

Table A7.1 Uncertainty calculation for the New Zealand Greenhouse Gas Inventory 1990–2006 including LULUCF removals (IPCC Tier 1)

Uncertainty calculation for the New Zealand Greenhouse Gas Inventory 1990 - 2006 including LULUCF (following IPCC Tier 1)

IPCC Source category	Gas	Base year emissions or absolute value of removals	Year t emissions or absolute value of removals	activity data uncertainty	emission or removal factor uncertainty	combined uncertainty	combined uncertainty as a % of the national total in year t	type A sensitivity	type b sensitivity	Uncertainty in the trend in national totals introduced by emission or removal factor uncertainty	Uncertainty in trend in national total introduced by activity data uncertainty	Uncertainty introduced into the trend in the national total
Energy sector	CO ₂	22640.92	32865.18	5	0	5	1.53	0.0494	0.3869	0.0000	2.7360	2.74
Industrial processes sector	CO ₂	2,728.50	3,519.01	5	0	5	0.16	0.0008	0.0414	0.0000	0.2930	0.29
LULUCF sector - forest land	CO ₂	21539.20	27987.36	5	25	25	6.64	0.0085	0.3295	0.2119	2.3299	2.34
LULUCF sector other land use categories	CO ₂	1404.86	1601.97	15	184	185	2.75	-0.0021	0.0189	-0.3821	0.4001	0.55
CRF6C-waste incineration	CO ₂	12.80	3.76	10	40	41	0.00	-0.0001	0.0000	-0.0059	0.0006	0.01
Energy sector	CH ₄	708.03	931.39	5	50	50	0.44	0.0004	0.0110	0.0207	0.0775	0.08
CRF2A - mineral products	CH ₄	0.00	0.00									
CRF2B - chemical industry	CH ₄	20.16	16.98	0	80	80	0.01	-0.0001	0.0002	-0.0080	0.0000	0.01
CRF4A - enteric fermentation	CH ₄	21810.44	24110.67	2	53	53	11.89	-0.0411	0.2839	-2.1773	0.8029	2.32
CRF4B - manure management	CH ₄	578.59	743.13	2	100	100	0.69	0.0001	0.0087	0.0126	0.0247	0.03
CRF4E- prescribed burning	CH ₄	2.73	0.88	20	60	63	0.00	0.0000	0.0000	-0.0018	0.0003	0.00
CRF4F - burning of residues	CH ₄	21.38	11.01	50	40	64	0.01	-0.0002	0.0001	-0.0076	0.0092	0.01
LULUCF sector	CH ₄	42.68	49.36	10	35	36	0.02	-0.0001	0.0006	-0.0019	0.0082	0.01
CRF 6A - Solid waste disposal	CH ₄	2121.53	1475.39	0	20	20	0.27	-0.0142	0.0174	-0.2849	0.0000	0.28
CRF 6B - wastewater handling	CH ₄	222.73	209.88	0	20	20	0.04	-0.0008	0.0025	-0.0170	0.0000	0.02
CRF6C-waste incineration	CH ₄	0.01	0.00	10	100	100	0.00	0.0000	0.0000	0.0000	0.0000	0.00
Energy sector	N ₂ O	150.18	272.73	5	50	50	0.13	0.0010	0.0032	0.0486	0.0227	0.05
Solvents-N ₂ O use	N ₂ O	41.54	40.30	10	0	10	0.00	-0.0001	0.0005	0.0000	0.0067	0.01
CRF4D -Agricultural soils	N ₂ O	10039.82	12733.15	5	73	73	8.67	0.0003	0.1499	0.0207	1.0600	1.06
CRF4B - manure management	N ₂ O	38.04	65.02	5	100	100	0.06	0.0002	0.0008	0.0199	0.0054	0.02
CRF4E- prescribed burning	N ₂ O	0.50	0.16	20	60	63	0.00	0.0000	0.0000	-0.0003	0.0001	0.00
CRF4F - burning of residues	N ₂ O	7.36	3.60	50	40	64	0.00	-0.0001	0.0000	-0.0027	0.0030	0.00
LULUCF sector	N ₂ O	4.92	15.12	10	35	36	0.01	0.0001	0.0002	0.0037	0.0025	0.00
CRF6B - wastewater handling	N ₂ O	146.92	167.40	0	1200	1200	1.87	-0.0002	0.0020	-0.2625	0.0000	0.26
CRF6C-waste incineration	N ₂ O	1.66	1.37	10	100	100	0.00	0.0000	0.0000	-0.0009	0.0002	0.00
CRF2F	HFCs	0.00	592.95	120	50	130	0.72	0.0070	0.0070	0.3490	1.1847	1.24
CRF2C	PFCs	641.68	90.89	0	30	30	0.03	-0.0085	0.0011	-0.2548	0.0000	0.25
CRF2F	SF ₆	12.33	13.24	5	20	21	0.00	0.0000	0.0002	-0.0006	0.0011	0.00
Total emissions/removals		84939.53	107521.91				16.6%			Uncertainty in the trend		4.6%

