Phare

ACHIEVEMENTS in the field of EMISSION FACTORS

Establishing a database on GHG emission factors

IPCC expert meeting in New Delhi, 24-25 July 2000

PHARE TOPIC LINK AIR EMISSIONS

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Development for over 10 years EMEP/CORINAIR GUIDEBOOK

Common activity of EEA and UN/ECE

ECONOMIC COMMISSION FOR EUROPE
UN/ECE

www.eea.eu.int

EEA

EUROPEAN TOPIC CENTRE AIR EMISSIONS

http://etc-ae.eionet.eu.int/etc-ae/index.htm

ETC/AE

Umwelt Bundes Amt

PHARE TOPIC LINK AIR EMISSIONS

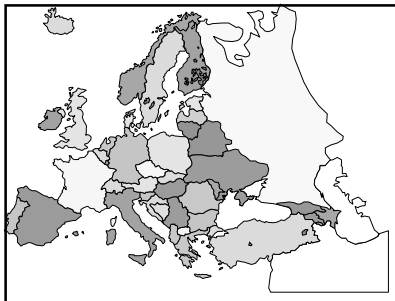
www.ptl-ae.atmoterm.pl

PTL/AE

One of the ETC-PTL work program tasks:

DEVELOPMENT of

CORINAIR METHODOLOGY



CORINAIR

Unified methodology for emissions inventory

Many years ago, in order to mesure length, people created and introduced a model. We can see it near to Paris.

To compare emissions from different countries and years, CORINAIR is being developed in Europe for years.

MAIN CORINAIR catalogues:

SNAP - EMISSION SOURCE CATEGORIES (385)

POLLUTANTS

FUELS and its parameters

Emission factors

SNAP

SNAP **S**elected **N**omenclature for **A**ir **P**ollution

SNAP'90 / 94 / 97

SNAP'97 consist of
11 groups,
74 sub-group
385 elementary positions

Each elementary position can be split additionally to different type of technology and fuels

SNAP positions
occuring in emission inventories in cement plants

3.1	- combustion in boilers, gas turbines and stationary engines
3.3.11	- cement, combustion in manufacturing industry; processes with contact
4.6.12	- cement (decarbonizing),
5.1.3	- storage of solid fuel
5.5.3	- service stations (including refuelling of cars)
7.1.3	- urban driving - passenger cars
7.2.3	- urban driving - light duty vehicles < 3.5 t
7.3.3	- urban driving - heavy duty vehicles > 3.5 t and buses
7.6	- gasoline evaporation from vehicles
8.8	- other mobile sources and machinery - industry
8.2	- railways
9.10.1	- waste water treatment in industry

In ATMOTERM's SOZAT system
data are collected
in much more detailed way

and then data may be transferred
automatically
in SNAP or NACE split

ATMOTERM Sp. z. o.o.
ul. Katowicka 35
45-061 Opole, Poland
tel. (077) 4426666
fax. (077) 4426695

NOSE - EUROSTAT

Statistical Office of European Union prepared
classification of emission sources in direct connection to NACE
international ISIC classification of economic activities.

These works include the experiences of CORINAIR
and SNAP catalogue.
There is also linkage to IPCC source/sink categories.

EMISSION FACTORS CATALOGUE

Access to more detailed
and splitted information
results in better emission inventory quality.

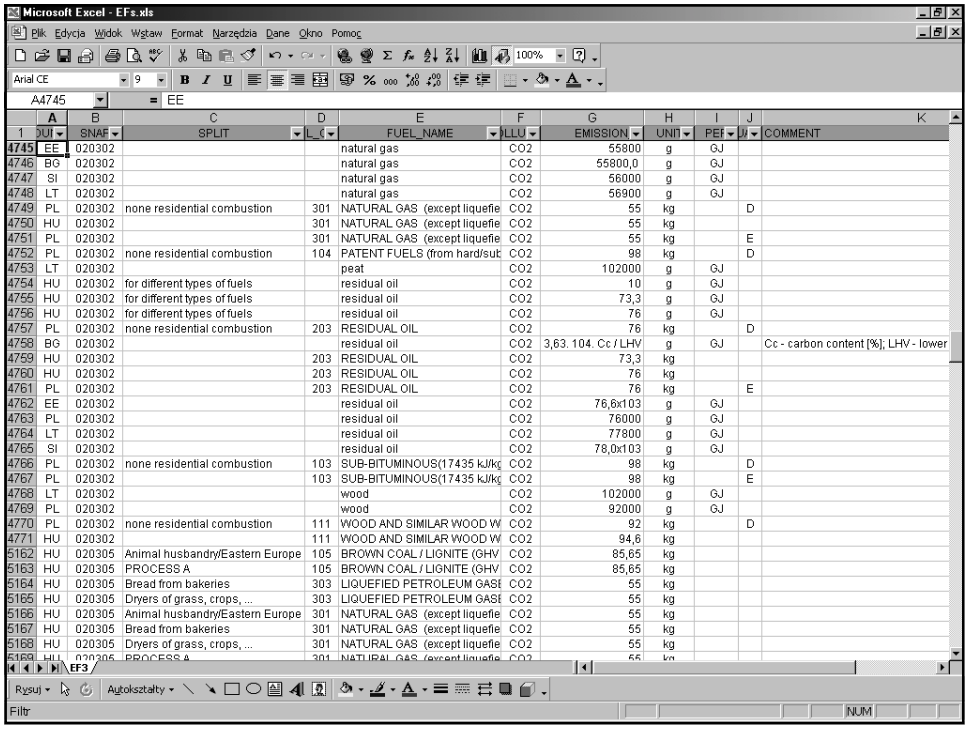
PTL/AE emission factors database

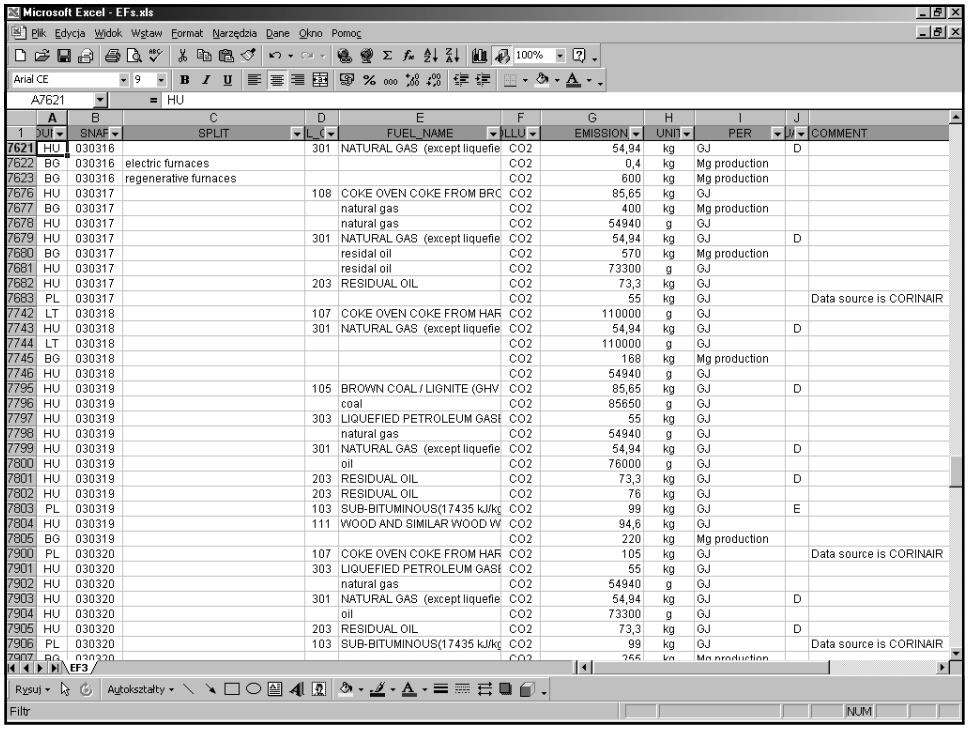
Collection by Phare National Experts and from Phare CORINAIR databases 90 - 98

Data report in the form of printed tables and electronic Excel database.

Collected data:
from 10 countries
for 25 pollutants

Number of records: 15000


Microsoft Excel - EFs.xls
Plik Edycja Widok Wstaw Format Narzędzia Dane Okno Pomoc
A4745 = EE
SNAP SPLIT L_C FUEL_NAME LLU EMISSION UNIT PER J COMMENT
4745 EE 020302 natural gas CO2 55800 g GJ
4746 BG 020302 natural gas CO2 55800,0 g GJ
4747 SI 020302 natural gas CO2 56000 g GJ
4748 LT 020302 natural gas CO2 56900 g GJ
4749 PL 020302 none residential combustion 301 NATURAL GAS (except liquefie CO2 55 kg D
4750 HU 020302 301 NATURAL GAS (except liquefie CO2 55 kg
4751 PL 020302 301 NATURAL GAS (except liquefie CO2 55 kg E
4752 PL 020302 none residential combustion 104 PATENT FUELS (from hard/sut CO2 98 kg D
4753 LT 020302 peat CO2 102000 g GJ
4754 HU 020302 for different types of fuels residual oil CO2 10 g GJ
4755 HU 020302 for different types of fuels residual oil CO2 73,3 g GJ
4756 HU 020302 for different types of fuels residual oil CO2 76 g GJ
4757 PL 020302 none residential combustion 203 RESIDUAL OIL CO2 76 kg D
4758 BG 020302 residual oil CO2 3,63. 104. Cc / LHV g GJ Cc - carbon content [%]; LHV - lower
4759 HU 020302 203 RESIDUAL OIL CO2 73,3 kg
4760 HU 020302 203 RESIDUAL OIL CO2 76 kg
4761 PL 020302 203 RESIDUAL OIL CO2 76 kg E
4762 EE 020302 residual oil CO2 76,6x103 g GJ
4763 PL 020302 residual oil CO2 76000 g GJ
4764 LT 020302 residual oil CO2 77800 g GJ
4765 SI 020302 residual oil CO2 78,0x103 g GJ
4766 PL 020302 none residential combustion 103 SUB-BITUMINOUS(17435 kJ/kg CO2 98 kg D
4767 PL 020302 103 SUB-BITUMINOUS(17435 kJ/kg CO2 98 kg E
4768 LT 020302 wood CO2 102000 g GJ
4769 PL 020302 wood CO2 92000 g GJ
4770 PL 020302 none residential combustion 111 WOOD AND SIMILAR WOOD W CO2 92 kg D
4771 HU 020302 111 WOOD AND SIMILAR WOOD W CO2 94,6 kg
5162 HU 020305 Animal husbandry/Eastern Europe 105 BROWN COAL / LIGNITE (GHV CO2 85,65 kg
5163 HU 020305 PROCESS A 105 BROWN COAL / LIGNITE (GHV CO2 85,65 kg
5164 HU 020305 Bread from bakeries 303 LIQUEFIED PETROLEUM GASE CO2 55 kg
5165 HU 020305 Dryers of grass, crops, ... 303 LIQUEFIED PETROLEUM GASE CO2 55 kg
5166 HU 020305 Animal husbandry/Eastern Europe 301 NATURAL GAS (except liquefie CO2 55 kg
5167 HU 020305 Bread from bakeries 301 NATURAL GAS (except liquefie CO2 55 kg
5168 HU 020305 Dryers of grass, crops, ... 301 NATURAL GAS (except liquefie CO2 55 kg
EF3
Rysuj Autokształty
Filtr
NUM


Microsoft Excel - EFs.xls
Plik Edycja Widok Wstaw Format Narzędzia Dane Okno Pomoc
A7621 = HU
SNAP SPLIT L_C FUEL_NAME LLU EMISSION UNIT PER J COMMENT
7621 HU 030316 301 NATURAL GAS (except liquefie CO2 54,94 kg GJ D
7622 BG 030316 electric furnaces CO2 0,4 kg Mg production
7623 BG 030316 regenerative furnaces CO2 600 kg Mg production
7676 HU 030317 108 COKE OVEN COKE FROM BRC CO2 85,65 kg GJ
7677 BG 030317 natural gas CO2 400 kg Mg production
7678 HU 030317 natural gas CO2 54940 g GJ
7679 HU 030317 301 NATURAL GAS (except liquefie CO2 54,94 kg GJ D
7680 BG 030317 residal oil CO2 570 kg Mg production
7681 HU 030317 residal oil CO2 73300 g GJ
7682 HU 030317 203 RESIDUAL OIL CO2 73,3 kg GJ
7683 PL 030317 CO2 55 kg GJ Data source is CORINAIR
7742 LT 030318 107 COKE OVEN COKE FROM HAR CO2 110000 g GJ
7743 HU 030318 301 NATURAL GAS (except liquefie CO2 54,94 kg GJ D
7744 LT 030318 CO2 110000 g GJ
7745 BG 030318 CO2 168 kg Mg production
7746 HU 030318 CO2 54940 g GJ
7795 HU 030319 105 BROWN COAL / LIGNITE (GHV CO2 85,65 kg GJ D
7796 HU 030319 coal CO2 85650 g GJ
7797 HU 030319 303 LIQUEFIED PETROLEUM GASE CO2 55 kg GJ
7798 HU 030319 natural gas CO2 54940 g GJ
7799 HU 030319 301 NATURAL GAS (except liquefie CO2 54,94 kg GJ D
7800 HU 030319 oil CO2 76000 g GJ
7801 HU 030319 203 RESIDUAL OIL CO2 73,3 kg GJ D
7802 HU 030319 203 RESIDUAL OIL CO2 76 kg GJ
7803 PL 030319 103 SUB-BITUMINOUS(17435 kJ/kg CO2 99 kg GJ E
7804 HU 030319 111 WOOD AND SIMILAR WOOD W CO2 94,6 kg GJ
7805 BG 030319 CO2 220 kg Mg production
7900 PL 030320 107 COKE OVEN COKE FROM HAR CO2 105 kg GJ Data source is CORINAIR
7901 HU 030320 303 LIQUEFIED PETROLEUM GASE CO2 55 kg GJ
7902 HU 030320 natural gas CO2 54940 g GJ
7903 HU 030320 301 NATURAL GAS (except liquefie CO2 54,94 kg GJ D
7904 HU 030320 oil CO2 73300 g GJ
7905 HU 030320 203 RESIDUAL OIL CO2 73,3 kg GJ D
7906 PL 030320 103 SUB-BITUMINOUS(17435 kJ/kg CO2 99 kg GJ Data source is CORINAIR
EF3
Rysuj Autokształty
Filtr
NUM

STRUCTURE of the database

Country
SNAP
SNAP split
Fuel code
Fuel name
Pollutant
Emission factor
Unit
per
Quality
Comment (sources)

Planned users of Phare Emission Factors database:
Reference Centre (national experts) of the countries which are preparing the CORINAIR emission inventory for the first time

There is no need for a special software.
Windows environment with MS Office package is enough.

Sources of the data - national EMEP/CORINAIR emission inventory

Quality control:

Sending the db to NE for checking. Review by PTL/AE experts.
Sending to ETC/AE for comments. Formal EEA approval for dissemination.

Access policy:

To be put on PTL/AE web site in Excel format and on internet webserver after formal approval of the countries and EEA Project Manager and EEA Phare Expert

Working language: English

Problems:

No clear, automatic differentiation was possible between real country specific emission factor and default CORINAIR emission factor. Lack of quality parameter and detail source data

After formal approval
the Phare countries Emission Factors Database will be available at:

www.ptl-ae.atmoterm.pl

We received the opinion of National Expert
that preparation
of emission factors database
is a very fruitful activity

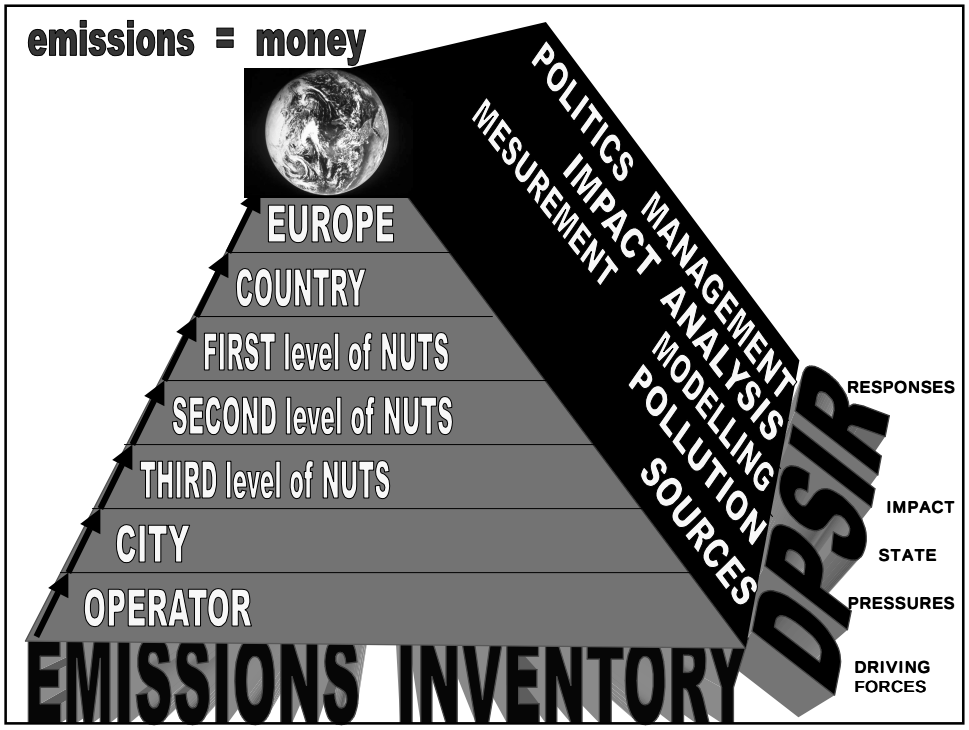
GAJA

Ecology and economy are integrated

creating Sensory Nerveuse System for Earth

"Any corporate entity can be seen as subordinate to the larger planet organism, just as mitochondria are subordinate to the cell. Part of the function of a healthy cell is to monitor the productions of its mitochondria, and ration resources according to the needs of the larger organism for those products. From the perspective of the cell, or the larger earth, what goes into and what comes out of the subordinate entity must be closely monitored, while what actually goes on in the sub-entity is of lesser concern. "

citation from Mr Champagne "Gaia Brain: Integration of Human Society and the Biosphere"




INTERNET
DATABASE
EMISSION FACTORS
ALL SUPPLIERS AND USERS