



CollectER – Collect Emission Register tool following EEA CORINAIR methodology

Software users: national experts on air emission inventories

The European Environment Agency (EEA) and its European Topic Centre on Air and Climate Change (ETC-ACC) provides the CollectER software tool to support European countries in compiling annual air emission inventories. This tool allows a transparent and standardized, hence consistent and comparable data collecting and emissions reporting procedure in accordance with the requirements of international conventions and protocols and EU legislation.



NEIS - Slovak National Emission Information System – set of tools for data collecting, calculation & reporting

Software users: Slovak Ministry of Environment, District Environmental Offices (79), Slovak Hydro-Meteorological Institute (SHMU), and Companies emitting air pollution (6.300)

Large-scaled information system of the Slovak state administration designed to bottom-up air pollution data collection. The most important goal of the NEIS is to give a very efficient tool to the District Environmental Offices to the process of collecting and verifying the air pollution data. Consequently the data are transferred and imported to the central database on SHMU to enable final verification, reporting and WEB presentation.



IPCC2006 software – tool following 2006 IPCC Guidelines for National Greenhouse Gas Inventories

Software users: national experts on GHGs inventory and reporting

IPCC National Greenhouse Gas Inventories Programme and its Technical Support Unit located at IGES in Japan, initiated the development of new IPCC 2006 GHG Inventory Software. The purpose of this software is to implement Tier1 and Tier2 methodologies published in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.



ISSP - Information System for Greenhouse Gases in Slovakia

The Web Portal designated to inform experts as well as public community about greenhouse gas emissions in Slovakia. It contains emissions data produced within the period since base year 1990 sectionalized into particular sectors (energy, industrial processes, agriculture, land use and waste). The system includes data about emissions, projections of emissions till 2025 and methodology used in Slovakia. The data can be searched using criteria and viewed in textual or graphical form using time series. The information system includes data archive as well as latest official data submitted to the UNFCCC and EEA updated annually.



EFDB -Database on GHGs Emission Factors provided by IPCC (Intergovernmental Panel on Climate Change)

EFDB represents the WEB Library, where users can find emission factors and other parameters with background documentation or technical references that can be used for estimating greenhouse gas emissions and removals. Moreover users are encouraged to provide the EFDB with any relevant proposals on emission factors or other related parameters. Acceptance of such proposals will be subject to evaluation by the EFDB Editorial Board using well-defined criteria.

CollectER

CollectER III software tool for national air emission experts to collect and report national emission inventory data to international obligations of UNFCCC and UNECE LRTAP. The distribution includes on-line help as well as TrainER - a self training document providing background on the approaches and database structures and including step by step guidance for the major functionality of the tool.

- A fully integrated inventory compilation and inventory reporting tool, based on the combined source categorizations of the UNFCCC and LRTAP Conventions and compatible with those used in the EU GHG Monitoring Mechanism and the National Emission Ceilings Directive
- Multi-annual capability, allowing the compilation of many annual emission inventories in one database structure including graphs of time series
- Support of the SNAP source categorization, and allows for country specific additions to SNAP
- User interface, enabling source selections by location, by NFR/CRF source category, SNAP and by fuel
- Rigorous input data screening providing safeguarding against typos and other errors
- Additional user defined summary and overview tables to support QA/QC during data input including "Completeness report" and "Key category analyses"

The screenshot displays the CollectER III software interface. The main window is titled "C:\Users\skakala.SPIRIT\Documents\CollectER_III\Data\Collecter_III.mdb - [Inventory]". The interface is divided into several sections:

- Source filter:** Includes tabs for Locations, Categories, Details, and Fuels. The Categories tree shows a hierarchical structure of emission sources.
- Activity rates:** A table showing activity rates for a selected source (Source ID 47) from 2001 to 2005. The unit is GJ.
- Source list:** A table listing various sources with columns for source_id, location_id, category_id, detail_id, and fuel_ic.
- Selected technologies:** A table showing technology details for a selected source (Source ID 47) from 2001.
- Emission Factors:** A table listing various pollutants and their emission factors, such as SO2, NOX, NMVOC, CH4, CO, CO2, N2O, Cd, Cu, Hg, Pb, Zn, and Flouranthe.

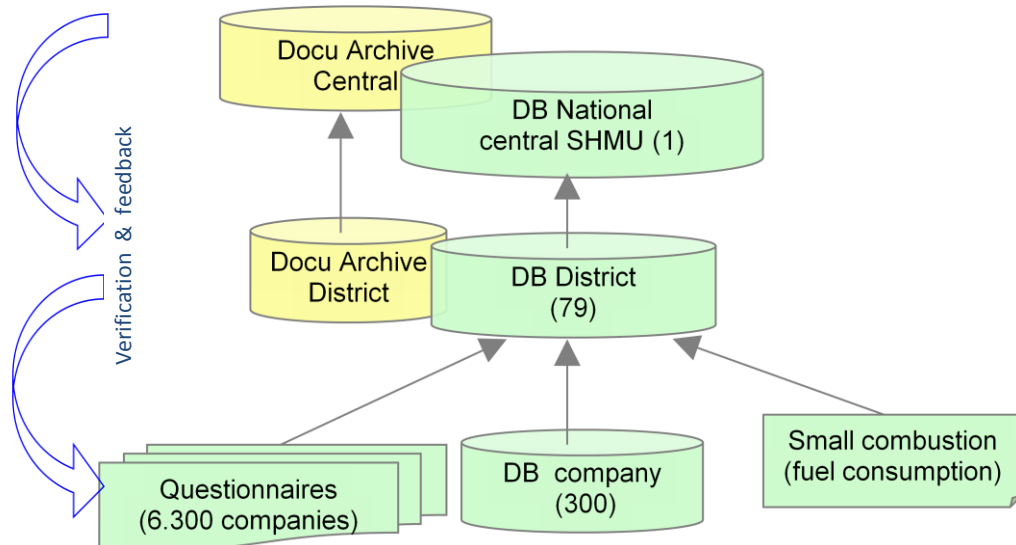
The "Selected sources: 1" indicator is visible at the bottom left of the interface.

Download available on http://acm.eionet.europa.eu/country_tools/ae/CollectER_III.html

CollectER III is a standard single user Windows application installed on a PC-Pentium, minimum 512Mb RAM and 40Mb free disk space running Win/XP till W7 having .NET Framework V2.0 preinstalled.

NEIS

NEIS - National Emission Information System of Slovak Republic is in operation since 1999. NEIS represents a strictly bottom - up implemented approach of data collection from stationary emissions sources identified according to the Slovak legislation. It collects data on the lowest level of combustion or technological processes including about 12.500 sources operated by 6.600 companies. In this case the specific local conditions, measurements and individual emission factors could be considered. The verification and approval of this data is realized on the lowest institutional level of District Environmental Offices. Such approach enables, the quality, transparency and reproducibility of air emission data is rather higher in compare with other methods based mostly on cumulative statistical data.



NEIS attributes

- A) **280 data types** related to Air Emissions of Stationary Point Sources, including technical and operational parameters, measurements, air emissions and methods of estimation, fees for air pollution
- B) **15 types** of Questionnaires
- C) **6.600** companies providing data
- D) **12.500** point sources of air emissions (7.600 energy sector / 3.400 industrial processes / 1.500 farms)
- E) **130** pollutants and GHGs
- F) **300** companies operating own NEIS PZ database providing data electronically
- G) **79** district environmental offices operating own NEIS BU database
- H) **Small combustion** sources data involved from fuel resale questioners + 500 **IPPC** sources questioner
- I) **Verified** annual Inventory available since Year 2000
- J) Everything following **SR/EU legislative standards**
- K) **Archive** of accompanying documents ... emission source allowance, decisions, fees...

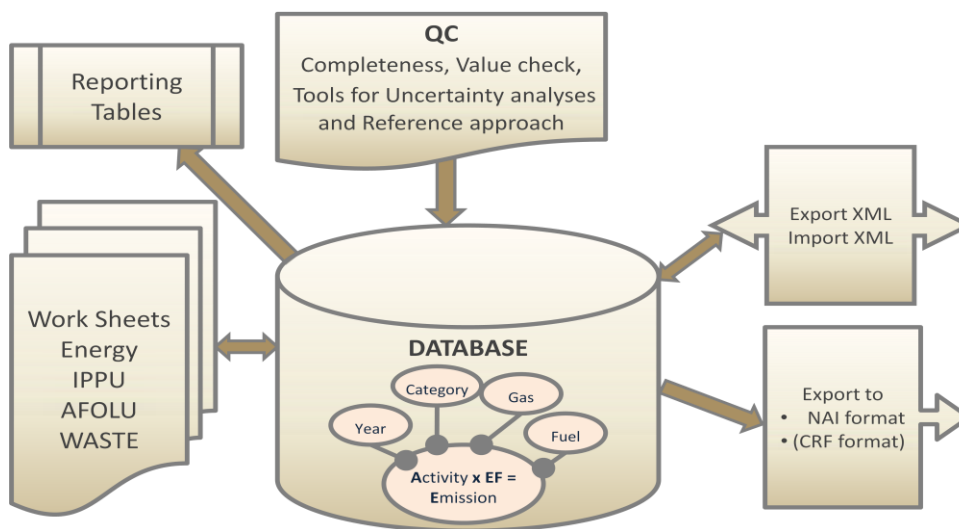
The advantages of the NEIS consists of enhancement of the transparency of the air emission inventory procedures, improvement of the observation of the law on air protection, consolidation of the air emission data on the districts, improvement of the credibility of the data reported. The direct NEIS output involves SHMU national annual report, international reporting to EEA, UNECE/EMEP and UNFCCC as well as comprehensive presentation of the national emission data on the Internet pages:

<http://www.air.sk/en/emissions.php> and http://www.air.sk/neiscu/main_gui.php?change_language=1

IPCC2006 software

Worksheets oriented software implementing 2006 IPCC Guidelines. User interface includes:

- Navigation pane through IPCC2006 Sector & category structure
- Worksheets input module to fill activity data values + uncertainties (or notation keys)
- Default emission factors are filled into worksheets from database to calculate emissions
- Reporting tables filled upon these calculations by aggregated emissions
- Data import/export function enables to load year/sector particular data into/ from XML format
- Worksheets control functions for completeness check and numerical value check
- QC tools for “Uncertainty analysis”, “Key Category analysis” and “Reference approach”



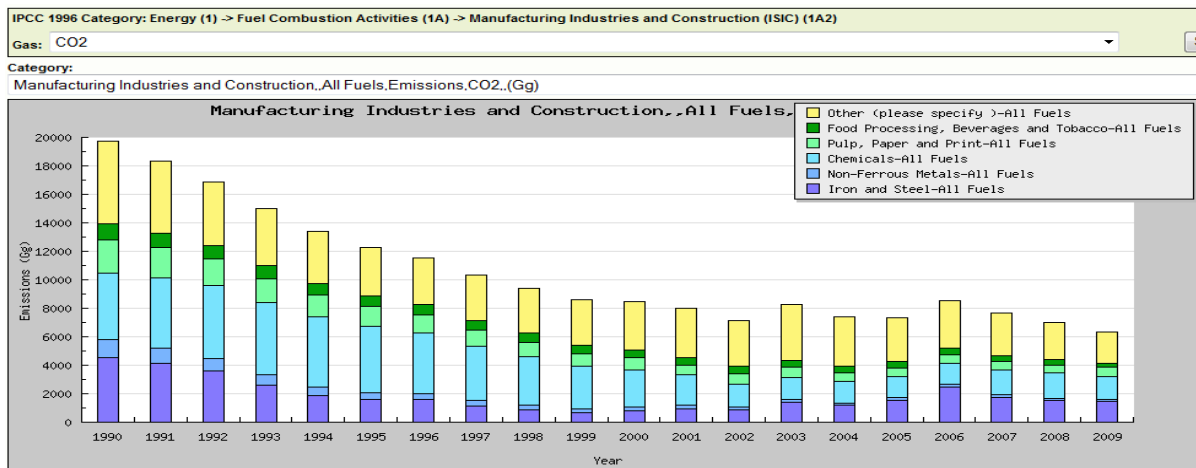
Fuel	A Consumption (Mass, Volume or Energy Unit)	B Conversion Factor (TJ/Unit) (NCV)	C Consumption (TJ) (C=A*B)	D CO2 Emission Factor (kg CO2/TJ)	Z Amount Captured (kg CO2)	E CO2 Emission (Gg CO2-E=CD*(1-Z))	F CH4 Emission Factor (kg CH4/TJ)	G CH4 Emissions (Gg CH4) G=CF*E*10 ⁻⁶	H N2O Emission Factor (kg N2O/TJ)	I N2O Emissions (Gg N2O) I=CF*E*10 ⁻⁶	Remark
Natural Gas	200 Gg	44.2	8840	64200	567	0.005	3	0.026	0.6	0.005	
Other Keros	300 Gg	43.8	13140	71900	944	0.039	3	0.039	0.6	0.007	
Jet Gasolin	400 Gg	44.3	17720	70000	1240	0.053	3	0.053	0.6	0.010	
Grand Summary			39700			2752.694		0.11910		0.023820	

Pages for download: <http://ipcc2006.air.sk/>

ISSP Information System for Greenhouse Gases in Slovakia

ISSP is the WEB portal where you can find all the official information on greenhouse gases (GHGs) in Slovakia related to the UNFCCC (United Nations Framework Convention on Climate Change) and the Kyoto Protocol (in accordance with decision 15/CMP.1). The main parts of the system are:

- A) **Background information:** including international framework, national arrangements, responsible subjects and GhG inventory processes in Slovakia.
- B) **GhG annual emissions:** displayed either as aggregate values (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆) or calculated values in CO₂ equivalents. Emissions are selected by year and IPCC 1996 category.
- C) **The methodology documents:** prepared by national experts including common introduction to the methodology of Greenhouse Gas emissions estimation in the particular sector which contains information about categories, gasses, methodologies used, about input data and their quality, about emission factors, uncertainty and completeness of the Slovak inventory
- D) **Time series of GhG emissions shown in stacked bar graph**



E) Projection of emissions till 2025



F) All GhG documents for download: including legislative norms, national reports and reporting tables.

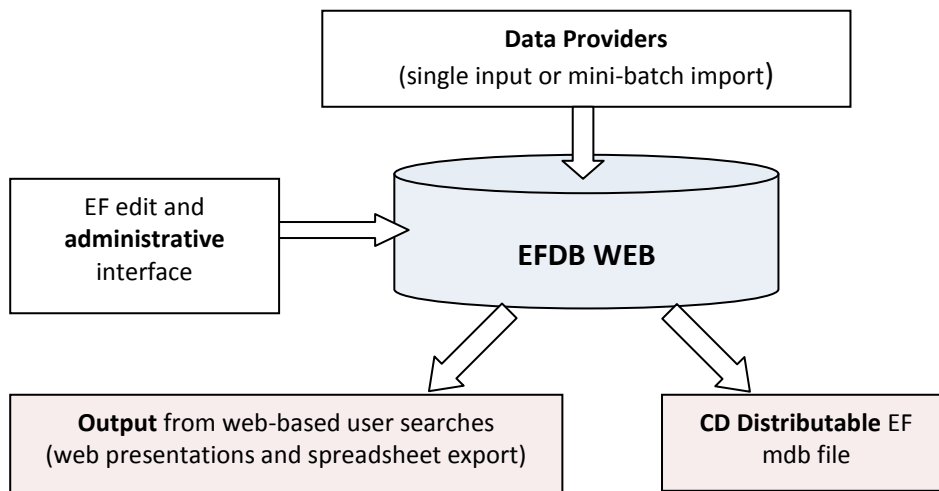
The ISSP pages are available on <http://issp.air.sk/main.php>

EFDB - Database on GHGs Emission Factors

EFDB is the public WEB Database provided by IPCC National Greenhouse Gas Inventories Programme and his Task Force on National Greenhouse Gas Inventories (TFI) based in Japan.

EFDB is meant to be a library, where users can find emission factors and other parameters with background documentation or technical references that can be used for estimating greenhouse gas emissions and removals. Moreover users are encouraged to provide the EFDB with any relevant proposals on emission factors or other related parameters. Acceptance of such proposals will be subject to evaluation by the EFDB Editorial Board using well-defined criteria.

EFDB at present contains the IPCC default data (presented in the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories and the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories). It also contains the data from CORINAIR94 (i.e., data in the Joint EMEP/CORINAIR Atmospheric Emission Inventory Guidebook, Third Edition. Copenhagen: European Environment Agency, 2001).



The search criteria for EFs are Guidelines version / IPCC sector - category / gas selection:

IPCC NGGIP		IPCC web sites
Home	Login	Find EF
Single Input	Mini-Batch Import	Documents
Downloads	Help	
Find EF - Search criteria		
Click here for online help.		
IPCC Guidelines version:	2006	<input type="button" value="OK"/>
IPCC Source/Sink Category		
Root -> Energy (1)		
<ul style="list-style-type: none"> ▶ 1.A: Fuel Combustion Activities ▶ 1.B: Fugitive emissions from fuels ▶ 1.C: Carbon dioxide Transport and Storage 		
Gases		
CO2, CH4 & N2O	<input type="button" value="OK"/>	
CO2, CH4 & N2O	Formula	Select gas
Ethers and Halogenated Ethers		<input type="checkbox"/>
HFCs		<input type="checkbox"/>
Other pollutants		<input type="checkbox"/>
PFCs		<input type="checkbox"/>
Precursors		<input type="checkbox"/>
SF6		<input type="checkbox"/>
NF3		<input type="checkbox"/>
SF5CF3		<input type="checkbox"/>
Other GHGs		<input type="checkbox"/>
(All gases)		<input type="button" value="Apply"/>

EFDB home page: <http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>