

TABLE 10 EMISSIONS TRENDS (CO₂)

(Sheet 1 of 5)
(Part 1 of 2)

NEW ZEALAND

2003
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
1. Energy	22,652.6323	23,040.6307	24,798.1322	24,075.0182	24,263.4540	24,141.2548	25,188.0743	27,543.3665	26,011.3207	27,292.2076
A. Fuel Combustion (Sectoral Approach)	22,031.3465	22,332.5861	24,123.2683	23,440.5281	23,585.4837	23,505.1896	24,538.8780	26,841.6028	25,336.8622	26,662.1948
1. Energy Industries	6,024.7996	6,099.4373	7,542.9562	6,529.8761	5,389.6471	4,674.4840	5,241.4246	6,843.3344	5,175.8577	6,410.2624
2. Manufacturing Industries and Construction	4,538.6117	4,942.4410	4,592.2955	4,707.3963	5,130.3417	5,036.4416	5,543.5950	6,000.9413	5,997.1613	5,682.2815
3. Transport	8,632.8050	8,639.9631	9,024.7479	9,440.6414	10,143.7333	10,855.8742	10,941.5881	11,257.7299	11,448.8523	11,698.5632
4. Other Sectors	2,835.1302	2,650.7447	2,963.2688	2,762.6142	2,921.7615	2,938.3899	2,812.2702	2,739.5972	2,714.9909	2,871.0877
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	621.2858	708.0446	674.8639	634.4902	677.9703	636.0652	649.1963	701.7637	674.4585	630.0129
1. Solid Fuels	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
2. Oil and Natural Gas	621.2858	708.0446	674.8639	634.4902	677.9703	636.0652	649.1963	701.7637	674.4585	630.0129
2. Industrial Processes	2,662.1821	2,787.2158	2,893.3275	3,039.1210	2,943.2796	3,019.7925	2,988.0816	2,890.9232	3,047.7134	3,212.2415
A. Mineral Products	448.2800	437.1627	500.5182	553.2498	565.9611	586.0167	580.9092	598.6790	574.0420	638.2510
B. Chemical Industry	426.5780	441.4380	403.2500	425.1910	449.6860	424.6760	410.9640	435.6720	480.6600	527.7650
C. Metal Production	1,787.3242	1,908.6151	1,989.5593	2,060.6803	1,927.6325	2,009.0998	1,996.2084	1,856.5722	1,993.0114	2,046.2255
D. Other Production	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Production of Halocarbons and SF ₆										
F. Consumption of Halocarbons and SF ₆										
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
3. Solvent and Other Product Use	IE,NE	IE,NE	IE,NE	IE,NE	IE,NE	IE,NE	IE,NE	IE,NE	IE,NE	IE,NE
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils ⁽²⁾										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land Use, Land-Use Change and Forestry	-21,370.4538	-20,100.5490	-17,663.6191	-15,241.8085	-14,160.8152	-14,652.0220	-14,924.8874	-16,459.2679	-19,304.5579	-21,112.2871
6. Waste	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
A. Solid Waste Disposal on Land	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
B. Waste-water Handling										
C. Waste Incineration	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in Summary LA)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total CO₂ emissions including net CQ from LUCF⁽⁴⁾	3,944.3606	5,727.2975	10,027.8406	11,872.3308	13,045.9184	12,509.0253	13,251.2684	13,975.0218	9,754.4762	9,392.1620
Total CO₂ emissions excluding net CQ from LUCF⁽⁴⁾	25,314.8144	25,827.8465	27,691.4597	27,114.1393	27,206.7336	27,161.0473	28,176.1559	30,434.2897	29,059.0341	30,504.4491
Memo Items:										
International Bankers	2,374.1423	2,194.8290	2,176.9807	2,244.1642	2,755.1750	2,692.8488	2,696.2108	2,819.6890	2,772.8246	2,856.9927
Aviation	1,340.9639	1,281.6352	1,310.6254	1,329.5027	1,431.5750	1,568.5705	1,634.5737	1,708.8020	1,700.5094	1,942.0695
Marine	1,033.1784	913.1938	866.3554	914.6615	1,323.6000	1,124.2783	1,061.6371	1,110.8870	1,072.3151	914.9232
Multilateral Operations	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
CO₂ Emissions from Biomass	2,599.1348	2,791.6400	2,661.0056	2,691.9901	3,169.4801	3,200.3117	3,145.3945	2,961.6107	3,092.7435	3,808.2256

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSIONS TRENDS (CH₄)
(Sheet 2 of 5)
(Part 1 of 2)

NEW ZEALAND
2003
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
Total CH₄ emissions	1,203.9988	1,196.0021	1,175.6560	1,189.8507	1,200.1805	1,214.1620	1,218.2463	1,217.2955	1,221.8350	1,232.5942
1. Energy	37.9484	32.7610	32.4207	31.6283	33.2826	35.6502	35.4672	36.9458	40.0152	42.0355
A. Fuel Combustion (Sectoral Approach)	9.9827	9.7025	9.7083	9.6097	8.9447	8.4867	7.8497	7.4058	6.8150	6.2004
1. Energy Industries	0.2634	0.2812	0.3186	0.2942	0.2379	0.1941	0.2182	0.2718	0.2042	0.2579
2. Manufacturing Industries and Construction	0.3777	0.4176	0.3912	0.3983	0.4792	0.4991	0.5207	0.5079	0.5247	0.5760
3. Transport	7.1163	7.1486	7.1800	7.2002	6.7768	6.3718	5.7381	5.2676	4.7387	4.0781
4. Other Sectors	2.2254	1.8552	1.8185	1.7170	1.4508	1.4218	1.3727	1.3585	1.3474	1.2885
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuel:	27.9657	23.0585	22.7123	22.0186	24.3379	27.1635	27.6174	29.5400	33.2002	35.8350
1. Solid Fuels	12.9605	8.7340	9.0388	8.6082	10.1859	13.4714	13.9432	13.6306	16.2593	16.8421
2. Oil and Natural Gas	15.0052	14.3245	13.6735	13.4104	14.1521	13.6921	13.6742	15.9095	16.9409	18.9930
2. Industrial Processes	1,028.0	1,708.0	1,449.0	1,626.0	2,025.0	2,816.0	3,751.0	3,877.0	3,667.0	4,103.0
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	1,028.0	1,708.0	1,449.0	1,626.0	2,025.0	2,816.0	3,751.0	3,877.0	3,667.0	4,103.0
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 SE ₆										
F. Consumption of Halocarbons and SE ₆										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use										
4. Agriculture	1,053.6608	1,048.9578	1,046.0159	1,060.8875	1,073.7006	1,084.6042	1,090.0191	1,096.6949	1,098.9097	1,108.5949
A. Enteric Fermentation	1,025.2747	1,020.9187	1,018.3487	1,033.1250	1,045.5367	1,056.0998	1,061.4970	1,068.4534	1,070.9870	1,081.0173
B. Manure Management	27.3575	26.9907	26.6407	26.7224	27.1344	27.4790	27.4611	27.1378	26.8381	26.5491
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	0.1342	0.1329	0.1272	0.1024	0.0810	0.0654	0.0593	0.0532	0.0402	0.0365
F. Field Burning of Agricultural Residue	0.8943	0.9155	0.8993	0.9377	0.9485	0.9600	1.0018	1.0504	1.0445	0.9919
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	0.2016	0.1853	0.2105	0.2689	0.3023	0.2915	0.3290	0.3579	0.2930	0.2605
6. Waste	111.1600	112.3900	95.5600	95.4400	90.8700	90.8000	88.6800	79.4200	78.9500	77.6000
A. Solid Waste Disposal on Land	103.7000	104.8900	88.0300	87.8800	83.2800	83.1700	81.0200	71.7300	71.2300	69.8400
B. Waste-water Handling	7.4600	7.5000	7.5300	7.5600	7.5900	7.6300	7.6600	7.6900	7.7200	7.7600
C. Waste Incineration	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in Summary I.A)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Memo Items:										
International Bankers	0.1316	0.1190	0.1146	0.1196	0.1621	0.1456	0.1406	0.1468	0.1426	0.1323
Aviation	0.0298	0.0285	0.0292	0.0296	0.0319	0.0349	0.0364	0.0380	0.0378	0.0432
Marine	0.1018	0.0905	0.0854	0.0900	0.1303	0.1107	0.1042	0.1088	0.1048	0.0891
Multilateral Operations	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
CO₂ Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 1

TABLE 10 EMISSIONS TRENDS (CH₄)

(Sheet 2 of 5)

(Part 2 of 2)

NEW ZEALAND

2003

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	Change from base to latest reported year
	(Gg)	(Gg)	(Gg)	(Gg)	%
Total CH₄ emissions	1,245.9897	1,263.0712	1,265.0155	1,268.8083	5.3829
1. Energy	40.3580	41.8021	41.1411	40.0466	5.5291
A. Fuel Combustion (Sectoral Approach)	5.7349	5.2415	4.8402	4.4171	55.7525
1. Energy Industries	0.2495	0.2939	0.2483	0.2418	8.1703
2. Manufacturing Industries and Construction	0.5994	0.5708	0.6032	0.5556	47.1146
3. Transport	3.6479	3.2425	2.9032	2.4779	65.1803
4. Other Sectors	1.2382	1.1343	1.0855	1.1418	48.6921
5. Other	NA	NA	NA	NA	0.0000
B. Fugitive Emissions from Fuels	34.6231	36.5606	36.3009	35.6295	27.4043
1. Solid Fuels	16.1922	16.9739	16.8609	15.8215	22.0753
2. Oil and Natural Gas	18.4308	19.5867	19.4400	19.8080	32.0071
2. Industrial Processes	4.9704	4.4103	4.6558	2.0434	98.7743
A. Mineral Products	NA	NA	NA	NA	0.0000
B. Chemical Industry	4.9704	4.4103	4.6558	2.0434	98.7743
C. Metal Production	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	0.0000
D. Other Production					
E. Production of Halocarbons and SF ₆					
F. Consumption of Halocarbons and SF ₆					
G. Other	NA	NA	NA	NA	0.0000
3. Solvent and Other Product Use					
4. Agriculture	1,126.0519	1,142.2849	1,144.2056	1,150.7340	9.2129
A. Enteric Fermentation	1,098.7404	1,115.0634	1,116.9759	1,123.4387	9.5744
B. Manure Management	26.2797	26.1351	26.1175	26.1640	4.3626
C. Rice Cultivation	NO	NO	NO	NO	0.0000
D. Agricultural Soils	NE,NO	NE,NO	NE,NO	NE,NO	0.0000
E. Prescribed Burning of Savannas	0.0384	0.0439	0.0404	0.0401	70.1088
F. Field Burning of Agricultural Residues	0.9935	1.0424	1.0718	1.0912	22.0075
G. Other	NO	NO	NO	NO	0.0000
5. Land Use, Land-Use Change and Forestry	0.2093	0.2039	0.1931	0.1943	3.6186
6. Waste	74.4000	74.3700	74.8200	75.7900	31.8190
A. Solid Waste Disposal on Land	66.6100	66.5500	66.9600	67.8800	34.5419
B. Waste-water Handling	7.7900	7.8200	7.8600	7.9100	6.0322
C. Waste Incineration	NE	NE	NE	NE	0.0000
D. Other	NO	NO	NO	NO	0.0000
7. Other (as specified in Summary 1.A)	NA	NA	NA	NA	0.0000
	NA	NA	NA	NA	0.0000
Memo Items:					
International Bunkers	0.1116	0.1188	0.1455	0.1268	3.6259
Aviation	0.0391	0.0418	0.0427	0.0496	66.3144
Marine	0.0726	0.0769	0.1028	0.0772	24.1276
Multilateral Operations	NE	NE	NE	NE	0.0000
CO₂ Emissions from Biomass					

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSIONS TRENDS (N₂O)
 (Sheet 3 of 5)
 (Part 1 of 2)

NEW ZEALAND
 2003
 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
Total N₂O emissions	33.5442	33.6285	33.9342	34.8772	35.9172	36.6874	37.0543	37.3649	37.6127	38.3359
1. Energy	0.4663	0.4670	0.4961	0.5118	0.5552	0.5891	0.5991	0.6202	0.6251	0.6611
A. Fuel Combustion (Sectoral Approach)	0.4663	0.4670	0.4961	0.5118	0.5552	0.5891	0.5991	0.6202	0.6251	0.6611
1. Energy Industries	0.0206	0.0164	0.0298	0.0208	0.0185	0.0194	0.0208	0.0315	0.0221	0.0296
2. Manufacturing Industries and Construction	0.1216	0.1297	0.1204	0.1247	0.1464	0.1431	0.1437	0.1378	0.1430	0.1517
3. Transport	0.2398	0.2422	0.2597	0.2791	0.3062	0.3396	0.3490	0.3646	0.3742	0.3872
4. Other Sectors	0.0844	0.0786	0.0862	0.0872	0.0841	0.0871	0.0856	0.0863	0.0859	0.0925
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	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
1. Solid Fuels	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
2. Oil and Natural Gas	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO
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,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
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	0.1340	0.1380	0.1390	0.1410	0.1430	0.1450	0.1480	0.1490	0.1500	0.1510
4. Agriculture	32.4738	32.5535	32.8190	33.7443	34.7389	35.4631	35.8170	36.1056	36.3374	37.0237
A. Enteric Fermentation										
B. Manure Management	0.1224	0.1231	0.1255	0.1322	0.1430	0.1511	0.1571	0.1611	0.1659	0.1718
C. Rice Cultivation										
D. Agricultural Soils	32.3290	32.4076	32.6712	33.5892	34.5733	35.2894	35.6366	35.9202	36.1476	36.8294
E. Prescribed Burning of Savannas	0.0017	0.0016	0.0016	0.0013	0.0010	0.0008	0.0007	0.0007	0.0005	0.0005
F. Field Burning of Agricultural Residues	0.0208	0.0212	0.0207	0.0215	0.0216	0.0218	0.0226	0.0237	0.0234	0.0221
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001
6. Waste	0.4700	0.4700	0.4800	0.4800	0.4800	0.4900	0.4900	0.4900	0.5000	0.5000
A. Solid Waste Disposal on Land										
B. Waste-water Handling	0.4700	0.4700	0.4800	0.4800	0.4800	0.4900	0.4900	0.4900	0.5000	0.5000
C. Waste Incineration	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in Summary 1.A)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Memo Items:										
International Bunkers	0.0669	0.0620	0.0613	0.0632	0.0776	0.0758	0.0758	0.0792	0.0779	0.0802
Aviation	0.0378	0.0361	0.0369	0.0375	0.0403	0.0442	0.0461	0.0482	0.0479	0.0547
Marine	0.0291	0.0259	0.0244	0.0257	0.0372	0.0316	0.0298	0.0311	0.0299	0.0255
Multilateral Operations	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
CO₂ Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 5.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	Change from base to latest reported year
	(Gg)	(Gg)	(Gg)	(Gg)	
Total N₂O emissions	39.6108	41.2578	42.4935	43.5469	29.8193
1. Energy	0.6938	0.7184	0.7497	0.8078	73.2354
A. Fuel Combustion (Sectoral Approach)	0.6938	0.7184	0.7497	0.8078	73.2354
1. Energy Industries	0.0252	0.0339	0.0323	0.0586	185.0074
2. Manufacturing Industries and Construction	0.1562	0.1554	0.1610	0.1695	39.4763
3. Transport	0.4146	0.4277	0.4511	0.4704	96.1624
4. Other Sectors	0.0978	0.1014	0.1052	0.1093	29.5003
5. Other	NA	NA	NA	NA	0.0000
B. Fugitive Emissions from Fuels	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	0.0000
1. Solid Fuels	NA,NE	NA,NE	NA,NE	NA,NE	0.0000
2. Oil and Natural Gas	IE,NE,NO	IE,NE,NO	IE,NE,NO	IE,NE,NO	0.0000
2. Industrial Processes	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	0.0000
A. Mineral Products	NA	NA	NA	NA	0.0000
B. Chemical Industry	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	IE,NA,NE,NO	0.0000
C. Metal Production	NA	NA	NA	NA	0.0000
D. Other Production					
E. Production of Halocarbons and SF ₆					
F. Consumption of Halocarbons and SF ₆					
G. Other	NA	NA	NA	NA	0.0000
3. Solvent and Other Product Use	0.1520	0.1530	0.1560	0.1560	16.4179
4. Agriculture	38.2649	39.8763	41.0777	42.0575	29.5121
A. Enteric Fermentation					
B. Manure Management	0.1783	0.1861	0.1917	0.1970	61.0004
C. Rice Cultivation				NA	0
D. Agricultural Soils	38.0641	39.6664	40.8615	41.8354	29.4055
E. Prescribed Burning of Savannas	0.0005	0.0005	0.0005	0.0005	70.1088
F. Field Burning of Agricultural Residues	0.0220	0.0232	0.0240	0.0246	17.9270
G. Other	NO	NO	NO	NO	0.0000
5. Land Use, Land-Use Change and Forestry	0.0001	0.0001	0.0001	0.0001	3.6186
6. Waste	0.5000	0.5100	0.5100	0.5254	11.7969
A. Solid Waste Disposal on Land					
B. Waste-water Handling	0.5000	0.5100	0.5100	0.5254	11.7969
C. Waste Incineration	NE	NE	NE	NE	0.0000
D. Other	NO	NO	NO	NO	0.0000
7. Other (as specified in Summary L.A)	NA	NA	NA	NA	0.0000
	NA	NA	NA	NA	0.0000
Memo Items:					
International Bunkers	0.0702	0.0750	0.0834	0.0849	26.9841
Aviation	0.0495	0.0530	0.0541	0.0629	66.3144
Marine	0.0207	0.0220	0.0294	0.0221	24.1276
Multilateral Operations	NE	NE	NE	NE	0.0000
CO₂ Emissions from Biomass					

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS (HFCs, PFCs and SF₆)

NEW ZEALAND

(Sheet 4 of 5)

2003

(Part 1 of 2)

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
Emissions of HFCs⁽⁵⁾ - (Gg CO₂ equivalent)	IE,NA,NO	NA,NO	1.8200	5.4600	25.8655	83.7772	139.0257	114.2695	210.6913	174.8195
HFC-23	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-32	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.0004	NA,NE,NO	NA,NE,NO	NA,NE,NO
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	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.0012	0.0005	0.0067	0.0105	0.0095
HFC-134	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-134a	IE,NA,NO	NA,NO	0.0014	0.0042	0.0161	0.0398	0.0716	0.0379	0.1138	0.0757
HFC-152a	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.0004	0.0012	0.0004	0.0002	0.0004
HFC-143	NA,NO	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	NA,NO	0.0004	0.0079	0.0071	0.0093	0.0094
HFC-227ea	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.0000	0.0001	0.0001	0.0001	0.0001
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 ⁽⁶⁾ - (Gg CO ₂ equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Emissions of PFCs⁽⁵⁾ - (Gg CO₂ equivalent)	515.6000	651.6400	638.1000	524.8000	183.6000	147.5000	265.4000	166.2000	130.2000	74.2000
CF ₄	0.0680	0.0844	0.0826	0.0680	0.0240	0.0190	0.0300	0.0210	0.0100	0.0100
C ₂ F ₆	0.0080	0.0112	0.0110	0.0090	0.0030	0.0020	0.0040	0.0030	0.0010	0.0010
C ₃ F ₈	NA,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.0008	0.0048	0.0003	0.0080
C ₄ F ₁₀	NA,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
c-C ₄ F ₈	NA,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
C ₅ F ₁₂	NA,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
C ₆ F ₁₄	NA,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
Unspecified mix of listed PFCs ⁽⁶⁾ - (Gg CO ₂ equivalent)	NA,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
Emissions of SF₆⁽⁵⁾ - (Gg CO₂ equivalent)	12.3324	12.6431	12.9777	14.0532	14.4117	15.0092	14.7941	15.2960	14.0293	13.1928
SF ₆	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS (HFCs, PFCs and SF₆)
(Sheet 4 of 5)
(Part 2 of 2)

NEW ZEALAND
2003
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	Change from base to latest reported year
	(Gg)	(Gg)	(Gg)	(Gg)	%
Emissions of HFCs⁽⁵⁾ - (Gg CO₂ equivalent)	173.2844	254.1239	387.6822	403.9601	100.0000
HFC-23	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
HFC-32	NA,NE,NO	0.0001	0.0009	0.0018	100.0000
HFC-41	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
HFC-43-10mee	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
HFC-125	0.0041	0.0128	0.0194	0.0236	100.0000
HFC-134	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
HFC-134a	0.1054	0.1239	0.1923	0.1806	100.0000
HFC-152a	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.0000
HFC-143	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
HFC-143a	0.0064	0.0149	0.0216	0.0266	100.0000
HFC-227ea	0.0002	0.0002	0.0003	0.0003	100.0000
HFC-236fa	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
HFC-245ca	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
Unspecified mix of listed HFCs ⁽⁶⁾ - (Gg CO ₂ equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	0.0000
Emissions of PFCs⁽⁵⁾ - (Gg CO₂ equivalent)	59.2500	59.2500	83.5000	84.9000	83.5337
CF ₄	0.0077	0.0077	0.0110	0.0110	83.8235
C ₂ F ₆	0.0010	0.0010	0.0010	0.0010	87.5000
C ₃ F ₈	NA,NE,NO	NA,NE,NO	0.0004	0.0006	100.0000
C ₄ F ₁₀	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NO	0.0000
c-C ₄ F ₈	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NO	0.0000
C ₅ F ₁₂	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NO	0.0000
C ₆ F ₁₄	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NO	0.0000
Unspecified mix of listed PFCs ⁽⁶⁾ - (Gg CO ₂ equivalent)	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NO	0.0000
Emissions of SF₆⁽⁵⁾ - (Gg CO₂ equivalent)	11.9500	12.0456	12.5714	12.3802	0.3876
SF ₆	0.0005	0.0005	0.0005	0.0005	0.3876

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS (SUMMARY)
(Sheet 5 of 5)
(Part 1 of 2)

NEW ZEALAND
2003
2005

GREENHOUSE GAS EMISSIONS	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)
CO ₂ emissions including net CO ₂ from LULUCF ⁽⁴⁾	3,944.3606	5,727.2975	10,027.8406	11,872.3308	13,045.9184	12,509.0253	13,251.2684	13,975.0218	9,754.4762	9,392.1620
CO ₂ emissions excluding net CO ₂ from LULUCF ⁽⁴⁾	25,314.8144	25,827.8465	27,691.4597	27,114.1393	27,206.7336	27,161.0473	28,176.1559	30,434.2897	29,059.0341	30,504.4491
CH ₄	25,283.9751	25,116.0440	24,688.7769	24,986.8644	25,203.7913	25,497.4010	25,583.1726	25,563.2059	25,658.5346	25,884.4773
N ₂ O	10,398.7099	10,424.8469	10,519.5908	10,811.9245	11,134.3448	11,373.0872	11,486.8337	11,583.1309	11,659.9233	11,884.1405
HFCs	1E,NA,NO	NA,NO	1.8200	5.4600	25.8655	83.7772	139.0257	114.2695	210.6913	174.8195
PFCs	515.6000	651.6400	638.1000	524.8000	183.6000	147.5000	166.2000	166.2000	130.2000	74.2000
SF ₆	12.3324	12.6431	12.9777	14.0532	14.4117	15.0092	14.7941	15.2960	14.0293	13.1928
Total (including net CO₂ from LULUCF)⁽⁴⁾	40,154.9780	41,932.4715	45,889.1060	48,215.4329	49,607.9317	49,625.7999	50,740.4945	51,417.1240	47,427.8546	47,422.9921
Total (excluding net CO₂ from LULUCF)^{(4),(7)}	61,525.4318	62,033.0205	63,552.7251	63,457.2414	63,768.7469	64,277.8219	65,665.3820	67,876.3920	66,732.4125	68,535.2792

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)
1. Energy	23,594.1102	23,873.3693	25,632.7451	24,897.8622	25,134.5120	25,072.5288	26,118.6178	28,511.4834	27,045.4305	28,379.8830
2. Industrial Processes	3,211.7025	3,487.3669	3,576.6542	3,617.5802	3,209.6818	3,325.2149	3,486.0724	3,268.1057	3,479.6410	3,560.6231
3. Solvent and Other Product Use	41.5400	42.7800	43.0900	43.7100	44.3300	44.9500	45.8800	46.1900	46.5000	46.8100
4. Agriculture	32,193.7569	32,119.6971	32,140.2241	32,739.3637	33,316.7606	33,770.2643	33,993.6749	34,223.3260	34,341.6954	34,757.8542
5. Land Use, Land-Use Change and Forestry ⁽⁸⁾	-21,366.1916	-20,096.6317	-17,659.1675	-15,236.1232	-14,154.4226	-14,645.8581	-14,917.9305	-16,451.7011	-19,298.3622	-21,106.7782
6. Waste	2,480.0600	2,505.8900	2,155.5600	2,153.0400	2,057.0700	2,058.7000	2,014.1800	1,819.7200	1,812.9500	1,784.6000
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (including LULUCF)⁽⁸⁾	40,154.9780	41,932.4715	45,889.1060	48,215.4329	49,607.9317	49,625.7999	50,740.4945	51,417.1240	47,427.8546	47,422.9921

TABLE 10 EMISSION TRENDS (SUMMARY)
(Sheet 5 of 5)
(Part 2 of 2)

NEW ZEALAND
2003
2005

GREENHOUSE GAS EMISSIONS	2000	2001	2002	2003	Change from base to latest reported year
	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	(%)
CO ₂ emissions including net CQ from LULUCF ⁽¹⁾	8,182.6917	9,792.4426	9,680.3294	11,833.8397	200.0192
CO ₂ emissions excluding net CQ from LULUCF ⁽⁴⁾	31,006.0462	32,983.4414	33,011.1415	34,699.5478	37.0721
CH ₄	26,165.7829	26,524.4942	26,565.3261	26,644.9743	5.3829
N ₂ O	12,279.3339	12,789.9169	13,172.9809	13,499.5297	29.8193
HFCs	173.2844	254.1239	387.6822	403.9601	100.0000
PFCs	59.2500	59.2500	83.5000	84.9000	83.5337
SF ₆	11.9500	12.0456	12.5714	12.3802	0.3876
Total (including net CO₂ from LULUCF)⁽⁴⁾	46,872.2928	49,432.2732	49,902.3899	52,479.5839	30.6926
Total (excluding net CO₂ from LULUCF)^{(4), (7)}	69,695.6474	72,623.2720	73,233.2020	75,345.2920	22.4620

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	Change from base to latest reported year
	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	CO2 equivalent (Gg)	(%)
1. Energy	28,905.7929	30,828.7499	30,864.6664	32,320.9222	36.9872
2. Industrial Processes	3,511.7005	3,673.2662	3,824.3756	4,014.1870	24.9863
3. Solvent and Other Product Use	47.1200	47.4300	48.3600	48.3600	16.4179
4. Agriculture	35,509.2091	36,349.6438	36,762.3977	37,203.2368	15.5604
5. Land Use, Land-Use Change and Forestry ⁽⁸⁾	-22,818.9297	-23,186.6867	-23,326.7299	-22,861.6001	6.9989
6. Waste	1,717.4000	1,719.8700	1,729.3200	1,754.4781	29.2566
7. Other	NA	NA	NA	NA	0.0000
Total (including LULUCF)⁽⁸⁾	46,872.2928	49,432.2732	49,902.3899	52,479.5839	30.6926

⁽¹⁾ 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 COP. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

⁽²⁾ Fill in net emissions/removals as reported in table Summary I.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

⁽³⁾ The information in these rows is requested to facilitate comparison of data, because Parties differ in the way they report C₂ emissions and removals from LULUCF

⁽⁴⁾ Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Only in these rows are the emissions expressed as CO₂ equivalent emissions.

⁽⁵⁾ In accordance with the UNFCCC reporting guidelines, HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is Gg of CO₂ equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

⁽⁶⁾ These totals will differ from the totals reported in table Summary 2 if Parties report non-CO₂ emissions from LULUCF.

⁽⁷⁾ Includes net CO₂, CH₄ and N₂O from LULUCF.

Documentation box:

- Parties should provide detailed explanations on emissions trends in Chapter 2: Trends in Greenhouse Gas Emissions and, appropriate, in the corresponding Chapters 3 - 9 of the NIR. Use this documentation box to provide references to relevant sections
- Use the documentation box to provide explanations if potential emissions are reported.
- Potential emissions are included in case of missing actual emissions for 2.F

CO₂:SO₂ emissions: There were problems discovered with inconsistent EFs used for some years by the consultant providing the data. Because of time constraints it was decided to use the constant EF over the 1999-2001 period and back-calculate to 1990 and forward 2003 using this value (1.77E-5 t SO₂/t product).

NO_x and CO: Emissions assumed to be totally associated with fuel use rather than industrial process so are counted with other fuel combustion emissions in the energy sector: 1AA.2 "Manufacturing Industries and Construction".

During 2005 NZ will look more closely at the precursor gases data and endeavour to get consistent EFs for the 2006 submission.