Ministry for the Environment
Manatū Mō Te Taiao

New Zealand's First Biennial Report

under the United Nations Framework Convention on Climate Change

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Introduction

New Zealand is pleased to submit its First Biennial Report under the United Nations Framework Convention on Climate Change. The report follows the biennial reporting guidelines for developed country Parties, and is composed of six chapters:

I. Information on greenhouse gas emissions and trends (page 1)

II. Quantified economy-wide emission reduction target (page 42)

III. Progress in achievement of quantified economy-wide emission reduction targets (page 46)

IV. Projections (page 67)

V. Provision of financial, technological and capacity-building support to developing country Parties (page 75)

VI. Other reporting matters (page 104).

The report also includes all of the relevant common tabular format (CTF) tables contained in Decision 19/CP.18.

Chapter I: Information on greenhouse gas emissions and trends

Introduction

New Zealand's Greenhouse Gas Inventory is the official annual report of all anthropogenic (human induced) emissions and removals of greenhouse gases in New Zealand. The Inventory measures New Zealand's progress against obligations under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.

Inventory reporting under the UNFCCC covers six sectors: energy; industrial processes; solvent and other product use; agriculture; land use, land-use change and forestry (LULUCF); and waste.

The inventory reports emissions and removals of the greenhouse gases carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). The indirect greenhouse gases, carbon monoxide (CO), sulphur dioxide (SO_2), oxides of nitrogen (NO_X) and non-methane volatile organic compounds (NMVOCs) are also included. Only emissions and removals of the direct greenhouse gases (CO_2, CH_4, N_2O, HFCs, PFCs and SF_6) are accounted for in total emissions under the UNFCCC the Kyoto Protocol.

New Zealand's most recent inventory report was submitted to the UNFCCC in April 2013.[1] It includes information on emissions and removals of greenhouse gases for a complete time series from 1990 to 2011 and supplementary information required for the Kyoto Protocol.[2]

[1] Ministry for the Environment. 2013. *New Zealand's Greenhouse Gas Inventory 1990–2011*. Retrieved from http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-2013

[2] The inventory submission is always delayed by 15 months due to the time constraints for data collection and processing

National trends: emissions by sector and by gas

As presented in the April 2013 Greenhouse Gas Inventory submission, New Zealand's total greenhouse gas emissions (excluding the LULUCF sector) were 72,834.9 Gg CO_2-e in 2011. Between 1990 (the base year) and 2011 New Zealand's total emissions increased by 22.1 per cent. The average annual growth of emissions was approximately 1.0 per cent per year.

The four emission sources that contributed most to this increase were methane emissions from dairy cattle, carbon dioxide from road transport, nitrous oxide from agricultural soils, and the use of hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.[3]

New Zealand's net greenhouse gas emissions (including all six sectors) in 2011 were 59,294.7 Gg CO_2-e. This represents an increase of 27,764.4 Gg CO_2-e (88.1 per cent) since 1990.

The agriculture and energy sectors were the largest contributors to New Zealand's total greenhouse gas emissions in 2011, contributing 47.2 per cent and 43.6 per cent of total emissions respectively. The emissions associated with industrial processes, waste, and solvents and other product use sectors were relatively minor.

In 2011, carbon dioxide and methane contributed the largest proportion of total emissions (45.5 per cent and 37.1 per cent respectively). Nitrous oxide (14.7 per cent) and HFCs, PFCs and SF_6 (2.7 per cent) made up the rest of New Zealand's emissions profile.

For more information on New Zealand's greenhouse gas emissions, see chapter 3 of the *Sixth National Communication*, CTF table 1 below, and New Zealand's Greenhouse Gas Inventory published in April 2013.

National Inventory System

New Zealand's National Inventory System operates in line with guidelines for national systems under the Kyoto Protocol, and is constantly being improved. The focus of this work is to achieve better transparency, comparability, consistency, completeness and accuracy in annual Inventory reports. Since New Zealand's *Fifth National Communication*, improvements in the Inventory programme have been focussed on:

- strengthening the Inventory quality assurance and quality control systems
- applying more accurate and comprehensive systems and methods for activity data processing and emission estimates
- shifting towards automation of data processing and quality control procedures.

For more information on New Zealand's National Inventory System and changes to arrangements since the *Fifth National Communication*, see Annex B of the *Sixth National Communication*, and New Zealand's Greenhouse Gas Inventory published in April 2013.

[3] Hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) are referred to as 'halocarbons' in the common reporting format (CRF) tables.

CTF Table 1: Emission trends: Summary

GREENHOUSE GAS EMISSIONS	Base year[a]	1991	1992	1993	1994	1995	1996	1997	1998
	kt CO_2 eq[3]	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq
CO_2 emissions including net CO_2 from LULUCF	-3,148.22	-3,619.79	-458.38	-639.05	805.76	2,939.71	5,041.48	6,622.47	3,993.23
CO_2 emissions excluding net CO_2 from LULUCF	25,047.06	25,689.64	27,593.54	27,136.72	27,259.40	27,384.61	28,670.50	30,924.97	29,380.96
CH_4 emissions including CH_4 from LULUCF	25,707.88	25,886.01	25,500.47	25,631.67	26,193.92	26,439.71	27,033.69	27,583.20	26,833.59
CH_4 emissions excluding CH_4 from LULUCF	25,650.33	25,847.83	25,448.78	25,563.31	26,112.93	26,366.26	26,947.92	27,500.65	26,725.21
N_2O emissions including N_2O from LULUCF	8,325.64	8,440.87	8,365.85	8,595.67	8,947.52	9,216.11	9,324.16	9,483.51	9,340.62
N_2O emissions excluding N_2O from LULUCF	8,300.60	8,418.47	8,342.68	8,571.07	8,922.25	9,192.22	9,299.44	9,459.60	9,314.00
HFCs	NA, NO	NA, NO	1.30	2.60	57.57	122.81	198.01	61.96	257.52
PFCs	629.87	625.05	396.61	180.45	159.87	131.16	236.77	172.52	125.34
SF_6	15.20	15.77	16.49	16.93	17.29	17.88	17.65	18.17	16.90
Total (including LULUCF)	**31,530.38**	**31,347.91**	**33,822.33**	**33,788.27**	**36,181.93**	**38,867.38**	**41,851.76**	**43,941.84**	**40,567.18**
Total (excluding LULUCF)	**59,643.06**	**60,596.77**	**61,799.40**	**61,471.09**	**62,529.32**	**63,214.93**	**65,370.28**	**68,137.87**	**65,819.91**

GREENHOUSE GAS EMISSIONS	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq
CO_2 emissions including net CO_2 from LULUCF	5,776.70	7,379.83	10,668.45	14,123.80	14,328.73	12,576.14	14,665.26	16,569.24	17,616.88	12,828.63
CO_2 emissions excluding net CO_2 from LULUCF	30,852.46	31,350.29	33,452.17	33,630.53	35,364.17	34,934.88	36,386.41	36,311.72	35,630.04	36,451.32
CH_4 emissions including CH_4 from LULUCF	27,185.90	27,942.10	28,031.05	27,960.19	28,154.52	28,056.95	28,413.38	28,493.43	27,353.51	26,482.97
CH_4 emissions excluding CH_4 from LULUCF	27,116.12	27,886.67	27,973.50	27,902.79	28,097.71	28,014.41	28,357.86	28,446.06	27,293.19	26,438.52
N_2O emissions including N_2O from LULUCF	9,499.53	9,861.97	10,226.83	10,600.01	10,942.98	11,006.07	11,126.12	11,001.90	10,570.57	10,329.31
N_2O emissions excluding N_2O from LULUCF	9,477.83	9,842.14	10,207.49	10,581.35	10,924.69	10,989.90	11,109.37	10,986.44	10,554.05	10,315.14
HFCs	264.46	252.99	336.04	504.64	664.65	452.07	712.16	666.41	927.66	807.26
PFCs	58.96	58.06	60.64	71.91	107.83	84.53	59.57	90.99	41.47	38.84
SF_6	16.06	10.57	10.91	14.92	17.60	22.31	19.03	15.47	14.70	15.13
Total (including LULUCF)	**42,801.61**	**45,505.52**	**49,333.91**	**53,275.47**	**54,216.32**	**52,198.07**	**54,995.52**	**56,837.43**	**56,524.78**	**50,502.14**
Total (excluding LULUCF)	**67,785.89**	**69,400.72**	**72,040.75**	**72,706.13**	**75,176.66**	**74,498.10**	**76,644.41**	**76,517.08**	**74,461.10**	**74,066.21**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	Kt CO_2 eq
1. Energy	29,082.25	29,657.78	31,699.45	31,882.25	33,225.21	32,758.21	34,153.07	34,163.05	33,219.96	34,348.54
2. Industrial Processes	3,579.70	3,523.76	3,707.94	3,864.52	4,276.57	4,011.77	4,291.13	4,280.32	4,655.84	4,294.03
3. Solvent and Other Product Use	46.81	47.12	47.43	56.11	52.39	48.36	44.33	40.30	43.40	31.00
4. Agriculture	32,986.85	34,058.41	34,445.63	34,742.02	35,503.54	35,547.00	35,986.34	35,916.19	34,446.62	33,332.24
5. Land Use, Land-Use Change and Forestry[b]	-24,984.28	-23,895.20	-22,706.84	-19,430.67	-20,960.35	-22,300.03	-21,648.89	-19,679.65	-17,936.32	-3,564.07
6. Waste	2,090.28	2,113.65	2,140.30	2,161.23	2,118.96	2,132.77	2,169.55	2,117.21	2,095.28	2,060.40
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (including LULUCF)	**42,801.61**	**45,505.52**	**49,333.91**	**53,275.47**	**54,216.32**	**52,198.07**	**54,995.52**	**56,837.43**	**56,524.78**	**50,502.14**

GREENHOUSE GAS EMISSIONS	2009	2010	2011	Change from base to latest reported year
	kt CO_2 eq[3]	kt CO_2 eq	kt CO_2 eq	(%)
CO_2 emissions including net CO_2 from LULUCF	11,630.33	15,519.81	19,556.20	-721.18
CO_2 emissions excluding net CO_2 from LULUCF	33,521.18	33,403.15	33,162.22	32.40
CH_4 emissions including CH_4 from LULUCF	26,913.52	26,930.19	27,101.64	5.42
CH_4 emissions excluding CH_4 from LULUCF	26,853.62	26,875.70	27,050.15	5.46
N_2O emissions including N_2O from LULUCF	10,142.88	10,444.45	10,704.03	28.57
N_2O emissions excluding N_2O from LULUCF	10,127.80	10,429.95	10,689.68	28.78
HFCs	872.41	1,077.69	1,885.07	100.00
PFCs	46.14	40.81	30.18	-95.21
SF_6	19.79	20.46	17.62	15.89
Total (including LULUCF)	**49,625.06**	**54,033.41**	**59,294.74**	**88.06**
Total (excluding LULUCF)	**71,440.94**	**71,847.77**	**72,834.93**	**22.12**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt CO_2 eq	kt CO_2 eq	kt CO_2 eq	(%)
1. Energy	31,579.38	31,317.45	31,003.32	32.00
2. Industrial Processes	4,290.58	4,764.22	5,430.99	60.07
3. Solvent and Other Product Use	27.90	31.00	27.90	-32.84
4. Agriculture	33,500.42	33,722.30	34,387.32	12.15
5. Land Use, Land-Use Change and Forestry[b]	-21,815.88	-17,814.36	-13,540.19	-51.84
6. Waste	2,042.67	2,012.80	1,985.40	-3.58
7. Other	NA	NA	NA	0.00
Total (including LULUCF)	**49,625.06**	**54,033.41**	**59,294.74**	**88.06**

Notes:

[1]Further detailed information could be found in the common reporting format tables of the Party's greenhouse gas inventory, namely "Emission trends (CO_2)", "Emission trends (CH_4)", "Emission trends (N_2O)" and "Emission trends (HFCs, PFCs and SF_6)", which is included in an annex to this biennial report.

[2]2011 is the latest reported inventory year.

[3]1 kt CO_2 eq equals 1 Gg CO_2-e.

Abbreviations: LULUCF = land use, land-use change and forestry; NA = Not Applicable

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

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

Emission Trends: CO_2

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year[a]	1991	1992	1993	1994	1995	1996	1997	1998
	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	**22,286.38**	**22,786.24**	**24,632.31**	**24,061.38**	**24,302.75**	**24,338.61**	**25,645.15**	**27,962.68**	**26,325.99**
A. Fuel Combustion (Sectoral Approach)	21,827.46	22,232.21	24,092.73	23,543.50	23,762.65	23,838.83	24,979.51	27,234.47	25,619.41
1. Energy Industries	5,955.71	6,070.15	7,547.88	6,616.22	5,512.24	4,786.86	5,537.96	7,131.90	5,566.15
2. Manufacturing Industries and Construction	4,639.31	5,108.70	4,961.34	5,199.27	5,519.51	5,588.69	5,969.64	6,359.03	6,018.43
3. Transport	8,439.17	8,448.12	8,796.62	9,260.52	9,940.00	10,591.24	10,745.02	10,972.32	11,165.21
4. Other Sectors	2,793.27	2,605.24	2,786.88	2,467.49	2,790.90	2,872.03	2,726.90	2,771.21	2,869.62
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	458.92	554.03	539.58	517.88	540.10	499.78	665.64	728.21	706.58
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
2. Oil and Natural Gas	458.92	554.03	539.58	517.88	540.10	499.78	665.64	728.21	706.58
2. Industrial Processes	**2,747.77**	**2,890.49**	**2,948.34**	**3,062.56**	**2,943.87**	**3,033.38**	**3,013.10**	**2,950.13**	**3,042.91**
A. Mineral Products	561.85	572.40	648.53	646.69	625.38	674.58	646.18	695.07	650.95
B. Chemical Industry	430.20	447.73	400.44	423.50	445.41	423.77	410.86	442.09	480.50
C. Metal Production	1,755.71	1,870.36	1,899.37	1,992.36	1,873.08	1,935.03	1,956.06	1,812.97	1,911.47
D. Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Production of Halocarbons and SF_6									

F. Consumption of Halocarbons and SF_6									
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
4. Agriculture									
A. Enteric Fermentation									
B. Manure Management									
C. Rice Cultivation									
D. Agricultural Soils									
E. Prescribed Burning of Savannas									
F. Field Burning of Agricultural Residues									
G. Other									
5. Land Use, Land-Use Change and Forestry	**-28,195.28**	**-29,309.43**	**-28,051.93**	**-27,775.77**	**-26,453.64**	**-24,444.90**	**-23,629.02**	**-24,302.50**	**-25,387.72**
A. Forest Land	-27,738.48	-29,024.50	-27,941.93	-27,921.19	-26,871.86	-25,109.93	-24,543.51	-25,513.24	-26,893.04
B. Cropland	549.43	541.76	534.27	527.27	520.58	510.79	501.15	494.76	488.36
C. Grassland	-1,275.64	-1,084.31	-891.16	-617.75	-326.40	-57.41	213.06	527.23	839.50
D. Wetlands	167.30	159.59	151.89	144.18	136.47	128.76	121.06	113.35	105.64
E. Settlements	97.57	93.44	90.38	87.03	82.85	78.10	74.39	70.52	66.89
F. Other Land	4.54	4.58	4.63	4.68	4.73	4.78	4.83	4.88	4.93
G. Other	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA

6. Waste	**12.91**	**12.91**	**12.90**	**12.78**	**12.78**	**12.62**	**12.25**	**12.16**	**12.05**
A. Solid Waste Disposal on Land	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
B. Waste-water Handling									
C. Waste Incineration	12.91	12.91	12.90	12.78	12.78	12.62	12.25	12.16	12.05
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total CO_2 emissions including net CO_2 from LULUCF	**-3,148.22**	**-3,619.79**	**-458.38**	**-639.05**	**805.76**	**2,939.71**	**5,041.48**	**6,622.47**	**3,993.23**
Total CO_2 emissions excluding net CO_2 from LULUCF	**25,047.06**	**25,689.64**	**27,593.54**	**27,136.72**	**27,259.40**	**27,384.61**	**28,670.50**	**30,924.97**	**29,380.96**
Memo Items:									
International Bunkers	2,340.47	2,184.46	2,112.96	2,188.96	2,621.37	2,720.77	2,690.42	2,716.80	2,828.65
Aviation	1,308.44	1,269.34	1,245.76	1,271.37	1,268.59	1,585.87	1,611.10	1,597.67	1,752.51
Marine	1,032.03	915.12	867.20	917.59	1,352.77	1,134.89	1,079.32	1,119.13	1,076.14
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO_2 Emissions from Biomass	4,170.91	4,272.00	4,274.71	4,499.04	4,722.08	4,862.89	4,662.02	4,872.75	5,150.82

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	**27,600.82**	**28,142.26**	**30,145.92**	**30,352.16**	**31,872.96**	**31,477.55**	**32,882.41**	**32,801.85**	**31,957.09**	**33,017.60**
A. Fuel Combustion (Sectoral Approach)	26,985.47	27,549.69	29,525.34	29,758.68	31,262.20	30,614.67	31,967.57	31,841.89	30,936.93	31,777.32
1. Energy Industries	6,773.95	6,447.45	7,930.01	7,313.48	8,626.64	8,247.61	10,288.47	10,178.85	8,804.57	9,722.99
2. Manufacturing Industries and Construction	5,825.60	6,091.03	6,441.28	6,713.78	6,109.35	5,592.68	4,794.34	4,746.69	5,194.40	5,236.24
3. Transport	11,402.64	11,942.98	12,022.43	12,494.28	13,029.34	13,330.39	13,392.64	13,523.00	13,649.38	13,667.98
4. Other Sectors	2,983.29	3,068.24	3,131.61	3,237.15	3,496.88	3,443.99	3,492.12	3,393.35	3,288.58	3,150.11
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	615.35	592.57	620.58	593.48	610.76	862.88	914.84	959.96	1,020.17	1,240.28
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
2. Oil and Natural Gas	615.35	592.57	620.58	593.48	610.76	862.88	914.84	959.96	1,020.17	1,240.28
2. Industrial Processes	**3,240.23**	**3,202.14**	**3,300.36**	**3,273.06**	**3,486.48**	**3,452.86**	**3,500.37**	**3,507.45**	**3,672.02**	**3,432.80**
A. Mineral Products	728.34	718.53	716.88	706.95	697.25	666.67	756.17	719.13	861.49	807.02
B. Chemical Industry	527.79	514.46	556.59	539.35	574.35	555.90	561.33	617.01	586.28	580.91
C. Metal Production	1,984.09	1,969.15	2,026.89	2,026.75	2,214.87	2,230.29	2,182.86	2,171.31	2,224.25	2,044.87
D. Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	**NA, NE**	**NA, NE**	**NA, NE**	**NA, NE**	**NA, NE**	**NA, NE**	**NA, NE**	**NA, NE**	**NA, NE**	**NA, NE**
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										

5. Land Use, Land-Use Change and Forestry	**-25,075.76**	**-23,970.47**	**-22,783.72**	**-19,506.73**	**-21,035.45**	**-22,358.74**	**-21,721.15**	**-19,742.48**	**-18,013.17**	**-23,622.69**
A. Forest Land	-26,880.63	-27,172.73	-26,211.30	-23,009.22	-25,970.69	-29,476.62	-32,868.71	-32,771.58	-35,057.55	-27,597.24
B. Cropland	481.96	482.10	475.41	462.59	454.80	458.98	470.38	469.62	477.92	396.57
C. Grassland	1,155.75	2,548.51	2,790.99	2,893.24	4,332.90	6,494.78	10,472.86	12,339.98	16,314.89	3,473.55
D. Wetlands	97.93	90.23	82.52	74.81	67.10	59.39	51.69	43.98	36.27	28.56
E. Settlements	64.25	70.43	67.87	62.85	66.77	79.89	107.13	119.58	142.78	45.43
F. Other Land	4.98	10.99	10.80	8.99	13.68	24.83	45.49	55.94	72.54	30.45
G. Other	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA	IE, NA
6. Waste	**11.41**	**5.89**	**5.89**	**5.31**	**4.73**	**4.48**	**3.63**	**2.42**	**0.93**	**0.92**
A. Solid Waste Disposal on Land	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
B. Waste-water Handling										
C. Waste Incineration	11.41	5.89	5.89	5.31	4.73	4.48	3.63	2.42	0.93	0.92
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total CO_2 emissions including net CO_2 from LULUCF	**5,776.70**	**7,379.83**	**10,668.45**	**14,123.80**	**14,328.73**	**12,576.14**	**14,665.26**	**16,569.24**	**17,616.88**	**12,828.63**
Total CO_2 emissions excluding net CO_2 from LULUCF	**30,852.46**	**31,350.29**	**33,452.17**	**33,630.53**	**35,364.17**	**34,934.88**	**36,386.41**	**36,311.72**	**35,630.04**	**36,451.32**

Memo Items:										
International Bunkers	2,735.05	2,529.93	2,735.17	2,804.24	2,837.22	2,935.47	3,168.80	3,115.40	3,243.59	3,387.16
Aviation	1,818.18	1,782.08	1,923.79	1,914.64	1,982.35	2,205.81	2,188.78	2,158.28	2,264.65	2,281.08
Marine	916.87	747.86	811.38	889.60	854.88	729.66	980.02	957.11	978.95	1,106.08
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO_2 Emissions from Biomass	5,684.30	6,179.65	6,101.35	6,555.89	6,628.28	7,124.39	7,091.42	7,059.56	6,762.74	6,300.15

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
1. Energy	**30,168.01**	**29,776.98**	**29,663.18**	**33.10**
A. Fuel Combustion (Sectoral Approach)	28,801.60	28,340.30	28,254.63	29.44
1. Energy Industries	7,526.38	6,758.18	6,452.31	8.33
2. Manufacturing Industries and Construction	4,907.94	5,094.34	4,966.76	7.06
3. Transport	13,492.96	13,641.85	13,835.30	63.94
4. Other Sectors	2,874.32	2,845.93	3,000.25	7.41
5. Other	NA	NA	NA	0.00
B. Fugitive Emissions from Fuels	1,366.42	1,436.67	1,408.55	206.93
1. Solid Fuels	NA, NO	NA, NO	NA, NO	0.00
2. Oil and Natural Gas	1,366.42	1,436.67	1,408.55	206.93
2. Industrial Processes	**3,352.24**	**3,645.51**	**3,511.68**	**27.80**
A. Mineral Products	752.15	740.21	713.25	26.95
B. Chemical Industry	629.85	630.02	536.43	24.69
C. Metal Production	1,970.24	2,275.27	2,262.01	28.84
D. Other Production	NA	NA	NA	0.00
E. Production of Halocarbons and SF_6				

F. Consumption of Halocarbons and SF_6				
G. Other	NA	NA	NA	0.00
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	0.00
4. Agriculture				
A. Enteric Fermentation				
B. Manure Management				
C. Rice Cultivation				
D. Agricultural Soils				
E. Prescribed Burning of Savannas				
F. Field Burning of Agricultural Residues				
G. Other				
5. Land Use, Land-Use Change and Forestry	**-21,890.86**	**-17,883.35**	**-13,606.02**	**-51.74**
A. Forest Land	-25,777.06	-21,383.09	-17,758.32	-35.98
B. Cropland	387.41	382.90	381.89	-30.49
C. Grassland	3,424.98	3,051.01	3,713.53	-391.11
D. Wetlands	20.86	20.86	20.86	-87.53
E. Settlements	34.76	34.73	34.70	-64.44
F. Other Land	18.19	10.24	1.32	-70.87
G. Other	IE, NA	IE, NA	IE, NA	0.00

6. Waste	**0.92**	**0.92**	**0.92**	**-92.84**
A. Solid Waste Disposal on Land	NE, NO	NE, NO	NE, NO	0.00
B. Waste-water Handling				
C. Waste Incineration	0.92	0.92	0.92	-92.84
D. Other	NO	NO	NO	0.00
7. Other (as specified in the summary table in CRF)	**NA**	**NA**	**NA**	**0.00**
Total CO_2 emissions including net CO_2 from LULUCF	**11,630.33**	**15,538.57**	**19,569.50**	**-721.60**
Total CO_2 emissions excluding net CO_2 from LULUCF	**33,521.18**	**33,421.91**	**33,175.53**	**32.45**
Memo Items:				
International Bunkers	3,253.63	3,345.03	3,248.79	38.81
Aviation	2,171.68	2,294.73	2,314.89	76.92
Marine	1,081.94	1,050.31	933.90	-9.51
Multilateral Operations	NO	NO	NO	0.00
CO_2 Emissions from Biomass	5,844.31	6,543.13	6,612.89	58.55

Abbreviations: CRF = common reporting format; LULUCF = land use, land-use change and forestry; NA = Not Applicable; NO = Not Occurring; NE = Not Estimated; IE = Included Elsewhere

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

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

Emission Trends: CH_4

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year[a]	1991	1992	1993	1994	1995	1996	1997	1998
	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	**52.08**	**48.84**	**49.86**	**48.68**	**48.47**	**49.90**	**60.77**	**57.58**	**55.91**
A. Fuel Combustion (Sectoral Approach)	9.26	9.55	8.90	8.82	9.02	9.56	10.23	10.25	9.81
1. Energy Industries	0.22	0.24	0.27	0.25	0.21	0.18	0.22	0.29	0.23
2. Manufacturing Industries and Construction	1.47	2.16	1.93	2.11	2.54	3.35	4.27	4.42	4.23
3. Transport	4.01	3.94	3.79	3.64	3.40	3.17	2.89	2.69	2.49
4. Other Sectors	3.56	3.21	2.91	2.81	2.88	2.86	2.85	2.85	2.86
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	42.82	39.29	40.96	39.86	39.45	40.34	50.54	47.32	46.10
1. Solid Fuels	13.49	9.25	9.50	9.26	10.77	13.53	19.72	14.00	16.06
2. Oil and Natural Gas	29.33	30.04	31.46	30.60	28.68	26.81	30.81	33.32	30.04
2. Industrial Processes	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO
C. Metal Production	IE, NA,	IE, NA, NE,	IE, NA,	IE, NA,	IE, NA,	IE, NA,	IE, NA,	IE, NA,	IE, NA,

	NE, NO	NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Other Production									
E. Production of Halocarbons and SF_6									
F. Consumption of Halocarbons and SF_6									
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use									
4. Agriculture	**1,083.49**	**1,095.15**	**1,075.04**	**1,081.17**	**1,111.71**	**1,121.50**	**1,137.46**	**1,165.62**	**1,130.25**
A. Enteric Fermentation	1,059.77	1,070.84	1,051.16	1,056.82	1,086.66	1,096.11	1,111.17	1,138.58	1,104.08
B. Manure Management	21.75	22.25	22.20	22.56	23.48	24.18	24.83	25.49	24.96
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
E. Prescribed Burning of Savannas	1.06	1.25	0.93	0.92	0.65	0.41	0.54	0.50	0.26
F. Field Burning of Agricultural Residues	0.90	0.80	0.76	0.87	0.92	0.80	0.92	1.05	0.94
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	**2.74**	**1.82**	**2.46**	**3.26**	**3.86**	**3.50**	**4.08**	**3.93**	**5.16**
A. Forest Land	0.92	0.76	1.11	1.28	1.80	1.60	1.86	2.05	1.50
B. Cropland	NE	NE	NE	NE	NE	NE	NE	NE	NE
C. Grassland	1.82	1.05	1.35	1.97	2.05	1.90	2.22	1.88	3.66
D. Wetlands	NE	NE	NE	NE	NE	NE	NE	NE	NE

E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE
F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE
6. Waste	**90.45**	**91.79**	**92.29**	**92.89**	**88.47**	**89.70**	**90.89**	**91.61**	**91.44**
A. Solid Waste Disposal on Land	72.11	72.56	73.25	74.00	68.79	69.57	70.46	71.06	70.99
B. Waste-water Handling	18.34	19.23	19.03	18.90	19.67	20.14	20.42	20.55	20.45
C. Waste Incineration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total CH_4 emissions including CH_4 from LULUCF	**1,228.76**	**1,237.60**	**1,219.64**	**1,225.99**	**1,252.51**	**1,264.60**	**1,293.21**	**1,318.74**	**1,282.75**
Total CH_4 emissions excluding CH_4 from LULUCF	**1,226.02**	**1,235.78**	**1,217.18**	**1,222.74**	**1,248.65**	**1,261.10**	**1,289.12**	**1,314.81**	**1,277.59**
Memo Items:									
International Bunkers	0.09	0.08	0.08	0.08	0.12	0.10	0.10	0.10	0.10
Aviation	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Marine	0.08	0.07	0.07	0.07	0.11	0.09	0.09	0.09	0.09
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO_2 Emissions from Biomass									

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	**62.31**	**64.04**	**64.98**	**63.45**	**51.59**	**48.02**	**45.74**	**50.22**	**46.59**	**50.39**
A. Fuel Combustion (Sectoral Approach)	10.18	10.73	10.08	10.31	7.69	7.86	6.31	6.24	6.17	6.15
1. Energy Industries	0.28	0.27	0.33	0.28	0.28	0.22	0.28	0.28	0.31	0.28
2. Manufacturing Industries and Construction	4.84	5.61	5.05	5.41	2.79	3.10	1.60	1.71	1.73	1.94
3. Transport	2.26	2.09	2.05	2.00	1.94	1.86	1.75	1.62	1.55	1.44
4. Other Sectors	2.80	2.76	2.65	2.62	2.68	2.68	2.68	2.62	2.56	2.48
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	52.13	53.31	54.90	53.14	43.90	40.16	39.43	43.98	40.42	44.24
1. Solid Fuels	17.67	17.40	17.68	17.70	16.85	15.89	16.78	21.13	13.78	17.11
2. Oil and Natural Gas	34.45	35.91	37.22	35.45	27.04	24.27	22.65	22.85	26.64	27.13
2. Industrial Processes	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO	IE, NA, NO
C. Metal Production	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO

D. Other Production										
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use										
4. Agriculture	**1,143.23**	**1,177.58**	**1,179.17**	**1,177.03**	**1,197.75**	**1,197.69**	**1,212.91**	**1,215.11**	**1,164.67**	**1,122.14**
A. Enteric Fermentation	1,117.03	1,149.97	1,150.84	1,148.28	1,168.07	1,168.05	1,182.95	1,184.78	1,134.40	1,092.37
B. Manure Management	25.04	26.26	26.98	27.37	28.38	28.62	28.71	29.05	28.55	28.33
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
E. Prescribed Burning of Savannas	0.22	0.41	0.31	0.36	0.32	0.30	0.38	0.46	0.70	0.55
F. Field Burning of Agricultural Residues	0.94	0.94	1.04	1.03	0.98	0.73	0.88	0.82	1.02	0.90
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	**3.32**	**2.64**	**2.74**	**2.73**	**2.71**	**2.03**	**2.64**	**2.26**	**2.87**	**2.12**
A. Forest Land	1.07	1.10	1.01	0.98	0.89	0.80	0.72	0.70	1.09	0.76
B. Cropland	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
C. Grassland	2.26	1.54	1.73	1.76	1.81	1.23	1.93	1.55	1.78	1.36
D. Wetlands	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE
6. Waste	91.21	92.46	93.63	94.53	92.20	92.74	94.47	92.04	91.05	89.26
A. Solid Waste Disposal on Land	71.24	71.76	72.52	73.52	70.69	71.26	72.08	69.67	69.04	67.01
B. Waste-water Handling	19.98	20.70	21.12	21.01	21.50	21.48	22.39	22.37	22.00	22.25
C. Waste Incineration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total CH_4 emissions including CH_4 from LULUCF	**1,300.08**	**1,336.72**	**1,340.52**	**1,337.75**	**1,344.24**	**1,340.48**	**1,355.77**	**1,359.62**	**1,305.18**	**1,263.91**
Total CH_4 emissions excluding CH_4 from LULUCF	**1,296.76**	**1,334.08**	**1,337.78**	**1,335.01**	**1,341.54**	**1,338.46**	**1,353.12**	**1,357.37**	**1,302.31**	**1,261.80**
Memo Items:										
International Bunkers	0.09	0.08	0.08	0.09	0.09	0.08	0.10	0.10	0.10	0.11
Aviation	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Marine	0.08	0.06	0.07	0.08	0.07	0.06	0.09	0.08	0.09	0.10
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO_2 Emissions from Biomass										

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
1. Energy	**55.54**	**62.13**	**52.91**	**1.60**
A. Fuel Combustion (Sectoral Approach)	6.57	6.51	6.47	-30.08
1. Energy Industries	0.24	0.26	0.23	7.33
2. Manufacturing Industries and Construction	2.38	2.49	2.51	70.34
3. Transport	1.38	1.32	1.25	-68.82
4. Other Sectors	2.57	2.44	2.48	-30.31
5. Other	NA	NA	NA	0.00
B. Fugitive Emissions from Fuels	48.97	55.62	46.44	8.45
1. Solid Fuels	21.88	27.23	19.55	44.94
2. Oil and Natural Gas	27.09	28.39	26.89	-8.33
2. Industrial Processes	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**IE, NA, NE, NO**	**0.00**
A. Mineral Products	NA	NA	NA	0.00
B. Chemical Industry	IE, NA, NO	IE, NA, NO	IE, NA, NO	0.00
C. Metal Production	IE, NA, NE, NO	IE, NA, NE, NO	IE, NA, NE, NO	0.00

D. Other Production				
E. Production of Halocarbons and SF_6				
F. Consumption of Halocarbons and SF_6				
G. Other	NA	NA	NA	0.00
3. Solvent and Other Product Use				
4. Agriculture	**1,137.61**	**1,133.77**	**1,152.64**	**6.38**
A. Enteric Fermentation	1,107.31	1,102.61	1,120.76	5.75
B. Manure Management	29.18	29.84	30.83	41.75
C. Rice Cultivation	NO	NO	NO	0.00
D. Agricultural Soils	NE, NO	NE, NO	NE, NO	0.00
E. Prescribed Burning of Savannas	0.20	0.31	0.29	-72.54
F. Field Burning of Agricultural Residues	0.92	1.01	0.75	-16.85
G. Other	NO	NO	NO	0.00
5. Land Use, Land-Use Change and Forestry	**2.85**	**2.59**	**2.45**	**-10.54**
A. Forest Land	1.04	0.86	0.74	-19.23
B. Cropland	NE	NE	NE	0.00
C. Grassland	1.81	1.73	1.71	-6.18
D. Wetlands	NE	NE	NE	0.00
E. Settlements	NE	NE	NE	0.00

F. Other Land	NE	NE	NE	0.00
G. Other	IE, NA, NE	IE, NA, NE	IE, NA, NE	0.00
6. Waste	**88.66**	**87.14**	**85.85**	**-5.09**
A. Solid Waste Disposal on Land	66.94	65.05	63.38	-12.10
B. Waste-water Handling	21.72	22.09	22.46	22.47
C. Waste Incineration	0.00	0.00	0.00	-44.40
D. Other	NO	NO	NO	0.00
7. Other (as specified in the summary table in CRF)	**NA**	**NA**	**NA**	**0.00**
Total CH_4 emissions including CH_4 from LULUCF	**1,284.67**	**1,285.63**	**1,293.85**	**5.30**
Total CH_4 emissions excluding CH_4 from LULUCF	**1,281.82**	**1,283.04**	**1,291.39**	**5.33**
Memo Items:				
International Bunkers	0.11	0.11	0.10	8.60
Aviation	0.02	0.02	0.02	75.40
Marine	0.10	0.09	0.08	0.88
Multilateral Operations	NO	NO	NO	0.00
CO_2 Emissions from Biomass				

Abbreviations: CRF = common reporting format; LULUCF = land use, land-use change and forestry; NA = Not Applicable; NO = Not Occurring; NE = Not Estimated; IE = Included Elsewhere

[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.

Emission Trends: N_2O

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year[a]	1991	1992	1993	1994	1995	1996	1997	1998
	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	**0.61**	**0.61**	**0.65**	**0.68**	**0.72**	**0.75**	**0.75**	**0.79**	**0.80**
A. Fuel Combustion (Sectoral Approach)	0.61	0.61	0.65	0.68	0.72	0.75	0.75	0.79	0.80
1. Energy Industries	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.02
2. Manufacturing Industries and Construction	0.17	0.18	0.18	0.19	0.20	0.20	0.19	0.20	0.21
3. Transport	0.33	0.34	0.36	0.38	0.41	0.43	0.44	0.46	0.47
4. Other Sectors	0.09	0.08	0.09	0.09	0.09	0.10	0.09	0.10	0.10
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
2. Oil and Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Industrial Processes	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C. Metal Production	NA	NA	NA	NA	NA	NA	NA	NA	NA

D. Other Production									
E. Production of Halocarbons and SF_6									
F. Consumption of Halocarbons and SF_6									
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	**0.13**	**0.14**	**0.14**	**0.14**	**0.14**	**0.15**	**0.15**	**0.15**	**0.15**
4. Agriculture	**25.58**	**25.95**	**25.67**	**26.37**	**27.45**	**28.28**	**28.61**	**29.08**	**28.60**
A. Enteric Fermentation									
B. Manure Management	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
C. Rice Cultivation									
D. Agricultural Soils	25.46	25.82	25.54	26.24	27.33	28.15	28.48	28.95	28.48
E. Prescribed Burning of Savannas	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01
F. Field Burning of Agricultural Residues	0.02	0.01	0.01	0.02	0.02	0.01	0.02	0.02	0.02
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	**0.08**	**0.07**	**0.07**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.09**
A. Forest Land	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
B. Cropland	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05
C. Grassland	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.03
D. Wetlands	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE

F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE
6. Waste	**0.47**	**0.48**	**0.49**	**0.50**	**0.50**	**0.52**	**0.53**	**0.53**	**0.53**
A. Solid Waste Disposal on Land									
B. Waste-water Handling	0.47	0.48	0.48	0.49	0.50	0.52	0.52	0.53	0.53
C. Waste Incineration	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total N_2O emissions including N_2O from LULUCF	**26.88**	**27.26**	**27.02**	**27.76**	**28.90**	**29.77**	**30.12**	**30.63**	**30.17**
Total N_2O emissions excluding N_2O from LULUCF	**26.80**	**27.19**	**26.94**	**27.68**	**28.82**	**29.69**	**30.04**	**30.56**	**30.08**
Memo Items:									
International Bunkers	0.08	0.07	0.07	0.07	0.08	0.09	0.08	0.08	0.08
Aviation	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Marine	0.04	0.04	0.03	0.03	0.05	0.04	0.04	0.04	0.04
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO_2 Emissions from Biomass									

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	**0.85**	**0.88**	**0.91**	**0.96**	**1.04**	**1.09**	**1.11**	**1.09**	**1.03**	**1.01**
A. Fuel Combustion (Sectoral Approach)	0.85	0.88	0.91	0.96	1.04	1.09	1.11	1.09	1.03	1.01
1. Energy Industries	0.03	0.03	0.04	0.03	0.06	0.08	0.09	0.09	0.05	0.08
2. Manufacturing Industries and Construction	0.22	0.24	0.25	0.27	0.28	0.29	0.29	0.28	0.28	0.26
3. Transport	0.49	0.51	0.52	0.55	0.58	0.61	0.61	0.59	0.58	0.55
4. Other Sectors	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.11
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
2. Oil and Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Industrial Processes	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C. Metal Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D. Other Production										

E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	**0.15**	**0.15**	**0.15**	**0.18**	**0.17**	**0.16**	**0.14**	**0.13**	**0.14**	**0.10**
4. Agriculture	**29.09**	**30.22**	**31.37**	**32.49**	**33.50**	**33.67**	**34.04**	**33.67**	**32.32**	**31.60**
A. Enteric Fermentation										
B. Manure Management	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11
C. Rice Cultivation										
D. Agricultural Soils	28.97	30.09	31.24	32.36	33.36	33.53	33.91	33.54	32.17	31.46
E. Prescribed Burning of Savannas	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
F. Field Burning of Agricultural Residues	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.02
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	**0.07**	**0.06**	**0.06**	**0.06**	**0.06**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**
A. Forest Land	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
B. Cropland	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03
C. Grassland	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
D. Wetlands	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

G. Other	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE	IE, NA, NE
6. Waste	**0.53**	**0.54**	**0.54**	**0.55**	**0.57**	**0.58**	**0.59**	**0.59**	**0.59**	**0.60**
A. Solid Waste Disposal on Land										
B. Waste-water Handling	0.52	0.53	0.54	0.55	0.57	0.58	0.58	0.58	0.58	0.59
C. Waste Incineration	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total N_2O emissions including N_2O from LULUCF	**30.69**	**31.86**	**33.03**	**34.24**	**35.34**	**35.54**	**35.93**	**35.53**	**34.13**	**33.34**
Total N_2O emissions excluding N_2O from LULUCF	**30.62**	**31.79**	**32.97**	**34.18**	**35.28**	**35.49**	**35.87**	**35.48**	**34.07**	**33.30**
Memo Items:										
International Bunkers	0.08	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.10
Aviation	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06
Marine	0.03	0.02	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO_2 Emissions from Biomass										

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
1. Energy	**0.94**	**0.92**	**0.90**	**47.79**
A. Fuel Combustion (Sectoral Approach)	0.94	0.92	0.90	47.79
1. Energy Industries	0.05	0.03	0.04	105.39
2. Manufacturing Industries and Construction	0.24	0.26	0.26	51.79
3. Transport	0.53	0.52	0.49	49.46
4. Other Sectors	0.11	0.10	0.11	21.71
5. Other	NA	NA	NA	0.00
B. Fugitive Emissions from Fuels	0.00	0.00	0.00	225.97
1. Solid Fuels	NA, NO	NA, NO	NA, NO	0.00
2. Oil and Natural Gas	0.00	0.00	0.00	225.97
2. Industrial Processes	NA, NO	NA, NO	NA, NO	0.00
A. Mineral Products	NA	NA	NA	0.00
B. Chemical Industry	NA, NO	NA, NO	NA, NO	0.00
C. Metal Production	NA	NA	NA	0.00

D. Other Production				
E. Production of Halocarbons and SF_6				
F. Consumption of Halocarbons and SF_6				
G. Other	NA	NA	NA	0.00
3. Solvent and Other Product Use	**0.09**	**0.10**	**0.09**	**-32.84**
4. Agriculture	**31.08**	**32.06**	**32.92**	**28.70**
A. Enteric Fermentation				
B. Manure Management	0.11	0.11	0.12	38.71
C. Rice Cultivation				
D. Agricultural Soils	30.95	31.92	32.79	28.80
E. Prescribed Burning of Savannas	0.01	0.01	0.01	-72.54
F. Field Burning of Agricultural Residues	0.02	0.02	0.01	-19.51
G. Other	NO	NO	NO	0.00
5. Land Use, Land-Use Change and Forestry	**0.05**	**0.05**	**0.05**	**-42.71**
A. Forest Land	0.01	0.01	0.01	-19.23
B. Cropland	0.03	0.03	0.03	-52.91
C. Grassland	0.01	0.01	0.01	-7.75
D. Wetlands	NE	NE	NE	0.00
E. Settlements	NE	NE	NE	0.00

F. Other Land	NE	NE	NE	0.00
G. Other	IE, NA, NE	IE, NA, NE	IE, NA, NE	0.00
6. Waste	0.58	0.59	0.59	23.94
A. Solid Waste Disposal on Land				
B. Waste-water Handling	0.58	0.58	0.58	24.45
C. Waste Incineration	0.00	0.00	0.00	-21.77
D. Other	NO	NO	NO	0.00
7. Other (as specified in the summary table in CRF)	NA	NA	NA	0.00
Total N_2O emissions including N_2O from LULUCF	32.74	33.71	34.55	28.53
Total N_2O emissions excluding N_2O from LULUCF	32.69	33.66	34.50	28.74
Memo Items:				
International Bunkers	0.09	0.09	0.09	22.67
Aviation	0.06	0.06	0.06	75.40
Marine	0.03	0.03	0.03	-28.09
Multilateral Operations	NO	NO	NO	0.00
CO_2 Emissions from Biomass				

Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and forestry; NA = Not Applicable; NO = Not Occurring; NE = Not Estimated; IE = Included Elsewhere

[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

Emission Trends: HFCs, PFCs and SF_6

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year[a]	1991	1992	1993	1994	1995	1996	1997	1998
	kt	kt	kt	kt	kt	kt	kt	kt	kt
Emissions of HFCs (kt CO_2 eq)	**NA, NO**	**NA, NO**	**1.30**	**2.60**	**57.57**	**122.81**	**198.01**	**61.96**	**257.52**
HFC-23	NA, NO	NA, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
HFC-32	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00
HFC-41	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-43-10mee	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-125	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00	0.01	0.00	0.01
HFC-134	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-134a	NA, NO	NA, NO	0.00	0.00	0.04	0.08	0.12	0.04	0.16
HFC-152a	NA, NO	NA, NO	NA, NE, NO	NA, NE, NO	0.00	0.00	0.00	0.00	0.00
HFC-143	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-143a	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00	0.01	0.00	0.01
HFC-227ea	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00	0.00	0.00
HFC-236fa	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-245ca	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO

Unspecified mix of listed HFCs (kt CO_2 eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Emissions of PFCs - (kt CO_2 eq)	**629.87**	**625.05**	**396.61**	**180.45**	**159.87**	**131.16**	**236.77**	**172.52**	**125.34**
CF_4	0.08	0.08	0.05	0.02	0.02	0.02	0.03	0.02	0.01
C_2F_6	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
C_3F_8	NA, NO	NA, NO	NA, NO	NA, NO	NA, NE, NO	0.00	0.00	0.00	0.01
C_4F_{10}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
c-C_4F_8	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_5F_{12}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_6F_{14}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of listed PFCs -(Gg CO_2 equivalent)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Emissions of SF_6 (Gg CO_2 equivalent)	**15.20**	**15.77**	**16.49**	**16.93**	**17.29**	**17.88**	**17.65**	**18.17**	**16.90**
SF_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt
Emissions of HFCs - (kt CO_2 eq)	**264.46**	**252.99**	**336.04**	**504.64**	**664.65**	**452.07**	**712.16**	**666.41**	**927.66**	**807.26**
HFC-23	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.00	0.00	NA, NE, NO	NA, NE, NO	0.00	NA, NE, NO	NA, NE, NO
HFC-32	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.02
HFC-41	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-43-10mee	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-125	0.01	0.01	0.02	0.04	0.05	0.04	0.07	0.06	0.09	0.09
HFC-134	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-134a	0.14	0.15	0.15	0.20	0.22	0.15	0.21	0.22	0.25	0.20
HFC-152a	0.00	NA, NE, NO	0.00	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
HFC-143	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-143a	0.01	0.01	0.02	0.04	0.06	0.04	0.07	0.05	0.09	0.07
HFC-227ea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-236fa	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-245ca	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of listed HFCs (kt CO_2 eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO

Emissions of PFCs (kt CO_2 eq)	**58.96**	**58.06**	**60.64**	**71.91**	**107.83**	**84.53**	**59.57**	**90.99**	**41.47**	**38.84**
CF_4	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
C_2F_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C_3F_8	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.00	0.00	0.00	NA, NE, NO	0.00	0.00	0.00
C_4F_{10}	NA, NO	NA, NE, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
c-C_4F_8	NA, NO	NA, NE, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_5F_{12}	NA, NO	NA, NE, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_6F_{14}	NA, NO	NA, NE, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of listed PFCs - (kt CO_2 eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Emissions of SF_6 (kt CO_2 eq)	**16.06**	**10.57**	**10.91**	**14.92**	**17.60**	**22.31**	**19.03**	**15.47**	**14.70**	**15.13**
SF_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
Emissions of HFCs - (kt CO_2 eq)	**872.41**	**1,077.69**	**1,885.07**	**100.00**
HFC-23	NA, NE, NO	0.00	NA, NE, NO	0.00
HFC-32	0.02	0.03	0.04	100.00
HFC-41	NA, NO	NA, NO	NA, NO	0.00
HFC-43-10mee	NA, NO	NA, NO	NA, NO	0.00
HFC-125	0.09	0.12	0.15	100.00
HFC-134	NA, NO	NA, NO	NA, NO	0.00
HFC-134a	0.23	0.30	0.77	100.00
HFC-152a	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.00
HFC-143	NA, NO	NA, NO	NA, NO	0.00
HFC-143a	0.08	0.09	0.11	100.00
HFC-227ea	0.00	0.00	0.00	100.00
HFC-236fa	NA, NO	NA, NO	NA, NO	0.00
HFC-245ca	NA, NO	NA, NO	NA, NO	0.00
Unspecified mix of listed HFCs - (kt CO_2 eq)	NA, NO	NA, NO	NA, NO	0.00

Emissions of PFCs - (kt CO_2 eq)	**46.14**	**40.81**	**30.18**	**-95.21**
CF_4	0.01	0.01	0.00	-95.16
C_2F_6	0.00	0.00	0.00	-95.48
C_3F_8	0.00	NA, NE, NO	NA, NE, NO	0.00
C_4F_{10}	NA, NO	NA, NO	NA, NO	0.00
c-C_4F_8	NA, NO	NA, NO	NA, NO	0.00
C_5F_{12}	NA, NO	NA, NO	NA, NO	0.00
C_6F_{14}	NA, NO	NA, NO	NA, NO	0.00
Unspecified mix of listed PFCs - (Gg CO_2 equivalent)	NA, NO	NA, NO	NA, NO	0.00
Emissions of SF_6 - (kt CO_2 eq)	**19.79**	**20.46**	**17.62**	**15.89**
SF_6	0.00	0.00	0.00	15.89

Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and forestry; NA = Not Applicable; NO = Not Occurring; NE = Not Estimated; IE = Included Elsewhere

[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.

Chapter II: Quantified economy-wide emission reduction target

New Zealand's target for the first commitment period under the Kyoto Protocol (2008 to 2012) is zero per cent increase on 1990 levels. This is a responsibility target that will be met through a combination of domestic reductions, eligible forest sinks and international emissions trading.

New Zealand has also announced two economy-wide emissions reduction responsibility targets for the period 2013–2020: An unconditional target of 5 per cent below 1990 by 2020 under the UNFCCC, and a conditional responsibility target of between 10 and 20 per cent below 1990 levels by 2020 (as noted in document FCCC/SB/2011/INF.1/Rev.1). These targets are detailed in the table below:

New Zealand Quantified economy-wide emissions targets for 2020	**Base year**
Responsibility target of 5 per cent below 1990 levels by 2020, tabled under the UNFCCC. This is equivalent to a Quantified Emissions Limitation or Reduction Objective of 96.8 on 1990 emissions over 2013-2020.	1990
New Zealand is prepared to take on a responsibility target for greenhouse gas emissions reductions of between 10 per cent and 20 per cent below 1990 levels by 2020, conditional on a comprehensive global agreement. This means: • the global agreement sets the world on a pathway to limit temperature rise to not more than 2°C; • developed countries make comparable efforts to those of New Zealand; • advanced and major emitting developing countries take action fully commensurate with their respective capabilities; • there is an effective set of rules for land use, land-use change and forestry (LULUCF); and • there is full recourse to a broad and efficient international carbon market.	1990

New Zealand will continue to regularly review its contributions to international mitigation action taking into account the latest science, development of new technologies and progress by other countries. The new climate change agreement to be concluded by December 2015 and to enter into force by 2020 is expected to introduce a more comprehensive and effective global mitigation agreement, and New Zealand's actions will reflect the progress that is made.

New Zealand's targets are based on the Kyoto Protocol accounting rules, including those agreed in Durban in 2011 for the land sector.

When reporting emissions from the LULUCF sector, New Zealand will continue to use a land-based approach as required by Good Practice Guidance for LULUCF. For 2013–2020, as a Party to the Kyoto Protocol, New Zealand will complete activity-based reporting under Article 3.3 of the Kyoto Protocol for afforestation, reforestation and deforestation, and forest management under Article 3.4.

Further information is provided in CTF tables 2a–2f below.

CTF Table 2a: Emission reduction target: base year and target [a]		
	Detail	**Comments**
Base year/ base period	1990	
Emission reductions target (% of base year/base period)	5 per cent unconditional by 2020	
Period for reaching target	2013–2020	

CTF Table 2b and 2c: Gases and sectors covered. GWP values. [a]				
Gases covered	**Covered**	**Base Year**	**GWP[c] reference source**	**Comments**
CO_2	Yes	1990	IPCC AR4	
CH_4	Yes	1990	IPCC AR4	
N_2O	Yes	1990	IPCC AR4	
HFCs	Yes	1990	IPCC AR4	
PFCs	Yes	1990	IPCC AR4	
SF_6	Yes	1990	IPCC AR4	
NF_3	Yes	1990	IPCC AR4	
Sectors covered	**Covered**	**Comments**		
Energy	Yes			
Transport[f]	Yes			
Industrial processes[g]	Yes			
Agriculture	Yes			
LULUCF	Yes	Not included in base year emissions		
Waste	Yes			

CTF Table 2d: Role of LULUCF sector [a]		
Title	**Covered**	**Comments**
LULUCF in base year level and target	Included in target	
Contribution of LULUCF is calculated using	Activity-based approach	Using Kyoto Protocol rules

CTF Table 2e: Possible scale of contributions of market-based mechanisms [a]	
Title	
CERs	New Zealand will measure progress against its 2020 target as if it had made a commitment under the Kyoto Protocol, including participation in international carbon markets, and recognising surplus achieved during first commitment period of the Kyoto Protocol.
ERUs	
AAUs[i]	
Carry-over units[j]	
Other mechanism units under the Convention (specify)[k]	

CTF Table 2f: Any other information[l]	
	Comments
Any other information	It is New Zealand's intention to apply the Kyoto Protocol's second commitment rules to its unconditional 2020 target. In practice however, some technical changes may be required to reflect the status of New Zealand's target (ie, that the 2020 target is under the UNFCCC, not inscribed in the Kyoto Protocol). New Zealand reserves the right to review the accounting rules it applies in order to ensure alignment with the Kyoto Protocol and to support a smooth transition to a post-2020 regime.

Abbreviations: LULUCF = land use, land-use change and forestry; GWP = global warming potential; 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.

[c] 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.

[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.

[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 XX/CMP.8.

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

[l] 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.

Chapter III: Progress in achievement of quantified economy-wide emission reduction targets and relevant information

Mitigation actions and their effects

Mitigation actions

New Zealand's policy response to emissions reduction is informed by a combination of its unique national circumstances (detailed in Chapter 2 of the *Sixth National Communication*) the level of its targets[4], and recognition that climate change is a global long-term issue necessitating a global response. New Zealand is committed to being part of this response.

As noted in its *Sixth National Communication*, New Zealand's emissions profile is unique for a developed country. Its long, thin, mountainous geography, low, dispersed population, and distant location from its main trading markets have contributed to a reliance on fossil fuels. New Zealand's economy features a strong agricultural export focus with 85 per cent of the agricultural production going to international markets. The impact of agriculture on New Zealand's emissions profile is significant with almost half of emissions coming from the agricultural sector compared to an average of 12 per cent in other developed countries.[5] The other key feature of New Zealand's national circumstances is a long-history of development of renewable energy generation. As a result, around three quarters of electricity is derived from renewable sources. This is predominantly hydro-electricity, though the role of wind and geothermal generation is growing.

These features of New Zealand's national circumstances mean that the cost of mitigation is likely to be higher for New Zealand than for most other developed countries. Remaining competitive with trade partners, while taking responsibility for emissions reductions targets will therefore present a challenge for New Zealand and has shaped New Zealand's approach to addressing its emissions.

New Zealand will take responsibility for meeting its targets through a combination of:

- domestic emissions reductions
- removal of carbon dioxide by forests
- participation in international carbon markets
- recognising surplus achieved during first commitment period of the Kyoto Protocol.

New Zealand continues to develop a broad policy to reduce emissions. This takes account of Government's wider goals and includes both domestic and global actions. The New Zealand Emissions Trading Scheme (NZ ETS) is New Zealand's principal policy response for reducing domestic emissions and its primary mechanism to meet international emissions reductions commitments. It is designed to create financial incentives to:

[4] Described in Chapter 3 of this Biennial Report, and in Chapter 4 of New Zealand's *Sixth National Communication*.

[5] Ministry for the Environment, *New Zealand's Greenhouse Gas Inventory 1990–2011*, submitted to the United Nations Framework Convention on Climate Change 12 April 2013.

- reduce emissions in New Zealand or by overseas purchasing
- invest in clean technology and renewable power generation
- invest in forests.

The NZ ETS creates an obligation on emitters who are participants in the scheme to report on their emissions and surrender emission units that correspond to their obligations. NZ ETS participants are allowed to surrender New Zealand Units (NZU) (the primary unit of trade in the scheme), and eligible international units to meet their NZ ETS obligations.

Since New Zealand's *Fifth National Communication*, a further two sectors have entered the NZ ETS. The waste sector assumed reporting obligations in 2012 and surrender obligations in 2013. This was followed by bulk importers and users of fluorinated greenhouse gases in the industrial processes sector who also assumed reporting and surrender obligations in 2013. Additionally, the agriculture sector has been required to report on its major emissions (methane and nitrous oxide from biological processes) since 1 January 2012, but currently there is no legislated date for when biological agricultural emissions will assume surrender obligations under the NZ ETS. Further detail on the NZ ETS and these amendments can be found in Chapter 4 of the *Sixth National Communication*.

Other key mitigation actions include:

- Research, technology development and sharing of technical expertise, most notably in the agricultural sector. In particular:
    - In 2009, leading the establishment of the Global Research Alliance on Agricultural Greenhouse Gases to increase international cooperation, collaboration and investment in research, development and the extension of technologies and practices that will help deliver ways to grow more food (and more climate-resilient food systems) without growing greenhouse gas emissions.
    - Establishing the New Zealand Agricultural Greenhouse Gas Research Centre in 2010, whose current focus is on practical ways to reduce methane and nitrous oxide emissions from pastoral livestock systems while improving productivity.
- New Zealand has joined the Climate and Clean Air Coalition, which brings together countries committed to taking action on short-lived climate pollutants (such as black carbon and methane).
- Energy efficiency initiatives that include a programme for home insulation, the expansion of the efficient products programmes, the launch of a new scheme to measure, rate and improve the energy performance of commercial buildings, and reforms to drive more sustainable Government procurement.
- Transport sector initiatives that include extending the road-user charge exemption for electric vehicles, actions to improve fuel efficiency in the commercial fleet such as the launch of the Heavy Vehicle Fuel Efficiency Programme, and investment in the development of advanced biofuels.

Domestic Institutional Arrangements

New Zealand ratified the Kyoto Protocol in December 2002. The Climate Change Response Act 2002 (the Act) established the legal framework to enable New Zealand to meet its obligations under both the UNFCCC and the Kyoto Protocol. The Act includes powers for the Minister of Finance to manage New Zealand's holdings of assigned amount units under the Protocol and enables the Minister to trade those units on the international market. It established an inventory agency[6] and a registry to record holdings and transfers of units.

The NZ ETS came into effect in 2008, following amendments to the Act. Entry has been phased by sector. The Act was further amended in 2009 and reviewed again in 2011, with consequential amendments made in 2012. The aim of the most recent changes was to ensure the NZ ETS more effectively supports the Government's economic growth objectives and is flexible enough to cater for a range of future international outcomes in the period 2013 to 2020.[7]

The Ministry for the Environment (MfE) is a statutory entity[8] and Government's primary advisor on matters relating to the environment, international matters affecting the environment, and climate change. A Prime Ministerial directive for the administration of the Climate Change Response Act 2002 names the Ministry for the Environment as New Zealand's 'Inventory Agency' with responsibility for recording and reporting information related to greenhouse gas emissions in accordance with international requirements.

MfE coordinates climate change policy across Government, with many policies and/or their implementation being led by other relevant departments. The full list of these departments and details about their roles and functions is outlined in Chapter 4 of New Zealand's *Sixth National Communication*.

The most significant change in structural arrangements since the *Fifth National Communication* is the establishment of a new Crown entity, the Environmental Protection Authority (EPA) in July 2011. The EPA brings together environmental regulatory functions previously administered by MfE, the Ministry of Economic Development (now the Ministry for Business, Innovation and Employment), and the Environmental Risk Management Authority. The EPA is responsible for the operation of the New Zealand Emission Unit Register (NZEUR) and the administration of all the non-forestry sectors and applications for eligible industrial allocation under the NZ ETS. The NZEUR conforms to all the technical requirements for registries under the Kyoto Protocol including its connection to the International Transaction Log.[9]

Economic and social impacts of response measures

Legislative decisions on climate change response measures made by the New Zealand Government must have the support of the majority of the Parliament before they can be passed into law. The public consultation phase of the legislative process allows members of any member of the public or organisation to raise concerns and issues relating to proposed measures. In addition, the introduction of legislation to Parliament must be underpinned by a Regulatory Impact Analysis that assesses the economic and social impacts of the measure.

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[6] The Climate Change Response Act 2002 describes the responsibilities of the Inventory Agency including for data collection, reporting and archiving of information. Refer to section 3.5 of the *Sixth National Communication* for a description of New Zealand's national system for its greenhouse gas inventory.

[7] More detail on this can be found in Chapter 4 of New Zealand's *Sixth National Communication*.

[8] The Ministry for the Environment was established under the Environment Act 1986.

[9] More detail on the NZEUR can be found in section 3.5.3 of New Zealand's Sixth National Communication.

The Climate Change Response Act 2002 provides for review of the NZ ETS including "*its environmental, social, and economic effects*". The first review of the NZ ETS was undertaken in 2011 and looked at the impacts across sectors of the economy – including lower income households and Maori. It found that it is in New Zealand's long-term economic interests to provide a cost on greenhouse gas emissions, even though it will impose a cost on the economy in the short term.[10]

The Ministry of Foreign Affairs and Trade provides the Government with advice on international aspects of proposed policies. New Zealand's regular trade, economic and political consultations with other governments, including some non-Annex I Parties also provides opportunities for countries to raise any concerns directly. More detailed information on the implementation of policies and measures that minimise adverse social, environmental and economic impacts on non-Annex 1 Parties of the Kyoto Protocol can be found in Chapter 15 of New Zealand's Greenhouse Gas Inventory 1990–2011.[11]

Estimates of emission reductions and removal and the use of units from the market-based mechanism and land use, land-use change and forestry activities

Table 3.1 below presents New Zealand's total greenhouse gas emissions in 1990 and 2011, including and excluding emissions and removals from the LULUCF sector. This table is based on New Zealand's Greenhouse Gas Inventory, as submitted to the UNFCCC secretariat in April 2013.

Table 3.1: New Zealand's emissions of greenhouse gases, by sector, in 1990 and 2011

Sector	Gg CO_2-e		Change from 1990 (Gg CO_2-e)	Change from 1990 (%)
	1990	2011		
Energy	23,487.7	31,003.3	+7,515.6	+32.0
Industrial processes	3,392.8	5,431.0	+2,038.1	+60.1
Solvent and other product use	41.5	27.9	–13.6	–32.8
Agriculture	30,661.9	34,387.3	+3,725.4	+12.1
Waste	2,059.1	1,985.4	–73.7	–3.6
Total (excluding LULUCF)	**59,643.1**	**72,834.9**	**+13,191.9**	**+22.1**
LULUCF	-28,112.7	–13,540.2	+14,572.5	+51.8
Net Total (including LULUCF)	**31,530.4**	**59,294.7**	**+27,764.4**	**+88.1**

Note: Net removals from the LULUCF sector are as reported under UNFCCC (chapter 7 of the Inventory). Columns may not total due to rounding.

Source: Ministry for the Environment. 2013. *New Zealand's Greenhouse Gas Inventory 1990–2011.* Wellington: Ministry for the Environment.

[10] For more information please see http://climatechange.govt.nz/emissions-trading-scheme/ets-review-2011/index.html.

[11] Ministry for the Environment. 2013. *New Zealand's Greenhouse Gas Inventory 1990–2011*. Retrieved from http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-2013

Accounting under the Kyoto Protocol

New Zealand's initial assigned amount under the Kyoto Protocol is recorded as 309,564,733 metric tonnes CO_2 equivalent (309,565 Gg CO_2-e). The initial assigned amount is five times the total 1990 emissions reported in the inventory submitted as part of *New Zealand's Initial Report under the Kyoto Protocol*.[12] The initial assigned amount does not change during the first commitment period (2008–2012) of the Kyoto Protocol. In contrast, the time series of emissions reported in each inventory submission are subject to continuous improvement. Consequently, the total emissions in 1990 as reported in this submission are 3.7 per cent lower than the 1990 level of 61,912.9 Gg CO_2-e, which was estimated in 2006 and used in the initial assigned amount calculation.

Table 3.2 below presents New Zealand's net emissions and removals from land subject to afforestation, reforestation and deforestation as reported under Article 3.3 of the Kyoto Protocol between 2008 and 2011.

Table 3.2: New Zealand's net emissions and removals from land subject to afforestation, reforestation and deforestation as reported under Article 3.3 of the Kyoto Protocol between 2008 and 2011

Source	2008	2009	2010	2011
Afforestation/reforestation				
Net removals from AR land not harvested in CP1 (Gg CO_2-e)	-18,199.48	-18,293.56	-18,455.91	-18,551.52
Emissions from AR land harvested in CP1 (Gg CO_2-e)	82.42	96.24	106.08	111.43
Net removals in calendar year (Gg CO_2-e)	**-18,117.06**	**-18,197.32**	**-18,349.83**	**-18,440.09**
Deforestation				
Emissions in calendar year (Gg CO_2-e)	1,586.19	1,368.06	1,029.40	1,674.62
Net removals (Gg CO_2-e)	**-16,530.87**	**-16,829.26**	**-17,320.43**	**-16,765.48**
Accounting quantity (Gg CO_2-e)	**-16,613.29**	**-16,925.50**	**-17,426.50**	**-16,876.91**

[12] Ministry for the Environment. 2006. *New Zealand's Initial Report under the Kyoto Protocol: Facilitating the calculation of New Zealand's assigned amount and demonstrating New Zealand's capacity to account for its emissions and assigned amount in accordance with Article 7 paragraph 4 of the Kyoto Protocol*. Wellington: Ministry for the Environment.

Estimates of emission reductions and removals and the use of units from the market-based mechanisms and land use, land-use change and forestry activities

CTF Table 3: Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
									2009	2020
New Zealand Emissions Trading Scheme	Forestry, Energy, Fishing, Industry, Liquid fossil fuels, Synthetic gases, Waste.	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6.	The scheme aims to reduce emissions by making emitters pay for any emissions covered under the Kyoto Protocol.	Economic, regulatory	Implemented	The NZ ETS covers all sectors and all gases, though 2012 amendments removed the date for biological emissions from agriculture to assume surrender obligations.	2008 (Entry has been phased by sector)	The Environmental Protection Authority administers the register and enforces the scheme. The Ministry for the Environment is responsible for development NZ ETS regulations. The Ministry for Primary Industries		9,810[13]

[13] Chapter 5 of the *Sixth National Communication* shows that an estimated 9,810.0 Gg CO_2-e emissions will be avoided by key quantifiable policies and measures by 2020. The NZ ETS is assumed to be responsible for the majority of this total, but its exact effect has not been quantified. This is because the impacts of the NZ ETS are difficult to entirely distinguish from impacts of other policies. Also, the NZ ETS is a long-term intervention, and its impacts need to be evaluated on that basis. The Ministry for the Environment is establishing a work programme to ensure that the NZ ETS and its impacts are monitored and evaluated over time.

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
								administers the forestry allocation plan and compliance with forestry regulations.		
ENERGYWISE homes	Energy	CO_2	Aims to increase energy efficiency in homes by providing information, and grants.	Fiscal, information	Implemented	ENERGYWISE Homes is the overall brand for a residential energy efficiency programme that encompasses a number of different initiatives. In addition to various information tools and campaigns, the Warm Up New Zealand: Heat Smart programme provided grants for insulation and clean heat, and the new Warm Up New Zealand: Healthy Homes	Energywise Homes has been ongoing for many years. Warm Up New Zealand: Heat Smart Programme ran from 2009 – September 2013 This was replaced with Warm Up New Zealand: Health Homes Programme which began rolling out from August 2013.	Energy Efficiency and Conservation Authority		20

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
						programme provides grants for insulation.				
Efficient Products Programme	Energy	CO_2	Aims to help New Zealand families and businesses to purchase and use products that use less energy and save money.	Regulatory, voluntary, information	Implemented	A joint Equipment Energy Efficiency (E3) Programme has been jointly developed with Australia. Energy efficiency measures including energy rating labelling for a range of residential, commercial and industrial products, along with mandatory performance standards allows both countries to set consistent standards and measures for energy efficiency.	2006	Energy Efficiency and Conservation Authority		1,400

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
Business programmes	Energy	CO_2	Promotes best practice energy management in energy intensive businesses.	Fiscal, information	Implemented	The focus is on four priority areas: Commercial Buildings; Industrial heat; Business Transport; and Lighting. The scheme provides information on new technologies and energy management, grants for energy audits and demonstrations of new technology, and one-on-one support.	The current suite of business programmes commenced implementation in 2012	Energy Efficiency and Conservation Authority	89	
Energy efficiency in Government - Sustainable Government Procurement	Energy	CO_2	The programme aims to make sustainable procurement an integral part of everyday procurement practice.	Fiscal, information	Implemented	The reforms are based around three core elements: policy transformation, capability building, and greater use of collaborative contracts.	2009	Ministry of Business, Innovation and Employment		NE

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
Vehicle fuel economy labelling	Transport	CO_2	A compulsory scheme requiring vehicle traders and online vendors to display information.	Regulatory	Implemented	Allows consumers to make more informed vehicle purchase choices and to place an appropriate value on fuel economy.	2008	New Zealand Transport Agency and the Energy Efficiency and Conservation Authority		43
Biofuels	Transport	CO_2	Supports research and innovation in relation to biofuels, with a focus on advanced biofuels.	Fiscal	Implemented	There is particular interest in fuels made from forestry waste given New Zealand's well established forestry industry.	2008	Ministry of Business, Employment and Innovation		NE
Electric vehicles	Transport	CO_2	Promotes uptake of electric vehicles in New Zealand, by exempting them from road-user charges.	Fiscal	Implemented	In 2012, the exemption on road user charges for electric vehicles was extended until 2020.	2009	New Zealand Transport Agency		NE
Other transport measures	Transport	CO_2		Fiscal, education	Implemented	These include research and driver training to promote more efficient driving		Ministry of Transport and the New Zealand Transport Agency		NE

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
						practices in the commercial fleet, research into Intelligent Transport Systems, improvements to roading and rail infrastructure, and promoting the use of public transport in New Zealand.				
Global Alliance on agricultural emissions	Agriculture	CH_4, N_2O, CO_2	A network to increase international collaboration and investment in research into increasing agricultural and food production without growing greenhouse gas emissions.	Research, information, training, education	Implemented		2009	Secretariat support and Co-chair of the Livestock Research Group provided by New Zealand		NE
Primary Growth Partnership (PGP)	Agriculture	CH_4, N_2O, CO_2	To boost the economic growth and sustainability of New Zealand's primary, forestry	Research, information, training	Implemented	Provides funding for programmes of research and innovation.	2009	Ministry for Primary Industries		NE

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
			and food sectors.							
New Zealand Agricultural Greenhouse Gas Research Centre	Agriculture	CH_4, N_2O, CO_2	Focuses on ways to increase productivity and reduce on-farm methane and nitrous oxide emissions.	Research, information, capability building, education	Implemented	The Centre brings together nine research organisations.	2010	Ministry for Primary Industries		NE
Pastoral Greenhouse Gas Research Consortium (PGGRC)	Agriculture	CH_4, N_2O	To provide livestock farmers with the information and means to mitigate their greenhouse gas emissions.	Research, information, education	Implemented	A partnership between the Government and the dairy and fertiliser industries.	2002	Ministry for Primary Industries and the Ministry of Business, Innovation and Employment		NE
Sustainable Land Management and Climate Change Plan of Action	Agriculture	CH_4, N_2O, Soil carbon, forest carbon	Initiatives and programmes in the agricultural and forestry sectors that focus on adaptation to climate change, reducing emissions and enhancing sinks, and new business opportunities.	Research, information, education, capability building	Implemented		2007	Ministry for Primary Industries		NE

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
Permanent Forest Sinks Initiative	Forestry	CO_2	Promotes the establishment of permanent forests on previously unforested land.	Fiscal, voluntary agreement	Implemented	The Initiative offers an assigned amount units for carbon sequestered in permanent forests established after 1 January 1990.	2008	Ministry for Primary Industries		NE
East Coast Forestry Project	Forestry	CO_2	The main purpose of this project is to reduce erosion by encouraging tree planting on erosion-prone land. The project also enhances the sequestration of carbon in forest sinks.	Fiscal, voluntary agreement	Implemented	Since 1992, MPI has provided funding to landholders to prevent and control erosion. The grant can be used to control erosion on the worst eroding or erosion-prone land in the district by providing effective tree cover through planting or encouraging natural reversion to native bush.	1992	Ministry for Primary Industries		NE

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
Afforestation Grant Scheme	Forestry	CO_2	The Scheme offers a contestable fund that aims to increase the area of Kyoto forest in New Zealand by offering a simpler alternative to the NZ ETS for landowners establishing new forests.	Fiscal, voluntary agreement	Implemented	Landowners who have received a grant have ongoing obligations to maintain their grant forests.	2008	Ministry for Primary Industries		NE
Waste Minimisation Act 2008	Waste	CH_4 (diversion of organic wastes from landfill) CO_2 (indirectly – through energy savings through resource efficiency)	The purpose is to encourage waste minimisation and decrease waste disposal in order to protect the environment from harm and provide environmental, social, economic and cultural benefits.	Regulatory	Implemented		2008	Ministry for the Environment		NE

Name of Mitigation action	Sector affected	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation	Brief description	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO_2 eq)	
National Environmental Standard for Landfill Methane (under the National Environmental Standard for Air Quality)	Waste	CH_4	The objective of the landfill gas standards is the effective management of discharges to air of greenhouse gases (mainly methane) generated from large landfills.	Regulatory	Implemented	Requires landfill sites with a lifetime design capacity of greater than 1 million tonnes of refuse to collect and destroy methane emissions.	Standard came into effect in 2004 with full compliance required by 2007	Ministry for the Environment and regional and local councils	216	502
Waste Minimisation Fund	Waste	CH_4 (through diversion of organic wastes from landfill) CO_2 (indirectly – through energy savings through resource efficiency)	The Waste Minimisation Fund (WMF) helps fund waste minimisation projects. The purpose of the fund is to increase resource efficiency, increase reuse, recovery and recycling, and decrease waste to landfill.	Fiscal	Implemented	The funding comes from a landfill disposal levy imposed under the Waste Minimisation Act 2008.		Ministry for the Environment		NE

CTF Table 4: Reporting on progress[a,b]

	Total emissions excluding LULUCF	Contribution from LULUCF[d]	Quantity of units from market based mechanisms under the Convention		Quantity of units from other market based mechanisms	
Year[c]	(kt CO_2 eq)	(kt CO_2 eq)	(number of units)	(kt CO_2 eq)	(number of units)	(kt CO_2 eq)
1990	59,643.06	–	NA	NA	NA	NA
2010	71,847.77	-17,426.50	NA	NA	NA	NA
2011	72,834.93	-16,876.91	NA	NA	NA	NA

Note: Current projections show that New Zealand's emissions including removals from Kyoto forestry will be below New Zealand's First Commitment Period target, so the Government will not have to purchase emission units to meet this target.

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

CTF Table 4(a)II: Progress in achievement of the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the counting of emissions and removals from the land use, land-use change and forestry sector in relation to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol[a,b,c]

GREENHOUSE GAS SOURCE AND SINK ACTIVITIES	*Base year*[d]	Net emissions/removals[e]					Accounting parameters[h]	Accounting quantity[i]
		2008	2009	2010	2011	Total[g]		
	(kt CO_2 eq)							
A. Article 3.3 activities								
A.1. Afforestation and Reforestation								-73,500.47
A.1.1. Units of land not harvested since the beginning of the commitment periodj		-18,199.48	-18,293.56	-18,455.91	-18,551.52	-73,500.47		-73,500.47
A.1.2. Units of land harvested since the beginning of the commitment period[j]								0.00
A.2. Deforestation		1,586.19	1,368.06	1,029.40	1,674.62	5,658.27		5658.27
B. Article 3.4 activities								
B.1. Forest Management (if elected)		NA	NA	NA	NA	NA		NA
3.3 offset[k]							0	NA

FM cap[l]							3666.67	NA
B.2. Cropland Management (if elected)	0	NA	NA	NA	NA	NA	0	0
B.3. Grazing Land Management (if elected)	0	NA	NA	NA	NA	NA	0	0
B.4. Revegetation (if elected)	0	NA	NA	NA	NA	NA	0	0

Note: 1 kt CO_2 eq equals 1 Gg CO_2-e.

Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and forestry; NA = Not Applicable

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

[c] Parties can include references to the relevant parts of the national inventory report, where accounting methodologies regarding LULUCF are further described in the documentation box or in the biennial reports.

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

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

[f] Additional columns for relevant years should be added, if applicable.

[g] Cumulative net emissions and removals for all years of the commitment period reported in the current submission.

[h] The values in the cells "3.3 offset" and "Forest management cap" are absolute values.

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

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

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

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

CTF Table 4(b): Reporting on progress

Units of market-based mechanisms			Year	
			2011	2012
Kyoto Protocol units[d]	Kyoto Protocol units	(number of units)	0	0
		(kt CO_2 eq)	0	0
	AAUs	(number of units)	0	0
		(kt CO_2 eq)	0	0
	ERUs	(number of units)	0	0
		(kt CO_2 eq)	0	0
	CERs	(number of units)	0	0
		(kt CO_2 eq)	0	0
	tCERs	(number of units)	0	0
		(kt CO_2 eq)	0	0
	lCERs	(number of units)	0	0
		(kt CO_2 eq)	0	0

Other units [d,e]	**Units from market-based mechanisms under the Convention**	(number of units)	0	0
		(kt CO_2 eq)	0	0
			0	0
			0	0
	Units from other market-based mechanisms	(number of units)	0	0
		(kt CO_2 eq)	0	0
			0	0
			0	0
Total		(number of units)	0	0
		(kt CO_2 eq)	0	0

Note: New Zealand understands 'surrender' as distinct from 'holding' To date, New Zealand has not surrendered any international units to fulfil its emissions target for the First Commitment Period of the Kyoto Protocol.

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

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

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

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

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

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

Chapter IV: Projections

New Zealand uses projections to anticipate future greenhouse gas emissions and removals. New Zealand's projections of emissions are produced by a cross-Government technical group led by the Ministry for the Environment. Agricultural emissions and net emissions and removals by forests are projected by the Ministry for Primary Industries. Emissions from stationary energy and transport, and carbon dioxide emissions from industrial processes are projected by the Ministry of Business, Innovation and Employment. Projections of emissions from the waste sector and emissions of fluorinated gases are completed by the Ministry for the Environment.

Kyoto Protocol First Commitment Period

New Zealand produces an annual projection of progress towards meeting its commitment under Article 3.1 of the Kyoto Protocol.[14] The latest report produced in April 2013 projected that New Zealand will have a surplus of 29.6 million units over the first commitment period of the Kyoto Protocol.

Projections under the UNFCCC

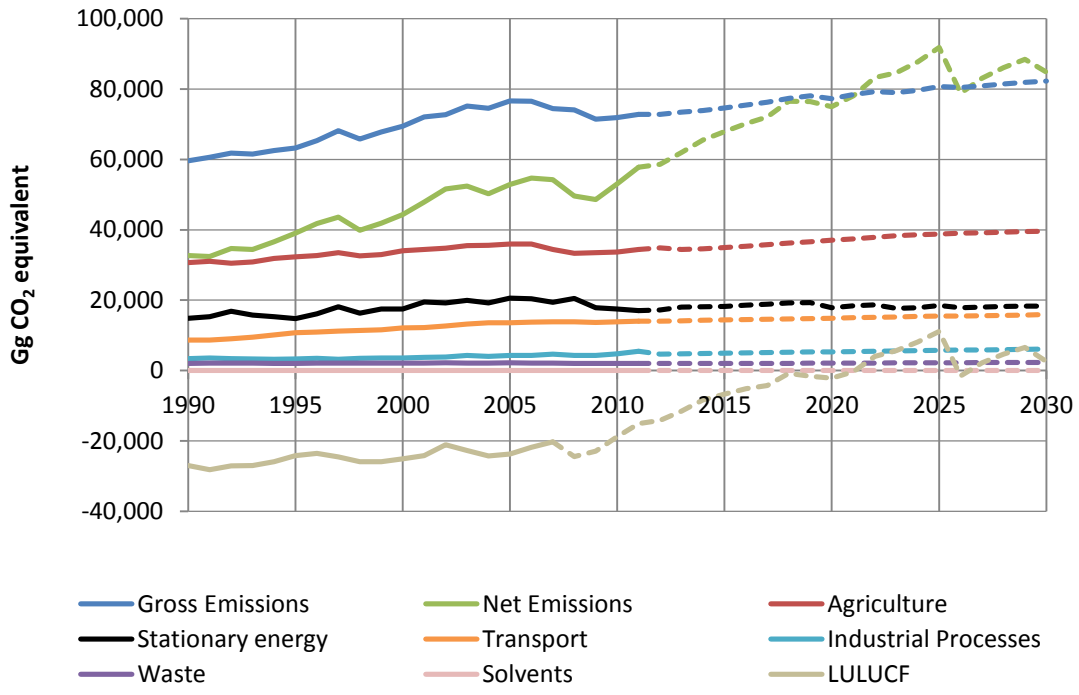
New Zealand uses projections to anticipate future emissions.[15] Projections of emissions and removals are useful but inherently uncertain. Economic variables such as commodity and oil prices, the assumed carbon price, the assumed rate of afforestation and deforestation, and the harvest age of forests have significant effects on projected emissions and removals. Seasonal changes, especially variation in rainfall can affect both energy and agriculture emissions. There is also uncertainty in the methodology to estimate emissions from biological sources such as agriculture and forestry.

Based on current data, projections out to 2030 show that New Zealand's total emissions are projected to increase gradually. New Zealand's net emissions are also projected to increase. Given the influence of forests on New Zealand's emissions, at any given point in time net emissions will be strongly influenced by the planting and harvesting cycles of New Zealand's planted forest in the Land Use Land-Use Change and Forestry (LULUCF) sector (Figure 4.1).

[14] This projection report is available at http://www.mfe.govt.nz/issues/climate/greenhouse-gas-emissions/net-position/index.html

[15] Emissions projections in National Communications reports are calculated using reporting rules under the UNFCCC, as required by reporting guidelines. In contrast, New Zealand's Kyoto Protocol projections, and emission reduction targets, are based on emissions calculated under the Kyoto Protocol framework of rules. As a result, the projections here are not strictly relevant to New Zealand's emissions reductions targets.

Figure 4.1: New Zealand's actual and projected emissions 1990-2030 under the UNFCCC



Note: Total gross emissions exclude the LULUCF (forestry) sector. LULUCF projections are based on a mid-point emissions scenario.

Plantation forestry is expected to temporarily transition from a net sink to a net source of emissions sometime around 2020. This is because forests planted in the late 1980s and early 1990s will be harvested for timber production around this time, as part of the managed forestry cycle. The forestry sector is expected to revert to a net carbon dioxide sink in the late 2030s, once the forests are replanted and the trees have matured enough to absorb enough carbon dioxide to act as a net sink.

These projections assume that New Zealand's natural forests are in a steady state with respect to carbon dioxide emissions, that is, neither a sink nor a source. This assumption is currently being reassessed. Projections of net emissions will be subject to change depending on the final outcome of this analysis.

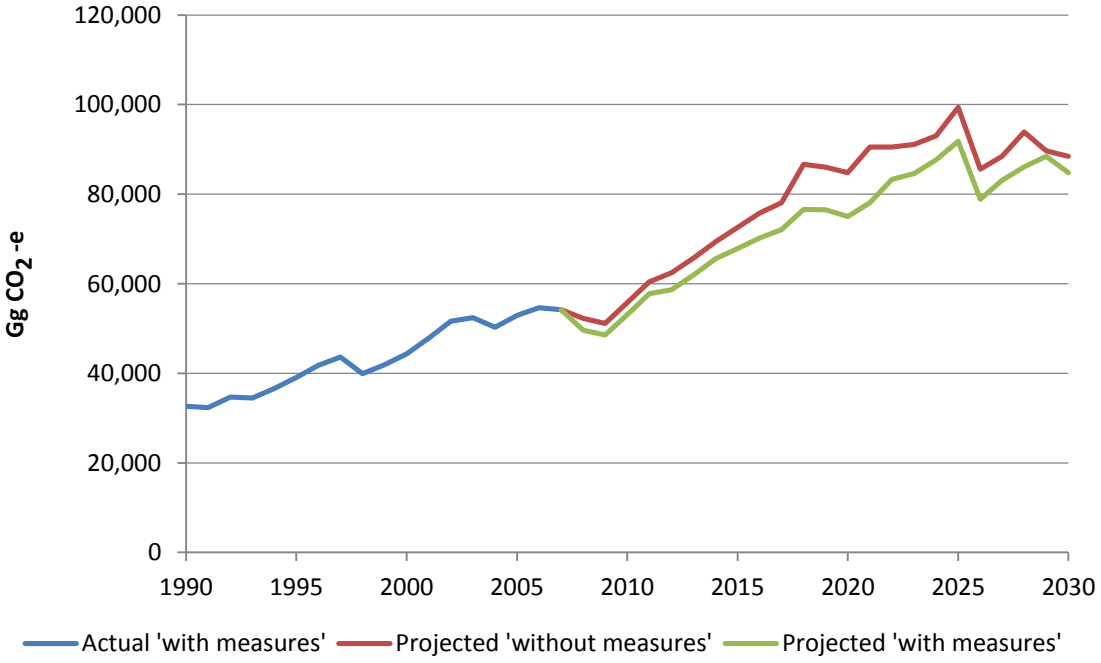
A comparison of New Zealand's projected net emissions 'with measures' and 'without measures' can be used to show some, but not all, of New Zealand's policies and measures.[16] As a result, the difference between the 'with measures' scenario and the 'without measures' scenario does not demonstrate the full impact of the Government's policies and measures. For example, New

[16] It is not possible to quantify the effect of all types of measures in the projections. Consequently, the 'with measures' scenario includes only the modelled impacts of the NZ ETS, Government afforestation grant schemes and the National Environmental Standard to control methane emissions from landfills. The 'with measures' scenario does not include the impact of policy measures such as investment in research. It is also not possible to isolate the impact of government policies and measures on energy efficiency, so both the 'with measures' and 'without measures' scenarios assume the same energy efficiency trends.

Zealand's investment in agricultural research should reduce domestic and global agriculture emissions, however the benefits cannot be predicted and are not included in emission estimates until proven. Projections show that New Zealand's policies and measures are estimated to avoid 9,810.0 Gg CO_2-e emissions in 2020, and 3,624.3 Gg CO_2-e emissions in 2030 (figure 4.2).

Figure 4.2 shows that the difference between projected emissions 'with measures' and 'without measures' varies over time. This occurs because the NZ ETS is expected to change the timing of forestry harvesting cycle decisions compared with the 'without measures' projection. Emissions reductions achieved also depend in part on the price of carbon faced by NZ ETS participants, which is related to the international carbon price. New Zealand anticipates that the future carbon price will rise as progress is made in international negotiations on a new post-2020 global agreement and countries set more ambitious emission reduction targets.

Figure 4.2: Actual and projected net emissions, with measures versus without measures, 1990–2030



Note: Projections start at 2008 because forestry data from 2008–2012 will not be confirmed until 2014.

Chapter 4 of the *Sixth National Communication* contains detailed information of the full suite of climate change related policies and measures implemented in New Zealand.

There have been no substantial changes in the methodologies used to project greenhouse gas emissions since the Fifth National Communication. Detailed information on projections and on the methodologies used to model projections presented in this section can be found in Chapter 5 of the *Sixth National Communication*.

CTF Table 5: Summary of key variables and assumptions used in the projections analysis

Key underlying assumptions	Unit	Historical [b]						Projected			
		1990	1995	2000	2005	2010	2011	2015	2020	2025	2030
GDP (real 1995/96)	NZ$ billion	82	94	110	132	140	142	158	178	201	222
Effective* carbon price for energy projections	NZ$/tonne CO_2-e							5	5	5	5
Oil price	2011 US$/barrel	39	27	41	68	83	95	106	118	127	135
Coal price	2011 NZ$/GJ							5.3	6.24	6.24	6.24
Exchange rate	NZ$/US$	0.62	0.55	0.46	0.7	0.72	0.79	0.71	0.6	0.6	0.6
Gas supply from new discoveries	PJ/year							0	59	133	181
Population	thousand	3,460	3,670	3,806	4,130	4,370	4,410	4,540	4,760	4,960	5,160
Afforestation[1]	Hectares/year	13,800	64,500	29,100	5,100	6,000	12,000	4,100	12,100	12,100	12,100
Deforestation[2]	Hectares/year	-1,700	-1,700	-3,100	-13,600	-4,400	-5,200	-5,500	-5,500	-5,500	-5,500
Harvest age[3]	Age							30	30	30	30
Carbon price for forestry projections	NZ$/tonne CO_2-e							12	12	12	12

Notes

[1] Numbers rounded to the nearest 100

[2] Deforestation figures for 2010 and 2011 differ to the 2011 National Greenhouse Gas Inventory as projections are backdated to 2008. This is due to final levels of deforestation, harvesting and afforestation from 2008 to 2012 only being confirmed once New Zealand's mapping is completed in 2013, and then included in New Zealand's 2014 inventory submission.
Includes post-1989, pre-1990 planted forest and natural forest deforestation.
Numbers rounded to the nearest 100

[3] Midpoint projections assume target rotation age of 30 years

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

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

* Under current existing policy settings, stationary energy participants under the NZ ETS are only required to surrender one NZU for every two tonnes of emissions. This policy has been accounted for in the energy emissions modelling for the projections. This means an effective price of $5 per tonne of CO_2-e equates to an NZU price of $10 per tonne of CO_2-e

CTF Table 6: Information on updated greenhouse gas projections under a 'with measures' and 'without measures' scenario

GHG emissions projections	Unit	GHG emissions and removals [b]							GHG emission projections - Scenarios			
		Base Year	1990	1995	2000	2005	2010	2011	With measures		Without measures	
									2020	2030	2020	2030
Sector [d, e]												
Energy	kt CO_2 eq	14,861.95	14,861.95	14,735.83	17,512.18	20,535.49	17,487.60	16,988.68	17,854.28	18,310.88	17,905.19	18,359.78
Transport	kt CO_2 eq	8,625.74	8,625.74	10,791.49	12,145.60	13,617.58	13,829.86	14,014.63	14,872.47	15,899.52	14,878.64	15,904.10
Industry/industrial processes	kt CO_2 eq	3,434.38	3,434.38	3,350.18	3,570.88	4,335.46	4,795.22	5,458.89	5,346.23	6,120.87	5,346.23	6,120.87
Agriculture	kt CO_2 eq	30,661.93	30,661.93	32,279.28	34,058.41	35,986.34	33,722.30	34,387.32	37,045.54	39,598.47	37,045.54	39,598.47
Forestry/LULUCF	kt CO_2 eq	-26,994.99	-26,994.99	-24,149.62	-25,075.48	-23,738.33	-20,370.40	-15,042.11	-2,200.62	2,587.76	7,172.29	5,907.97
Waste management/waste	kt CO_2 eq	2,059.06	2,059.06	2,058.15	2,113.65	2,169.55	2,012.80	1,985.40	2,099.76	2,314.51	2,479.78	2,565.09
Other (specify)	kt CO_2 eq											

Gas												
CO_2 emissions including net CO_2 from LULUCF	kt CO_2 eq	-1,947.93	-1,947.93	3,234.99	6,274.82	12,648.09	13,032.75	18,120.11	32,532.34	38,733.32	41,953.08	42,106.51
CO_2 emissions excluding net CO_2 from LULUCF	kt CO_2 eq	25,047.06	25,047.06	27,384.61	31,350.29	36,386.41	33,403.15	33,162.22	34,732.96	36,145.55	34,780.79	36,198.54
CH_4 emissions including CH_4 from LULUCF	kt CO_2 eq	25,707.88	25,707.88	26,439.71	27,942.10	28,413.38	26,930.19	27,101.64	28,861.33	30,549.23	29,363.45	31,103.15
CH_4 emissions excluding CH_4 from LULUCF	kt CO_2 eq	25,650.33	25,650.33	26,366.26	27,886.67	28,357.86	26,875.70	27,050.15	28,807.06	30,494.95	29,309.18	31,048.87
N_2O emissions including N_2O from LULUCF	kt CO_2 eq	8,325.64	8,325.64	9,216.11	9,861.97	11,126.12	10,444.45	10,704.03	11,778.13	12,921.50	11,787.54	12,922.05
N_2O emissions excluding N_2O from LULUCF	kt CO_2 eq	8,300.60	8,300.60	9,192.22	9,842.14	11,109.37	10,429.95	10,689.68	11,772.40	12,915.77	11,781.81	12,916.32
HFCs	kt CO_2 eq	NA,NO	NA,NO	122.81	252.99	712.16	1,077.69	1,885.07	1,867.27	2,656.61	1,867.27	2,656.61
PFCs	kt CO_2 eq	629.87	629.87	131.16	58.06	59.57	40.81	30.18	20.24	12.21	20.24	12.21
SF_6	kt CO_2 eq	15.20	15.20	17.88	10.57	19.03	20.46	17.62	18.35	19.16	18.35	19.16

GHG projections	Unit	Base Year	1990	1995	2000	2005	2010	2011	2020	2030	2020	2030
Total with LULUCF [f 1]	**kt CO_2 eq**	**32,730.66**	**32,730.66**	**39,162.66**	**44,400.51**	**52,978.35**	**51,546.35**	**57,858.65**	**75,077.66**	**84,892.03**	**85,009.93**	**88,819.69**
Total without LULUCF[2]	**kt CO_2 eq**	**59,643.06**	**59,643.06**	**63,214.94**	**69,400.72**	**76,644.40**	**71,847.76**	**72,834.92**	**77,218.28**	**82,244.25**	**77,777.64**	**82,851.71**

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry; NA = Not Applicable; NO = Not Occurring; NE = Not Estimated

Notes: 1 kt CO_2 eq equals 1 Gg CO_2-e.

[1] Total emissions including LULUCF in this table differ to the total emissions including LULUCF presented in the *Sixth National Communication*. Total emissions presented in this table include non-CO2 emissions from LULUCF, whereas the total emissions presented in the *Sixth National Communication* do not.

[2] The projections of total emissions excluding LULUCF under a 'without measures' scenario for 2020 and 2030 in this table differ to the projections of total emissions excluding LULUCF under a 'without measures' scenario for 2020 and 2030 presented in the Sixth National Communication. This is due to a difference in the methodology used to estimate the effect of measures on methane emissions in the waste sector.

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

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

[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

Chapter V: Provision of financial, technological and capacity-building support to developing country Parties

New Zealand remains committed to addressing climate change in developing countries to ensure good outcomes and to manage risks. During the reporting period, New Zealand has given and delivered on undertakings to continue to provide climate change-related financial support, with a focus on renewable energy in the Pacific region. New Zealand provides a range of financial, technological and capacity-building support to developing country Parties (primarily to its partner countries in the Pacific, but also to countries in Asia, Africa, and Latin America) through multilateral, bilateral and regional channels. It also provides specific resources for mitigation, adaptation and technology transfer.

New Zealand's contributions are captured in the following tables:

- Table 7 - public financial support
- Table 7(a) - public financial support provided through multilateral channels
- Table 7(b) -public financial support provided through bilateral, regional and other channels
- Table 8 - support for technology development and transfer
- Table 9 – support for capacity-building.

In addition to these tables, further information on financial support provided by New Zealand can be found in Chapter 7 of the Sixth National Communication.

This Biennial Report covers two calendar years 2011 and 2012. Funds are reported in New Zealand Dollar millions (NZD). The methodology used for calculating currency exchange is the Annual Average exchange rates, as used by the Organisation for Economic Cooperation and Development (OECD). The rates used are as follows:

- 2011: US$ 1 = NZ$ 1.2664
- 2012: US$ 1 = NZ$ 1.2349

New and Additional

New Zealand provided NZ$53.49 million in bilateral climate change-related assistance over the reporting period. New Zealand also provided core funding[17] to regional and multilateral agencies totalling NZ$98.87 million. Over this period, climate-related finance accounted for a growing proportion of expenditure within Vote Official Development Assistance, which also increased over the previous three years.

The New Zealand Aid Programme's approach of integrating environment (and climate change objectives) in all activities as cross-cutting issues is in keeping with international best practice. New Zealand considers this to be the most effective way to manage climate change risks and therefore looks to design development assistance with environment and climate change co-benefits.

[17] These contributions represent the full amounts provided to the organisations for the full range of activities covered by their programmes, which include climate change mitigation and adaptation.

National approach to tracking and reporting provision of support

The New Zealand Aid Programme has systems in place to track, measure and record climate change-related assistance provided to developing countries. For example, the Programme's Climate Change Operational Policy, in place since mid-2012, defines how support for climate change is to be delivered, recorded and quantified. In addition, the Environmental and Social Impacts Operational Policy (the Programme's environmental 'safeguards' policy) seeks to identify and manage risks posed by climate change while taking advantage of opportunities to strengthen resilience of communities and infrastructure.

In this Biennial Report, New Zealand reports on bilateral, regional and multilateral contributions as follows:

- Reported bilateral contributions include contributions for aid activities where addressing climate change is the principal, or significant, outcome of the activity.
- Reported regional and multilateral contributions include core funding provided to regional and multilateral organisations. Core funding, which is directed to programmes and projects identified in those organisations' strategic plans, is not monitored at a level that tracks their specific climate change actions. As such, the figures provided in Tables 7, 7(a), and 7(b) represent total allocations to multilateral and regional organisations "that Parties cannot specify as climate specific". This approach is in keeping with the Guidelines and footnotes c) and d) in these tables.

For the purposes of this report, "provided" means funds that have been transferred from the New Zealand Government to a recipient (including any multilateral organisation).

Technology transfer and building capacity

During the reporting period, New Zealand contributed to technology and knowledge distribution through various initiatives in the Pacific region. Details of support for country level "technology development and transfer support" and "capacity building support" is set out in Tables 7(b), 8, 9 and Chapter 7 of the Sixth National Communication.

New Zealand's contributions are not monitored at a level that differentiates between the provision of "technology development and transfer support" and "capacity building support". Therefore, the figures in Tables 7(b), 8 and 9 represent a combined figure for those contributions, and are replicated throughout those tables.

CTF Table 7: Provision of public financial support: summary information [a]

Allocation channels	New Zealand dollar - NZD					USD [b]				
		Climate-specific [d]					Climate-specific [d]			
	Core/general [c]	Mitigation	Adaptation	Cross-cutting [e]	Other	Core/general [c]	Mitigation	Adaptation	Cross-cutting [e]	Other
2011										
Total contributions through multilateral channels	42.78					33.78				
Multilateral climate change funds [g]	3.28					2.59				
Other multilateral climate change funds [h]										
Multilateral financial institutions, including regional development banks	31.22					24.65				
Specialised United Nations bodies	8.28					6.54				
Total contributions through bilateral, regional and other channels		12.59	10.16		10.92		9.95	8.05		8.62
Total	**42.78**	**12.59**	**10.16**		**10.92**	**33.78**	**9.95**	**8.05**		**8.62**

2012										
Total contributions through multilateral channels	30.04					24.33				
Multilateral climate change funds [g]	2.68					2.17				
Other multilateral climate change funds [h]										
Multilateral financial institutions, including regional development banks	19.04					15.42				
Specialized United Nations bodies	8.32					6.74				
Total contributions through bilateral, regional and other channels		25.75	7.23		12.89		20.86	5.86		10.44
Total	**30.04**	**25.75**	**7.23**		**12.89**	**24.33**	**20.86**	**5.86**		**10.44**

Abbreviation: USD = United States dollars

[a] Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX 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 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 1/CP.17

CTF Table 7(a): Provision of public financial support: contribution through multilateral channels[a]

	Total Amount								
	Core/general [d]		Climate-specific [e]						
Donor funding	**Domestic Currency**	**USD**	**Domestic Currency**	**USD**	**Status [b]**	**Funding source [f]**	**Financial instrument [f]**	**Type of support [f,g]**	**Sector [c]**
2011									
Total contributions through multilateral channels	**42.78**	**33.76**							
Multilateral climate change funds [g]	**3.28**	**2.59**							
1. Global Environment Facility	3.27	2.58			Provided	ODA	Other (Capital subscription)	Other (Core contribution)	Other (Not applicable)
2. Least Developed Countries Fund									
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities	0.01	0.01			Provided	ODA	Grant	Other (Core contribution)	Other (Not applicable)

7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	**31.22**	**24.65**							
1. World Bank	19.71	15.56			Provided	ODA	Other (Capital subscription)	Other (Core contribution)	Other (Not applicable)
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank	11.51	9.09			Provided	ODA	Other (Capital subscription)	Other (Core contribution)	Other (Not applicable)
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank									
7. Other									
Specialised United Nations bodies	8.28	6.54							

1. United Nations Development Programme									
	8.00	6.32			Provided	ODA	Grant	Other (Core contribution)	Other (Not applicable)
2. United Nations Environment Programme									
	0.28	0.22			Provided	ODA	Grant	Other (Core contribution)	Other (Not applicable)
2012									
Total contributions through multilateral channels	**30.04**	**24.33**							
Multilateral climate change funds [g]	**2.68**	**2.17**							
1. Global Environment Facility	2.45	1.98			Provided	ODA	Other (Capital subscription)	Other (Core contribution)	Other (Not applicable)
2. Least Developed Countries Fund									
3. Special Climate Change Fund									
4. Adaptation Fund									

5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities	0.23	0.19			Provided	ODA	Grant	Other (Core contribution)	Other (Not applicable)
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	**19.04**	**15.42**							
1. World Bank	12.51	10.13			Provided	ODA	Other (Capital subscription)	Other (Core contribution)	Other (Not applicable)
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank	6.53	5.29			Provided	ODA	Other (Capital subscription)	Other (Core contribution)	Other (Not applicable)
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank									

7. Other									
Specialised United Nations bodies	**8.32**	**6.74**							
1. United Nations Development Programme									
	8.00	6.48			Provided	ODA	Grant	Other (Core contribution)	Other (Not applicable)
2. United Nations Environment Programme									
	0.32	0.26			Provided	ODA	Grant	Other (Core contribution)	Other (Not applicable)
3. Other									

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

[a] Parties should fill in a separate table for each year, namely 20xx-3 and 20xx-2, where 20xx 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 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] This refers to funding for activities which are cross-cutting across mitigation and adaptation.

CTF Table 7(b) Provision of public financial support: contribution through bilateral, regional and other channels[a]

	Total Amount						
	Climate-specific [f]						
Recipient country/region/project/programme [b]	Domestic Currency	USD	Status [c]	Funding source [g]	Financial instrument [g]	Type of support [g, h]	Sector
2011							
Total contributions through bilateral, regional and other channels	**33.67**	**26.62**					
Afghanistan	0.33	0.26	Provided	ODA	Grant	Mitigation	Energy
Bangladesh	0.09	0.07	Provided	ODA	Grant	Mitigation	Energy
Cook Islands	0.26	0.21	Provided	ODA	Grant	Adaptation	Water and sanitation
Cook Islands	1.47	1.16	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Cook Islands	0.20	0.16	Provided	ODA	Grant	Mitigation	Energy
Ecuador	0.17	0.13	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)

Fiji	0.53	0.42	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Global/International	0.53	0.42	Provided	ODA	Grant	Mitigation	Agriculture
Global/International	0.35	0.28	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Indonesia	3.13	2.47	Provided	ODA	Grant	Mitigation	Energy
Indonesia	1.75	1.38	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Kiribati	0.05	0.04	Provided	ODA	Grant	Adaptation	Cross-cutting
Kiribati	0.07	0.06	Provided	ODA	Grant	Adaptation	Water and sanitation
Kiribati	0.10	0.08	Provided	ODA	Grant	Mitigation	Water and sanitation
Kiribati	0.09	0.07	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Nepal	0.06	0.05	Provided	ODA	Grant	Mitigation	Water and sanitation
Pacific Regional	0.21	0.17	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)

Pacific Regional	0.11	0.09	Provided	ODA	Grant	Adaptation	Cross-cutting
Pacific Regional	0.26	0.21	Provided	ODA	Grant	Mitigation	Energy
Philippines	0.69	0.54	Provided	ODA	Grant	Adaptation	Cross-cutting
Philippines	0.78	0.62	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Samoa	0.29	0.23	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Samoa	0.12	0.09	Provided	ODA	Grant	Adaptation	Cross-cutting
Samoa	0.02	0.02	Provided	ODA	Grant	Mitigation	Energy
Solomon Islands	0.09	0.07	Provided	ODA	Grant	Adaptation	Cross-cutting
Solomon Islands	0.58	0.46	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Tokelau	1.25	0.99	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Tokelau	3.40	2.68	Provided	ODA	Grant	Mitigation	Energy
Tonga	4.18	3.30	Provided	ODA	Grant	Mitigation	Energy

Tonga	0.30	0.24	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Tuvalu	0.21	0.17	Provided	ODA	Grant	Mitigation	Energy
Vanuatu	0.21	0.17	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Vanuatu	0.08	0.06	Provided	ODA	Grant	Mitigation	Forestry
Vietnam	0.30	0.24	Provided	ODA	Grant	Adaptation	Cross-cutting
Other Channels	10.92	8.62	Provided	ODA	Grant	Other (Core/General)	Other (Core/General)*
Solomon Islands	0.49	0.39	Provided	ODA	Grant	Adaptation	Other (Coastal Zone Management)

* Core/General contributions are provided to organisations. These contributions represent the full amounts provided to the organisations for the full range of activites covered by their programmes, which include climate change mitigation and adaptation.

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 20xx-3 and 20xx-2, where 20xx 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.

2012							
Total contributions through bilateral, regional and other channels	**45.87**	**37.16**					
Afghanistan	10.87	8.80	Provided	ODA	Grant	Mitigation	Energy
Bangladesh	0.09	0.07	Provided	ODA	Grant	Mitigation	Energy
Cook Islands	0.12	0.10	Provided	ODA	Grant	Adaptation	Water and sanitation
Cook Islands	0.52	0.42	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Cook Islands	0.52	0.42	Provided	ODA	Grant	Mitigation	Energy
Ecuador	0.11	0.09	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Fiji	0.29	0.23	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Global/International	0.70	0.57	Provided	ODA	Grant	Mitigation	Agriculture
Global/International	0.20	0.16	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Indonesia	2.97	2.41	Provided	ODA	Grant	Mitigation	Energy

Indonesia	0.76	0.62	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Kiribati	0.04	0.03	Provided	ODA	Grant	Adaptation	Cross-cutting
Kiribati	0.09	0.07	Provided	ODA	Grant	Mitigation	Water and sanitation
Kiribati	0.02	0.02	Provided	ODA	Grant	Adaptation	Water and sanitation
Kiribati	0.07	0.06	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Pacific Regional	0.18	0.15	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Pacific Regional	0.05	0.04	Provided	ODA	Grant	Adaptation	Cross-cutting
Pacific Regional	0.28	0.23	Provided	ODA	Grant	Mitigation	Energy
Papua New Guinea	1.23	1.00	Provided	ODA	Grant	Mitigation	Energy
Philippines	0.78	0.63	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Samoa	0.25	0.20	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)

Samoa	0.09	0.07	Provided	ODA	Grant	Adaptation	Cross-cutting
Solomon Islands	0.17	0.14	Provided	ODA	Grant	Adaptation	Cross-cutting
Solomon Islands	1.42	1.15	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Solomon Islands	0.75	0.61	Provided	ODA	Grant	Mitigation	Energy
Tokelau	0.71	0.57	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Tokelau	3.40	2.75	Provided	ODA	Grant	Mitigation	Energy
Tonga	4.69	3.80	Provided	ODA	Grant	Mitigation	Energy
Tonga	0.55	0.45	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Tuvalu	0.11	0.09	Provided	ODA	Grant	Mitigation	Energy
Vanuatu	0.14	0.11	Provided	ODA	Grant	Adaptation	Other (Vulnerability Assessment)
Vanuatu	0.05	0.04	Provided	ODA	Grant	Mitigation	Forestry
Vietnam	0.27	0.22	Provided	ODA	Grant	Adaptation	Cross-cutting
Other Channels	12.89	10.44	Provided	ODA	Grant	Other (Core/General)	Other (Core/General)*

Solomon Islands	0.49	0.40	Provided	ODA	Grant	Adaptation	Other (Coastal Zone Management)

* Core/General contributions are provided to organisations. These contributions represent the full amounts provided to the organisations for the full range of activites covered by their programmes, which include climate change mitigation and adaptation.

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 20xx-3 and 20xx-2, where 20xx 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.

CTF Table 8: Provision of technology development and transfer support[a,b]

Recipient country and/or region	Targeted area	Sector [c]	Source of the funding for technology transfer	Activities undertaken by	Status
Afghanistan	Mitigation	Energy	Public	Public	Implemented
Bangladesh	Mitigation	Energy	Public	Private	Implemented
Cook Islands	Adaptation	Water and sanitation	Public	Public	Implemented
Cook Islands	Adaptation	Other (Vulnerability Assessment)	Public	Private and Public	Implemented
Cook Islands	Mitigation	Energy	Public	Public	Implemented
Ecuador	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Fiji	Adaptation	Other (Vulnerability Assessment)	Public	Private and Public	Implemented
Global/International	Mitigation	Agriculture	Public	Public	Implemented
Global/International	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Indonesia	Mitigation	Energy	Public	Public	Implemented
Indonesia	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Kiribati	Adaptation	Other (Cross-cutting)	Public	Public	Implemented
Kiribati	Adaptation	Water and sanitation	Public	Public	Implemented

Kiribati	Mitigation	Water and sanitation	Public	Public	Implemented
Kiribati	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Nepal	Mitigation	Water and sanitation	Public	Private	Implemented
Pacific Regional	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Pacific Regional	Adaptation	Other (Cross-cutting)	Public	Public	Implemented
Pacific Regional	Mitigation	Energy	Public	Private and Public	Implemented
Philippines	Adaptation	Other (Cross-cutting)	Public	Public	Implemented
Philippines	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Samoa	Adaptation	Other (Cross-cutting)	Public	Public	Implemented
Samoa	Adaptation	Other (Vulnerability Assessment)	Public	Private and Public	Implemented
Samoa	Mitigation	Energy	Public	Public	Implemented
Solomon Islands	Adaptation	Other (Cross-cutting)	Public	Private and Public	Implemented
Solomon Islands	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Tokelau	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Tokelau	Mitigation	Energy	Public	Public	Implemented

Tonga	Mitigation	Energy	Public	Private and Public	Implemented
Tonga	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Tuvalu	Mitigation	Energy	Public	Public	Implemented
Vanuatu	Adaptation	Other (Vulnerability Assessment)	Public	Public	Implemented
Vanuatu	Mitigation	Other (Forestry)	Public	Public	Implemented
Vietnam	Adaptation	Other (Cross-cutting)	Public	Private and Public	Implemented
Other Channels	Mitigation and Adaptation	Other (Core/General)	Public	Public	Implemented
Papua New Guinea	Mitigation	Energy	Public	Public	Implemented
Solomon Islands	Mitigation	Energy	Public	Private	Implemented
Solomon Islands	Adaptation	Other (Coastal Zone Management)	Public	Public	Implemented

[a] To be reported to the extent possible.

[b] The table should include measures and activities since the last national communication or biennial report.

[c] Parties may report sectoral disaggregation, as appropriate.

CTF Table 9: Provision of capacity-building support[a]

Programme or project title	Recipient country / region	Targeted area	Description of programme or project [b,c]
Urban Development: Rainwater Harvesting	Kiribati	Adaptation	Water and Sanitation: Provision of better access to safe drinking water on South Tarawa and Kiritimati Island through the installation of rainwater capture and storage systems on large public buildings
SDF 99 /1 Temotu Community Sustainable Livelihoods and Resilience	Solomon Islands	Adaptation	Cross-cutting: Strengthening of the local economy and livelihood security in order to mitigate the negative impacts of climate change and natural disasters on 942 households in Temotu Pele Constituency
SDF 1/41 Ecocare Pacific Trust - Solar PV Programme for Tongan Schools	Tonga	Mitigation	Energy: Support for the provision of renewable solar powered electricity generation for all schools in Tonga
Tokelau Renewable Energy	Tokelau	Mitigation	Energy: Installing three solar photovoltaic-based mini-grids to supply approximately 90% of Tokelau's current electricity demand
Fiji Rotahomes Koroipita Project (Phase 2)	Fiji	Adaptation	Other Vulnerability Assessment: Provision of affordable and sustainable housing (using building codes to standard cyclones) to impoverished families
Samoa Renewable Energy Feasibility	Samoa	Mitigation	Energy: Assessment of the long-term feasibility of a proposed coconut oil extraction and bio-diesel processing plant to fuel electricity generation on Savai'i, Samoa

Local Government Training for DRM Capacity Building	Indonesia	Adaptation	Other Vulnerability Assessment: Provision of support to help increase the capability of local government in Indonesia to reduce risk, prepare for, respond to and recover from natural disasters
Munda Runway, Nusatupe Runway, Noro-Munda Rd	Solomon Islands	Adaptation	Other Vulnerability Assessment: Making the infrastructure more resistant to the forces of the weather, and some of the road work is also linked to improving access across low lying flood prone areas
Support to the Integration of DRR/Adaptation into Local Development	Philippines	Adaptation	Cross-cutting: Assessment of vulnerabilities across 30 provinces to disaster and climate change risks and development of land use plans
GRA - Regional capacity building workshops	Global/International	Mitigation	
Samoa tsunami evacuation maps and signage (GNS Science)	Samoa	Adaptation	Cross-cutting: Provision of support for strengthening public awareness and preparedness in Samoa of tsunami threats and other hazards (including weather-related)
SDF 2/134 Solar power in rural primary schools and ECE centres	Solomon Islands	Mitigation	Energy: Assistance to improve education quality by installation of solar power in rural primary schools and Early Childhood Education centres
National Disaster Management Framework	Indonesia	Adaptation	Other Vulnerability Assessment: Support for a National Disaster Management Framework
Cook Islands Renewable Energy	Cook Islands	Mitigation	Energy: Support to enable the Cook Islands Government to progress the establishment of renewable electricity generation on Rarotonga

Tuvalu renewable energy	Tuvalu	Mitigation	Energy: Support for a Renewable Energy and Energy Efficiency Unit, part of the Tuvalu Electricity Corporation, and a plan for infrastructure development for greater use of renewable energy generation
IMDFF-DR (Disaster Risk Management)	Indonesia	Adaptation	Other Vulnerability Assessment: Support for the implementation of the Government's Rehabilitation and Reconstruction Action Plans (RENAKSI) developed following disaster events
Biennial reports	Global/International	Mitigation	Agriculture: Production of biennial reports by developing countries
Manihiki Cyclone Shelters Repairs and Upgrades	Cook Islands	Adaptation	Other Vulnerability Assessment: Construction upgrades to two cyclone management centres on Manihiki island
MAQFF Interim support - forestry training	Vanuatu	Mitigation	Forestry: Supporting 15 government forestry officers to complete the two-year Diploma in Agriculture course at Hango Agriculture College in Tonga
GNS Science Geothermal training in Indonesia	Indonesia	Mitigation	Energy: Provision of training (in partnership with the University of Gadjah Mada) aimed at increasing the geothermal skill base in Indonesia
Vanuatu Inter-Island Shipping Programme	Vanuatu	Adaptation	Energy: Support for a Renewable Energy and Energy Efficiency Unit, part of the Tuvalu Electricity Corporation, and a plan for infrastructure development for greater use of renewable energy generation
Alternate Jetty	Cook Islands	Adaptation	Other Vulnerability Assessment: Construction of an alternative jetty at Arorangi, contributing to resilience in a natural disaster should Avatiu Port become inaccessible

TC Tomas Home Rehabilitation Project - Habitat for Humanity Fiji	Fiji	Adaptation	Other Vulnerability Assessment: Provision of hurricane resistant, home replacement structures to lower-income families in Vanua Levu, Fiji, whose homes were destroyed by Cyclone Tomas
Secretariat of the Pacific Regional Environment Programme (SPREP)	Other Channels	Multiple Areas	Multiple Areas: Provision of Core / General Contributions to regional organisations. These contributions represent the full amounts provided to the organisations for the full range of activities covered by their programmes, which include climate change mitigation and adaptation.
Informal Settlements – Rotahomes / Koroipita Project	Fiji	Adaptation	Other Vulnerability Assessment: Assistance to provide impoverished families with affordable and sustainable housing using building codes to standard cyclones
TA for Geothermal Scale-Up	Indonesia	Mitigation	Energy: Provision of technical assistance for capacity building for the transformational scale-up of geothermal development in Indonesia
Tokelau Budget Support 2010/11	Tokelau	Adaptation	Other Vulnerability Assessment: Budget support for Tokelau. Climate change is a significant element of Tokelau's national development plans
Climate Change and Development Fund	Global/International	Adaptation	Other Vulnerability Assessment: Funding support to implement climate change projects in developing countries
SDF 2/120 Rural Solar Power Project Bangladesh	Bangladesh	Mitigation	Energy: Assistance to improve household lighting for rural Bangladesh families through the provision of affordable solar power units
Pacific Power Utilities improved energy efficiency	Pacific Regional	Mitigation	Energy: Energy efficiency assessment of 10 Pacific Island Power utilities to identify what can be done by Pacific Governments and Power Utilities to improve the efficiency of energy services

GRA - Collaborative research projects	Global/International	Mitigation	
ICU Bulletin (Island Climate Update - NIWA/SPREP met forecasting)	Pacific Regional	Adaptation	Cross-cutting: Production of monthly climate bulletin including seasonal rainfall outlook for the south-west Pacific
Urban Development: Solid Waste Management	Kiribati	Mitigation	Water and Sanitation: Provision of support to improve solid waste management in South Tarawa (with potential methane reduction benefits)
Pacific Energy Summit	Pacific Regional	Mitigation	Energy: Funding / coordination in preparation for the Pacific Energy Summit
Aquaponics	Cook Islands	Adaptation	Other Vulnerability Assessment: Aquaponics Pilot Project
University of the South Pacific (SPC)	Other Channels	Multiple Areas	Multiple Areas: Provision of Core / General Contributions to regional organisations. These contributions represent the full amounts provided to the organisations for the full range of activities covered by their programmes, which include climate change mitigation and adaptation.
Tokelau Budget Support 2011/12	Tokelau	Adaptation	Other Vulnerability Assessment: Budget support for Tokelau. Climate change is a significant element of Tokelau's national development plans
Renewable Energy	Tonga	Mitigation	Energy: Construction and five-year ongoing management of the 1 MW Popua Solar PV Power Plan
Cartagena Dialogue	Global/International	Adaptation	Other Vulnerability Assessment: Support for the participation by developing country representatives at Cartagena meetings

GNS Dam Safety Project	Vietnam	Adaptation	Cross-cutting: Provision / assistance with skills, tools, and processes to Vietnamese dam owners, industry professionals and government agencies in order to reduce the risk of catastrophic dam failure
Indonesia Geothermal Energy	Indonesia	Mitigation	Energy: Support for geothermal development in Indonesia, largely through the use of technical assistance
Northern Group Water Project	Cook Islands	Adaptation	Water and Sanitation: Provision of access to reliable supplies of portable water for remote island communities in the northern Cook Islands (sufficient to meet daily household requirements even through prolonged periods of dry weather)
Post-Tsunami Resort Building (Concessional Finance Scheme)	Samoa	Adaptation	Other Vulnerability Assessment: Support for rehabilitated high end tourist resorts following the 2009 tsunami
Fiji Flood Recovery - Infrastructure Projects	Fiji	Adaptation	Other Vulnerability Assessment: Support for a range of infrastructure projects to assist citizens following the Nadi floods in January 2009
GRA - GRASS awards	Global/International	Mitigation	
GRA - LEARN fellowships	Global/International	Mitigation	
Domestic Maritime Support Project	Solomon Islands	Adaptation	Other Coastal Zone Management: Funding support to help build/rebuild six new wharves across Solomon Islands
Urban Development: Temaiku Subdivision	Kiribati	Adaptation	Other Vulnerability Assessment: Support for development of a “climate proofed” residential subdivision at Temaiku, South Tarawa to accommodate natural urban growth and ease overcrowding in existing villages

Power Generation - Bamyan Province	Afghanistan	Mitigation	Energy: Electrification of Bamyan Town and Nayak through solar Photovoltaics (PV)
Increasing Access to Electricity for Rural Communities	Papua New Guinea	Mitigation	Energy: Support to increase access to electricity in rural Papua New Guinea, where the main energy supply is from hydropower
SDF 2/169 Indigenous housing as a solution to climate change	Samoa	Adaptation	Other Vulnerability Assessment: Support for indigenous housing as a solution to climate risk in Samoa
Ministry of Civil Defence and Emergency Management (MCDEM)	Pacific Regional	Adaptation	Other Vulnerability Assessment: Provision of support from the Ministry of Civil Defence and Emergency Management (MCDEM) to improve levels of resilience and enhanced capability to prepare for and respond to natural disasters in the Pacific
Technical Assistance - CRRP fund	Cook Islands	Adaptation	Other Vulnerability Assessment: Support for the Cyclone Recovery and Rehabilitation Plan (CRRP) for the Cook Islands
GRA - LEARN fellowships	Global/International	Mitigation	
Urban Development: Solid Waste Management	Kiribati	Mitigation	Other Vulnerability Assessment: Support for development of a 'climate proofed' residential subdivision at Temaiku, South Tarawa to accommodate natural urban growth and ease overcrowding in existing villages
Aitutaki - Cyclone Pat Recovery and Reconstruction	Cook Islands	Adaptation	Other Vulnerability Assessment: Reconstruction work on Aitutaki to help better prepare the residents in the case of future natural disasters

SDF 1/70 Waste Utilisation natural fertiliser	Nepal	Mitigation	Water and Sanitation: Support for communities to compost waste and produce quality organic fertiliser (as waste reduction as landfill potentially reduces methane)
Metservice - Meteorological Forecasting for cyclones	Pacific Regional	Adaptation	Other Vulnerability Assessment: Provision of forecasting services and warnings for tropical cyclones in the Pacific
Strategic Policy Unit	Kiribati	Multiple Areas	Cross-cutting: Provision of support to the Strategic Policy Unit within the Office of the President, covering issues such as climate change and population
Village Network Upgrade	Tonga	Mitigation	Energy: Access to safe, efficient and reliable electricity supply for rural and peri-urban households in 17 villages on Tongatapu, Tonga
GRA - Meeting attendance costs	Global/International	Mitigation	
Project ReBUILD	Philippines	Adaptation	Other Vulnerability Assessment: Resilience Capacity Building for cities and municipalities to reduce disaster risks
Ecuador: Landcare: Climate Change	Ecuador	Adaptation	Other Vulnerability Assessment: Support to rural inhabitants to develop more sustainable livelihoods based on better management of the natural resource base in páramo areas and associated watersheds, taking climate change into account
Secretariat of the Pacific Community (SPC)	Other Channels	Multiple Areas	Multiple Areas: Provision of Core / General Contributions to regional organisations. These contributions represent the full amounts provided to the organisations for the full range of activities covered by their programmes, which include climate change mitigation and adaptation.

Oxfam Climate Change Project	Vietnam	Multiple Areas	Cross-cutting: Enhanced capacity of coastal communities in Binh Dai and Thanh Phu districts to identify and manage the impacts of climate change and natural disasters on their livelihoods
Police Support	Tonga	Adaptation	Other Vulnerability Assessment: provision of support for upgrading new and existing building component
Vanuatu MCA Infrastructure	Vanuatu	Adaptation	Other Vulnerability Assessment: Support for the completion of the Vanuatu Transport Infrastructure Project
Vanuatu Tourism Assistance Programme	Vanuatu	Adaptation	Other Vulnerability Assessment: Assistance with repairing the Port Vila seawall (and considering climate change in the design)
Indonesia: Empower: Biogas	Indonesia	Mitigation	Energy: Development of renewable energy resources, particularly biomass waste, to improve the health, economic and social conditions of village households
Tourism Tsunami Rebuilding Programme	Samoa	Adaptation	Other Vulnerability Assessment: Support for rehabilitated beach fales, budget tourist accommodation businesses, and related tourist support services following the 2009 tsunami

[a] To be reported to the extent possible

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

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

Chapter VI: Other reporting matters

The New Zealand Emissions Trading Scheme (NZ ETS) is the domestic policy that, inter alia, allows the Government to devolve compliance with any domestic or international targets to entities that are responsible for prescribed emitting activities. The NZ ETS places legislated obligations[18] on participants to submit emission units for the emissions related to obligated activities, and when emissions are in excess of any allocations provided to them they must acquire additional units.

Participants are required to determine and report their own emissions in the prescribed manner and frequency. For the industrial and energy sectors, these returns must be submitted annually. Participants must submit units following each data submission. These requirements are backed up by audits of participants' data. The legislation also provides for compliance action to enforce these obligations, with a substantial financial penalty in addition to repayment of any outstanding emission units. Similar powers apply for any repayment obligations in case of over-allocation.

The same legislation provides for mandatory provision of data for use in the compilation of the National Inventory Report, and also includes penalties for non-compliance with these obligations.

There is a legislated requirement for the Government to set a cap for the NZ ETS before any emission units may be auctioned to participants. This requirement has not yet been activated. If and when it is activated, caps will be set and published annually for five years ahead. International commitments and reduction targets must be taken into account in setting caps.

When a cap is in place, units in excess of the amount set by the cap for any year will not be auctioned to participants. However, additional units may be provided to participating forest owners for sequestration of carbon by forestry activities, and potentially to some industrial entities for allocations provided on an intensity basis.

[18] The Climate Change Response Act 2002 sets out all the legislated obligations and requirements referred to in this chapter.

http://www.legislation.govt.nz/act/public/2002/0040/latest/DLM158584.html