

Table A7.2 Uncertainty calculation for the New Zealand Greenhouse Gas Inventory 1990–2006 excluding LULUCF removals (IPCC Tier 1)

Uncertainty calculation for the New Zealand Greenhouse Gas Inventory 1990 - 2006 excluding LULUCF removals (following IPCC Tier 1)													
IPCC Source category	Gas	Base year emissions	Year t emissions	activity data uncertainty	emission factor uncertainty	combined uncertainty	combined uncertainty as a % of the total emissions in year t	type A sensitivity	type b sensitivity	Uncertainty in the trend in national totals introduced by emission factor uncertainty	Uncertainty in trend in national total introduced by activity data uncertainty	Uncertainty introduced into the trend in total emissions	
Energy sector	CO ₂	22640.92	32865.18	5	0	5	2.11	0.0708	0.5301	0.0000	3.7485	3.75	
Industrial processes sector	CO ₂	2,728.50	3,519.01	5	0	5	0.23	0.0014	0.0568	0.0000	0.4014	0.40	
CRF6C-waste incineration	CO ₂	12.80	3.76	10	40	41	0.00	-0.0002	0.0001	-0.0080	0.0009	0.01	
Energy sector	CH ₄	708.03	931.39	5	50	50	0.60	0.0007	0.0150	0.0333	0.1062	0.11	
CRF2A - mineral products	CH ₄	0.00	0.00										
CRF2B - chemical industry	CH ₄	20.16	16.98	0	80	80	0.02	-0.0001	0.0003	-0.0108	0.0000	0.01	
CRF4A - enteric fermentation	CH ₄	21810.44	24110.67	2	53	53	16.41	-0.0531	0.3889	-2.8169	1.1000	3.02	
CRF4B - manure management	CH ₄	578.59	743.13	2	100	100	0.95	0.0003	0.0120	0.0255	0.0339	0.04	
CRF4E- prescribed burning	CH ₄	2.73	0.88	20	60	63	0.00	0.0000	0.0000	-0.0025	0.0004	0.00	
CRF4F - burning of residues	CH ₄	21.38	11.01	50	40	64	0.01	-0.0003	0.0002	-0.0102	0.0126	0.02	
LULUCF sector	CH ₄	42.68	49.36	10	35	36	0.02	-0.0001	0.0008	-0.0024	0.0113	0.01	
CRF 6A - Solid waste disposal	CH ₄	2121.53	1475.39	0	20	20	0.38	-0.0192	0.0238	-0.3843	0.0000	0.38	
CRF 6B - wastewater handling	CH ₄	222.73	209.88	0	20	20	0.05	-0.0011	0.0034	-0.0226	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	0.18	0.0014	0.0044	0.0677	0.0311	0.07	
Solvents-N ₂ O use	N ₂ O	41.54	40.30	10	0	10	0.01	-0.0002	0.0007	0.0000	0.0092	0.01	
CRF4D -Agricultural soils	N ₂ O	10039.82	12733.15	5	73	73	11.96	0.0018	0.2054	0.1322	1.4523	1.46	
CRF4B - manure management	N ₂ O	38.04	65.02	5	100	100	0.08	0.0003	0.0010	0.0277	0.0074	0.03	
CRF4E- prescribed burning	N ₂ O	0.50	0.16	20	60	63	0.00	0.0000	0.0000	-0.0005	0.0001	0.00	
CRF4F - burning of residues	N ₂ O	7.36	3.60	50	40	64	0.00	-0.0001	0.0001	-0.0036	0.0041	0.01	
LULUCF sector	N ₂ O	4.92	15.12	10	35	36	0.01	0.0001	0.0002	0.0050	0.0034	0.01	
CRF6B - wastewater handling	N ₂ O	146.92	167.40	0	1200	1200	2.58	-0.0003	0.0027	-0.3346	0.0000	0.33	
CRF6C-waste incineration	N ₂ O	1.66	1.37	10	100	100	0.00	0.0000	0.0000	-0.0012	0.0003	0.00	
CRF2F	HFCs	0.00	592.95	120	50	130	0.99	0.0096	0.0096	0.4782	1.6231	1.69	
CRF2C	PFCs	641.68	90.89	0	30	30	0.03	-0.0115	0.0015	-0.3463	0.0000	0.35	
CRF2F	SF ₆	12.33	13.24	5	20	21	0.00	0.0000	0.0002	-0.0007	0.0015	0.00	
Total emissions/removals		61995.47	77932.57	Uncertainty in the year			20.6%	Uncertainty in the trend			5.4%		