

Switzerland's Greenhouse Gas Inventory 1990-2013

Addendum to the National Inventory Report
Including reporting elements under the Kyoto Protocol

Submission of 15 April 2015
under the United Nations Framework Convention on Climate Change
and under the Kyoto Protocol



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Exceptional circumstances for inventory preparation

Due to substantial technical problems with the UNFCCC reporting software, it was impossible to generate CRF tables at the time of the inventory preparation for submission 2015. Therefore, the standard procedures for various QA/QC activities had to be replaced by ad-hoc workarounds in order to produce an inventory without CRF tables and the national inventory report in April 2015. The preparation of the CRF tables in late fall 2015 revealed several issues that led to subsequent recalculations and changes to the inventory database. The NIR submitted in April 2015 does therefore not reflect the final status of the inventory and the corresponding CRF tables.

A brief overview over the updated emissions is provided in the summary tables below. A detailed documentation of the inventory, including the recalculations made after April 2015, is provided in the national inventory report submitted in April 2016. The inventory submission 2015 for the years 1990-2013 is identical to submission 2016.

The documents are available at www.climatereporting.ch.

Table 2-4 Switzerland's GHG emissions in CO₂ equivalent (kt) by sources and sinks, 1990–2013. The column below on the far right (digits in italic) indicates the percentage change in emissions in 2013 as compared to the base year 1990.

Source and Sink Categories	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	CO ₂ equivalent (kt)									
1. Energy	41'837	44'271	44'259	42'075	40'953	41'862	42'761	41'782	43'324	43'123
1A1 Energy industries	2'521	2'801	2'892	2'557	2'595	2'632	2'844	2'842	3'200	3'222
1A2 Manufacturing industries and construction	6'457	6'738	6'278	6'105	6'042	6'210	6'005	5'920	6'109	5'971
1A3 Transport	14'660	15'150	15'470	14'399	14'582	14'263	14'321	14'875	15'083	15'691
1A4 Other sectors	17'632	18'991	19'023	18'408	17'127	18'170	19'015	17'574	18'381	17'719
1A5 Other	220	203	194	186	181	163	152	162	161	147
1B Fugitive emissions from fuels	346	388	403	419	426	424	424	408	390	373
2. Industrial processes and product use	3'521	3'157	2'997	2'691	2'881	2'873	2'749	2'667	2'782	2'846
3. Agriculture	6'804	6'766	6'649	6'545	6'529	6'503	6'460	6'275	6'231	6'137
5. Waste	1'139	1'054	1'057	1'009	952	955	951	942	928	917
6. Other	12	12	13	13	13	13	13	14	14	14
Total (excluding LULUCF and HWP)	53'314	55'259	54'975	52'332	51'328	52'207	52'935	51'678	53'279	53'037
4. Land use, land-use change and forestry and harvested wood products	-884	-4'049	-3'781	-4'042	-2'220	-3'738	-5'207	-3'435	-2'124	-1'965
Total (including LULUCF and HWP)	52'430	51'211	51'194	48'290	49'108	48'469	47'728	48'243	51'155	51'071

Source and Sink Categories	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	CO ₂ equivalent (kt)									
1. Energy	42'139	43'549	41'933	43'157	43'501	43'996	43'602	41'567	42'926	41'819
1A1 Energy industries	3'149	3'285	3'355	3'354	3'633	3'817	4'032	3'720	3'837	3'674
1A2 Manufacturing industries and construction	5'932	6'187	5'734	5'853	5'992	6'003	6'172	5'983	6'025	5'714
1A3 Transport	15'924	15'624	15'547	15'714	15'792	15'851	15'966	16'289	16'639	16'434
1A4 Other sectors	16'631	17'964	16'816	17'785	17'650	17'879	17'001	15'163	16'021	15'600
1A5 Other	151	149	155	140	129	139	143	136	131	133
1B Fugitive emissions from fuels	352	340	327	311	306	309	288	276	272	266
2. Industrial processes and product use	3'099	3'199	3'237	3'328	3'621	3'776	3'757	3'823	3'902	3'797
3. Agriculture	6'123	6'187	6'153	6'077	6'056	6'098	6'133	6'191	6'298	6'219
5. Waste	939	954	977	957	976	968	968	952	936	917
6. Other	14	14	14	14	14	14	14	14	14	14
Total (excluding LULUCF and HWP)	52'314	53'903	52'315	53'533	54'168	54'852	54'475	52'548	54'076	52'767
4. Land use, land-use change and forestry and harvested wood products	4'910	-624	-2'344	-1'977	-2'745	-2'349	-263	-1'096	-1'877	-2'470
Total (including LULUCF and HWP)	57'223	53'278	49'971	51'556	51'423	52'503	54'211	51'451	52'199	50'297

Source and Sink Categories	2010	2011	2012	2013	2013/1990
	CO ₂ equivalent (kt)				%
1. Energy	43'191	39'147	40'539	41'473	-0.9%
1A1 Energy industries	3'847	3'600	3'643	3'739	48.3%
1A2 Manufacturing industries and construction	5'829	5'389	5'397	5'498	-14.9%
1A3 Transport	16'323	16'142	16'259	16'169	10.3%
1A4 Other sectors	16'777	13'610	14'850	15'698	-11.0%
1A5 Other	138	125	133	134	-39.2%
1B Fugitive emissions from fuels	277	281	258	235	-32.3%
2. Industrial processes and product use	4'011	4'046	4'050	4'074	15.7%
3. Agriculture	6'241	6'185	6'152	6'083	-10.6%
5. Waste	906	893	871	864	-24.2%
6. Other	14	14	14	14	16.1%
Total (excluding LULUCF and HWP)	54'363	50'285	51'626	52'508	-1.5%
4. Land use, land-use change and forestry and harvested wood products	-2'097	-1'688	-2'001	-1'817	105.5%
Total (including LULUCF and HWP)	52'266	48'597	49'625	50'691	-3.3%

Table 2-8 Summary of Switzerland's GHG emissions in CO₂ equivalent (kt), 1990–2013 by sectors, excluding emissions from sectors 4 LULUCF, 6 Other and International bunkers.

Annex A sources		Sector	Base year initial report									
				1990	1991	1992	1993	1994	1995	1996	1997	1998
			CO ₂ equivalent (kt)									
	1 Energy + indirect CO ₂ from this sector	41'881	41'881	44'316	44'304	42'115	40'982	41'890	42'789	41'808	43'347	
	2 Industrial processes and product use + indirect CO ₂ from this sector	3'893	3'893	3'499	3'312	2'975	3'147	3'118	2'974	2'874	2'972	
	3 Agriculture	6'804	6'804	6'766	6'649	6'545	6'529	6'503	6'460	6'275	6'231	
	5 Waste + indirect CO ₂ from this sector	1'142	1'142	1'056	1'059	1'011	954	957	952	943	930	
	Total (Annex A sources)	53'719	53'719	55'637	55'324	52'646	51'612	52'468	53'175	51'900	53'480	

Annex A sources		Sector										
			1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
			CO ₂ equivalent (kt)									
	1 Energy + indirect CO ₂ from this sector	43'140	42'156	43'566	41'948	43'172	43'515	44'009	43'615	41'579	42'939	
	2 Industrial processes and product use + indirect CO ₂ from this sector	3'026	3'269	3'359	3'384	3'463	3'743	3'892	3'870	3'932	4'012	
	3 Agriculture	6'137	6'123	6'187	6'153	6'077	6'056	6'098	6'133	6'191	6'298	
	5 Waste + indirect CO ₂ from this sector	918	940	955	979	958	977	969	969	954	937	
	Total (Annex A sources)	53'222	52'488	54'067	52'465	53'670	54'291	54'969	54'588	52'657	54'186	
KP-LULUCF	Art.3.3	Afforestation & reforestation									-21	
		Deforestation									118	
	Art.3.4	Forest management excl. HWP									-1'937	
		Cropland management									NA	
		Grazing land management									NA	
		Revegetation									NA	
	Harvested wood products (HWP)									-523		

Annex A sources		Sector						2013 vs. 1990
			2009	2010	2011	2012	2013	%
			CO ₂ equivalent (kt)					
	1 Energy + indirect CO ₂ from this sector	41'831	43'202	39'158	40'548	41'484	-1%	
	2 Industrial processes and product use + indirect CO ₂ from this sector	3'907	4'122	4'157	4'160	4'182	7%	
	3 Agriculture	6'219	6'241	6'185	6'152	6'083	-11%	
	5 Waste + indirect CO ₂ from this sector	919	908	894	872	865	-24%	
	Total (Annex A sources)	52'876	54'472	50'394	51'733	52'614	-2%	
KP-LULUCF	Art.3.3	Afforestation & reforestation	-22	-20	-19	-18	-18	
		Deforestation	70	129	130	131	129	
	Art.3.4	Forest management excl. HWP	-2'881	-2'912	-1'713	-3'064	-3'067	
		Cropland management	NA	NA	NA	NA	NA	
		Grazing land management	NA	NA	NA	NA	NA	
		Revegetation	NA	NA	NA	NA	NA	
	Harvested wood products (HWP)	-377	-411	-257	-168	-160		