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EXECUTIVE BODY FOR THE CONVENTION ON
LONG-RANGE TRANSBOUNDARY AIR POLLUTION

Steering Body to the Cooperative Programme for Monitoring and Evaluation
of the Long-range Transmission of Air Pollutants in Europe (EMEP)
(Twenty-seventh session, Geneva, 8-10 September 2003)
Item 4 (g) of the provisional agenda

PRESENT STATE OF EMISSION DATA

Note by the Meteorological Synthesizing Centre-West
prepared in consultation with the secretariat

Summary

This document summarizes the official emission data (by sector and national totals) on anthropogenic emissions of the main pollutants (SO₂, NO_x, NH₃, NMVOC and CO) for 1980-2001; on heavy metals for 1990-2001; on selected persistent organic pollutants for 1990-2001; and on particulate matter (TSP, PM₁₀, PM_{2.5}) for 2000 and 2001. In addition, Parties provided historical and projected activity data (energy consumption, transport, and agricultural activity) for 1990, 1995, 2000, 2010, 2015 and 2020, as well as projected national total emissions for 2010, 2015 and 2020. Gridded data (in the EMEP 50X50 km² grid), including data on large point sources, were requested only for Parties that had not submitted them in 2000. As of 1 June 2003, 36 Parties (74%) of a total 49 had reported their data. They prepared their submissions, to the extent possible, in accordance with the revised Guidelines for Estimating and Reporting Emission Data, adopted by the Steering Body at its twenty-sixth session (EB.AIR/GE.1/2002/7 and Corr.1). Data presented in the annex to this document are also accessible at: <http://webdab.emep.int/>; the database will be updated in autumn 2003.

Documents prepared under the auspices or at the request of the Executive Body for the Convention on Long-range Transboundary Air Pollution for GENERAL circulation should be considered provisional unless APPROVED by the Executive Body.

I. REPORTING EMISSIONS TO UNECE

1. High-quality emission data are essential to assess the state of air pollution in Europe and to determine progress made toward the environmental goals set out in the protocols to the Convention. Parties submit their official emission data and agreed related information to the UNECE secretariat each year. The secretariat checks that each submission is made through the relevant national authority (official data) and then forwards submissions to the Meteorological Synthesizing Centre-West (MSC-W) for storage, management and consistency analysis. MSC-W also works on developing methods for validating emission data in cooperation with the relevant Parties, which have a chance to correct and finalize their data.

2. The goal established during the seventh phase programme for EMEP (EB.AIR/GE.1/1998/3) was for all gaps in the time series of national annual total and sector (level 1) emissions from protocol base years and onwards to be filled using harmonized emission inventory methodologies as early as possible, and at the latest during the 2005 inventory. Moreover, EMEP aims to have a full set of gridded data for national total and sectoral emissions for every five years with updates for the intervening years, if necessary.

3. In a letter inviting Parties to submit data for the 2003 reporting round, the particular importance of reporting projected activity data was highlighted, as this would be crucial for developing the baseline scenario for integrated assessment modelling providing the basis for the review of the Gothenburg Protocol, and would also be used in the European Commission's Clean Air for Europe (CAFE) Programme. The letter also underlined the importance of providing gridded sector data for the Meteorological Synthesizing Centre West (MSC-W) to be able to allocate transboundary transport in modelling and assessments, and in view of the implications for Parties in the design of emission control and abatement options.

4. Parties were encouraged to report according to the revised Guidelines for Estimating and Reporting Emission Data, adopted by the Steering Body at its twenty-sixth session (EB.AIR/GE.1/2002/7 and Corr.1, to be published in the Air Pollution Studies series, No. 15). Some Parties had indicated during the twenty-sixth session of the Steering Body that they would not yet be in a position to use the revised reporting tables annexed to the Guidelines to report emission data in 2003, but would make every effort to use them in 2004.

II. OFFICIAL SUBMISSIONS OF 2001 DATA TO UNECE

5. According to the Guidelines, Parties were to submit 2001 data to the secretariat by 15 February 2003, two weeks later than the previous year. Gridded data were due on 1 March 2003. Final revisions and corrections were due by 15 March 2003. By 1 June 2003, 36 Parties of a total 49 (74%) had transmitted official emission data submissions to the secretariat. Of those reporting, 29 (81%) reported on time, up from only one quarter last year. Twenty-seven Parties (75% of those reporting) reported at least some emission data according to the revised

reporting tables; others used the previous format, their own format, or a combination thereof. Eighteen Parties (50% of those reporting) reported both on time and with the revised reporting tables.

A. Harmonized nomenclatures for reporting

6. The improvement in emission reporting was due, in part, to the use of the revised Guidelines, as well as to Parties' better understanding and greater capacity to provide the data requested. The Guidelines provide general guidance on minimum reporting, as well as information on additional reporting, recalculations, uncertainties and data quality. The reporting tables annexed to the Guidelines aim to harmonize the nomenclatures for reporting under the Convention with those used by the United Nations Framework Convention on Climate Change.

7. The revised reporting tables, as set out in the Guidelines, were made available to Parties as electronic templates on the EMEP homepage: http://www.emep.int/index_data.html. Methodological issues and problems that arose in the first use of the revised Guidelines will be dealt with during the next meeting of the Task Force on Emission Inventories and Projections (22-24 September 2003) in Warsaw. It is expected that many more Parties will report according to the new tables next year.

B. New data validation tool (REPDAB)

8. Official submissions were made electronically, or sent by post to the secretariat, where they were recorded and archived. Initial verification and assessment of submissions was done by the secretariat, in part with the use of a new data validation software tool (REPDAB) developed by MSC-W. REPDAB was run on each submission and, where formatting errors, gaps or inconsistencies were found, Parties were given the opportunity to resubmit data. This procedure facilitated the verification of submissions, and improved the quality of reporting in the 2003 reporting round.

9. The data and results of the REPDAB reports were thereafter transmitted to MSC-W for consistency analysis, storage, maintenance and modelling, as well as to the Meteorological Synthesizing Centre East (MSC-E) for analysis and modelling of data on heavy metals and persistent organic pollutants, and to the Centre for Integrated Assessment Modelling (CIAM). In the context of cooperation with the European Environment Agency (EEA) and its European Topic Centre on Air and Climate Change (ETC/ACC) in the review of emission inventories, submissions were also sent by the Convention's secretariat to EEA. The Task Force on Emission Inventories and Projections will assess the usefulness of this early sharing of data.

10. Since REPDAB was only introduced after reporting was already under way, several

Parties encountered difficulties in using and understanding this new data-checking tool. Problems encountered with the first use of REPDAB will be considered by the Task Force. Next year Parties will be in a position to check their submissions with REPDAB, and to make any necessary corrections, prior to submitting data to the secretariat. Many more Parties are thus expected to report correctly in the 2004 reporting round.

III. DATA ON PARTICULATE MATTER, HEAVY METALS AND POPs

11. According to paragraph 22 of the Guidelines, Parties should report emission inventory data for the source categories set out in the nomenclature for reporting (NFR), annually from the year 2000 (annex IV, tables IV 1A and IV 1B). Parties outside the EMEP region are encouraged to report similar information. Parties are also encouraged to report data going back to 1990 in an appropriate format. In addition to providing data on the main pollutants, Parties are requested to provide data on: particulate matter (PM) (for 2000 and 2001), heavy metals (for 1990 to 2001) and POPs (for 1990 to 2001). Twenty-five (70%) of the total 36 reporting Parties were able to submit data on at least one type of PM (i.e. PM_{2.5}, PM₁₀ or total suspended particulate (TSP)), while 11 (31%) of those reporting submitted data on all three types of PM. As for heavy metals, 31 (86% of reporting Parties) reported at least one of the priority metals (i.e. lead, cadmium and mercury); 25 reported all three priority metals and 23 reported at least one additional metal (i.e. arsenic, chromium, copper, nickel, selenium or zinc). Ten Parties reported all three priority metals and all three types of PM: Austria, Belgium, Denmark, Finland, France, Hungary, Netherlands, Norway, Poland and Sweden. Twenty-two Parties (61% of those reporting) reported data on at least one persistent organic pollutant.

12. Data on heavy metals and POPs are increasingly important for the preparations for the reviews of the Protocols on Heavy Metals and POPs. Both the EMEP Steering Body and the Working Group on Strategies and Review, moreover, have recognized the need for better information on particles. Consequently, the Task Force may wish to consider the obstacles to Parties' reporting more comprehensively on emissions of particulate matter, heavy metals and POPs.

IV. GRIDDED DATA, DATA ON LARGE-POINT SOURCES, PROJECTED ACTIVITY DATA AND INVENTORY REPORTS

13. According to paragraph 22 of the Guidelines, Parties should report, on a five-yearly basis, data in the EMEP 50x50 km² grid, including both national totals and sector emissions, for the main pollutants, PM, lead, cadmium and mercury, as well as for the following persistent organic pollutants: polycyclic aromatic hydrocarbons (PAHs), hexachlorobenzene (HCB), dioxins and furans (PCDD/F). By 1 June 2003, the following Parties had submitted such gridded data for the 2003 reporting round: Belgium (preliminary data only), Bulgaria,

Croatia, Finland, Hungary (preliminary data only), Latvia, Serbia and Montenegro (sulphur and nitrogen oxides only), Slovakia, Spain, Sweden and the former Yugoslav Republic of Macedonia. Problems with gridded data submitted by Croatia, Latvia and the former Yugoslav Republic of Macedonia were highlighted to emission data experts from those countries and it is hoped that future submissions will improve.

14. According to paragraph 23 of the Guidelines, for the year 2000 and every fifth year, Parties within the geographic scope of EMEP should provide data on large point sources, including type of source, geographic coordinates (latitude and longitude), emission quantities of pollutants (main pollutants, PM, heavy metals and POPs) and, where appropriate, effective chimney height. Parties in areas outside the geographic scope of EMEP are encouraged to make available similar information. All stationary source facilities discharging more than 500 metric tons per year of sulphur, nitrogen oxides, non-methane volatile organic compounds or total suspended particulate are considered to be large point sources, regardless of the type of emitter or sector, including large airports meeting at least one of these criteria. The following eight Parties included data on large point sources in their submissions: Belgium (preliminary data for 2000, for the Walloon region only), Bulgaria (2000), Cyprus (2000), Estonia (2001, TSP only), Latvia (2001), Slovenia (2001, PM₁₀ only), Spain (90-2001) and the former Yugoslav Republic of Macedonia (2001). Several Parties experienced problems with the definitions of large point sources and the use of the templates. The Task Force will address these issues.

15. According to paragraph 24 of the Guidelines, Parties within the geographic scope of EMEP should report projected activity data on energy consumption, electricity and heat production, energy consumption for the transport sector and agricultural activity data for the years 2010, 2015 and 2020. The following 12 Parties reported projected activity data for at least one of these years: Bulgaria (preliminary data only), Croatia, Cyprus, Denmark, Latvia, Monaco, Norway, Portugal, Slovakia, Slovenia, Sweden and the former Yugoslav Republic of Macedonia.

16. Paragraph 24 of the Guidelines also calls for projected national total emissions for 2010, 2015 and 2020 of: sulphur oxides, nitrogen oxides, non-methane volatile organic compounds and ammonia. Twenty-one Parties reported projections for at least one of these years and at least one of the pollutants: Azerbaijan, Belgium (preliminary data only), Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Germany, Hungary, Latvia, Liechtenstein, Norway, Poland, Portugal, Slovakia, Slovenia, Switzerland, United Kingdom and United States of America.

17. Paragraph 38 of the Guidelines encourages Parties to submit, no later than three months after submitting emission data reports, an informative inventory report to the secretariat. These reports should contain a description of the methodologies and assumptions used in each

sector, references or sources of information, emission factors, information on recalculations, notation keys, uncertainties and quality control of data. Parties are encouraged, moreover, to publish their emission data and inventory reports and, where possible, to make them available on the Internet. By 1 June 2003, informative inventory reports had been received from three Parties: Finland, Latvia and Sweden. No information was given on the Internet accessibility of the reports.

V. DATA QUALITY AND IMPROVEMENT

18. In accordance with the work plan of the Executive Body, the Task Force on Emission Inventories and Projections should work with Parties to improve the quality and completeness of emission reporting with a focus on validation and good practice (ECE/EB.AIR/77/Add.2, annex XIII, item 2.1). To this end, an EMEP workshop on validation and evaluation of air emission inventories was held at Gothenburg (Sweden) on 14-16 October 2002, in which the need for a more comprehensive inventory improvement programme was identified (EB.AIR/GE.1/2003/5).

19. The Steering Body may wish to consider ways to ensure the quality of overall air emission inventories so as to meet EMEP and policy needs, for instance for the review of protocols and the CAFE programme, including procedures for the review of inventories, taking account of proposals by MSC-W, as well as further harmonization with the reporting and review process of the United Nations Framework Convention on Climate Change.

VI. EMISSION TRENDS IN THE EMEP AREA

20. Provided that all gaps are filled in the time series of reported emission data, it is possible to calculate the development of total emissions over the EMEP area since 1980. Figures I-IV illustrate the emission trends for SO₂, NO_x, NH₃ and NMVOC, respectively.

21. European sulphur dioxide emissions (fig. I) show a clear downward trend. Total SO₂ emissions declined 61% between 1980 and 2001. National total emissions of NO_x reported by the Russian Federation for 1980-1987 included only stationary sources, and this year MSC-W has added the contribution from mobile sources reported by the Russian Federation in 1990. This influenced strongly the NO_x trends in the 1980s in the EMEP area (fig. II). The reduction in NO_x was 25% between 1980 and 2001.

22. European emissions of ammonia (fig. III) dropped by 24% between 1990 and 2001; the almost constant emissions before 1990 is mainly the result of assumptions made to fill in missing data for most countries. The total emission level of ammonia, notably for the late 1990s, has been revised downward compared to last year, as a result of the submission of ammonia emission data from Ukraine and recalculations by Spain.

23. The NMVOC emissions (fig. IV) refer to anthropogenic releases only. The trend between 1980 and 1986 is different from that reported previously, because attempts have been made to complete the emission data from the Russian Federation, which reported an incomplete set of emission sources. The reduction between 1980 and 2001 was 33%, while the decline from 1988, when emissions peaked, to 2001 was 35%.

24. The procedures followed by MSC-W for completing or correcting the time series of emission data will be documented and presented to the Task Force. Projections for 2010, shown in figures I-IV, are provided by CIAM, and the current legislation scenario (CLE) was used for all Parties where available. For other Parties and areas, reported projections or the latest emission figure was used. Although total NH₃ emissions for 2010 reported this year are only 1% higher than those reported last year, there was an increase in emission levels for the EMEP area between 2001 and 2010 (see para. 22 above).

25. Tracking emission reductions achieved by each Party is central to the work of the Convention. Figures V to VIII present the percentage emission reduction $(100 \times E_{\text{year1}} - E_{\text{year2}}) / E_{\text{year1}}$ between 1990 (the Gothenburg Protocol base year) and 2001. The calculated reductions tabulated in table 11 are based on updated emissions officially reported by each Party. Non-Signatories to the Protocol are listed to the right in the figures. The Protocol had 31 Signatories as of 1 May 2003.

26. All data used in the MSC-W model runs will be presented and analysed in the technical report to the Steering Body at its twenty-seventh session (EMEP/MSC-W Note 1/03).

Table 1: Anthropogenic emissions of sulphur (1980-1994) in the ECE region (Gg SO₂ per year)

Party/Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia ¹	141	110.7	101.3	110.3	96.9	100.2	111.2	110.6	104.1	62.7	72	59.5	44.1	5.5	4.2
Austria ²	343.5	303.6	288.6	216.9	200.8	182.8	163	141.2	105.4	94.29	78.68	71.67	59.09	57.91	51.63
Azerbaijan ³															
Belarus ⁴	740	730	710	710	690	690	690	761	720	668	637	652	458	382	324
Belgium ⁵	828	712	694	560	500	400	377	367	354	325	361.5	329.9	315.3	293.9	252.2
Bosnia and Herzegovina											480				
Bulgaria ⁶	2050							2420	2228	2180	2008	1665	1115	1426	1480
Canada ⁷	4643	4291	3612	3625	3955	3772	3329	3687	3772	3311	3210	3576	3093	2555	2492
Croatia ⁸	150										180	108	106.7	113.7	89.3
Cyprus	28	28	33	30	33	35	38	39	42	42	46	33	39	43	42
Czech Republic	2257	2341	2387	2338	2305	2277	2177	2164	2066	1998	1881	1780	1543	1424	1275
Denmark ⁹	452.1	370.4	378.7	322.9	305.5	339.4	287.9	255.1	250.2	196.8	179.9	238.7	186	152.1	156
Estonia	287					254	256	255	254	254	252.1	245.6	187.4	153.8	149.1
Finland	584	534	484	372	368	382	331	328	302	244	260	194	141	123	114
France ¹⁰	3261	2564	2458	2024	1806	1508	1378	1361	1256	1419	1323	1440	1276	1110	1056
Georgia ¹¹	230.2	242.1	250.1	267.3	266.6	273.2	255.3	258.3	255.3	249.1	248.3	194	135.2	71.4	46.9
Germany	7514	7441	7440	7346	7633	7732	7641	7397	6487	6165	5322	3995	3307	2945	2472
Greece	400					500					493	532	546	545	517
Hungary	1633	1580	1545	1480	1440	1404	1362	1285	1218	1102	1010	913	827.3	757.3	741
Iceland ¹²	17.8	17.8	17.8	18.2	18.8	18.1	18.4	16.2	17.5	17.3	24	23.1	23.9	24.5	23.8
Ireland	222	192	158	142	142	140	162	174	152	162	185.7	180.2	171.5	160.8	175
Italy ¹³	3757	3330	2850	2463	2114	1901	1929	2029	1963	1854	1651	1539	1394	1333	1271
Kazakhstan											1156	1296	1296	1285	1093
Kyrgyzstan												52.1	40.8	31.6	21
Latvia											95.34	71.12	59.1	57.68	70.64
Liechtenstein	0.31	0.29	0.27	0.25	0.23	0.2	0.18	0.17	0.15	0.13	0.113	0.108	0.101	0.094	0.084
Lithuania	311	312	304	310	303	304	316	316	300	298	222	234	139	125	117
Luxembourg	24			14		16					15			15	13
Malta															
Monaco ¹⁴											0.063	0.091	0.094	0.1	0.089
Netherlands ¹⁵	490	464	404	323	299	258	264	263	250	204	202.4	173	172	164	146
Norway ¹⁶	136	128	110.7	103.8	95.8	98.2	91.4	72.13	67.6	57.64	51.88	44.12	36.35	35	34.1
Poland	4100					4300	4200	4200	4180	3910	3210	2995	2820	2725	2605
Portugal ¹⁷	266			306		198	234	218	204		287.8	283.2	342.9	307.7	278.7
Republic of Moldova ¹⁸	308	305	287	284	270	282	297	317	273	238	265	259.8	168.2	156.4	108.5
Romania	1055	1095	1104	1229	1223	1255	1293	1305	1469	1517	1311	1041	951	928	912
Russian Federation ¹⁹	7323	7110	7252	7095	6663	6350	5880	5806	5333	4875	4671	4603	4033	3637	3131
Serbia and Montenegro ²⁰	406	408	409	440	456	478	470	484	502	506	508	446	396	401	424
Slovakia ²¹	780					613	604	614	589	573	542	445	380	325	238
Slovenia	234	254	256	274	250	241	247	222	210	211	196	180	186	183	177
Spain ²²	2913	2848	2811	2828	2583	2448	2323	2193	1845	2178	2182	2168	2138	2008	1956
Sweden ²³	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	105.7	99.28	87.86	78.31	80
Switzerland ²⁴	116	108	100	92	84	76	68	62	56	49	41.96	41	38	34	31
TFYR of Macedonia ²⁵															
Turkey ²⁶	204.5	218	236.7	299.1	360.8	519.8	674.4	606.4	443.1	740.7	764.6	840.6	821.3	767.8	991.5
Ukraine	3849	3492	3427	3498	3470	3463	3393	3264	3211	3073	2783	2538	2376	2194	1715
United Kingdom	4854	4399	4187	3847	3698	3717	3877	3873	3810	3696	3719	3535	3461	3115	2675
United States	23501	22251	20993	20449	21292	21463	20795	20580	21005	21132	21478	20901	20687	20387	19840
European Community ^{aa}											16363	14825	13652	12429	11277

Table 1, continued: Anthropogenic emissions of sulphur (1995-2001, 2010, 2015, 2020) in the ECE region (Gg SO₂ per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2010	2015	2015	2020	2020
								CLE *	CRP **	CLE	CRP	CLE	CRP
Armenia	2.5	1.5	0.4	3.31	0.84	8.4026	4.395						
Austria	52.0081	51.1628	45.7689	42.9915	38.9898	38.0479	36.6728	39					
Azerbaijan							14.7	48.9		36.9		27.1	
Belarus	275	246.3	208.5	190	163.7	142.75	150.723	480					
Belgium	257.279	240.33	219.24	212.46	180.82	164.724	161.857		99				
Bosnia and Herzegovina													
Bulgaria	1476	1420	1365	1251	943	981.983	845.935	NA	856	NA	702	NA	702
Canada	2633	2534	2538	2558	2528	2460.43	2487.95	2236.82	185.296	2183.57	215.811	2091.41	208.083
Croatia	70.4	66.2	80.4	89.5	90.7	58.1		70					
Cyprus	41	45	47	49	50	50	48.3	39	39		34		30
Czech Republic	1089	944	697	438	268	264	251	245	283	230	NE	225	NE
Denmark	148.48	179.05	109.43	74.36	53.97	27.73	25.33	56		50		50	
Estonia	118.5	125.2	119	110	102.5	95.46	91.7	100		NE		NE	
Finland	96	105	99	90	87	73.5	85.238	97.5		NE		97.1	
France	992.865	967.58	819.825	846.414	723.094	653.627	609.845	375					
Georgia	20.3	30.1	33.1	20.18	8.61								
Germany	1939	1340	1039	835	738	638	650	509					
Greece	541	525	521	528	540	483	485	546					
Hungary	704.96	673.23	658.51	591.79	590.14	486.15	400.48	550				480	
Iceland	23.9	24.1	24.5	26.8				29.4					
Ireland	161.2	147.4	166	176	157.4	131.49		42					
Italy	1322	1250	1075	1039	923	758.158		842					
Kazakhstan	1083.36	804.545	937.875	961.196	880.982	947.986							
Kyrgyzstan	15.7	14	9.9	10.8	8.72								
Latvia	54.547	50.8826	38.607	35.5978	29.4903	16.664	13.3718	21.68	NE	22.54	NE	26.97	NE
Liechtenstein	0.0789	0.0743	0.0689	0.0642	0.06	0.0534	0.0508	0.04		0.04		0.04	
Lithuania	94	93	77	94	70	43.1	48.7741	145					
Luxembourg	9	8	6	4	3.82182	3.0916		4					
Malta													
Monaco	0.085	0.076	0.073	0.071	0.075	0.067	0.065136	0.04	NE	NE	NE	NE	NE
Netherlands	141.498	135	118	108.006	103.209	91.5183	88.9258	50					
Norway	33.3757	32.7593	30.0009	29.5837	28.5251	26.5946	24.7541	29.5					
Poland	2376	2368	2181	1897	1719	1511	1564	1397					
Portugal	318.41	260.688	265.296	299.311	315.306	288.084	301.248	165	NE	NE	NE	NE	NE
Republic of Moldova	64.06	67.03	36.13	32.08	12.05			135					
Romania													
Russian Federation	2969	2774	2524	2275	2062	1997		2400					
Serbia and Montenegro	462	434	522	521	355	387	394.1	1135					
Slovakia	239	227	202	179	171	123.88	128.572	89	89	92	92	95	95
Slovenia	125	112	118	123	104	96		NE	27	NE	NA	NE	NA
Spain	1805.71	1578.65	1745.69	1611.13	1617.55	1516.91	1424.91						
Sweden	72.8744	96.6602	69.7178	67.3931	54.3279	57.2374	56.7658	67					
Switzerland	33.55	30	26	27.6	25.5	19.257	21.079	17.86		17.149		16.995	
TFYR of Macedonia			17	105		105.2	136.53						
Turkey	1006.79	1164.73	1225.4	1353.68	2104.19	1346.96		995					
Ukraine	1639	1293	1132.4	1028.1	1028.7	2310	1844.35	2310					
United Kingdom	2364.52	2029.36	1670.24	1607.98	1228.78	1188.33	1125.33	585	585	532.928	532.928	449.975	449.975
United States	17406	17621	18068	18182	17533	16483	14324.8	15167		14759		14351	
European Community	10198	8885	8071	7665	6932	5750							

* CLE Current legislation projections.

** CRP Current reduction plans.

NE Not estimated.

NA Not applicable.

Table 2: Anthropogenic emissions of nitrogen oxides (1980-1994) in the ECE region (Gg NO₂ per year)

Party/ Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia ²⁷		15.4	17.2	16.6	15.7	44.8	53	51.5	55.5	51.2	46.2	40	21.8	12.1	11.9
Austria ²⁸	242.569	227.819	223.989	226.822	226.982	231.61	225.277	223.152	217.271	212.633	203.885	209.16	200.457	196.976	190.631
Azerbaijan															
Belarus	234	235	235	237	240	238	358	263	262	263	285	281	224	207	203
Belgium ²⁹	442					325	317	338	345	357	333.582	325.54	334.25	330.3	333.16
Bosnia and Herzegovina															
Bulgaria ³⁰								416	415	411	361	256	230	242	230
Canada	1959	1907	1897	1884	1871	2781	2752	2971	2781	3002	2982	2974	2937	2961	2958
Croatia ³¹	60										87.6	65	56.2	59.3	65.5
Cyprus	13	13	14	14	14	14	15	16	17	17	18	16	19	20	20
Czech Republic	937	819	818	830	844	831	826	816	858	920	544	521	496	454	375
Denmark ³²	273.202	243.168	264.062	257.031	0	295.49	315.96	307.19	297.85	280.23	277.43	324.52	280.49	281.05	287.06
Estonia								70	70	69	67.7	63.33	39.35	38.05	41.08
Finland	295	276	271	261	257	275	277	288	293	301	300	290	284	282	282
France ³³	2022.86	1926.25	1894.02	1872.63	1870.21	1845.8	1806.16	1836.74	1840.66	1901.18	1897.3	1963.95	1919.51	1796.41	1747.23
Georgia ³⁴	121	125.6	130	137.6	137.3	140.4	133.8	134.1	134.6	130.6	129.5	112.5	47.8	32.5	20.8
Germany	3334	3259	3219	3258	3305	3276	3286	3350	3230	3011	2728	2514	2323	2207	2055
Greece ³⁵						306		285	304		290	298	297	292	299
Hungary	272.9	270	268	266	264	262.5	264.2	264.9	257.8	246.8	238	203.1	183.3	184	187.4
Iceland	21.2	21.2	21.2	21.8	21.7	20.5	22.3	24	24.9	25.3	26.3	26.7	28.4	29.3	29.2
Ireland	73	86	86	85	84	91	100	115	122	127	118.1	119.5	130.4	119.1	115.3
Italy ³⁶	1638	1604	1605	1583	1596	1614	1690	1811	1854	1917	1938	1984	2010	1990	1789
Kazakhstan											355.698	400.523	377.892	372.248	296.558
Kyrgyzstan												20	8.9	6.5	3.3
Latvia											80.0047	62.6534	50.7568	50.6289	45.8363
Liechtenstein	0.58	0.59	0.59	0.6	0.6	0.6	0.6	0.59	0.59	0.58	0.525	0.5029	0.4788	0.4549	0.4398
Lithuania	152	154	156	158	162	166	169	171	172	173	158	166	98	78	77
Luxembourg	23			21		21		19.768			23			25	23
Malta															
Monaco ³⁷											0.53	0.636	0.684	0.634	0.623
Netherlands ³⁸	583	575	562	555	573	589	587	599	602	584	569.552	568	556	535	510
Norway ³⁹	190.956	177.7	182	186.7	201	212.8	227.9	229.626	224	224.7	223.523	213.306	211.843	221.568	219.373
Poland	1229					1500	1510	1530	1550	1480	1280	1205	1130	1120	1105
Portugal ⁴⁰	166			192		96	110	116	122		285.935	301.778	323.854	318.539	322.746
Republic of Moldova ⁴¹	58	57	50	42	44	66	72	71	74	70	100	97	67.3	53	46.2
Romania	523	528	516	542	546	542	559	580	590	579	546	464	357	318	319
Russian Federation ⁴²	1734	1915	2002	1976	1879	1903	1871	3411	3287	3335	3600	3435	3123	3054	2667
Serbia and Montenegro ⁴³	47	50	50	53	58	58	58	60	63	62	66	57	49	54	52
Slovakia ⁴⁴								197		227	215	194	181	174	165
Slovenia	51	52	52	51	52	53	58	57	59	58	63	58	58	63	66
Spain ⁴⁵	1068	982	972	994	1007	979	1001	1059	1092	1185	1270.2	1313.64	1344.52	1316.15	1340.66
Sweden ⁴⁶	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	333.771	333.626	318.934	306.654	319.727
Switzerland ⁴⁷	170	172	174	175	177	179	176	174	172	169	153.69	146	138	129	124
TFYR of Macedonia ⁴⁸															
Turkey ⁴⁹	363.94	377.06	407.51	432.99	459.35	483.03	528.26	569.57	570.73	609.24	643.66	649.13	667.27	747.69	730.88
Ukraine	1145	1145	1153	1153	1102	1059	1112	1094	1090	1065	1097	989	830	700	568
United Kingdom	2581.18	2497.46	2488.14	2497.65	2457.65	2537.44	2619.89	2730.57	2786.16	2786.95	2759	2633.35	2553.43	2366.59	2301.41
United States	22121	22397	21819	21704	22581	21045	20480	23442.6	23214.6	23023	23161	22842	22916	23003	22997
European Community ⁵⁰								13446	13464	13563	13389	13281	12977	12341	11951

Table 2, continued: Anthropogenic emissions of nitrogen oxides (1995-2001, 2010, 2015, 2020) in the ECE region (Gg NO₂ per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2010	2015	2015	2020	2020
								CLE *	CRP **	CLE	CRP	CLE	CRP
Armenia	14.9	11.4	15.1	10.95	10.61	9.97	13.331						
Austria	188.148	206.635	194.704	203.003	192.547	196.378	199.397	107					
Azerbaijan							43.2	90.1		103.1		113.2	
Belarus	367	172.7	188.5	164	142	134.8	134.825	180					
Belgium	358.858	314.79	305.79	312.08	288.94	328.513	316.586		176				
Bosnia and Herzegovina													
Bulgaria	266	259	225	223	202	184.423	163.67	NA	266	NA	195	NA	195
Denmark	268.86	311.74	270.93	242.88	227.76	209.02	203.97	146		130		120	
Estonia	42.06	44.36	44.75	46.01	39.62	41.403	37.72	60		NE		NE	
Finland	258	268	260	252	247	235.8	221.87	151		NE		150.8	
France	1708.73	1677.77	1611.47	1592.43	1516.92	1440.52	1411.09	810					
Georgia	26.6	49.6	54.5	42.35	30.14								
Germany	1984	1897	1784	1675	1619	1584	1592	1155					
Greece	296	306	310	334	326	321	331	344					
Hungary	190.07	195.81	199.5	202.62	200.65	185.45	184.53	198				198	
Iceland	28.4	29.6	28.6	27.7				30					
Ireland	115.3	119.9	118.5	121.8	118.5	125.131		65					
Italy	1768	1744	1662	1594	1485	1372.02		1436					
Kazakhstan	282.707	251.954	213.232	228.013	205.179	200.894							
Kyrgyzstan	3.4	3.5	3.5	3.6	2.38								
Latvia	47.1209	43.3617	42.1586	40.4622	38.0876	34.8265	41.9715	34.62	NE	40.41	NE	43.77	NE
Liechtenstein	0.4188	0.404	0.3912	0.3763	0.3618	0.3549	0.3032	0.22		0.2		0.19	
Lithuania	65	65	57	60	54	47.5	55.0378	110					
Luxembourg	21	22	18	17	16.0917	17.0285		11					
Malta													
Monaco	0.579	0.557	0.553	0.518	0.551	0.59	0.715003	NE	NE	NE	NE	NE	NE
Netherlands	486.318	501	453	427.843	429.155	412.559	410.181	260					
Norway	220.706	230.195	232.681	234.555	237.681	223.759	220.731	188.9					
Poland	1120	1154	1114	991	951	838	805	879					
Portugal	335.692	331.106	338.288	362.141	384.596	404.862	396.941	249	NE	NE	NE	NE	NE
Republic of Moldova	38.2	38	36.5	21.7	16.91			90					
Romania													
Russian Federation	2570	2467	2379	2488	2494	2357		3300					
Serbia and Montenegro	59	57	66	66	46	50	50.8	147					
Slovakia	174	132	125	130	118	106.255	105.79	113	113	120	120	128	128
Slovenia	67	70	71	64	58	58	NE	NE	45	NE	NA	NE	NA
Spain	1352.02	1318.23	1356.42	1354.89	1412.32	1432.84	1403.5						
Sweden	296.025	294.907	279.909	266.521	258.578	252.47	248.007	148					
Switzerland	120	113	107	104	99	95.69	91.543	65.953		59.665		58.22	
TFYR of Macedonia			6	15.22		30.4	31.91						
Turkey	800.47	873.04	879.25	862.72	952.09	951.11		2044					
Ukraine	531	467	455.2	557.5	542.5	561.1	1090.82	1094					
United Kingdom	2173.83	2163.61	2011.55	1918.31	1810.08	1736.96	1680.32	1167	1167	1180.75	1180.75	1132	1132
United States	22639	22423	22552	22152	21540	21547	20275	17498		15930		14362	
European Community	11567	11360	10896	10556	10215	9497							

* CLE Current legislation projections.

** CRP Current reduction plans.

NE Not estimated.

NA Not applicable.

Table 3: Anthropogenic emissions of ammonia (1980-1994) in the ECE region (Gg NH3 per year)

Party/Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia ⁵¹		3.1	3.1	3	2.8	2	1.7	1.7	2	0.2	25	0.11	0.05	0.01	0.006
Austria ⁵²	51.3521	52.1311	52.4146	53.3958	53.8275	53.572	52.9989	53.9468	51.3341	52.4392	52.2702	53.4142	49.9206	56.4532	57.5314
Azerbaijan															
Belarus ⁵³											4				4
Belgium ⁵⁴						89					99.2961	93.12	92.64	97.38	96.31
Bosnia and Herzegovina															
Bulgaria ⁵⁵											144	124	111	109	101
Canada															
Croatia ⁵⁶											37.1	31.7	26.8	25.5	24.2
Cyprus															
Czech Republic															
Denmark ⁵⁷	125	123	120	119	115	138.14	138.71	135.3	132.18	132.72	133.16	129.08	127.21	123.71	119.7
Estonia											24.25	22.24	18.47	13.36	12.59
Finland	39	0	0	0	0	43	41	45	0	0	38	0	41	0	0
France ⁵⁸	795.272	804.13	807.35	811.894	798.531	799.282	808.697	805.526	784.17	780.726	779.147	774.387	764.978	756.487	762.09
Georgia															
Germany	835	821	817	841	853	857	846	845	835	823	736	653	636	615	595
Greece											79	78	75	75	73
Hungary	157					150	170	150		170	124	93	84	77	76
Iceland															
Ireland											112.4	114.5	117	116.9	118.6
Italy ⁵⁹	479	475	464	504	481	487	495	497	499	481	466	451	440	449	459
Kazakhstan											0.49	0.42	0.69	0.61	0.39
Kyrgyzstan															
Latvia ⁶⁰											43.8453	41.7651	32.9407	19.72	16.7508
Liechtenstein	0.22				0.17						0.2047	0.205	0.2049	0.2048	0.2057
Lithuania ⁶¹	85	86	86	87	88	89	89	90	89	86	84	85	81	80	80
Luxembourg											7			7	7
Malta															
Monaco ⁶²											0.001	0.001	0.001	0.002	0.003
Netherlands ⁶³	234	240	244	244	246	248	258	258	237	232	232	228	180	191	166
Norway ⁶⁴	22.5668	23	23	23	23	23	23	23.1096	21.3	22.9034	22.5887	22.9528	24.5404	24.2834	24.5681
Poland	550					550	550	550	550	550	508	450	447	382	384
Portugal ⁶⁵											111.598	106.967	112.182	105.407	98.9256
Republic of Moldova ⁶⁶	52.7					57.9					49	49	44	37	35
Romania	340	332	327	311	359	343	350	329	339	341	300	267	255	223	221
Russian Federation ⁶⁷	1189	1192	1214	1245	1247	1239	1286	1277	1269	1258	1191	1161	1084	903	772
Serbia and Montenegro															
Slovakia ⁶⁸											63	56.3	47	41.6	38.7
Slovenia											24	23	24	23	22
Spain ⁶⁹	285	276	292	295	299	296	304	330	331	339	329.611	319.016	316.809	297.804	318.107
Sweden ⁷⁰	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	54.4452	54.7853	54.9384	61.521	61.8269
Switzerland ⁷¹	77				60	73.7					71.5	71	71	71	70
TFYR of Macedonia															
Turkey ⁷²															
Ukraine											729	733.7	690.5	620	585.4
United Kingdom	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	341.415	343.362	327.999	327.524	328.741
United States						1685					3925	3977	4028	4093	4157
European Community ⁷³										3780					

NE Not estimated.

Table 3, continued: Anthropogenic emissions of ammonia (1995-2001, 2010, 2015, 2020) in the ECE region (Gg NH₃ per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2010	2015	2015	2020	2020
								CLE *	CRP **	CLE	CRP	CLE	CRP
Armenia	0.006	0.004	0.004	0.002	0.003	0.002	0.0038						
Austria	56.8794	55.5351	56.8645	56.1402	54.944	53.7153	53.7217	66					
Azerbaijan													
Belarus	4.6	4.4	4.05	4.4	4.16	142.06	137.385	150					
Belgium	100.274	98.91	98.83	102.34	99.74	81.4013	223.853		74				
Bosnia and Herzegovina													
Bulgaria	99	83	77	66	60	56.228	54.355	NA	108	NA	100.5	NA	100.5
Canada	540												
Croatia	24.9	23.4	23	23.3	24.4	22.6		30					
Cyprus							8.54	9	9		8		8
Czech Republic	86	81	81	80	75	74	76.607	62	101	60	NE	57	NE
Denmark	113.16	109.23	108.9	110.12	104.95	104.45	102.27	83		83		83	
Estonia	10.97	9.55	9.74	9.76	8.47	8.764	8.97	29		NE		NE	
Finland	35.2	35	38	37.8	35.2	33.1	33.173	31		NE		NE	
France	766.231	777.443	783.012	784.993	787.097	784.157	778.954	780					
Georgia													
Germany	603	608	599	604	604	596	607	579					
Greece	85	73	71	74	73			73					
Hungary	77	78	76	73.53	71.09	70.81	66.3	90				90	
Iceland													
Ireland	119.6	121.9	123.4	127.4	127	122.44		116					
Italy	461	430	443	438	448	437.347		449					
Kazakhstan	0.32	0.07	0.07	0.26	0.27	0.27							
Kyrgyzstan					59.114								
Latvia	16.8202	15.5364	14.5139	13.3585	11.9518	11.6108	12.35	11.78	NE	12.81	NE	13.82	NE
Liechtenstein	0.3864	0.2058	0.2061	0.3884	0.2066	0.2066	0.1755	0.17		0.17		0.17	
Lithuania	38	36	35	35	29	25.2	50.2586	84					
Luxembourg	7	7	7	7	7.28799	7.23336		7					
Malta													
Monaco	0.003	0.004	0.005	0.005	0.006	0.006	0.006097	NE	NE	NE	NE	NE	NE
Netherlands	192.765	146	188	170.388	166.499	152.127	147.579	128					
Norway	26.0813	26.5383	25.9819	25.9052	25.4811	25.4371	24.6393	25.3					
Poland	380	364	350	371	341	322	309	468					
Portugal	105.66	102.521	101.037	102.969	108.694	107.223	107.665	88	NE	NE	NE	NE	NE
Republic of Moldova	33	31	25	25	24.8			42					
Romania													
Russian Federation	824	749	730	675	657	650		800					
Serbia and Montenegro							NE						
Slovakia	39.6	38	36.1	32.1	30.2	29.6185	28.4465	37	37	36	36	37	37
Slovenia	22	22	19	20	20	19	NE	NE	20	NE	NA	NE	NA
Spain	306.376	340.128	340.074	358.676	370.702	388.828	383.177						
Sweden	61.5167	61.753	59.5154	59.7529	56.8136	57.2761	53.9813	57					
Switzerland	69.2	69	69	68.3	68.3	68.29	67.513	65.893		65.893		65.893	
TFYR of Macedonia													
Turkey	0.009	0.008	0.006	0.007	0.007	0.007							
Ukraine	540.3	517.8	482.7	410.1	363.5	358.4	378.176	23					
United Kingdom	319.263	322.308	326.484	320.013	316.478	297.185	290.37	297	297	284.395	284.395	287.721	287.721
United States	4225	4258	4342	4433	4458	4503	9064.34	4506		4605		4704	
European Community	3549	3527	3587	3582									

* CLE Current legislation projections.

** CRP Current reduction plans.

NE Not estimated.

NA Not applicable.

Table 4: Anthropogenic emissions of non-methane volatile organic compounds (1980-1994) in the ECE region (Gg NMVOC per year)

Party/Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia ⁷⁴		25.7	24.3	23.8	21.7	92.7	98.1	104.3	92.5	90.2	81	69.9	30.9	19.9	17.1
Austria ⁷⁵	361.96	365.381	367.26	372.207	378.911	381.533	379.88	382.326	373.115	364.543	344.785	322.722	293.171	282.021	269.971
Azerbaijan															
Belarus	549	546	543	543	540	516	506	509	535	511	533	546	412	372	366
Belgium ⁷⁶						688					273.704	267.36	266.47	264.56	257.87
Bosnia and Herzegovina															
Bulgaria ⁷⁷									309.188		217	178	179	208	175
Canada	2099					3104	3026	2988	3104	3002	2997	2958	2921	2647	2691
Croatia ⁷⁸											105	86.5	63.7	69.3	74.7
Cyprus															
Czech Republic					275					441	394	366	346	310	
Denmark ⁷⁹	203	199	199	202	0	190.42	188.59	188.53	186.56	183.99	162.02	163.87	162.17	161.17	158.23
Estonia						81	83	83	84	87	88.4	81.9	45.4	41.6	44.65
Finland ⁸⁰								210	224.9	227.4	223.9	209.8	203.7	195.9	193.6
France ⁸¹									2705.86	2673.84	2473.06	2453.15	2398.64	2287.79	2157.94
Georgia ⁸²	45.5	46.8	47.8	49.8	49.3	48.5	47.6	48.2	47.8	46	46.4	8.2	3.9	2.2	1.7
Germany ⁸³	3224	3152	3134	3152	3191	3190	3218	3274	3256	3202	3220	2796	2539	2326	2159
Greece ⁸⁴						614					255	253	261	270	274
Hungary ⁸⁵	215					232	263	228	215	205	205	149.6	141.8	149	142.4
Iceland	7.7	7.7	7.7	7.6	7.7	8	8.4	11.9	12.6	12.6	12.8	14.3	14.1	13.6	14.2
Ireland											111.107	111.057	114.33	108.548	107.454
Italy	2179	2119	2074	2045	2007	1992	2019	2088	2124	2215	2041	1866.41	1933.8	1860.82	1814.98
Kazakhstan ⁸⁶											0.394	0.465	0.558	0.565	0.7
Kyrgyzstan												8	6.9	4	2.5
Latvia											142.55	97.8473	79.0404	73.6064	76.1656
Liechtenstein	1.14	1.15	1.15	1.15	1.15	1.15	1.13	1.1	1.08	1.06	0.9879	0.9322	0.868	0.8108	0.7606
Lithuania	100	102	104	105	106	112	108	108	109	109	108	111	66	52	52
Luxembourg						15					19			18	18
Malta															
Monaco ⁸⁷											0.702	0.806	0.928	0.829	0.823
Netherlands ⁸⁸	579	555	543	526	513	502	489	485	538	468	492.328	462	438	405	389
Norway ⁸⁹	173.29	181.7	188.6	201.3	212.3	231.4	249.4	252.974	249	276.364	294.393	293.623	321.829	337.806	352.081
Poland ⁹⁰	1036	912	889	954	985	1011	1029	1014	1026	1016	831	833	805	756	819
Portugal ⁹¹						199					390.341	418.778	446.1	453.357	453.648
Republic of Moldova ⁹²				105	101	102	102	96	157	151.2	99	74.5	65.6		
Romania	829	810	772	796	812	787	830	884	846	812	772	678	627	634	638
Russian Federation ⁹³	2843	2843	2582	2444	2390	2496	2338	3410	3396	3444	3668	3361	3297	3062	2924
Serbia and Montenegro															
Slovakia ⁹⁴											262	NE	NE	151	NE
Slovenia									39		44	41	40	42	44
Spain ⁹⁵	1392	1372	1350	1377	1371	1393	1420	1475	1510	1544	1633.02	1657.68	1641.74	1540.9	1600.31
Sweden ⁹⁶	NE	NE	NE	NE	NE	NE	NE	NE	514.829	511.561	497.838	477.582	460.226	427.302	408.237
Switzerland ⁹⁷	323				324	324	318	311	305	298	278.8	261	242	226	213
TFYR of Macedonia															
Turkey ⁹⁸	359.02	360.95	379.26	387.44	383.86	378.97	403.01	430.31	449.82	453.02	462.87	457.16	478.55	527.1	515.54
Ukraine						1626	1660	1687	1604	1512	1369	1302	1171	972	1024
United Kingdom	2159.75	2136.64	2175.27	2196.63	2250.06	2258.52	2307.64	2366.16	2429.5	2464.2	2424.92	2356.12	2262.48	2153.11	2103.27
United States	23221	21786	20943	21865	22957	21904	20953	20726	20965	20120	18421	18878	18777	18948	19327
European Community ⁹⁹										16231	15687	15187	14540	14376	

Table 4, continued: Anthropogenic emissions of non-methane volatile organic compounds (1995-2001, 2010, 2015, 2020) in the ECE region (Gg NMVOC per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2010	2015	2015	2020	2020
								CLE *	CRP **	CLE	CRP	CLE	CRP
Armenia	23.4	17.8	35.1	16.94	17.47	15.96	28.277						
Austria	271.131	268.685	249.86	242.487	236.865	231.513	232.252	159					
Azerbaijan							8.5	17.7		20.3		22.3	
Belarus	195	327.7	344.7	294	239.9	225	215.4	321					
Belgium	262.461	241.69	248.53	269.09	247.98	233.136	251.501		139				
Bosnia and Herzegovina													
Bulgaria	173	147	120	132	118	120.408	289.12	NA	408	NA	400.9	NA	400.9
Canada	2639	2554	2533	2491	2528	2492.52	2476.25	2556.86	76.0502	2636.77	91.8026	2710.65	101.037
Croatia	74.1	81.5	79.5	78.5	77.4	79.8		90					
Cyprus							14.42	14	14		12		11
Czech Republic	292	293	277	242	234	227	220	209	220	206	NE	200	NE
Denmark	153.59	152.52	145.32	138.33	132.74	128.59	123.9	83		80		75	
Estonia	47.5	50.2	53.92	53.7	42.33	33.691	33.27	49		NE		NE	
Finland	187.8	181.6	175.2	170.8	165.9	161.3	157.092	130		NE		NE	
France	2079.17	1992.61	1918.68	1856.68	1784.62	1726.18	1673.65	1050					
Georgia	1.5	2.4	2.8	10.84	18.63								
Germany	2021	1893	1822	1735	1663	1605	1606	1192					
Greece	273	284	285	290	291	305	268	261					
Hungary	150.3	150.1	145.4	140.6	169.84	172.68	166.06	137				137	
Iceland	12	12	9.8	10				6.6					
Ireland	105.35	111.85	115.7	117.635	98.407	90.266		55					
Italy	1800.35	1757.39	1689.94	1585.71	1723	1557	1464	1440					
Kazakhstan	1.222	0.132	0.083	0.026	0.041	0.22							
Kyrgyzstan	2.8	2.4	2.4	2.4	2.32								
Latvia	79.3733	82.8406	83.9275	83.3335	80.7952	69.3438	80.867	66.56	NE	66.66	NE	79.22	NE
Liechtenstein	0.7103	0.672	0.6346	0.5963	0.5568	0.5274	0.6383	0.53		0.53		0.53	
Lithuania	77	82	81	79	68	60.8	70.5983	84					
Luxembourg	16	16	15	13	14.92	14.9247		9					
Malta													
Monaco	0.751	0.696	0.636	0.578	0.562	0.518	0.50675	NE	NE	NE	NE	NE	NE
Netherlands	362.992	362	317	301.451	290.875	278.003	270.938	185					
Norway	367.133	371.462	368.233	353.997	358.206	367.449	375.813	170.3					
Poland	769	766	774	730	731	599	873	804					
Portugal	474.529	450.192	510.538	543.126	495.164	487.673	492.404	240	NE	NE	NE	NE	NE
Republic of Moldova	61.7	64.4	68.8	42.9	22.14			100					
Romania													
Russian Federation	2857	2622	2386	2376	2451	2450		3500					
Serbia and Montenegro							NE						
Slovakia	159	161	138	132	130	88.997	89.7673	76	76	79	79	81	81
Slovenia	44	49	48	42	40	40	NE	NE	40	NE	NA	NE	NA
Spain	1549.46	1534.17	1534.42	1584.53	1584.83	1547.99	1533.15						
Sweden	398.762	388.558	354.292	338.875	318.499	304.223	303.359	241					
Switzerland	199.4	191	182	173	165	158.82	147.137	122.638		121.792		121.991	
TFYR of Macedonia													
Turkey	677.29	754.5	784.31	803.33	785.36	725.63		1925					
Ukraine	811	718	665	253.9	272.4		269.487	1369					
United Kingdom	1971.03	1904.28	1829.35	1692.7	1526.21	1418.11	1335.94	1200	1200	1194.96	1194.96	1220.73	1220.73
United States	18824	17700	17680	17180	16572	16252	15407.8	12606		12546		12486	
European Community	13043	13525	13336	12511	12103	11562							

* CLE Current legislation projections.

** CRP Current reduction plans.

NE Not estimated.

NA Not applicable.

Table 5: Anthropogenic emissions of carbon monoxide (1980-1994) in the ECE region (Gg CO per year)

Party/Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia ¹⁰⁰		26.6	30	30.4	30.9	404.9	405.1	416.5	417.1	398.9	304.3	377.2	195.1	145.1	128
Austria ¹⁰¹	1794.77	1751.13	1718.79	1694.12	1727.95	1708.11	1646.2	1578.36	1489.78	1426.69	1237.96	1246.3	1197.55	1166.5	1116.76
Azerbaijan															
Belarus						1654	1605	1601	1590	1615	1722	1717	1381	1201	1241
Belgium											1284.57	1103.17	1122.6	1087.53	1043.84
Bosnia and Herzegovina															
Bulgaria ¹⁰²								997	995	985	891	608	768	820	855
Canada	10273					12564	12463	13065	12564	12828	12712	12392	12227	11630	11642
Croatia ¹⁰³											655.2	565.3	416.5	375.4	369.4
Cyprus															
Czech Republic	894		906		895	899	740	738	737	884	1257	1179	1170	1103	1125
Denmark ¹⁰⁴	956.342	1075.12	1122.71	950.602	0	996.21	970.7	988.29	903.51	961.39	712.81	752.84	742.74	746.06	717.12
Estonia						400	417	423	419	448	434.1	399.2	207.8	210.2	241.1
Finland	660										559	552	478	457	444
France ¹⁰⁵	15753.9	14984	14528.2	14092.9	14157.1	13988.5	13590.9	13351.9	12916.3	12361	10950.6	10836.5	10362.7	9779.36	9079.11
Georgia ¹⁰⁶	648.3	617.3	632.2	647.8	651.3	636.5	642.9	638.9	647.7	597.3	526.4	441.4	129.5	142.5	148.5
Germany	14046	13027	12438	11980	12176	12134	12135	12438	12081	11430	11213	9515	8352	7704	7064
Greece											1298	1290	1320	1285	1264
Hungary	1019					931.1			963.1		997	913.4	835.8	796.1	774.29
Iceland	44.2	44.2	44.2	43.2	44.1	45.5	48.2	53.6	57.1	57	58.2	59.2	60.7	59.9	60.3
Ireland											400.9	394.4	394.6	350.3	329.2
Italy ¹⁰⁷	7588	7478	7527	7432	7590	7692	7607	7674	7581	7735	7824	8003	7961	7755	7549
Kazakhstan											1639.9	1975.3	1959.5	1801.36	1425.86
Kyrgyzstan												26.2	21.3	13.2	9.5
Latvia											497.969	494.35	482.748	319.844	329.264
Liechtenstein	5.02	4.79	4.56	4.34	4.11	3.88	3.66	3.44	3.21	3	2.637	2.4979	2.3248	2.1816	2.0805
Lithuania	541	548	543	550	550	545	554	564	578	568	519	577	350	292	303
Luxembourg						193					175			219	145
Malta															
Monaco ¹⁰⁸											3.025	3.477	3.942	3.469	3.407
Netherlands ¹⁰⁹	1530	1418	1374	1354	1357	1381	1252	1192	1179	1131	1119.68	1025	983	960	907
Norway ¹¹⁰	909.203	815.1	823.7	815.8	842	844.2	872.3	918.55	868.9	910.025	866.67	799.341	778.33	780.949	766.129
Poland											7406		7083	8655	5115
Portugal ¹¹¹											1078.29	1149.02	1241.42	1225.71	1205.86
Republic of Moldova ¹¹²	55	53	56	49	48	483	478	474	496	476	453.2	468.4	279.2	218.4	170.9
Romania	3245	3217	3152	3030	3463	3307	3378	3196	3317	3314	3186	2695	2506	2434	2325
Russian Federation ¹¹³	13520	15005	13617	13696	13672	14122	13142	13270	13144	12210	13329	13000	11703	11320	10603
Serbia and Montenegro															
Slovakia ¹¹⁴											491	533	478	426	454
Slovenia	68	66	63	61	64	68	78	79	75	75	81	78	78	87	93
Spain ¹¹⁵	3494	3372	3343	3370	3344	3305	3347	3437	3620	3807	3798.08	3867.9	3933.19	3712.65	3674.47
Sweden ¹¹⁶	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	1134.88	1097.53	1090.44	1045.15	1026.56
Switzerland	1280	1222	1164	1106	1048	990	933	877	820	764	672.6	629	581	544	516
TFYR of Macedonia ¹¹⁷															
Turkey ¹¹⁸	2933.9	2961.41	3110.36	3140.59	3140.63	3121.39	3304.57	3477.15	3609.75	3505.33	3584.74	3578.82	3662.39	3935.99	3769.27
Ukraine						9832	9722	9269	9085	8794	8141	7406	5496	4218	3375
United Kingdom	7669.06	7658.29	7751.74	7567.24	7652.81	7454.18	7454.36	7502.21	7560.58	7804.19	7444.73	7214.05	6895.18	6384.22	6048.03
United States	101641	97724	96799	100470	100999	103472	97183	94855	95593	93832	84544	89239	88301	89091	90353
European Community ¹¹⁹										50205	48326	46474	44154	42041	

NE Not estimated.

Table 5, continued: Anthropogenic emissions of carbon monoxide (1995-2001, 2010, 2015, 2020) in the ECE region (Gg CO per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2015	2020
Armenia	173.6	125.5	223.6	124.4	123.7	109.66	104.248			
Austria	1029.68	1050.23	985.352	953.085	907.178	858.745	859.738			
Azerbaijan							293.1	611.3	699.2	767.9
Belarus	1253	1241.8	1223.2	1034	786.4	717.5	710.76	1404		
Belgium	1174.82	1000.12	938.34	1113.95	1016.8	1099.62	1026.81			
Bosnia and Herzegovina										
Bulgaria	846	613	515	650	617	667.27	521.365	750		666
Canada	11207	10800	10603	10313	9885	9368.93	9174.17	10550		10360
Croatia	373.6	428.4	430.9	408.6	398.9	402.1		660		
Cyprus							84.53			
Czech Republic	999	1012	944	765	716	648	649			
Denmark	700.74	706.21	663.68	600.29	564.58	578.57	587.29	331		
Estonia	242.3	267.7	282.8	280.7	215.3	201.66	177.45			
Finland	436	461	474	452	547	526.3	605.04			
France	8922.47	8322.88	7873.4	7672.17	7147.38	6639.58	6364.67			
Georgia	249.5	390.2	429.2	353.3	222.5					
Germany	6532	6109	5955	5424	5143	4768	4797			
Greece	1254	1354	1356	1489	1386	1531	1366			
Hungary	761.29	726.87	733.36	736.93	721.62	633.04	591.83	600		700
Iceland	49.4	49.9	38.9	39.8				19.41		
Ireland	304.4	306.8	312.1	317.7	285.1	279.571		322		
Italy	7755	6971	6681	6318	6051	5207.2		4213		
Kazakhstan	1421.92	1450.55	1378.8	1345.42	1187.39	1114.27				
Kyrgyzstan	7.5	5.5	4.6	5	3.68					
Latvia	389.725	407.17	384.031	375.985	339.258	272.926	381.557	258.456	260.508	243.4
Liechtenstein	1.9864	1.896	1.8177	1.7313	1.6519	1.6361	1.5857	1.22	1.16	1.16
Lithuania	286	312	358	358	320	281.5	228.57	400		
Luxembourg	107	103	80	51	49.8041	48.9385		33		
Malta										
Monaco	3.072	2.751	2.661	2.264	2.214	2.108	2.09309			
Netherlands	852.467	903	749	739.239	701.911	678.579	658.99			
Norway	733.826	706.522	669.813	632.962	599.302	568.181	548.224			
Poland	4547	4837	4700	4301	4363	3463	3528			
Portugal	1192.36	1172.1	1134.15	1133.29	1101.48	1086.5	1056.47			
Republic of Moldova	192	170.3	210.2	153.4	100.2			150		
Romania										
Russian Federation	9945	9401	10332	10383	10804	10811		16650		
Serbia and Montenegro							NR			
Slovakia	404	348	352	318	310	290.139	286.791			
Slovenia	91	95	93	77	70	68	NE	53		
Spain	3301.8	3423.97	3266.83	3249.98	2996.89	2885.59	2857.16			
Sweden	1014.8	999.609	899.401	952.044	908.893	832.962	808.45	426		
Switzerland	490.9	467	443	422	399	393.9	409.529	316.229	300.088	299.112
TFYR of Macedonia			23	25.8		76.94	76.1			
Turkey	3986.51	4135.15	4178.82	4156.05	4046.76	3778.2		10986		
Ukraine	2906	2567	2516	2810.4	2671.8		3107.31	8141		
United Kingdom	5694.9	5665.62	5280.25	4901.88	4590.5	4025.05	3737.12	2837.5		
United States	83993	90741	90054	89456	85240	82939	103079	83482	88038	92593
European Community	40490	39029	37423	35673	33848	30817				

**Table 6: Anthropogenic emissions of total suspended matter (1980-1994) in the ECE region
(Mg TSP per year)**

Party/Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia															
Austria ¹²⁰	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	73962.3	NE	NE	NE	NE
Azerbaijan															
Belarus															
Belgium											NE				
Bosnia and Herzegovina															
Bulgaria															
Canada											640162	599274	508125	448224	353680
Croatia															
Cyprus															
Czech Republic ¹²¹															
Denmark ¹²²															
Estonia ¹²³						334000	294100	300500	278500	262000	268500	277800	240728	189022	161492
Finland															
France ¹²⁴											1623460	1662290	1568180	1476200	1441030
Georgia															
Germany ¹²⁵															
Greece															
Hungary											197000	191750	154200	150300	149570
Iceland															
Ireland															
Italy															
Kazakhstan											1268120	1218990	1163740	1070340	8864040
Kyrgyzstan															
Latvia											28144.8	27663.4	13882.7	9514.18	13105.3
Liechtenstein															
Lithuania															
Luxembourg															
Malta															
Monaco ¹²⁶											10.046	11.121	12.714	11.583	10.548
Netherlands ¹²⁷											110979				
Norway ¹²⁸											88577.9	81604.8	77550.6	84261.3	83091.3
Poland															
Portugal											NE	NE	NE	NE	NE
Republic of Moldova															
Romania															
Russian Federation															
Serbia and Montenegro															
Slovakia ¹²⁹															
Slovenia															
Spain											0	0	0	0	0
Sweden ¹³⁰	82141.9	73119.2	77591.9	157218	166363	179383	168330	155077	148077	140501	139828	134426	128603	124333	116780
Switzerland															
TFYR of Macedonia															
Turkey															
Ukraine															
United Kingdom	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
United States															
European Community															

NE Not estimated.

Table 6, continued: Anthropogenic emissions of total suspended matter (1995-2001, 2010, 2015, 2020) in the ECE region (Mg TSP per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2015	2020
Armenia										
Austria	76257.5	NE	NE	NE	80160.1	78460.8	79682.3			
Azerbaijan										
Belarus										
Belgium	NE					277241	277262			
Bosnia and Herzegovina										
Bulgaria							NE			
Canada	14888400	14804500	15066900	15130900	14852500	16613100	16864700			
Croatia										
Cyprus										
Czech Republic	202157	178028	126930	84388	66477	57182	53851			
Denmark						42403.4	42872.8			
Estonia	113144	98930	78277	69851	70463	78538.7	77462.5			
Finland	50043					73587	80144.4			
France	1435220	1519180	1515610	1538100	1535130	1485720	1510260			
Georgia										
Germany						250000	247000	NE		NE
Greece										
Hungary	154500	140650	136530	127410	127610	128500	122290	108000	107000	106000
Iceland										
Ireland										
Italy										
Kazakhstan	9123770	7828800	6662030	617602	5860110	5859670				
Kyrgyzstan										
Latvia	12465.2	11829.8	12320.7	11123	12146	9500.23	13285	NE	NE	NE
Liechtenstein							NE			
Lithuania						12719	10991.2			
Luxembourg										
Malta										
Monaco	9.473	8.921	8.345	7.422	6.737	6.181	8.29336			
Netherlands	83896.8			53575.9	72747	72237.3	71099.4			
Norway	82150.7	85662.2	89450.8	82750.2	79692.1	82127.1	79897.8			
Poland						463923	496338			
Portugal	NE	NE	NE	NE	NE	NE	NE			
Republic of Moldova										
Romania										
Russian Federation										
Serbia and Montenegro							NE			
Slovakia						52444.6	49765.9			
Slovenia							NE			
Spain										
Sweden	114865	109729	100507	95291.1	87676.3	86166.1	90550.1			
Switzerland	41976									
TFYR of Macedonia										
Turkey										
Ukraine							867478			
United Kingdom	NE	NE	NE	NE	NE	NE	NE			
United States										
European Community										

NE Not estimated.

Table 7: Anthropogenic emissions of particulate matter (1980-1994) in the ECE region (Mg PM10 per year)

Party/Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia															
Austria ¹³¹	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	46532.4	NE	NE	NE	NE
Azerbaijan															
Belarus															
Belgium											NE				
Bosnia and Herzegovina															
Bulgaria															
Canada															
Croatia															
Cyprus															
Czech Republic ¹³²															
Denmark ¹³³															
Estonia															
Finland															
France ¹³⁴											629930	668013	636275	605374	573635
Georgia															
Germany															
Greece															
Hungary															
Iceland															
Ireland															
Italy															
Kazakhstan															
Kyrgyzstan															
Latvia											NE	NE	NE	NE	NE
Liechtenstein											89.2				
Lithuania															
Luxembourg															
Malta															
Monaco ¹³⁵															
Netherlands ¹³⁶											89726				
Norway ¹³⁷											70240.1	64495.6	61579.6	68107.9	69127.4
Poland															
Portugal											NE	NE	NE	NE	NE
Republic of Moldova															
Romania															
Russian Federation															
Serbia and Montenegro															
Slovakia ¹³⁸															
Slovenia															
Spain											0	0			
Sweden ¹³⁹	61592.6	54032.4	58116.1	129601	137476	149127	139683	127770	120545	113967	113192	109269	104041	100319	93665.8
Switzerland											32130				
TFYR of Macedonia															
Turkey															
Ukraine															
United Kingdom	358310	342838	335759	331975	291649	329755	343468	340369	335654	321872	309177	307223	296236	283666	269234
United States															
European Community															

NE Not estimated.

Table 7, continued: Anthropogenic emissions of particulate matter (1995-2001, 2010, 2015, 2020) in the ECE region (Mg PM10 per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2015	2020
Armenia										
Austria	46859.9	NE	NE	NE	48352.9	47416.1	47982.7			
Azerbaijan										
Belarus										
Belgium	NE					65434.6	65599.6			
Bosnia and Herzegovina										
Bulgaria							NE			
Canada	4663390	4629490	4672900	4673350	4640020	5121780	5197580			
Croatia										
Cyprus							574			
Czech Republic							43105.2			
Denmark						19905.2	20018.5			
Estonia	33268						NE			
Finland	30028					48240	53861.9			
France	572584	593629	574659	580548	567425	545352	550388			
Georgia										
Germany										
Greece										
Hungary	60240	53000	50830	48140	46410	47040	43360			
Iceland										
Ireland						13573				
Italy										
Kazakhstan										
Kyrgyzstan										
Latvia	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Liechtenstein	80					73.7	53.609	51	51	51
Lithuania							637			
Luxembourg										
Malta										
Monaco							NE			
Netherlands	69792.6			43738	62971.1	62475.4	61315.7			
Norway	67635.2	70359.1	74016.8	67560.3	64696.9	65873.1	64412.6			
Poland						281885	305471			
Portugal	NE	NE	NE	NE	NE	NE	NE			
Republic of Moldova										
Romania										
Russian Federation										
Serbia and Montenegro							NE			
Slovakia							NE			
Slovenia							NE			
Spain										
Sweden	91804.8	87297.8	79349.6	74266.9	66948.7	66083.8	69292.7			
Switzerland	28222					26402	23910.7	22727	22727	22727
TFYR of Macedonia										
Turkey										
Ukraine							NO			
United Kingdom	238627	233026	213469	207437	196072	177955	178485			
United States						20901300	21266100			
European Community										

NE Not estimated.

NO Not occurring.

**Table 8: Anthropogenic emissions of particulate matter (1980-1994) in the ECE region
(Mg PM2.5 per year)**

Party/Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Armenia															
Austria ¹⁴⁰	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	27576.7	NE	NE	NE	NE
Azerbaijan															
Belarus															
Belgium											NE				
Bosnia and Herzegovina															
Bulgaria															
Canada															
Croatia															
Cyprus															
Czech Republic															
Denmark ¹⁴¹															
Estonia															
Finland															
France											368990	403844	381714	411667	335530
Georgia															
Germany															
Greece															
Hungary															
Iceland															
Ireland															
Italy															
Kazakhstan															
Kyrgyzstan															
Latvia											NE	NE	NE	NE	NE
Liechtenstein															
Lithuania															
Luxembourg															
Malta															
Monaco ¹⁴²															
Netherlands ¹⁴³											54283.2				
Norway ¹⁴⁴											58684.6	53583.7	51172.9	57204.5	59497
Poland															
Portugal											NE	NE	NE	NE	NE
Republic of Moldova															
Romania															
Russian Federation															
Serbia and Montenegro															
Slovakia ¹⁴⁵															
Slovenia															
Spain															
Sweden ¹⁴⁶	40331.5	33503.4	37601.5	100757	107934	118470	110561	100010	93482.8	86724.4	86068.9	82610.8	78133.5	75114.2	69122.4
Switzerland															
TFYR of Macedonia															
Turkey															
Ukraine															
United Kingdom	213212	205416	201772	200359	184935	199269	206113	206228	205895	197452	190369	188138	180194	169094	162983
United States															
European Community															

NE Not estimated.

Table 8, continued: Anthropogenic emissions of particulate matter (1995-2001, 2010, 2015, 2020) in the ECE region (Mg PM_{2.5} per year)

Party/Year	1995	1996	1997	1998	1999	2000	2001	2010	2015	2020
Armenia										
Austria	27514.3	NE	NE	NE	27754.3	27435.2	27778.9			
Azerbaijan										
Belarus										
Belgium	NE					35993.8	36240.9			
Bosnia and Herzegovina										
Bulgaria							NE			
Canada	924952	914740	910791	908387	912585	989259	999135			
Croatia										
Cyprus										
Czech Republic										
Denmark						13290.1	13172.8			
Estonia	13693						NE			
Finland	22016					37663	38272.4			
France	334903	347847	327134	329673	316993	299274	303110			
Georgia										
Germany										
Greece										
Hungary	27780	27940	26790	25170	20210	25720	24430			
Iceland										
Ireland										
Italy										
Kazakhstan										
Kyrgyzstan										
Latvia	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Liechtenstein							NE			
Lithuania										
Luxembourg										
Malta										
Monaco							NE			
Netherlands	42501.7			33853.2	37439.8	37263.8	36601.6			
Norway	58527.3	60381.3	63815.3	58272.5	55576.8	56199.8	54457.6			
Poland						135317	142050			
Portugal	NE	NE	NE	NE	NE	NE	NE			
Republic of Moldova										
Romania										
Russian Federation										
Serbia and Montenegro							NE			
Slovakia							NE			
Slovenia							NE			
Spain										
Sweden	67645.9	63936.9	57623.7	52495.6	45844.1	44950.4	47507.7			
Switzerland	15479									
TFYR of Macedonia										
Turkey										
Ukraine							NO			
United Kingdom	148206	145333	163940	125710	118787	108239	108351			
United States						6060620	6153840			
European Community										

NE Not estimated.

NO Not occurring.

**Table 9: Anthropogenic emissions of persistent organic pollutants in the ECE region
(kg per year, except for dioxins and furans, which are g I-Teq per year; PAHs are Mg per year)**

Party	Year	ANNEX I										ANNEX II			ANNEX III						OTHER		
		Aldrin	Chlor-dane	Chlor-decone	Dieldrin	Endrin	Hepta-chlor	Hexa-bromo-biphenyl	Mirex	Toxa-phene	HCH	DDT	PCBs	Dioxins and furans	PAHs					HCB	PCP	SCCP	
															Benzo(a)pyrene	Benzo(b)-flour-anthene	Benzo(k)-flour-anthene	Indeno (1.2.3-cd)pyrene	Total 1-4				
Austria ¹⁴⁷	1980												0						0	0			
	1981												0						0	0			
	1982												0						0	0			
	1983												0						0	0			
	1984												0						0	0			
	1985		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	187.671	NE	NE	NE	NE	28.3475	105.974		NE	NE
	1986		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	186.784	NE	NE	NE	NE	27.6365	103.5		NE	NE
	1987		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	188.624	NE	NE	NE	NE	27.5588	106.191		NE	NE
	1988		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	175.383	NE	NE	NE	NE	26.1367	99.0276		NE	NE
	1989		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	165.964	NE	NE	NE	NE	25.6995	95.1762		NE	NE
	1990		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	160.02	NE	NE	NE	NE	17.5143	91.7571		NE	NE
	1991		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	134.42	NE	NE	NE	NE	18.1347	83.9964		NE	NE
	1992		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	75.2806	NE	NE	NE	NE	13.5564	68.1712		NE	NE
	1993		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	66.7256	NE	NE	NE	NE	10.3895	63.7631		NE	NE
	1994		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	55.8894	NE	NE	NE	NE	9.51287	51.4996		NE	NE
	1995		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	58.1564	NE	NE	NE	NE	9.82836	52.8062		NE	NE
	1996		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	59.2607	NE	NE	NE	NE	10.9049	55.462		NE	NE
1997		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	59.2664	NE	NE	NE	NE	9.49922	51.6515		NE	NE	
1998		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	55.2666	NE	NE	NE	NE	9.08084	48.5647		NE	NE	
1999		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	51.383	NE	NE	NE	NE	8.73965	45.8396		NE	NE	
2000		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	49.5866	NE	NE	NE	NE	8.16229	42.324		NE	NE	
2001		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	52.2537	NE	NE	NE	NE	8.89243	46.3583		NE	NE	
Belarus	1997												16.4										
	1998												15.68										
	1999												15.19										
	2000												18.344										
	2001												22.49	10.23	20.325	5.515	5.667	41.721					
Belgium ¹⁴⁸	1990	0	0	0	0	0	0	0	0	0	163	0	NE	624.719	IE	IE	IE	IE	190.784	NE	0	0	
	1993																		294.11				
	1994													147.566					235.174	30			
	1995	0	0	0	0	0	0	0	0	0	164.7	0.0066	0.00514	467.997	IE	IE	IE	IE	31.6178	NE	0	0	
	1996										9765			108.13					184.96	21	6		
	1997										9600			122.84					187.38	25	7		
	1998										9600			122.86					187.19	25	7		
	1999													129.22					104.74				
	2000	0	0	0	0	0	0	0	0	0	167	0	0	162.682	IE	IE	IE	IE	59.0567	54.06	15.56	0	
	2001	0	0	0	0	0	0	0	0	0	170	0	0	163.575	IE	IE	IE	IE	57.6827	53.94	15.04		
Bulgaria	1990											258.44	554.196					677.32	544	49.3			
	1995											382.19	456					443.43	79	10.72			
	1996											261.73	340.935					409.509	87	10.61			
	1997											226.99	309.576					364.3	47	7.54			

Party	Year	ANNEX I									ANNEX II			ANNEX III						OTHER		
		Aldrin	Chlor-dane	Chlor-decone	Dieldrin	Endrin	Hepta-chlor	Hexa-bromo-biphenyl	Mirex	Toxa-phene	HCH	DDT	PCBs	Dioxins and furans	PAHs				HCB	PCP	SCCP	
															Benzo(a)pyrene	Benzo(b)-flour-anthene	Benzo(k)-flour-anthene	Indeno (1.2.3-cd)pyrene				Total 1-4
	1998											252.8	288.43					384.024	75.6	9.07		
	1999											247.44	245.28					286	46	6.36		
	2000											228.5	232.528					118.079	54	2.6334		
	2001	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	196.09	181.482	NE	NE	NE	NE	86.2571	24	1.785	NE	
	2010											453.9	425.3					621.4	109	9.8		
	2020											483.3	394.3					678.9	101	6.8		
Croatia ¹⁴⁹	1990											9400	178.64					15.11	0.3	8500	1458970	
	1996											12800	97.35					9.3	0	0	1636000	
	1997											3100	95.04					9.17	0			
	1998											5000	110.77					8.59	0			
	1999											5000	97.96					7.93	0			
	2000											6983	109.04					9.07	0			
Cyprus	1990												772							0.7		
Czech Republic ¹⁵⁰	1990											772.9	1252					751.6				
	1991											772	1220					747				
	1992											741.3	1220					1131				
	1993											643.6	1140					1115				
	1994											629.8	1135					951.4				
	1995											622.9	1135					1357				
	1996											554.5	921.5					971.4				
	1997											447.8	830.2					657.4				
	1998											457.7	766.7					656.7				
	1999											485.4	643.2					556.6				
	2000											474.07	743.8					487.59				
	2001	0	0	0	0	0	0	0	0	0	0	406.561	620.414	0	0	0	0	459.987	0	0	0	
Denmark ¹⁵¹	1990	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	1.64517	2.16484	0.721832	1.41919		NO	NO	NE	
	1991	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	1.89477	2.48486	0.813692	1.66842		NO	NO	NE	
	1992	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	1.88549	2.48728	0.829409	1.59149		NO	NO	NE	
	1993	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	2.02508	2.68445	0.893206	1.67537		NO	NO	NE	
	1994	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	1.98069	2.62712	0.880245	1.6537		NO	NO	NE	
	1995	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	1.96939	2.63452	0.893931	1.58852		NO	NO	NE	
	1996	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	2.09149	2.82753	0.963655	1.6241		NO	NO	NE	
	1997	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	2.0765	2.81075	0.96113	1.59357		NO	NO	NE	
	1998	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	92.34	1.84132	2.49407	0.861684	1.39302		NO	NO	NE	
	1999	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	1.84701	2.52468	0.860996	1.39609		NO	NO	NE	
	2000	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	2.37632	3.20041	1.08815	1.77177		NO	NO	NE	
	2001	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	81.17	2.74532	3.69666	1.24224	2.04757		NO	NO	NE	
Estonia	1990																	0.308				
	1991																	0.29				
	1992																	0.172				
	1993																	0.182				
	1994																	0.183				
	1995																	0.188				
	1996																	0.191				

Party	Year	ANNEX I									ANNEX II			ANNEX III						OTHER				
		Aldrin	Chlor-dane	Chlor-decone	Dieldrin	Endrin	Hepta-chlor	Hexa-bromo-biphenyl	Mirex	Toxa-phene	HCH	DDT	PCBs	Dioxins and furans	PAHs					HCB	PCP	SCCP		
															Benzo(a)pyrene	Benzo(b)flour-anthene	Benzo(k)flour-anthene	Indeno (1,2,3-cd)pyrene	Total 1-4					
	1997																		0.197					
	1998																		0.213					
	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							2.963						
	2001											NE	0.09	2.07	0.02	0.01	0.01	2.11	NE					
Finland	1990												30					15.76						
	1991												33.2					15.33						
	1992												31.2					15.45						
	1993										5300		31.9					15.724						
	1994										1100		32.7					15.637						
	1995										15800		33.8					16.921						
	1996												31.7					15.84						
	1997												32					16.053						
	1998												32.12					16.25						
	1999												32.2					15.9						
	2000												30.69					15.16						
	2001	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	30.571	IE	IE	IE	IE	16.316	NA						
France¹⁵²	1990	NE	NE	NE	NE	NE	NE	NE	NE	NE	60.955	1859.09	NE	NE	NE	NE	309.508	1654.87	NE	NE				
	1991	NE	NE	NE	NE	NE	NE	NE	NE	NE	67.6738	1932.86	NE	NE	NE	NE	336.264	1674.14	NE	NE				
	1992	NE	NE	NE	NE	NE	NE	NE	NE	NE	66.8871	1958.46	NE	NE	NE	NE	310.228	1698.77	NE	NE				
	1993	NE	NE	NE	NE	NE	NE	NE	NE	NE	67.0894	2023.34	NE	NE	NE	NE	303.897	1633.13	NE	NE				
	1994	NE	NE	NE	NE	NE	NE	NE	NE	NE	63.8149	2014.4	NE	NE	NE	NE	279.765	1790.96	NE	NE				
	1995	NE	NE	NE	NE	NE	NE	NE	NE	NE	59.7048	1808.88	NE	NE	NE	NE	273.848	1788.1	NE	NE				
	1996	NE	NE	NE	NE	NE	NE	NE	NE	NE	60.0592	1591.92	NE	NE	NE	NE	281.333	1701.27	NE	NE				
	1997	NE	NE	NE	NE	NE	NE	NE	NE	NE	49.2212	1105.33	NE	NE	NE	NE	270.75	1718.34	NE	NE				
	1998	NE	NE	NE	NE	NE	NE	NE	NE	NE	49.3922	957.217	NE	NE	NE	NE	275.47	1699.67	NE	NE				
	1999	NE	NE	NE	NE	NE	NE	NE	NE	NE	45.2591	658.134	NE	NE	NE	NE	267.531	1697.61	NE	NE				
	2000	NE	NE	NE	NE	NE	NE	NE	NE	NE	42.6067	559.911	NE	NE	NE	NE	261.134	1800.47	NE	NE				
	2001	NE	NE	NE	NE	NE	NE	NE	NE	NE	42.586	467.706	NE	NE	NE	NE	266.962	1763.23	NE	NE				
Germany¹⁵³	1990										43579	1196					420	86						
	1994									15000	30894						396		752	2100300				
	1995												309											
Hungary	1980										180.63	199.362					135.157	0.620	0.0465					
	1985										169.32	207.256					155.888	0.486	0.03645					
	1990									9281	134.91	156.844					132.034	0.304	0.0228					
	1991									60	119.6	150.875					121.619	0.506	0.03795					
	1992									12	107.82	126.080					86.879	0.678	0.05085					
	1993									462	106.36	121.833					80.7	0.632	0.0474					
	1994									798	104.45	104.069					73.337	0.476	0.0357					
	1995									1650	101.11	116.480					67.623	0.66	0.0495					
	1996									2400	98.79	108.198					63.249	0.66	0.0495					
	1997									31	95.6	103.296					60.48	0.678	0.05085					
	1998									22	92.18	93.641					53.504	0.712	0.0534					
	1999										93.02	92.845					54.587	0.700	0.0525					
	2000										88.29	99.400					55.656	0.712	0.0522					

Party	Year	ANNEX I									ANNEX II			ANNEX III						OTHER		
		Aldrin	Chlor-dane	Chlor-decone	Dieldrin	Endrin	Hepta-chlor	Hexa-bromo-biphenyl	Mirex	Toxa-phenene	HCH	DDT	PCBs	Dioxins and furans	PAHs				Total 1-4	HCB	PCP	SCCP
															Benzo(a)pyrene	Benzo(b)-flour-anthene	Benzo(k)-flour-anthene	Indeno (1.2.3-cd)pyrene				
	2001												103.726					55.459	0.7058	0.0529		
	2010											79	70					47				
	2015											79	65					43				
	2020											79	57					38				
Iceland	1990	0																				
Kyrgyzstan	1992											0.04						1.824				
	1993											0.038						4.363				
	1994											4.898						0.27				
	1995																	0.129				
	1996																	0.544				
	1997											0.003						0.2				
	1998											0.003						0.202				
	1999																	0.089				
Lithuania	1997											12.45	5.62					71.21				
	1998											14.2	5.97					53.14				
	1999											12.69	5.03					44.49				
	2000											10.753	4.277					34.022				
	2001											14.8614	12.7468					87.0927	0.0203			
Luxembourg	1990																	40				
	1994																	23				
	1995																	24				
	1996																	16				
	1997																	16				
	1998																	8				
	1999																	0				
Monaco ¹⁵⁴	1990											0.277	2.385					0.008				
	1991											0.282	2.428					0.008				
	1992											0.31	2.675					0.009				
	1993											0.338	2.912					0.009				
	1994											0.367	3.165					0.01				
	1995											0.366	3.155					0.01				
	1996											0.392	3.376					0.011				
	1997											0.441	3.804					0.012				
	1998											0.415	3.577					0.011				
	1999											0.419	3.614					0.012				
	2000											0.433	3.736					0.012				
	2001	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.45941	3.9604	NE	NE	NE	NE	NE	NE	NE		
Netherlands ¹⁵⁵	1990	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NE	NE	NE	NE	1759.13	NO	34000	NO
	1992	0	0	0	0	0	0	0	0	0	0	0.251	505					142		30000		
	1994	0	0	0	0	0	0	0	0	0	0	0.283	143					139	0	0	5631000	
	1995	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	66.6061	NE	NE	NE	NE	925.282	NO	29000	NO	
	1996											0	60.7					109	0	0	4036600	
	1997											0	55.3					107	2.1	0	3533200	
	1998	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	43.9678	NE	NE	NE	NE	713.221	NO	26000	+	

Party	Year	ANNEX I										ANNEX II			ANNEX III						OTHER		
		Aldrin	Chlor-dane	Chlor-decone	Dieldrin	Endrin	Hepta-chlor	Hexa-bromo-biphenyl	Mirex	Toxa-phene	HCH	DDT	PCBs	Dioxins and furans	PAHs					HCB	PCP	SCCP	
															Benzo(a)pyrene	Benzo(b)-flour-anthene	Benzo(k)-flour-anthene	Indeno (1.2.3-cd)pyrene	Total 1-4				
	1999	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	28.1908	NE	NE	NE	NE	509.518	NO	25000	NO		
	2000	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	30.618	NE	NE	NE	NE	636.329	NO	24000	NO		
	2001	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	28.1298	NE	NE	NE	NE	614.175	NO	23350	NO		
Norway ¹⁵⁶	1990	0	0	0	0	0	0	0	0	0	0	0	0					14.4822					
	1991	0	0	0	0	0	0	0	0	0	0	0	0					13.9085					
	1992	0	0	0	0	0	0	0	0	0	0	0	0					13.2115	120				
	1993	0	0	0	0	0	0	0	0	0	0	0	0					13.9007	135				
	1994	0	0	0	0	0	0	0	0	0	0	0	0					13.7363	125				
	1995	0	0	0	0	0	0	0	0	0	0	0	0					13.818	80	63			
	1996	0	0	0	0	0	0	0	0	0	0	0	0					14.3113	50	100	766800		
	1997	0	0	0	0	0	0	0	0	0	0	0	0					14.2029	60	100			
	1998	0	0	0	0	0	0	0	0	0	0	0	0					14.0656	50				
	1999	0	0	0	0	0	0	0	0	0	0	0	0					13.0138	40				
	2000																	13.5987					
	2001																	14.8631					
Poland	1990	0	0	0	0	0	0	0	0	0	2425	0	529.1					159.2	62.1				
	1991										2367		535.4					174.3	38.6				
	1992										2322		517.1					171.7	39.1				
	1993										2348		591.8					253.2	42.5				
	1994										2330		519.5					231.4	38.1				
	1995	0	0	0	0	0	0	0	0	0	2323	0	514.5					237.3	50.7				
	1996	0	0	0	0	0	0	0	0	0	2348	0	484.2					224.9	48				
	1997	0	0	0	0	0	0	0	0	0	2342	0	439.5					195.2	51.1				
	1998	0	0	0	0	0	0	0	0	0	2353	0	381.3					176.2	43.2				
	1999	0	0	0	0	0	0	0	0	0	2331	0	381.1					175.9	39.5				
	2000										2265		333.4					167.3	46.3				
	2001										2327		447.5					163.6	8.4				
Republic of Moldova	1990																	6.171					
	1991																	4.879					
	1992																	3.993					
	1993																	3.282					
	1994																	3.12					
	1995																	4.261					
	1996																	3.595					
	1997																	5.058					
	1998																	4.76					
	1999																	4.35					
Russian Federation ¹⁵⁷	1990									923		991	18.26						1.637				
	1991											947	17.3						1.637				
	1992											901	15.6						1.637				
	1993											878	15.29						1.687				
	1994											825	15.45						1.6				
	1995											769	15.28						1.3				
	1996											637	15.02						1.1				

Party	Year	ANNEX I									ANNEX II			ANNEX III							OTHER			
		Aldrin	Chlor-dane	Chlor-decone	Dieldrin	Endrin	Hepta-chlor	Hexa-bromo-biphenyl	Mirex	Toxa-phene	HCH	DDT	PCBs	Dioxins and furans	PAHs					HCB	PCP	SCCP		
															Benzo(a)pyrene	Benzo(b)-flour-anthene	Benzo(k)-flour-anthene	Indeno (1.2.3-cd)pyrene	Total 1-4					
	1997												614	14.95							0.979			
	1998												606	14.71								0.95		
	1999												625	15.32								0.98		
	2000												631	15.43								1.1		
	2010												900	20								1.7		
Slovakia¹⁵⁸	1990											163.5	189.4								42			
	1995											138.1	156.9								19.4			
	1997											137.4	124.6								18.5			
	1998											138.6	138.1								16			
	1999											136.2	126.8								16.7			
	2000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	129.311	144.521	6.05509	2.45613	7.21599	1.95954	17.5	NE	NE	NE			
	2001	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	136.712	129.927	5.92063	2.21763	7.17605	1.79036		NE	NE	NE			
Slovenia	1990											357	8.6								23.53	0	0	
	1994											265	5.67								17.99	0	0	
	1995											235	4.94								16.98	0	0	
	1996											214	4.91								17.28	0	0	
	1997											194	3.82								18.87	0	0	
	1998											184	3.53								18.18	0	0	
	1999											105	3.51								18.3	0	0	
	2000											143	2.9								22.658	0	0	
	2001	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Spain¹⁵⁹	1990	0	0	0	0	0	0	0	0	0	0	9204	0	0	185.52	0	0	0	0	337.088	6646.52	69.6948	0	
	1991	0	0	0	0	0	0	0	0	0	0	9204	0	0	194.759	0	0	0	0	340.92	6204.36	70.3502	0	
	1992	0	0	0	0	0	0	0	0	0	0	6705	0	0	205.505	0	0	0	0	326.225	5369.11	73.8925	0	
	1993	0	0	0	0	0	0	0	0	0	0	5917	0	0	200.458	0	0	0	0	326.001	5107.82	74.5184	0	
	1994	0	0	0	0	0	0	0	0	0	0	10650	0	0	192.186	0	0	0	0	321.496	5562.69	74.8429	0	
	1995	0	0	0	0	0	0	0	0	0	0	9598	0	0	162.114	0	0	0	0	278.382	4894.03	76.0121	0	
	1996	0	0	0	0	0	0	0	0	0	0	9730	0	0	159.273	0	0	0	0	281.866	5416.8	72.8303	0	
	1997	0	0	0	0	0	0	0	0	0	0	9992	0	0	131.53	0	0	0	0	260.896	6069.63	89.0993	0	
	1998	0	0	0	0	0	0	0	0	0	0	9992	0	0	134.281	0	0	0	0	252.319	6118.8	94.5256	0	
	1999	0	0	0	0	0	0	0	0	0	0	9992	0	0	140.914	0	0	0	0	270.609	6072.32	96.6141	0	
	2000	0	0	0	0	0	0	0	0	0	0	9992	0	0	145.67	0	0	0	0	297.752	6100.04	102.764	0	
	2001	0	0	0	0	0	0	0	0	0	0	9992	0	0	142.122	0	0	0	0	302.824	6162.49	107.973	0	
Sweden¹⁶⁰	1980	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	7.3481	NE	NE	NE	NE
	1981	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.164	NE	NE	NE	NE
	1982	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	6.5686	NE	NE	NE	NE
	1983	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	106.566	NE	NE	NE	NE
	1984	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	156.62	1.85712	4.08566	NE	0.92856	107.661	NE	NE	NE	NE
	1985	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	166.69	1.64346	3.61561	NE	0.821729	108.857	NE	NE	NE	NE
	1986	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	148.06	1.314	2.8908	NE	0.657	103.383	NE	NE	NE	NE
	1987	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	121.29	0.979	1.282	0.166	0.312	96.3887	NE	NE	NE	NE
	1988	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	92.6	1.402	2.377	0.134	0.557	88.5864	NE	NE	NE	NE
	1989	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	75.36	1.793	3.172	0.146	0.739	82.2203	NE	NE	NE	NE
	1990	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	69.8257	1.56282	2.61335	0.156619	0.61362	38.296	NE	NE	NE	NE

Party	Year	ANNEX I										ANNEX II			ANNEX III							OTHER		
		Aldrin	Chlor-dane	Chlor-decone	Dieldrin	Endrin	Hepta-chlor	Hexa-bromo-biphenyl	Mirex	Toxa-phene	HCH	DDT	PCBs	Dioxins and furans	PAHs					HCB	PCP	SCCP		
															Benzo(a)pyrene	Benzo(b)-flour-anthene	Benzo(k)-flour-anthene	Indeno (1.2.3-cd)pyrene	Total 1-4					
	1991	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	62.9716	1.94632	3.40368	0.166752	0.794514	37.7789	NE	NE	NE			
	1992	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	54.781	1.26248	1.87189	0.171944	0.447033	33.4422	NE	NE	NE			
	1993	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	57.0952	1.17031	1.67648	0.170543	0.402445	30.9958	NE	NE	NE			
	1994	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	51.7804	1.344	2.061	0.17	0.49	28.3724	NE	NE	NE			
	1995	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	49.2621	1.553	2.509	0.172	0.592	28.1446	NE	NE	NE			
	1996	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	47.0858	1.804	3.088	0.1766	0.784	27.7254	NE	NE	NE			
	1997	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	43.8358	1.412	2.378	0.1756	0.8	23.5046	NE	NE	NE			
	1998	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	43.0798	1.851	3.154	0.1756	0.751	22.2826	NE	NE	NE			
	1999	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	41.6698	2.35	4.291	0.1756	1.053	39.5442	NE	NE	NE			
	2000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	44.0879	1.496	2.379	0.1816	0.62	23.5586	NE	NE	NE			
	2001	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	45.2633	1.843	3.295	0.1817	1.009	27.962	NE	NE	NE			
Switzerland	1990	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1991	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1992	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1993	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1994	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1995	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1996	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1997	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1998	0	0	0	0	0	0	0	0	0	0	0							0	0				
	1999	0	0	0	0	0	0	0	0	0	0	0							0	0				
Ukraine	1997																	2.948						
	1998																	0.77						
United Kingdom	1990	0	0	0	0	0	0	0	0	0	100013	0	7126.96	1180.99	67.2011	81.562	41.6459	33.995	224.34	1408.15	538370	47.6133		
	1991	0	0	0	0	0	0	0	0	0	86189	0	6545.91	1161.03	61.621	76.1295	38.6645	32.2726	208.623	1375.09	538351	45.4336		
	1992	0	0	0	0	0	0	0	0	0	74756	0	6050.8	1136.13	52.938	69.2328	34.9242	29.2018	186.232	1372.78	538350	43.2538		
	1993	0	0	0	0	0	0	0	0	0	65250	0	5553.58	1089.49	33.787	55.0874	27.6919	21.2117	137.713	1178.31	529954	41.0741		
	1994	0	0	0	0	0	0	0	0	0	57301	0	4990.77	1002.24	30.5366	52.1955	25.9883	19.2605	127.915	1012.93	518960	30.1393		
	1995	0	0	0	0	0	0	0	0	0	50616	0	4439.52	873.677	24.2904	41.8553	20.7553	15.6516	102.489	1017.75	506214	23.9874		
	1996	0	0	0	0	0	0	0	0	0	44963	0	3899.09	644.069	12.9592	17.5541	8.84621	9.39303	48.6929	992.204	493643	18.1677		
	1997	0	0	0	0	0	0	0	0	0	40158	0	3404.49	471.05	11.1935	12.5483	6.27202	7.54953	37.5054	894.01	481342	12.7229		
	1998	0	0	0	0	0	0	0	0	0	35926	0	2839.98	411.473	9.71255	8.23799	5.27014	5.87494	29.0383	907.532	467424	7.70389		
	1999	0	0	0	0	0	0	0	0	0	33334	0	2166.4	394.603	8.61991	6.87925	4.0364	5.89581	25.3745	596.109	455703	5.82583		
	2000	0	0	0	0	0	0	0	0	0	30308	0	1643.12	345.609	6.6916	5.93487	3.18872	4.27793	20.0357	594.851	449211	3.41193		
	2001	0	0	0	0	0	0	0	0	0	26964	0	1561.23	341.279	7.2074	5.86893	3.11789	5.28633	21.4238	591.259	442937	0.5474		
United States ¹⁶¹	1990											102	2366						24745	1450				
	1996		300				83		1		235	195							18834	281				

NE Not estimated.

NO Not occurring.

NA Not applicable.

Table 10: Anthropogenic emissions of heavy metals in the ECE region (Mg per year)

Party	Year	PRIORITY METALS			OTHER METALS					
		Lead	Cadmium	Mercury	Arsenic	Chromium	Copper	Nickel	Selenium	Zinc
Armenia ¹⁶²	1983	91		0.01	30					
	1984	61		0.01	95					
	1985	44		0.01	62		5			
	1986	87					5			
	1987	46			62	0.2	5	0.3		
	1988	57			66		5	0.003		0.1
	1989	22		0.03	22	5	2	0.1		
	1990	11		0.01		4	2.5	0.1		
	1991	0.82		0.01		5.97	1.6	0.24		
	1992	0.61		0.008		1.8	0.068	0.239		
	1993	0.79		0.009		1.04	0.036	0.074		
	1994	0.34		0.001		0.34	0.002	0.003		
	1995	0.334		0.001		0.101	0.001	0.009		
	1996	0.009		0.0008	0.0003	0.466	0.009	0.02		0.016
	1997	0.009				0.019	0.65	0.003		
	1998	0.01				0.008	0.005	0.007		0.001
1999	0.0053				0.073	0.008	0.004		0.021	
2000	0				0.006	0.00043	0		0	
Austria ¹⁶³	1980	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1981	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1982	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1983	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1984	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1985	330.89	4.8861	4.32983	NE	NE	NE	NE	NE	NE
	1986	316.817	4.38156	3.89974	NE	NE	NE	NE	NE	NE
	1987	305.648	3.7593	3.32761	NE	NE	NE	NE	NE	NE
	1988	275.504	3.25216	2.83537	NE	NE	NE	NE	NE	NE
	1989	242.242	3.01148	2.59097	NE	NE	NE	NE	NE	NE
	1990	205.617	2.58752	2.50374	NE	NE	NE	NE	NE	NE
	1991	170.467	2.50422	2.39282	NE	NE	NE	NE	NE	NE
	1992	118.606	2.1812	2.03028	NE	NE	NE	NE	NE	NE
	1993	86.3397	2.20732	1.88696	NE	NE	NE	NE	NE	NE
	1994	60.8344	1.8953	1.61991	NE	NE	NE	NE	NE	NE
	1995	18.5608	1.66785	1.56601	NE	NE	NE	NE	NE	NE
1996	18.1234	1.71265	1.51741	NE	NE	NE	NE	NE	NE	
1997	17.2003	1.73344	1.54546	NE	NE	NE	NE	NE	NE	
1998	15.6218	1.68442	1.37423	NE	NE	NE	NE	NE	NE	
1999	14.7572	1.57522	1.27034	NE	NE	NE	NE	NE	NE	
2000	13.853	1.42699	1.15116	NE	NE	NE	NE	NE	NE	
2001	14.3036	1.53223	1.16081	NE	NE	NE	NE	NE	NE	
Belarus ¹⁶⁴	1990	797.63	7.59	0.48	13.15	29.24	34.98	601.89		210.48
	1995	148.35	3.48	0.265	4.48	14.1	19.11	246.36		121.66
	1996	46.34	1.2	0.297	3.66	8.68	13.89	202.74		122.26
	1997	42.2	1.25	0.31	3.07	8.27	15.1	167.05		159.28
	1998	41.24	1.45	0.392	2.96	7.91	13.64	154.28		177.87
	1999	37.52	1.42	0.38	2.64	7.19	13.19	128.92		180.11
	2000	46.121	1.378	0.358	3.33	6.295	11.778	94.43		196.486
	2001	40.674	1.78	0.522	2.112	6.538	11.659	92.535		204.662
Belgium	1990	535.484	7.58965	8.86276	5.57222	46.4982	35.9999	83.6548	30.8801	NE
	1991	218	3	2	1	12	6	10	0	135
	1992	230	4	3	3	11	20	9	0.1	97
	1993	230	1	1	2	22	22	11	3	86
	1994	325.44	4.4	5.82	4.63	26.82	45.69	52.64	23.46	241.59
	1995	273.803	6.08702	3.76053	5.97265	24.182	37.842	64.2886	18.2581	243.747
	1996	302.6	4.62	5.55	5.22	32.15	33.19	57.68	7.66	219.93
	1997	287.19	4.6	3.32	4.67	25.48	28.08	46.36	10.19	177.45
	1998	203.02	3.26	3.5	4.86	22.47	29.52	67.72	9.99	186.36
	1999	173.68	2.9	2.06	4.43	4.33	30.54	66.36	5.56	170.8
	2000	123.037	2.34266	2.87909	2.92671	17.6919	23.05	49.5506	3.77563	150.328
2001	99.5735	2.21416	2.56026	3.01557	17.7271	21.4997	55.6947	4.10854	147.37	
Bulgaria ¹⁶⁵	1990	435.85	28.25	13.2	0	0	0	0	0	0
	1995	297.49	12.82	6.88	0	0	0	0	0	0
	1996	278.81	14.33	4.7	0	0	0	0	0	0
	1997	231.24	14.23	4.31						
	1998	250.78	14.87	4.69	0	0	0	0	0	0
	1999	223.51	13.57	4.06						
2000	213.359	10.987	4.186							

Party	Year	PRIORITY METALS			OTHER METALS					
		Lead	Cadmium	Mercury	Arsenic	Chromium	Copper	Nickel	Selenium	Zinc
	2001	133.257	9.8104	3.6424	NE	NE	NE	NE	NE	NE
	2010	176.7	11.9	5.8						
	2020	202.8	13.3	6.9						
Croatia¹⁶⁶	1990	466	1.61	1.15	2.28	13	14.64	45.76	0.91	84.21
	1995	264	0.95	0.29						
	1996	268	1.04	0.3						
	1997	190	1.03	0.32	1.25	5.19	10.21	30.39	0.41	64.67
	1998	183	1.06	0.32	1.33	5.63	10.31	31.42	0.42	68.29
	1999	178	1.05	0.31	1.32	5.65	10.72	31.83	0.38	68.4
	2000	146.9	1.02	0.41	1.07	4.31	9.79	26.55	0.63	61.06
Cyprus	1990	81	0.2	0.3	0.6	1.6	1.2	1.7		1.8
	1991	63								
	1992	66								
	1993	69								
	1994	68								
	1995	67								
	1996	67								
	1997	72								
	1998	69								
	1999	75								
	2000	74								
	2001	58.7								
Czech Republic¹⁶⁷	1990	269.4	4.34	7.52						
	1991	240	3.92	7.42						
	1992	247	3.61	7.28						
	1993	232	3.48	7.46						
	1994	202.5	3.52	7.17						
	1995	179.7	3.55	7.4						
	1996	165.4	2.94	5.86						
	1997	179.7	3	5.54						
	1998	169.2	2.65	5.16						
	1999	157	2.72	3.66						
	2000	107.71	2.85	3.84						
	2001	46.7003	2.60519	3.26736	3.45924	12.3785	15.7503	15.4502	8.39387	155.622
Denmark¹⁶⁸	1990	119.85	1.12	3.09	1.45	6.44	10.12	25.64	4.21	24.15
	1991	96.3	1.23	3.25	1.94	5.62	10.52	32.26	1.41	24.64
	1992	87.28	1.21	3.09	1.75	5.24	10.26	31.42	1.27	23.62
	1993	45.84	1.13	3.07	1.71	4.9	10.24	27.62	1.22	23.86
	1994	19.92	1.37	3.1	2	5.26	10.6	38.7	1.37	23.91
	1995	16.82	0.95	2.55	1.44	3.93	9.8	25.87	2.09	24.99
	1996	15.62	0.87	2.61	1.12	4.13	9.86	24.85	3.61	25.05
	1997	7.91	0.8	2.07	0.91	3.22	9.64	22.52	3.18	20.94
	1998	7.11	0.71	1.88	0.86	2.68	9.4	18.75	2.77	20.52
	1999	6.62	0.69	1.92	0.85	2.63	9.46	15.07	2.59	20.67
	2000	6.95	0.7	1.96	0.86	2.29	9.12	13.93	1.99	21.44
	2001	6.06	0.72	1.87	0.71	2.38	9.26	12.78	1.63	23.13
Estonia	1990	232.5	1.612	1.292	8.1	8.2	1.7	4.4	0.2	29.3
	1991	208.4	1.493	1.183	7.7	7.9	1.7	4.2	0.2	27.5
	1992	120.9	1.118	0.98	7.2	7.795	1.648	3.9	0.2	26.77
	1993	100.4	0.885	0.75	5.6	6.195	1.241	3.1	0.1	21.47
	1994	106.7	0.937	0.798	4.8	5.078	1.033	2.651	0.1	17.64
	1995	87.56	0.899	0.751	4	3.982	0.841	2.167	0.1	16.76
	1996	80.16	0.941	0.778	4.3	4.236	2.344	2.352	0.1	16.34
	1997	73.08	0.978	0.773	3.8	3.874	2.255	2.068	0.1	14.33
	1998	54.66	0.829	0.664	3.5	3.368	2.158	1.929	0.1	13.23
	1999	45.04	0.776	0.611						
	2000	40.73	0.68	0.553	9.668	9.686	3.482	7.865	0.006	52.963
	2001	37	0.62	0.5	8.61	8.76	3.3	7.24	NA	48.77
Finland	1990	326.1	6.3	1.1	33.2	31.6	94.4	67	0	570.5
	1991	247.4	3.4	0.9	22.1	41.4	90.7	45.1	0	381.4
	1992	174.7	2.9	0.8	17.5	31.2	65.5	37.1	0	283.7
	1993	99.7	2.9	0.6	14.3	20.5	54.1	25.9	0	259.6
	1994	60.1	2.4	0.7	10.7	19.6	48.9	33.6	0	315.7
	1995	56.6	1.7	0.7	3.5	21.7	26.7	33.8	0	321.7
	1996	35	1.5	0.8	7.2	21.2	54.5	25.1	0	191.4
	1997	18.5	1.1	0.6	12.3	20.5	72.3	27.8	0	70.3
	1998	20.3	1.3	0.5	12.4	18.2	27.4	20.8	0	71.2
	1999	14	0.6	0.4	3.6	18.5	4.1	16.9		57.7
	2000	37.5	1.4	0.6	4.6	28	18.7	33.3		70.7

Party	Year	PRIORITY METALS			OTHER METALS					
		Lead	Cadmium	Mercury	Arsenic	Chromium	Copper	Nickel	Selenium	Zinc
	2001	37.513	1.647	0.729	5.16	26.065	19.336	32.958	NE	69.117
France ¹⁶⁹	1980	0	0	0	0	0	0	0	0	0
	1981	0	0	0	0	0	0	0	0	0
	1982	0	0	0	0	0	0	0	0	0
	1983	0	0	0	0	0	0	0	0	0
	1984	0	0	0	0	0	0	0	0	0
	1985	0	0	0	0	0	0	0	0	0
	1986	0	0	0	0	0	0	0	0	0
	1987	0	0	0	0	0	0	0	0	0
	1988	0	0	0	0	0	0	0	0	0
	1989	0	0	0	0	0	0	0	0	0
	1990	4191.56	16.9558	26.9056	24.5892	377.237	89.5003	300.893	10.9184	1949.22
	1991	2794.78	17.3422	28.1304	24.3896	320.239	92.0941	348.825	11.3498	1789.09
	1992	2019.4	16.8174	27.0839	23.8455	270.253	92.3323	292.864	11.128	1629.53
	1993	1764.98	15.8947	24.4485	19.9475	210.163	92.1945	248.739	10.2797	1428.34
	1994	1569.25	15.0886	23.6264	21.859	184.669	92.3164	239.875	10.8102	1352.81
	1995	1392.42	14.1265	22.4366	21.4679	195.126	91.077	248.617	11.3499	1301.13
	1996	1216.63	14.0285	22.1064	20.3306	199.15	91.6339	249.889	11.2628	1318.24
	1997	1067.21	12.675	17.3344	20.6205	228.228	89.0513	240.126	11.6506	1409.4
	1998	954.589	12.1768	16.9071	22.3649	234.301	88.9408	260.598	12.0934	1404.95
	1999	719.5	11.2421	15.1235	21.6751	224.818	86.6312	229.195	11.6641	1306.34
	2000	196.036	11.507	14.8716	22.1987	243.617	87.9705	220.118	11.9805	1380.75
	2001	174.692	11.1181	13.7571	21.0084	236.915	87.254	232.659	11.8339	1332.01
Germany	1985	5028	45	154	221	344	459	440		1900
	1990	2323	31	113	122	253	361	278	27	1323
	1995	632	11	31	32	115	79	158	25	451
	2010	294	11	24						
Greece	1996	470	3	13	4	10	14	101	0.2	52
Hungary	1980	574.43	7.49	8.71	21.68	22.25	38.72	66.94	4.93	97.64
	1985	528.94	6.78	8.34	22.45	22.41	36.71	74.13	4.78	99.96
	1990	680.48	5.52	6.28	15.94	16.42	28.07	42.48	3.39	96.59
	1991	487.559	4.699	5.826	14.522	14.828	23.798	48.959	3.191	70.826
	1992	207.654	4.034	4.991	10.225	11.787	18.345	48.717	2.807	62.017
	1993	187.1	4.14	5	10.1	12.21	18.18	57.24	2.89	67.64
	1994	155.464	4.077	4.724	9.656	11.831	16.696	54.084	2.777	46.14
	1995	126.553	3.782	4.829	8.791	10.878	15.759	50.066	2.466	48.259
	1996	99.822	3.41	4.667	8.341	10.039	14.502	42.873	2.254	45.691
	1997	89.733	3.26	4.474	7.252	9.185	14.692	46.601	2.107	44.952
	1998	82.202	3.082	4.278	6.118	7.404	14.614	45.92	1.902	39.368
	1999	38.548	2.993	4.247	6.126	7.257	15.559	43.046	1.842	39.859
	2000	36.954	2.746	4.21	5.709	6.657	15.229	37.235	1.62	40.146
	2001	50.536	3.05	4.355	6.06	8.175	17.313	38.64	1.69	82.157
	2015	30	2.7	2.6						
	2010	30	2.7	3.1						
	2020	30	2.7	2.1						
Iceland	1990	12.2								
	1991	8.9								
	1992	6.8								
	1993	5.3								
	1994	4.6								
	1995	3.9								
	1996	1.7								
	1997	0.4								
	1998	0.4								
Italy	1990	4299.8	53.786	19.975						
	1994	2173.8	29.898	13.228						
Kazakhstan	1990				1600		1800			
	1991				1700		1500			
	1992				1800		1100			
	1993				2100		1400			
	1994				1700		620			
	1995				3100		2670			
Kyrgyzstan	1999	0.005				0.169				
Latvia	1990	109.062	2.23264	1.03187	2.38013	10.5265	6.78466	86.0463	3.41088	64.4078
	1991	49.2117	1.53645	0.830671	1.64731	7.27528	4.57048	59.1561	2.39218	44.2703
	1992	43.206	1.17617	0.535672	1.26925	5.20488	3.42501	46.7057	1.94113	29.3549
	1993	57.0376	1.07861	0.364836	1.16385	5.2744	3.77773	40.6631	0.906936	34.7137
	1994	53.1388	1.21992	0.46286	1.2968	5.89117	3.91471	46.2782	0.943402	38.1731
	1995	48.1474	0.916247	0.351913	0.96819	4.72353	3.48401	33.5879	1.06096	32.4022

Party	Year	PRIORITY METALS			OTHER METALS					
		Lead	Cadmium	Mercury	Arsenic	Chromium	Copper	Nickel	Selenium	Zinc
	1996	36.7056	0.8793	0.402098	0.92977	4.78195	3.42638	31.3074	1.13	34.0261
	1997	30.5686	0.850619	0.310793	0.90134	6.12131	4.24854	24.3942	0.683955	52.9993
	1998	27.2686	0.805372	0.359388	0.8527	6.09881	4.20795	21.9586	0.815094	53.7981
	1999	8.73199	0.736982	0.299401	0.77981	6.02246	4.17247	18.3779	0.844089	55.0029
	2000	8.38402	0.592023	0.214789	0.62773	5.78211	4.10053	11.0534	0.636689	56.6718
	2001	8.52528	0.55875	0.141284	0.5919	5.70326	4.39907	9.37111	0.442788	57.1504
	2010	9.73839	0.605108	0.134948	0.65977	6.65089	4.87317	8.35312	0.379357	68.0736
	2015	10.3689	0.639535	0.1729	0.69749	7.16298	5.15825	8.3587	0.37949	73.668
	2020	11.5664	0.687629	0.168019	0.77572	7.73057	5.8396	8.83385	0.394267	79.5694
Lithuania	1990	46.7	3.8	0.018	3.4	7.4	11.7	95.6		59.1
	1991	48.8	2.8	0.016	2.1	4.6	10.5	57.4		55.2
	1992	32.4	2.5	0.011	2.1	4.6	6.8	59.9		30
	1993	28.2	2.3	0.014	2	4.4	5.7	57		13.2
	1994	33	2.1	0.013	1.9	4.3	3.7	57.8		8.9
	1995	30.2	2.1	0.153	1.7	4.2	6.8	51.6		50.1
	1996	17.8	2.2	0.159	1.7	4.5	7.5	54.4		56.9
	1997	19.5	2.2	0.232	1.5	4.1	8.3	49.4		71
	1998	21.78	2.59	0.245	1.85	5.07	9.18	62.4		78.71
	1999	19.25	2.008	0.253	1.366	3.813	7.872	46.1		72.84
	2000	15.917	1.351	0.252	0.782	2.31	6.398	26.562		61.814
	2001	14.69	1.16722	0.516321	0.8829	2.37674	3.25801	28.3437	1.20003	37.3704
Luxembourg	1990	77.4	0.6	0.3						
	1994	52.5	0.5	0.2						
	1995	29.8	0.4	0.1						
	1996	26.1	0.4	0.1						
	1997	17.7	0.3	0.1						
	1998	6.8	0.2	0.1						
	1999	2.34	0.054	0.286	0.082	0.373	1.205	0.79	0.015	35.466
	2000	1.61462	0.05079	0.27492	0.07902	0.34196	1.25015	0.67962	0.02365	36.6958
Monaco¹⁷⁰	1990	2.181	0.005	0.052		0.001	0.018	0.001	0	0.01
	1991	2.256	0.005	0.053		0.001	0.019	0.001	0	0.011
	1992	2.285	0.005	0.059		0.001	0.02	0.001	0	0.012
	1993	1.917	0.006	0.064		0.001	0.025	0.001	0	0.014
	1994	1.653	0.006	0.07		0.001	0.025	0.001	0	0.015
	1995	0.624	0.006	0.069		0.001	0.024	0.001	0	0.014
	1996	0.537	0.007	0.074		0.001	0.024	0.001	0	0.014
	1997	0.481	0.008	0.084		0.001	0.024	0.001	0	0.014
	1998	0.403	0.007	0.079		0.001	0.023	0.001	0	0.014
	1999	0.364	0.007	0.08		0.001	0.025	0.001	0	0.014
	2000	0.06	0.008	0.082		0.001	0.025	0.001	0	0.015
	2001	0.063366	0.00808094	0.0871288	NE	0.000800681	0.0272232	0.00112095	0.000160136	0.0160136
Netherlands¹⁷¹	1990	332.56	1.95013	3.02965	1.47436	11.2154	19.4005	84.4189	0.421306	220.937
	1991	251	2.33	2.74		11.5	46.9	85.7		325
	1992	233	2.33	2.75	1.5	11.3	48.7	96.5	0.4	317
	1993	213	1.84	2.57		13.8	49.9	90.3		270
	1994	164	1.68	1.54	1.81	10.4	50.7	95.6	0.3	277
	1995	158.932	1.01132	1.0681	1.20108	8.22556	20.4616	96.3039	0.369407	143.924
	1996	106	1.83	1.04	1.29	7.51	43.4	95.6	0.541	267
	1997	72.1	1.88	0.759	1.37	6.32	47	85.1	0.332	251
	1998	43.9202	1.15276	0.559431	1.23725	5.39541	21.3608	52.5792	0.11777	100.319
	1999	44	1.15186	0.559404	1.24883	5.48614	23.0309	52.3025	0.119584	101.98
	2000	44.1249	1.15848	0.577732	1.25817	5.55793	21.2052	53.1663	0.121663	103.451
	2001	44.1562	1.16019	0.57804	1.26326	5.59706	21.4158	53.0484	0.122449	104.26
Norway¹⁷²	1980	482.344								
	1981	577								
	1982	651								
	1983	559								
	1984	401								
	1985	406	1.1							
	1986	341	0							
	1987	227.836	0							
	1988	293	0							
	1989	212.305	1.2							
	1990	186.023	1.64431	1.70351	3.09792	12.7973	21.8821			
	1991	142.725	1.57281	1.58252	2.99735	12.7183	19.0097			
	1992	125.785	1.56702	1.42082	2.96755	12.5952	19.2901			
	1993	85.8498	1.63717	1.12017	3.1512	12.3481	19.3026			
	1994	22.5106	1.18249	1.17094	3.55788	11.654	17.8482			108.086
	1995	20.7303	1.01173	1.08788	2.8965	11.3668	18.6477			109.2
	1996	8.89528	1.05156	1.11833	2.99901	11.4376	18.887			103.7

Party	Year	PRIORITY METALS			OTHER METALS					
		Lead	Cadmium	Mercury	Arsenic	Chromium	Copper	Nickel	Selenium	Zinc
	1994	405.6	1.66	0.61						
	1995	195.5	1.71	0.65						
	1996	99	1.77	0.59						
	1997	80.38	1.75	0.61						
	1998	60.47	1.67	0.63						
	1999	50.2	1.62	0.6						
	2000	37.15	1.54	0.58						
	2001	NE	NE	NE	NE	NE	NE	NE	NE	NE
Spain ¹⁷⁵	1990	2832.78	14.9229	21.4549	34.7811	38.9455	145.377	265.563	43.7422	1380.25
Sweden ¹⁷⁶	1980	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1981	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1982	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1983	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1984	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1985	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1986	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1987	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1988	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1989	NE	NE	NE	NE	NE	NE	NE	NE	NE
	1990	474.246	2.47078	1.56188	6.73086	22.9194	34.3186	32.4852	0.557022	178.123
	1991	397.794	2.01589	1.39551	5.71255	19.3445	32.7193	30.0571	0.630769	158.071
	1992	355.465	1.70579	1.27096	5.02811	17.1656	40.1154	30.1513	0.647328	136.408
	1993	275.699	1.65763	1.14486	3.67742	17.254	29.6573	32.1414	0.647155	137.616
	1994	45.3415	1.36923	1.1289	5.15669	15.4793	19.9844	34.4351	0.668132	136.964
	1995	23.8227	1.34172	1.12257	2.48082	12.2322	19.2086	34.2332	0.708763	126.894
	1996	21.2996	1.34532	1.11124	1.96346	10.6975	20.1246	30.3913	0.752613	121.689
	1997	20.2414	1.20804	0.919402	1.87218	8.69098	20.5102	29.1936	0.611074	111.509
	1998	18.7393	1.17368	0.881782	2.19377	7.49021	18.5564	29.3284	0.635543	109.758
	1999	17.7899	0.999077	0.888938	1.30264	6.30221	16.2368	24.4947	0.597038	99.4625
	2000	15.4394	0.927736	0.805334	1.09157	6.89745	17.0228	15.7804	0.569994	90.3573
	2001	15.2722	1.11166	0.687017	1.41225	7.23563	15.7098	22.0618	0.685421	105.701
Switzerland	1980	1760	6.35	7.93						1280
	1985	768	4.74	7.84						925
	1990	520	4.2	6.8						841
	1991	461	3.9	6.1						814
	1992	401	3.6	5.4						767
	1993	341	3.1	4.7						719
	1994	287	2.7	4						674
	1995	226	2.5	3.3						607
	1996	199.7	2.3	3.1						609.2
	1997	173.9	2.2	2.9						589.6
	1998	148.6	2.18	2.63						547.3
	1999	131.2	2.18	2.63						553.4
	2000	113.569	2.176	2.63						558.287
	2001	100.903	2.088	2.524						499.317
	2010	86.125	1.858	2.375						528.062
	2015	86.125	1.863	2.375						551.062
	2020	86.125	1.867	2.375						568.062
TFYR of Macedonia	1998	3.02	0.167	0.048						162.74
	2000	3.02	0.167	0.048						
	2001	20.89	2.224	0.048			3.9			
Ukraine	2001	663.076	10.451	25.051	221.109	451.374	1024.89	237.567	14.84	2515.85
United Kingdom	1980	8150.72	20.5737	35.1786	97.8009	177.451	145.259	703.422	132.336	947.44
	1981	7356.43	20.044	34.016	93.1057	174.209	139.062	614.859	125.039	971.576
	1982	7457.77	20.0227	33.6324	91.8916	167.743	134.27	592.446	119.96	936.739
	1983	7574.14	19.8543	32.5972	89.987	166.572	134.923	529.791	118.734	941.731
	1984	7772.92	22.0113	30.4244	77.0614	146.174	117.116	630.822	98.6539	917.311
	1985	7172.87	20.4674	33.2903	91.639	163.041	128.783	514.62	114.904	938.679
	1986	3497.43	19.9925	32.4657	92.3873	168.593	133.279	500.571	126.349	924.213
	1987	3587.13	19.7504	31.4125	88.6938	166.554	132.789	429.774	116.534	934.67
	1988	3727.8	19.9707	32.1961	89.6647	167.082	132.927	470.525	118.949	980.826
	1989	3224.24	19.8787	31.5317	84.0645	164.06	127.852	429.102	119.136	968.878
	1990	2780.22	20.333	31.6223	80.8648	154.387	126.899	420.497	113.368	935.816
	1991	2527.12	19.9364	32.4266	83.3491	148.124	120.55	439.829	106.973	880.973
	1992	2309.17	19.6116	30.343	82.9415	149.013	115.026	443.317	110.395	893.855
	1993	2088.05	13.8279	19.9768	79.5994	142.038	108.579	430.654	104.063	889.512
	1994	1842.68	13.4055	19.472	73.5685	134.282	103.412	395.041	94.1792	887.187
	1995	1535.06	12.0041	19.0372	64.7042	111.979	87.9449	329.334	76.9624	813.283

Party	Year	PRIORITY METALS			OTHER METALS					
		Lead	Cadmium	Mercury	Arsenic	Chromium	Copper	Nickel	Selenium	Zinc
	1996	1297.3	9.53636	14.4566	60.3873	101.638	87.0557	296.005	70.3272	714.418
	1997	1147.46	8.02538	12.155	53.1703	89.5802	65.2277	224.015	54.6783	636.379
	1998	886.492	6.55221	11.18	49.9353	83.9066	63.3917	197.81	51.5119	568.869
	1999	525.797	6.1309	8.97664	46.07	70.9858	57.4063	158.796	34.4532	428.146
	2000	192.842	7.24858	8.79333	38.0224	69.354	48.1831	125.288	28.8494	413.184
	2001	193.652	5.07425	8.8171	40.9365	74.953	42.6301	137.505	31.0212	392.956
	2010	340	12.3	12.3						
United States	1990	2996	180	187	394	1003		1205	504	
	1991	3781.49								
	1992	3455.05								
	1993	3548.32								
	1994	3667.83								
	1995	3577.3		146						
	1996	2383	142	170	323	953		1086	782	

NE Not estimated.

Table 11: Percentage reduction (1990-2001) of 1990 level (A negative number indicates an increase) ¹⁷⁷

PARTY to the Convention	SO ₂			NO ₂			NH ₃			NMVOC		
	1990	2001	Reduction	1990	2001	Reduction	1990	2001	Reduction	1990	2001	Reduction
Units	Gg SO ₂		%	Gg NO ₂		%	Gg NH ₃		%	Gg NMVOC		%
Signatories to the Gothenburg Protocol (as of 1 May 2003)												
Armenia	72	4	94	46	13	71				81	28	65
Austria	79	37	53	204	199	2	52	54	-3	345	232	33
Belgium	362	162	55	334	317	5				274	252	8
Bulgaria	2008	846	58	361	164	55	144	54	62	217	289	-33
Canada ¹⁷⁸	3210	2488	22	2982	2792	6				2997	2476	17
Canada SOMA	1872	1196	36									
Czech Republic	1881	251	87	544	332	39	156	77	51	441	220	50
Denmark	180	25	86	277	204	26	133	102	23	162	124	24
Finland	260	85	67	300	222	26	38	33	13	224	157	30
France	1323	610	54	1897	1411	26	779	779	0.025	2473	1674	32
Germany	5322	650	88	2728	1592	42	736	607	18	3220	1606	50
Greece	493	485	2	290	331	-14				255	268	-5
Hungary	1010	400	60	238	185	22	124	66.3	47	205	166	19
Italy										2041	1464	28
Latvia	95	13	86	80	42	48	44	12.35	72	143	81	43
Liechtenstein	0.113	0.051	55	0.525	0.3032	42	0.205	0.176	14	0.988	0.638	35
Netherlands	202	89	56	570	410	28	232	148	36	492	271	45
Norway	52	25	52	224	221	1	23	25	-9	294	376	-28
Poland	3210	1564	51	1280	805	37	508	309	39	831	576	31
Portugal	288	301	-5	286	397	-39	112	108	4	390	492	-26
Slovakia	542	129	76	215	106	51	63	28	55	262	90	66
Spain	2182	1425	35	1270	1404	-10	330	383	-16	1633	1533	6
Sweden	106	57	46	334	248	26	54	54	0.852	498	303	39
Switzerland	42	21	50	154	92	40	72	68	6	279	147	47
Ukraine	2783	1844	34	1097	1091	1	729	378	48	1369	269	80
United Kingdom	3719	1125	70	2759	1680	39	341	290	15	2425	1336	45
United States ¹⁷⁸	21478	14325	33	23161	20275	12	3925	4532	-15	18421	15408	16
NON-Signatories to the Gothenburg Protocol (as of 1 May 2003)												
Belarus	637	151	76	285	135	53				533	215.4	60
Cyprus	46	48	-5	18	18	-0.389						
Estonia	252	92	64	68	38	44	24	9	63	88	33	62
Lithuania	222	49	78	158	55	65	84	50	40	108	71	35
Monaco ¹⁷⁹	0.063	0.065	-3	0.53	1	-35	0.001	0.006	-510	0.702	0.507	28
Serbia and Montenegro	508	394	22	66	51	23						

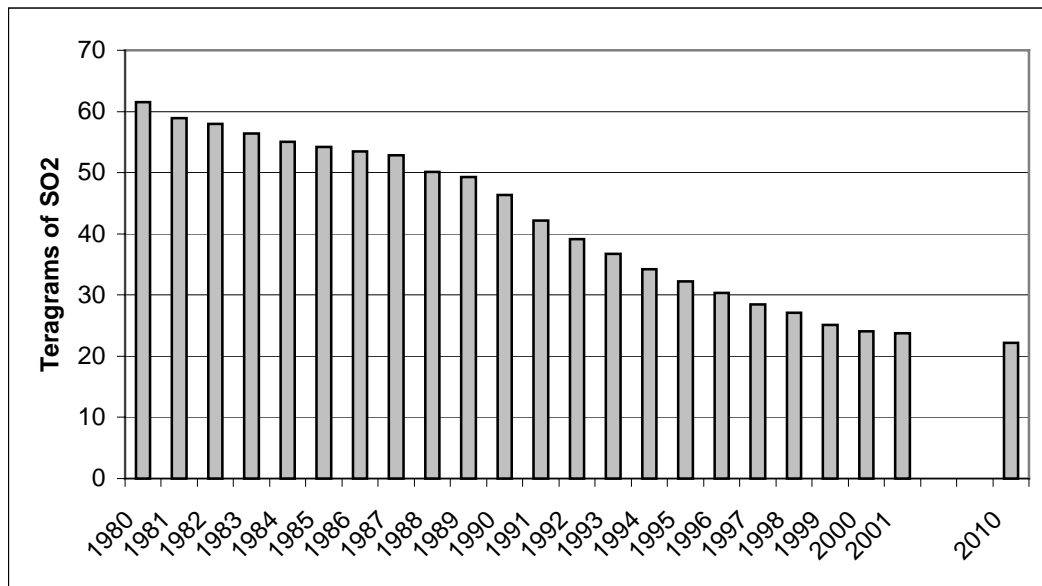


Figure I. Sulphur emission trends in the EMEP area (1980-2001, 2010)

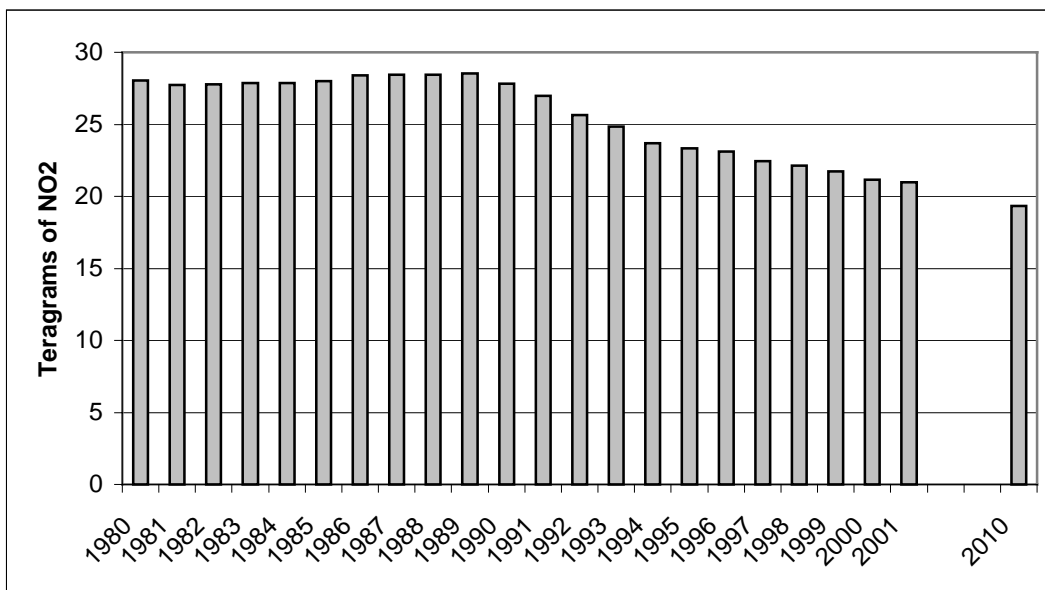


Figure II. Nitrogen oxides emission trends in the EMEP area (1980-2001, 2010)

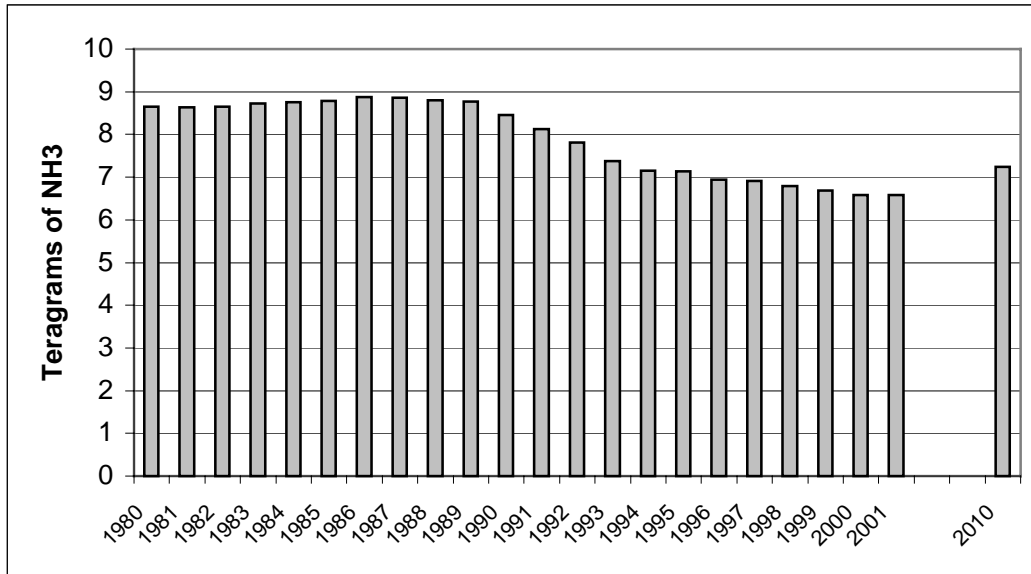


Figure III. Ammonia emissions trends in the EMEP area (1980-2001, 2010)

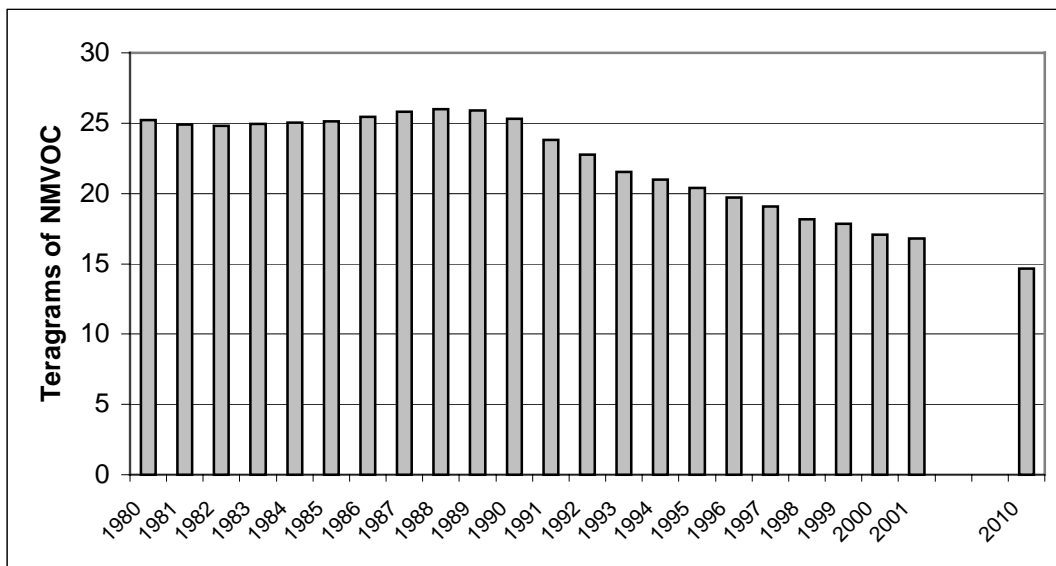


Figure IV. Trends in emissions of volatile organic compounds in the EMEP area (1980-2001, 2010)

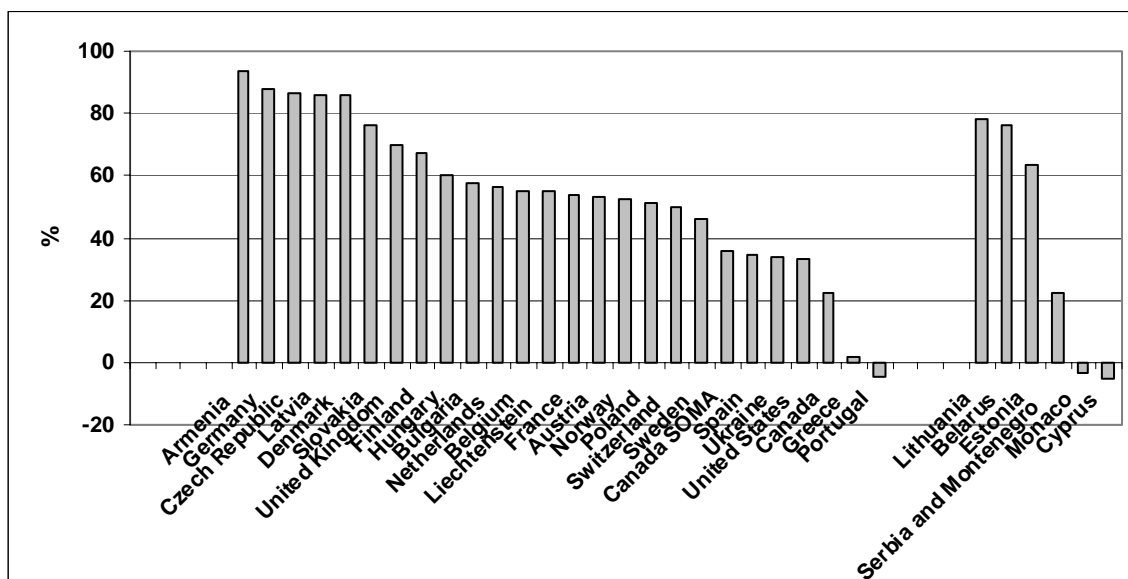


Figure V. Sulphur emissions reductions in the ECE region (1990-2001) (based on the latest data available). Signatories to the 1999 Gothenburg Protocol are on the left. Only countries that have reported national total emission data, including main sources, for both 1990 and 2001 are listed here.

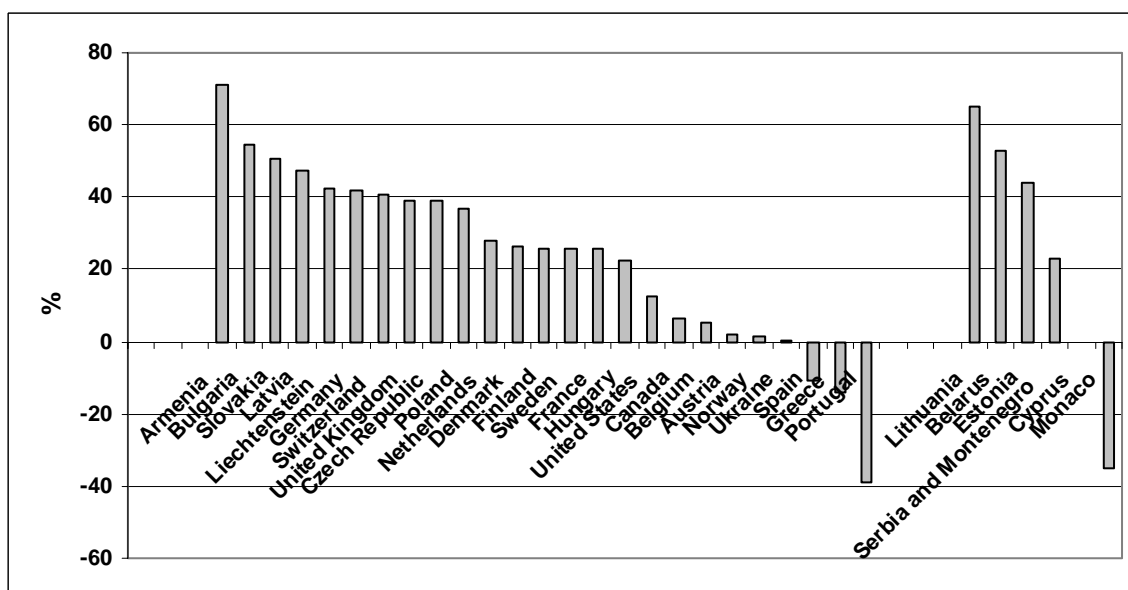


Figure VI. Nitrogen oxides emission reductions in the ECE region (1990-2001) (based on the latest data available). Signatories to the 1999 Gothenburg Protocol are on the left. Only countries that have reported national total emission data, including main sources, for both 1990 and 2001 are listed here.

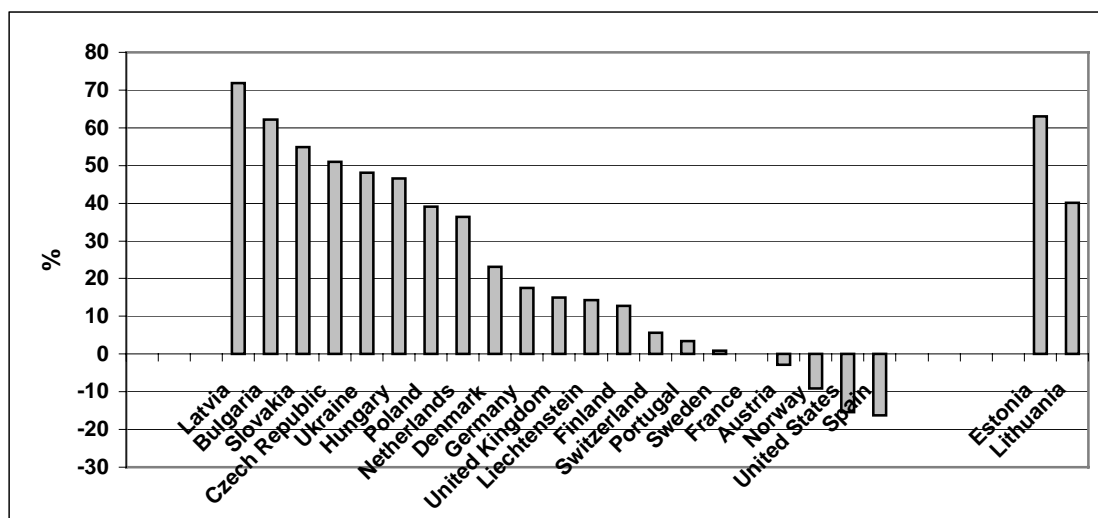


Figure VII. Emission reduction of ammonia in the ECE region 1990-2001 (based on the latest data available, see table 3). Signatories to the 1999 Gothenburg Protocol are on the left. Only countries that have reported national total emission data including main sources for both 1990 and 2001 are listed here.

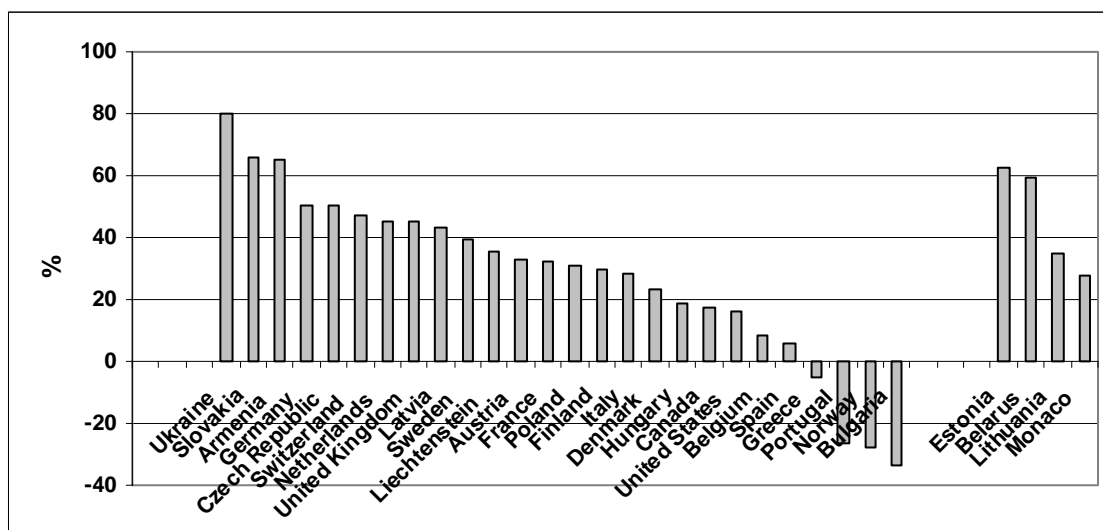


Figure VIII. Reductions in emissions of non-methane volatile organic compounds in the ECE region (1990-2001) (based on the latest data available, see table 4). Signatories to the 1999 Gothenburg Protocol are on the left. Only countries that have reported national total emission data, including main sources, for both 1990 and 2001 are listed here.

Table 1, footnotes: Anthropogenic emissions of sulphur in the ECE region

¹ Reduction from 1993 onwards explained by blockade, followed by decline in energy production. 1999 reduction explained by use of natural gas as fuel.

² 1980-2001: Recalculated due mainly to revision of energy balance.

³ 2010, 2015, 2020: National projections calculated according to 1990 baseline and economic development forecast.

⁴ 2000: NFR 8 emissions included in NFR 7.

⁵ S90: Relevant information lacking for at least one of the three Belgian regions in 1980-89, therefore no sector data given before 1990.

⁶ 2000 S7 S8: Calculated on the basis of total quality of fuels used by sector.

⁷ Emissions of SO₂ for Sulphur Oxides Management Area (SOMA) (year, value)(Gg):

1980:	3245	1988:	2190	1996:	1206
1981:	2819	1989:	2241	1997:	1210
1982:	2373	1990:	1872	1998:	1247
1983:	2382	1991:	1586	1999:	1149
1984:	2598	1992:	1546	2000:	1221
1985:	2343	1993:	1576	2001:	1196
1986:	2053	1994:	1382		
1987:	2111	1995:	1227		

⁸ 1980-1989: Data missing because Croatia was part of Yugoslavia; 1990-1998: Distributed according to SNAP90; 1999-2000: Distributed according to SNAP97.

⁹ Data include emissions within the EMEP area; 1985-2001: For road traffic new method used to estimate fuel balance.

¹⁰ 1980-2010: Data include emissions within the EMEP area only. National totals do not include international air traffic and international sea traffic; 2010: Figures correspond to national emission ceilings (NEC).

¹¹ Calculations based on official statistical data. Due to economic and social difficulties, collection of statistical data inadequate and not of reliable quality.

¹² Two thirds of SO₂ emitted as H₂S; 1980 and 1981 emissions assumed to be similar to 1982 due to lack of data.

¹³ 1996-2000 emissions estimated according to SNAP97.

¹⁴ 2001: Sector 1A4a included in 1A4bi; cannot separate emissions from commercial/institutional sectors from emissions from residential sectors.

¹⁵ 1990, 1995, 1998-2001: 1A3e: Other mobile sources such as draglines, building cranes etc; 2G: Emissions from industry not attributable to previous two categories; 3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

¹⁶ 1980, 1987, 1989-2001: 1A2 other: Manufacturing Industries and Construction; 1A2 f other: All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction; 1 A 3 Transport; 1A3e other: 1A3eii includes machinery except in agriculture/forestry/fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1A4c Agriculture/Forestry/Fishing; 1B1 fugitive emissions from solid fuels: 1B1c other: no emissions reported; 2 A mineral products: 2A7 other including non-fuel mining and construction; manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sand-pits. Construction; 2B chemical industry: 2B5 other: Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint; 2 Total industrial processes: 2G other: no emissions reported; 3 Total solvent and other product use: including products containing HMs and POPs; In addition to other solvents, this item includes mercury emissions by evaporation from products.

¹⁷ 1990-2001 and 2010, 2020: National totals include emissions in Portuguese territorial areas outside EMEP grid area: Azores and Madeira Islands. 1990-2001: Recalculations reflecting mostly revision of national energy balances by Economy Ministry.

¹⁸ Since 1993 emissions on left bank of Dniester River not included, except emissions from Moldavian electric station; 1991-1992 decline in emissions due to decrease in the national economy. 1990-1999: Emissions calculated according to EMEP/CORINAIR Emission Inventory Guidebook and Greenhouse Gas Inventory Reporting Instructions. SO_x emissions for 1980-1989 do not include mobile sources.

¹⁹ Figures apply to European part within EMEP; since 1980, SO₂ emission data updated to reflect emissions from mobile sources (agricultural engineering, road-building machinery and railway transport).

²⁰ 1980-2001: Figures refer to stationary sources only.

²¹ 1990-2000: S4 emissions included in S3; 2000-2020: Main pollutants, particulate matter and heavy metals; 1A3aii Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

²² 1990-2001: Geographical coverage of non-gridded data is for the whole Spanish territory (including Canary Islands, Ceuta and Melilla).

²³ 1990-2000: Mobile sector recalculated.

²⁴ 2010: Emissions correspond to national emission ceiling (NEC) in Gothenburg Protocol.

²⁵ 1997: Refers to Skopje only; 1998: Sectors 1-6 only; data for sectors 7-11 not yet ready; 2000-2001: Includes all sectors.

²⁶ Emissions from fuel combustion in all sectors calculated only for 1999; 2010: Sum of reported sector data.

aa 1990-2000: For 1990-2000, data as compiled for UNFCCC submission used; Time series differ slightly due to different treatment of overseas territories and international bunkers. EC inventory relies on availability and submission of data by Member States. However, to provide more complete picture, emissions of air pollutants reported by EC and Member States under UNFCCC (SO_x, NO_x, CO and NMVOC) have been used.

Table 2, footnotes: Anthropogenic emissions of nitrogen oxides in the ECE region

²⁷ Reduction from 1992 onwards explained by blockade, followed by drop in energy production.

²⁸ 1980-2001: Recalculated due mainly to revision of energy balance.

²⁹ Relevant information lacking for at least one of the three Belgian regions from 1980-89, therefore no sector data given before 1990.

³⁰ 2000: S7 S8 emissions calculated on basis of total quality of fuels used by sector.

³¹ 1980-1989: Data missing because Croatia was part of Yugoslavia; 1990-1998: Distributed according to SNAP90; 1999-2000: Distributed according to SNAP97.

³² Data include emissions within EMEP area; 1985-2001: For road traffic new method used to estimate fuel balance.

³³ Data include emissions within EMEP area. National totals do not include international air traffic and international sea traffic; 2010: figures correspond to National emission ceilings (NEC).

³⁴ Calculations are based on official statistical data. Due to economic and social difficulties, collection of statistical data inadequate and not of reliable quality.

³⁵ 1987: Based on emission figures for 1990-2000.

³⁶ 1996-2000 emissions estimated according to SNAP97.

³⁷ 2001: Sector 1A4a included in 1A4bi because data available at present do not allow for separate emissions from commercial/institutional sectors and emissions from residential sectors.

³⁸ 1990,1995 and 1998-2001: 1A3e: Other mobile sources such as draglines, building cranes etc.; 2G: emissions from industry not attributable to previous two categories; 3D: Emissions from use of consumer products: emissions from cigarettes, foam and (car) service companies.

³⁹ 1980, 1987 and 1989-2001: 1A2 other: Manufacturing Industries and Construction: 1A2f other: All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction; 1A3 Transport: 1A3e Other: 1A3eii includes machinery except in Agriculture/Forestry/Fishing, military and households. Snow scooters and small watercraft are included under 1A4b Residential and 1A4c Agriculture/Forestry/Fishing; 1B1 Fugitive Emissions from Solid Fuels: 1B1c Other: No emissions reported; 2 A Mineral products: 2A7 Other including Non Fuel Mining and Construction; Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction; 2 B Chemical industry: 2B5 Other: Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint; 2 total industrial processes: 2G Other: No emissions reported; 3 Total solvent and other product use: 3D Other: including products containing HMs and POPs; In addition to other solvents, this item includes mercury emissions by evaporation from products.

⁴⁰ 1990-2020: National emission totals include emissions in Portuguese territorial areas that are outside EMEP grid area: Azores and Madeira Islands; 1990-2001: recalculations reflecting mostly the revision of national energy balances under the responsibility of the Economy Ministry.

⁴¹ Since 1993 emissions from the left bank of Dniester River are not included, except for emissions from Moldavian electric station. The drop in emissions between 1991 and 1992 is due to a decrease in the national economy. For 1990-1999 emissions have been calculated according to EMEP/CORINAIR Emission Inventory Guidebook and the Greenhouse Gas Inventory Reporting Instructions. NOx emissions for 1980-1984 do not include mobile sources.

⁴² Figures apply to European part of EMEP. Since 1987, NOx emissions have been updated according to the instruction of the Ministry of Natural Resources for road transport, other mobile sources, etc. NOx emission data for earlier periods (before 1987) have not been corrected; does not include mobile sources.

⁴³ Figures refer to stationary sources only.

⁴⁴ 1990-2000: S4 emissions included in Sector 3; 2000-2020: Main pollutants, particulate matter and heavy metals; 1A3aai Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at airport.

⁴⁵ 1990-2001: Geographical coverage of non-gridded data is for the whole Spanish territory (including Canary Islands, Ceuta and Melilla).

⁴⁶ Mobile sector 1990-2000: recalculated.

⁴⁷ 2010 projections correspond to national emission ceiling (NEC) in Gothenburg Protocol.

⁴⁸ 1997: Refers to Skopje only; 1998: Data for sectors 1-6 only; data for sectors 7-11 not yet ready; 2000 and 2001: For all sectors.

⁴⁹ 2010: Sum of reported sector data.

⁵⁰ 1987-1989: For the time series 1987-1989, data as submitted under the European Environment Information and Observation Network (EIONET) have been used. As no officially agreed data gap filling procedure exists, data gaps were filled by EMEP data and EEA interpolations; 1990-2000: For the time series 1990-2000, data as compiled for the UNFCCC submission; Time series differ slightly due to different treatment of overseas territories and international bunkers. EC inventory relies on availability and submission of data from Member States. However, to provide a more complete picture, emissions of air pollutants reported by EC and its Member States under UNFCCC (SOx, NOx, CO and NMVOC) have been used.

Table 3, footnotes: Anthropogenic emissions of ammonia in the ECE region

⁵¹ 1980-2001: Emissions from agriculture was only included in 1990.

⁵² 1980-2001: Recalculations mainly because of revision of energy balance.

⁵³ Without emissions from agriculture.

⁵⁴ As relevant information is lacking for at least one of the three Belgian regions during the period 1980-89, no sector data are given before 1990.

⁵⁵ 2000 S7 S8: Emissions are calculated on the basis of the total quality of the used fuels by sectors.

⁵⁶ 1980-1989: Data are missing because Croatia was part of Yugoslavia.

1990-1998: Distributed according to SNAP90.

1999-2000: Distributed according to SNAP97.

⁵⁷ Data include emissions within the EMEP area only.

1985-2001: Road traffic: New method for estimating the fuel balance.

⁵⁸ Data include emissions within the EMEP area only. National totals do not include international air traffic and international sea traffic.

2010: Emissions correspond to the national emission ceilings (NEC).

⁵⁹ Emissions for 1996-2000 estimated according to SNAP97.

⁶⁰ In 1993 number of livestock decreased compared to 1992.

⁶¹ NH3 emissions in sector S10 increased in 2001 because for the first time contribution of nitrogen fertilizers was evaluated.

⁶² 2001: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

⁶³ 1990,1995 and 1998-2001:

1A3e: Other mobile sources such as draglines, building cranes etc.

2G: Emissions from industry not attributable to previous two categories.

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

⁶⁴ 1980, 1987 and 1989-2001:

Other:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other:

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other:

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other:

No emissions reported.

2 A Mineral Products: 2 A 7 Other including Non Fuel Mining and Construction

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical Industry: 2 B 5 Other:

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total Industrial Process: 2 G Other:

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs.

In addition to other solvents, this item includes mercury emissions by evaporation from products.

⁶⁵ National emission totals include emissions in Portuguese territorial areas that are outside EMEP grid area: Azores and Madeira Islands. 1990-2001: Recalculations reflecting mostly the revision of national energy balances under the responsibility of the Economy Ministry.

⁶⁶ 1993 emissions from the left bank of Dniester River are not included, except for emissions from Moldavian electric station. The drop in emissions between 1991 and 1992 is due to a decrease in the national economy. For 1990-1999 emissions have been calculated according to EMEP/CORINAIR Emission Inventory Guidebook and the Greenhouse Gas Inventory Reporting Instructions.

⁶⁷ Figures apply to the European part within EMEP.

NH3 figures for 1980-1986 refer to agricultural sector only. Since 1987 NH3 figures include emissions from industrial sources.

⁶⁸ 2000-2020

Main pollutants, particulate matter and heavy metals.

1A3a ii Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

⁶⁹ 1990-2001 Geographical coverage of non-gridded data is for the whole Spanish territory (including Canary Islands, Ceuta and Melilla).

⁷⁰ Mobile sector 1990-2000: recalculated.

⁷¹ Emissions in 2010 correspond to the national emission ceiling (NEC) in the Gothenburg Protocol.

⁷² Sector 4 emissions only.

⁷³ 1990-2000: For the time series 1990-2000, data as compiled for the EC UNFCCC submission were used.

The two time series differ slightly due to different treatment of overseas territories and international bunkers. The EC inventory relies on the availability and submission of Member States' data. However, to provide a more complete picture, the emissions of air pollutants reported by the EC and its Member States under the UNFCCC (SO_x, NO_x, CO and NMVOC) have been used.

Table 4, footnotes: Anthropogenic emissions of non-methane volatile organic compounds in the ECE region

⁷⁴ Reduction in emissions from 1993 onwards is explained by the blockade, followed by a drop in energy production.

⁷⁵ 1980-2001: Recalculations mainly because of revision of energy balance.

⁷⁶ The NMVOC figure for 1985 includes CH₄ emissions. As relevant information is lacking for at least one of the three Belgian regions during the period 1980-89, no sector data are given before 1990.

⁷⁷ 2000 S7 S8: Emissions are calculated on the basis of the total quality of the used fuels by sectors.

⁷⁸ 1980-1989: Data are missing because Croatia was part of Yugoslavia.

1990-1998: Distributed according to SNAP90.

1999-2000: Distributed according to SNAP97.

⁷⁹ Data include emissions within the EMEP area only.

1985-2001: Road traffic: New method for estimating the fuel balance.

⁸⁰ 1990-1999: NMVOC sector 3 emissions are included in sector 8.

⁸¹ 1980-2010: Data include emissions within the EMEP area only. National totals do not include international air traffic and international sea traffic.

2010: Emissions correspond to the national emission ceilings (NEC).

⁸² Calculations are based on official statistical data. Due to economic and social difficulties the collection of statistical data within the country is inadequate. Therefore it can be assumed that data provided here are not reliable.

⁸³ NMVOC emissions by source categories do not include biogenic NMVOC emissions of managed forests since only anthropogenic emissions were requested.

⁸⁴ 1985: Includes CH₄.

⁸⁵ There are two main reasons for the considerable NMVOC decrease from 1990 to 1991. One is the change in the calculation methods. Before 1991 a top-down calculation was used, since 1991 a bottom-up method on the basis of a detailed survey has been applied. The second reason is the sudden, rapid recession in the economy including lower industrial production, less fuel and solvent consumption resulting in less VOC emission.

⁸⁶ CH₄ included.

⁸⁷ 2001: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

⁸⁸ 1990, 1995 and 1998-2001:

1A3e: Other mobile sources such as draglines, building cranes etc.

2G: Emissions from industry not attributable to previous two categories.

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

⁸⁹ 1980, 1987 and 1989-2001:

Other:

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other:

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other:

No emissions reported.

2 1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other:

A Mineral products: 2 A 7 Other including Non Fuel Mining and Construction

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical Industry: 2 B 5 Other:

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total Industrial Processes: 2 G Other:

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs. In addition to other solvents, this item includes mercury emissions by evaporation from products.

⁹⁰ 2001 and 2010: Other includes: NFR 2 B 5: Carbon black (SNAP 040409) and processes in org. chem. industry (SNAP 0405). NFR 3D: Other use of solvents (SNAP 0604). NFR 7: Nature includes 297 Gg NMVOC from source sector SNAP 11.

⁹¹ 1990- 2020: National emission totals include emissions in Portuguese territorial areas that are outside EMEP grid area: Azores and Madeira Islands. 1990-2001: Recalculations reflecting mostly the revision of national energy balances under the responsibility of the Economy Ministry.

⁹² Since 1993 emissions from the left bank of Dniester River are not included, except for emissions from Moldavian electric station. The drop in emissions between 1991 and 1992 is due to a decrease in the national economy.

For 1990-1999 emissions have been calculated according to EMEP/CORINAIR Emission Inventory Guidebook and the Greenhouse Gas Inventory Reporting Instructions.

⁹³ Figures apply to the European part within EMEP.

NMVOC: Natural sources not included. Since 1987 NMVOCs emission data were updated taking into account emissions from railway transport, agricultural engineering and road-building machinery.

⁹⁴ 2000-2020.

Main pollutants, particulate matter and heavy metals.

1A3aii Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

6C Waste incineration - total waste incineration.

7 Other - biomass on-site burning and forest fires.

1A3ai(i) International Aviation (LTO) included in 1A3aii(i).

1A3ai(ii) International Aviation (cruise) included in 1A3aii(ii).

1A3di International Navigation included in 1A3dii.

⁹⁵ 1990-2001.

Geographical coverage of non-gridded data is for the whole Spanish territory (including Canary Islands, Ceuta and Melilla).

⁹⁶ Mobile sector 1990-2000: recalculated.

⁹⁷ Emissions in 2010 correspond to the national emission ceiling (NEC) in the Gothenburg Protocol.

⁹⁸ 2010: Sum of reported sector data.

⁹⁹ 1990-2000: For the time series 1990-2000, data as compiled for the EC UNFCCC submission were used.

The two time series differ slightly due to different treatment of overseas territories and international bunkers. The EC inventory relies on the availability and submission of Member States' data. However, to provide a more complete picture, the emissions of air pollutants reported by the EC and its Member States under the UNFCCC (SO_x, NO_x, CO and NMVOC) have been used.

Table 5, footnotes: Anthropogenic emissions of carbon monoxide in the ECE region

¹⁰⁰ Reduction in emissions from 1992 onwards is explained by the blockade followed by a drop in energy production.

¹⁰¹ Recalculations mainly because of revision of energy balance.

¹⁰² 2000 S7 S8: Emissions are calculated on the basis of the total quality of the used fuels by sectors.

¹⁰³ 1980-1989: Data are missing because Croatia was part of Yugoslavia.

1990-1998: Distributed according to SNAP90.

1999-2000: Distributed according to SNAP97.

¹⁰⁴ Data include emissions within the EMEP area only.

1985-2001 Road traffic: New method for estimating the fuel balance.

¹⁰⁵ Data include emissions within the EMEP area only.

¹⁰⁶ Calculations are based on official statistical data. Due to economic and social difficulties the collection of statistical data within the country is inadequate. Therefore it can be assumed that data provided here are not reliable.

¹⁰⁷ Emissions for 1996-2000 estimated according to SNAP97.

¹⁰⁸ 2001: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

¹⁰⁹ 1990, 1995 and 1998-2001:

1A3e: Other mobile sources such as draglines, building cranes etc

2G: Emissions from industry not attributable to previous two categories

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

¹¹⁰ 1980, 1987 and 1989-2001

Other:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other.

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other.

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing.

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other.

No emissions reported.

2 A Mineral products: 2 A 7 Other including Non Fuel Mining and Construction.

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical Industry: 2 B 5 Other

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total industrial processes: 2 G Other

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs. In addition to other solvents, this item includes mercury emissions by evaporation from products.

¹¹¹ National emission totals include emissions in Portuguese territorial areas that are outside EMEP grid area: Azores and Madeira Islands. 1990-2001: Recalculations reflecting mostly the revision of national energy balances under the responsibility of the Economy Ministry.

¹¹² Since 1993 emissions from the left bank of Dniester River are not included, except for emissions from Moldavian electric station. The drop in emissions between 1991 and 1992 is due to a decrease in the national economy. For 1990-1999 emissions have been calculated according to EMEP/CORINAIR Emission Inventory Guidebook and the Greenhouse Gas Inventory Reporting Instructions.

¹¹³ Figures apply to the European part within EMEP. CO emission data from 1987 onwards were updated taking into account emissions from railway transport, agricultural engineering and road-building machinery.

¹¹⁴ Sector 4: Emissions included in Sector 3 2000-2020.

Main pollutants, particulate matter and heavy metals.

1A3aii Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

¹¹⁵ 1990-2001: Geographical coverage of non-gridded data is for the whole Spanish territory (including Canary Islands, Ceuta and Melilla).

¹¹⁶ Mobile sector 1990-2000: recalculated.

¹¹⁷ 1997: Refers to Skopje only.

1998: Data are for sectors 1-6 only. Data for sectors 7-11 are not yet ready.

2000 and 2001: All sectors included.

¹¹⁸ 2010: Sum of reported sector data.

¹¹⁹ 1990-2000: For the time series 1990-2000, data as compiled for the EC UNFCCC submission were used.

The two time series differ slightly due to different treatment of overseas territories and international bunkers. The EC inventory relies on the availability and submission of Member States' data. However, to provide a more complete picture, the emissions of air pollutants reported by the EC and its Member States under the UNFCCC (SO_x, NO_x, CO and NMVOC) have been used.

Table 6, footnotes: Anthropogenic emissions of total suspended matter in the ECE region (Mg TSP per year)

¹²⁰ 1980-2001 - Recalculations mainly because of revision of energy balance.

¹²¹ NFR 1A2 - without SNAP 08 08 (a), these emissions are included in NFR 1A3e ii

NFR 1A4b - without SNAP 08 09, these emissions are included in NFR 1A3e ii

NFR1A5a - these emissions are included in NFR 1A4a

NFR1A5b - these emissions are included in NFR 1A3e ii

¹²² Emissions within EMEP area.

1985-2001 Road traffic: New method for estimating the fuel balance. PM emissions: fuels other than diesel are included.

¹²³ 1980-2000 TSP: The TSP emissions are dust only.

¹²⁴ Data include emissions within the EMEP area only.

¹²⁵ TSP: The national total TSP emissions contain transshipments of bulk goods and these emissions are listed in detail in sector 11, other sources and sinks.

¹²⁶ 2001: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

¹²⁷ Specification of emissions included in the "other" categories:

1A3e: Other mobile sources such as draglines, building cranes etc.

2G: Emissions from industry not attributable to previous two categories.

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

¹²⁸ Other:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other.

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing.

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other.

No emissions reported.

2 A Mineral Products: 2 A 7 Other including Non Fuel Mining and Construction Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits.

Construction

2 B Chemical Industry: 2 B 5 Other.

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total Industrial Processes: 2 G Other.

No emissions reported.

3 Total Solvent and other product use: 3 D Other including products containing HMs and POPs

In addition to other solvents, this item includes mercury emissions by evaporation from products.

¹²⁹ 1A3aⁱⁱⁱ Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

¹³⁰ Mobile sector 1990-2000: recalculated.

Table 7, footnotes: Anthropogenic emissions of particulate matter in the ECE region (Mg PM₁₀ per year)

¹³¹ Recalculations mainly because of revision of energy balance.

¹³² TABLE IV 1A: National sector emissions: Main pollutants, particulate matter and heavy metals

NFR 1A2 - without SNAP 08 08 (a), these emissions are included in NFR 1A3e ii

NFR 1A4b - without SNAP 08 09, these emissions are included in NFR 1A3e ii

NFR1A5a - these emissions are included in NFR 1A4a

NFR1A5b - these emissions are included in NFR 1A3e ii

¹³³ Emissions within EMEP area.

1985-2001: Road traffic: New method for estimating the fuel balance. Fuels other than diesel are included.

¹³⁴ Data include emissions within the EMEP area only.

¹³⁵ 2001: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

¹³⁶ Specification of emissions included in the "other" categories:

1A3e: Other mobile sources such as draglines, building cranes etc.

2G: Emissions from industry not attributable to previous two categories.

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

¹³⁷ Other:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other

No emissions reported.

2 A Mineral Products: 2 A 7 Other including Non Fuel Mining and Construction.

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical Industry: 2 B 5 Other

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total Industrial processes: 2 G Other

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs.

In addition to other solvents, this item includes mercury emissions by evaporation from products.

¹³⁸ 1A3aⁱⁱⁱ Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

¹³⁹ Mobile sector 1990-2000: recalculated.

Table 8, footnotes: Anthropogenic emissions of particulate matter in the ECE region (Mg PM_{2.5} per year)

¹⁴⁰ Recalculations mainly because of revision of energy balance.

¹⁴¹ Emissions within EMEP area.

1985-2001 Road traffic: New method for estimating the fuel balance. Fuels other than diesel are included.

¹⁴² 2001: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

¹⁴³ Specification of emissions included in the "other" categories:

1A3e: Other mobile sources such as draglines, building cranes etc.

2G: Emissions from industry not attributable to previous two categories

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

¹⁴⁴ Other:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other.

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other.

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing.

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other.

No emissions reported.

2 A Mineral products: 2 A 7 Other including Non Fuel Mining and Construction

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical Industry: 2 B 5 Other.

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total Industrial processes: 2 G Other.

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs.

In addition to other solvents, this item includes mercury emissions by evaporation from products.

¹⁴⁵ 1A3aⁱⁱⁱ Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

¹⁴⁶ Mobile sector 1990-2000: recalculated.

Table 9, footnotes: Anthropogenic emissions of persistent organic pollutants in the ECE region

¹⁴⁷ 1985-2001: Recalculations mainly because of revision of energy balance.

¹⁴⁸ 1990 DIOX and PAH: Refer to Flanders only.

1993 PAH: Refer to Flanders only.

1995-1998 HCH: Refer to Wallonia only.

1994 1996-1998 HCB: Refer to Wallonia only.

1996-1998 PCP: Refer to Wallonia only.

1994 DIOX: Refer to Brussels and Wallonia only.

¹⁴⁹ 1990 and 1996: SCCP includes TCM, TRI, PER, TCE.

1980-1989: Data are missing because Croatia was part of Yugoslavia.

1990-1998: Distributed according to SNAP90.

1999-2000: Distributed according to SNAP97.

¹⁵⁰ NFR 1A2 includes SNAP 03 01(a), 03 03 01, 03 03 02, 03 03 03, 03 03 10, without SNAP 08 08 (a), these emissions are included in NFR 1A3e ii.

NFR 1A4b - without SNAP 08 09, these emissions are included in NFR 1A3e ii.

NFR1A5a - these emissions are included in NFR 1A4a.

NFR1A5b - these emissions are included in NFR 1A3e ii.

NFR 2C - these emissions are included in NFR 1A2.

NFR 6C - include SNAP 09 02 01, 09 02 02, 09 02 08 only.

¹⁵¹ 1990-2000 PAH S7 S8: Emissions are calculated with COPERT. Data include emissions within the EMEP area only.

All other compounds: 1985-2001 Road traffic: New method for estimating the fuel balance.

¹⁵² Data include emissions within the EMEP area only.

¹⁵³ PAH: Figures include only benzo(ghi)perylene and flouranthene.

S6 SCCP: Very rough estimate.

S8 POP: Emissions included in Table 3-G Road transport.

S11 PCB: Rough estimation (electrical equipment).

S11 PCP: Very rough estimation (import of treated leather clothing).

¹⁵⁴ 2001: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

¹⁵⁵ 1990, 1995, 1998-2001

Specification of emissions included in the "other" categories:

1A3e: Other mobile sources such as draglines, building cranes etc.

2G: Emissions from industry not attributable to previous two categories

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

¹⁵⁶ 1996 SCCP

TRI only

1990-2001:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other

No emissions reported.

2 A Mineral products: 2 A 7 Other including Non Fuel Mining and Construction

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical industry: 2 B 5 Other.

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total industrial processes: 2 G Other.

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs.

In addition to other solvents, this item includes mercury emissions by evaporation from products.

1990-1999:

1992-1999 HCB: Only data for sector 4: Production processes, no data for other sectors. ECE-4 is used for the PAH data.

¹⁵⁷ All figures apply to the European part within EMEP.

¹⁵⁸ 2000 and 2001: (except for PAH total (1-4)).

Other:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other.

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other.

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing.

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other.

No emissions reported.

2 A Mineral products: 2 A 7 Other including Non Fuel Mining and Construction.

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical Industry. 2 B 5 Other.

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total industrial processes: 2 G Other.

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs.

In addition to other solvents, this item includes mercury emissions by evaporation from products.

¹⁵⁹ Geographical coverage of non-gridded data is for the whole Spanish territory (including Canary Islands, Ceuta and Melilla).

¹⁶⁰ Mobile sector 1990-2000: recalculated.

¹⁶¹ PAH: PAHs are defined as the sum of 16 PAH: benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, acenaphthene, acenaphthylene, anthracene, benzo(ghi)perylene, fluoroanthene, fluorene, naphthalene, phenanthrene, pyrene.

The 1990 dioxin and furan inventory was developed using national methodologies. Data development for subsequent years includes application of facility-specific information and is expected to include additional sources.

DIOX: The dioxin and furan inventory data and estimation methodologies are being reassessed. Data developed since the 1990 inventory include facility-specific information and are expected to include more sources.

The PCB 1996 national value reflects that reported to the United States Environmental Protection Agency's Toxic Release Inventory (TRI) and is suspected to contain an error in industry reporting.

Table 10, footnotes: Anthropogenic emissions of heavy metals in the ECE region

¹⁶² 1999 - 2000, Pb: Road transport not included.

¹⁶³ 1980-2001: Recalculations mainly because of revision of energy balance.

¹⁶⁴ 2000: NFR 8 emissions included in NFR 7

¹⁶⁵ 2000: S7 S8: Emissions are calculated on the basis of the total quality of the used fuels by sectors.

¹⁶⁶ 1980-1989: Data are missing because Croatia was part of Yugoslavia.

1990-1998: Distributed according to SNAP90.

1999: Distributed according to SNAP97.

NFR 1A2 - includes SNAP 03 01(a), 03 03 01, 03 03 02, 03 03 03, 03 03 10, 03 03 11, 03 03 12, 03 03 17, without SNAP 08 08 (a), as these emissions are included in NFR 1A3e ii.

NFR 1A4b - without SNAP 08 09, these emissions are included in NFR 1A3e ii.

NFR 1A5a - these emissions are included in NFR 1A4a.

NFR 1A5b - these emissions are included in NFR 1A3e ii.

NFR 2C - these emissions are included in NFR 1A2.

NFR 6C - includes SNAP 09 02 01, 09 02 02, 09 02 08 only.

¹⁶⁸ Data include emissions within the EMEP area.

1985-2001 Road traffic: New method for estimating the fuel balance.

¹⁶⁹ Data include emissions within the EMEP area.

¹⁷⁰ 2001: Table 1a: Sector 1A4a has been included in 1A4bi because data available at present do not allow separating emissions from commercial/institutional sectors and emissions from residential sectors.

¹⁷¹ 1990, 1995 and 1998-2001:

1A3e: Other mobile sources such as draglines, building cranes etc.

2G: Emissions from industry not attributable to previous two categories.

3D: Emissions from use of consumer products: cigarettes, foam and (car) service companies.

¹⁷² 1990-2001:

1 A 2 Manufacturing Industries and Construction: 1 A 2 f Other:

All mining, extraction and manufacturing industries (NACE 10-37) not included in 1A1. Construction.

1 A 3 Transport: 1 A 3 e Other:

1 A 3 e ii includes machinery except in Agriculture / Forestry / Fishing, military and households. Snow scooters and small watercraft are included under 1 A 4 b Residential and 1 A 4 c Agriculture / Forestry / Fishing.

1 B 1 Fugitive Emissions from Solid Fuels: 1 B 1 c Other:

No emissions reported.

2 A Mineral products: 2 A 7 Other including Non Fuel Mining and Construction

Manufacturing of other non-metallic mineral products (NACE 26) not included in 2A1-2A3: glass, plaster, clay products, rock wool. Mining, crushing plants, sandpits. Construction.

2 B Chemical Industry. 2 B 5 Other:

Manufacturing of methanol, basic plastics, sulphuric acid, chlorine, explosives, soap, pigments and paint.

2 Total industrial processes: 2 G Other:

No emissions reported.

3 Total solvent and other product use: 3 D Other including products containing HMs and POPs.

In addition to other solvents, this item includes mercury emissions by evaporation from products.

¹⁷³ Figures apply to the European part within EMEP.

¹⁷⁴ 2000-2001

Main pollutants, particulate matter and heavy metals.

1A3aii Civil aviation (domestic, LTO) includes emissions from civil aviation (domestic, LTO) and surface operations at the airport.

¹⁷⁵ Geographical coverage of non-gridded data is for the whole Spanish territory (including Canary Islands, Ceuta and Melilla).

¹⁷⁶ 1990-2001 Mobile sector: recalculated.

Table 11, footnotes: Percentage reduction (1990-2001) of 1990 level

¹⁷⁷ Only Parties reporting emissions including main sources both for 1990 and for 2001 for at least one component are listed here.

¹⁷⁸ Special notes for NH₃ and NMVOC are stated in the Gothenburg Protocol.

¹⁷⁹ The NH₃ reduction (increase) is not included in the NH₃ reduction histogram.