

REFERENCES

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A. SOCIO-ECONOMY AND ENERGY

- A-1 Statistical Yearbook of Hungary 1992, Central Statistical Office, 1993
- A-2 Statistical Yearbook 1991, Central Statistical Office, 1992
- A-3 STADAT on-line data-base of the Central Statistical Office
- A-4 1990 Census, Central Statistical Office, 1992
- A-5 Hungary 1992, Central Statistical Office, 1993
- A-6 The BAZ County volume of the 1990 Census, Central Statistical Office, 1992
- A-7 Statistical Yearbook of BAZ County 1992, County Directorate of the Central Statistical Office, 1993
- A-8 Statistical Yearbook of BAZ County 1991, County Directorate of the Central Statistical Office, 1992
- A-9 Yearly Bulletin 1992, BAZ County Directorate of the Central statistical Office, 1993
- A-10 National Accounts of Hungary 1991, Central Statistical Office, 1993 [E]
- A-11 Economic Processes 1989-92, Central Statistical Office, 1993
- A-12 The Yearbook of Economic Statistics 1991, Central Statistical Office, 1993
- A-13 Monthly Bulletin of Statistics 1993/9, Central Statistical Office, 1993 [E]
- A-14 Hungarian Yearly Statistical Booklet 1991, Central Statistical Office, 1992
- A-15 OECD Economic Surveys: Hungary, Paris, 1991
- A-16 Annual Report 1992, National Bank of Hungary, 1993
- A-17 The National Labor Center's data
- A-18 An Economic Geography of Hungary, ed. Dr. T. Bernát, Academic, Publishers, Budapest, 1989 [E]
- A-19 Government document enclosed to the Bill on the Guiding Principles of Territorial Development Policies, cited by the daily Magyar Nemzet, 8 May 1993
- A-20 "The Hungarian Energy Policy" submitted in 1992 to the Parliament of the Republic
- A-21 Strategy of the Hungarian Energy Supply, Ministry of Trade & Industry, 1993
- A-22 Energy-Supply 1993, Energy Inspectorate, 1994
- A-23 Characteristic Statistical Data 1992, Hungarian Power Companies Ltd., 1993 [E]
- A-24 The Strategy of MVM Rt. on Power Station Construction, Hungarian Power Companies Ltd, 1993 [E]
- A-25 "Coal-mines in the Deep", article by E. Eller in an economic journal Figyelo, Budapest, December 10, 1992.

A-26 Guidelines for the Energy Saving, Agency of Small-to-Medium Enterprises (Japan),
March 1983. [J]

A-27 Policy of the Hungarian Government on Reconstruction of Power Stations, MVM
Rt., 1992.

B. POLICY, INSTITUTION, LAWS AND REGULATIONS

B-1 Decree of the Government No. 43/1990.(IX.15.) - on the responsibilities and
authority of the minister for environment and regional policy. [E]

B-2 Act II of 1976 on the Protection of Human Environment, 1976. [E]

B-3 Regulation No. 4/1986.(VI.2.) OKTH of the President of the National Authority for
Environment Protection and Nature Conservation on the execution of the Order No.
21/1986.(VI.2.) MT regarding the protection of clean air. [E]

B-4 Order No. 21/1986.(VI.2.) issued by the Council of Ministers in subject of
protection of clean air. [E]

B-5 Clean Air Protection Strategy and Concept,
Ministry for Environment and Regional Policy, Department for Air, Water and Soil
Quality Protection, February 1991. [E]

B-6 Legal and Institutional Framework of Air Pollution Control in Hungary - State of
the Art Report, Institute for Environmental Protection, Department for Air Pollution
Abatement, April 1991. [E]

B-7 Project Proposals for G-24 "PHARE-Environment Programme", January 1990. [E]

B-8 European Community PHARE Environmental Program, Hungary. [E]

B-9 State of the Environment in Hungary and Program for Environmental Actions - The
fifth section of the Government Program, Ministry for Environment and Regional
Policy, September 1990. [E]

B-10 The Order of the Minister of Transportation, Communication and Building Affairs
5/1990. (IV.12.) - on the Technical Examination of Public Vehicles, Hungarian
Bulletin, Part II. Statutory Provisions, 671-718

B-11 Supplement No.3 for the Decree of KHVM 18/1991 (XII.18.) - Regulation of
emission control for passenger cars, agricultural vehicles and slow-speed vehicles,
Ministry for Transport, Communication and Water Conservancy, December 1991.

B-12 The Improvement of the Air Quality in Highly Endangered Geographical Regions
for the Period 1994-1998, Government Resolution No. 1079/1993(Dated: December
23.) [E]

B-13 Minutes on Further Reduction of Sulfur Emissions to the 1979 Treaty on Air
Pollution Reaching out to Large Territories over National Borders, June 1994 [E]

B-14 Hungarian Standard MSZ 21854 1M(Modified MSZ 21854:1990 "Requirements
of Cleanness of Ambient Air", October 1993

B-15 Central Environment Protection Fund (Excerpt from the LXXXIII-rd Act,1992),
Ministry for Environment and Regional Policy Central Environment Protection
Fund Secretariat, Nov. 1993 [E]

- B-16 Ministerial Decree No. 20 of 1993 (IV.23.) for the Execution of Act No.LXXXIII of 1992 on the Central Environment Protection Fund, Ministry for Environment and Regional Policy Central Environment Protection Fund Secretariat, Nov. 1993 [E]
- B-17 General Introduction to the Central Environment Protection Fund , Ministry for Environment and Regional Policy Central Environment Protection Fund Secretariat, Nov. 1993 [E]
- B-18 Annual Program for Support, 1993, Ministry for Environment and Regional Policy Central Environment Protection Fund Secretariat, Nov. 1993 [E]
- B-19 Description of Window 2 Procedures (Window 2 HFU Account Summary), Ministry for Environment and Regional Policy Central Environment Protection Fund Secretariat, Nov. 1993 [E]
- B-20 The Government's .../. 1993. (...) Governmental Decree on Air Pollution Abatement (Draft Version 9) [E]
- B-21 Regulation Number ... of the Minister for Environmental Protection and Regional Policy on Declaration of Air Pollution Data
- B-22 The Regulation of MTTW of/1993.(....) of the Minister for Environment and Regional Policy and the Minister for Transport, Telecommunication and Water Management on the Amendment of the Regulation of MTTW of 18/1991.(XII.18) on the Environmental Protection Inspection and Control of Motor Cars [E]
- B-23 The Joint Regulation of MERP and MTTW of/1993.(....) of the Minister for Environment and Regional Policy and the Minister for Transport, Telecommunication and Water Management, on Permitting Mobile Air Pollution Sources into Traffic and Maintaining the Operation of Those as Well as Rules in Air Pollution Abatement Concerning Activities Conducted by Certain Public Road Vehicles [E]
- B-24 Regulation Number ... of the Minister for Environmental Protection and Regional Policy on the Rules of Thermal Waste Disposal to Protect Ambient Air Quality [E]
- B-25 Regulation Number of the Minister for Environmental Protection and Regional Policy on Fees Relating to Air Pollution [E]
- B-26 Regulation Number of the Minister for Environmental Protection and Regional Policy on Rules of Measuring and Evaluating Ambient Air Quality [E]
- B-27 Regulation Number of the Minister for Environmental Protection and Regional Policy on the Smog Alarm System and its Execution [E]
- B-28 The Regulation of MERP of/1993/(...) of the Minister for Environmental Protection and Regional Policy on the Rules of Stack Height's Imposition Required in Respect to Air Pollution Abatement [E]
- B-29 Regulation Number of the Minister for Environmental Protection and Regional Policy on Zoning
- B-30 Regulation Number of the Minister for Environmental Protection and Regional Policy on Fees Relating to Air Pollution
- B-31 Regulation Number of the Minister for Environmental Protection and Regional Policy on Making up Regional Programs for Abatement of Air Pollutant Emissions
- B-32 The Regulation of MERP of/1993/(...) of the Minister for Environmental Protection and Regional Policy on Emission Limit Values, Measurement and Control of Air Pollutants Emitted by Stationary Air Polluting Point Sources

- B-33 Government Resolution No.1079/1993 (Dated: December 23.) The Improvement of the Air Quality in High Endangered Geographical Regions for the Period 1994-1998 [E]
- B-34 Government Resolution No. 2014/1994 (Dated : February 16), On the Reorganization of Borsod Steel Industry [E]
- B-35 Hungarian Standards, MSZ 2041 : 1988 (Industrial Fuel Oil), MSZ 1627 : 1992 (Diesel Fuels), MSZ 11715 : 1982 (Heating Fuels)

C. TRANSPORTATION AND TRAFFIC

- C-1 Traffic Volumes in Saj— Valley, Road Management and Coordinating Directorate, 1992. [E]
- C-2 Breakdown of the Operating Cycle used for the TYPE I Test, Institute for Transport Sciences. [E]
- C-3 Gacs, István : Concise Data of the Motor Vehicle Fleet in Hungary, in the County Borsod-Abaúj-Zemplén and in the Town Miskolc in the Years 1980, 1985, 1988, 1989 and 1990, May 1992. [E]
- C-4 Transport on Public Road Networks of Municipalities 1990, Road Transport Department, Ministry for Transport, Communication and Water Conservancy, 1991.
- C-5 Results of the 1980 Cross-sectional Traffic Census, KPM Public Roads Directorate of Miskolc, 1981.
- C-6 Cross-sectional Traffic on National Public Roads 1985 - Borsod-Abaúj-Zemplén county and Heves county, Public Roads Directorate of Miskolc, 1987.
- C-7 Cross-sectional Traffic on National Public Roads 1990 - Motor ways & Motor Roads in Baranya county, Borsod-Abaúj-Zemplén county, Hajdú-Bihar county, N—grád county, Pest county and Jász-Kiskun-Szolnok county, Road Management and Coordination Authority, 1991.
- C-8 Road Traffic Observation 1991, Road Management and Coordination Authority, 1992.
- C-9 Road Condition of Major Roads in the Study Area, Miskolc Road Management Office, Ministry for Transport, Communication and Water Conservancy, July 1993.
- C-10 List of Stations of the 1993 Traffic Census, Miskolc Road Management Office, 1992.
- C-11 Program of the 1993 Census of Public Road Traffic, Miskolc Road Management Office, 1992.
- C-12 Road Control Manual 1992.
- C-13 The Long-term Development Program of the National Public Road Network, October 1991.

D. AIR POLLUTION AND CONTROL

- D-1 Haszpra, Lásal— and et al. : Background Pollution and Accumulation of pollutants in Hungary, December 1991.

- D-2 Air Pollution Caused by Power Stations in Hungary, Hungarian Electricity Board. [E]
- D-3 Di—szei, Agnes : A Study on Industrial Source Air Pollution Problems in Hungary (Draft), September 1992. [E]
- D-4 Air Pollution in Budapest - Inventory study, Ministry for Environment and Regional Policy, June 1991. [E]
- D-5 Merétei T., Kovács M. : Experiences of Emission Inventory of the Road Traffic in Hungary, Institute for Transport Sciences, March 1988. [E]
- D-6 Figures for Specific Emission 1987 - Passenger car, Bus and Truck.
- D-7 Technical Manual for Reduction of Nitrogen Oxides Emissions, Tokyo Metropolitan Government, Environmental Protection Bureau, 1985. [J]
- D-8 A Preliminary Environmental Study for Reconstruction of the Borsod Thermal Power Station, Tisza Power Plant, Ltd., December 1993.
- D-9 Investigation and Improvement of Environmental Impact of the Iron and Steel Industry in the Sajo River Valley, Final Report (Draft), UNID, Vienna June 1991. [E]

E. MONITORING AND SIMULATION

- E-1 Haszpra, Lászl— : Concept and Strategy of the Hungarian Background Air Pollution Monitoring, January 1991. [E]
- E-2 Air Pollution Monitoring Networks in Hungary. [E]
- E-3 Master Plan for the Air Quality Monitoring in Hungary in Urban Areas, OKI, NERI and Programme Management Department of the Ministry for Environment and Regional Policy, August 1991. [E]
- E-4 Selected Reports on the Air Pollution Monitoring from Health Science.
- E-5 Local Dispersion Model, Institute for Atmospheric Physics, Department for Air Chemistry. [E]
- E-6 Selected Data on air Pollution Abatement in Hungary, Department for International Cooperation and Information, Ministry for Environment and Regional Policy, 1992 [E]

F. OTHERS

- F-1 Meteorological Observation Data (Miskolc, 1981~1990)- Temperature, Wind, etc., National Meteorological Service
- F-2 Topographical Maps (Scale: 1 : 25,000 and 1 : 150,000)

* Items marked by "E" are in English and "J" are in Japanese. All the other items are in Hungarian.



Conversion of SO₂ Concentration Unit

ppm → mg/m ³		mg/m ³ → ppm	
ppm (ppb)	mg/m ³ (μg/m ³)	mg/m ³ (μg/m ³)	ppm (ppb)
1	3	1	0
2	5	2	1
3	8	3	1
4	11	4	2
5	13	5	2
6	16	6	2
7	19	7	3
8	21	8	3
9	24	9	3
10	27	10	4
20	53	20	8
30	80	30	11
40	106	40	15
50	133	50	19
60	160	60	23
70	186	70	26
80	213	80	30
90	240	90	34
100	266	100	38
200	532	200	75
300	799	300	113
400	1,065	400	150
500	1,331	500	188
600	1,597	600	225
700	1,863	700	263
800	2,130	800	301
900	2,396	900	338
1,000	2,662	1,000	376
2,000	5,324	2,000	751
3,000	7,986	3,000	1,127
4,000	10,648	4,000	1,503
5,000	13,311	5,000	1,878
6,000	15,973	6,000	2,254
7,000	18,635	7,000	2,629
8,000	21,297	8,000	3,005
9,000	23,959	9,000	3,381
10,000	26,621	10,000	3,756

Note: The unit conversion was made by the following equation
using the condition of 20°C and 1.013x10⁵ Pa.

$$\text{SO}_2 [\text{ppm}] = 22.4/64 \cdot (273+20)/273 \cdot \text{SO}_2 [\text{mg/m}^3]$$

Conversion of NO₂/NO_x Concentration Unit

ppm → mg/m ³		mg/m ³ → ppm	
ppm (ppb)	mg/m ³ (μg/m ³)	mg/m ³ (μg/m ³)	ppm (ppb)
1	2	1	1
2	4	2	1
3	6	3	2
4	8	4	2
5	10	5	3
6	11	6	3
7	13	7	4
8	15	8	4
9	17	9	5
10	19	10	5
20	38	20	10
30	57	30	16
40	77	40	21
50	96	50	26
60	115	60	31
70	134	70	37
80	153	80	42
90	172	90	47
100	191	100	52
200	383	200	105
300	574	300	157
400	765	400	209
500	957	500	261
600	1,148	600	314
700	1,339	700	366
800	1,531	800	418
900	1,722	900	470
1,000	1,913	1,000	523
2,000	3,827	2,000	1,045
3,000	5,740	3,000	1,568
4,000	7,654	4,000	2,091
5,000	9,567	5,000	2,613
6,000	11,480	6,000	3,136
7,000	13,394	7,000	3,658
8,000	15,307	8,000	4,181
9,000	17,221	9,000	4,704
10,000	19,134	10,000	5,226

Note: The unit conversion was made by the following equation
using the condition of 20°C and 1.013x10⁵ Pa.

$$\text{NO}_2 \text{ [ppm]} = 22.4/46 \cdot (273+20)/273 \cdot \text{NO}_2 \text{ [mg/m}^3\text{]}$$

