



## Project Summary

# User's Guide for GloED Version 1.0, the Global Emissions Database

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The EPA Office of Research and Development has developed a powerful software package called the Global Emissions Database (GloED). GloED is a user-friendly, menu-driven tool for storage and retrieval of emissions factors and activity data on a country-specific basis. Data can be selected from databases resident within GloED and/or supplied by the user. The data are used to construct emissions scenarios for the countries and sources selected. References are linked to the data to ensure clear data pedigrees. The scenario outputs can be displayed on thematic global maps or other graphic outputs such as pie or bar charts. In addition, data files can be exported as Lotus 1-2-3, dBase, or ASCII files, and graphics can be saved as a .PCX file or exported to a printer. The report describes GloED and how it works. Supplied with the reports are 3.5 in. (8.9 cm) computer diskettes.

*This Project Summary was developed by EPA's National Risk Management Research Laboratory, Air Pollution Prevention and Control Division, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).*

### Description of the Software and the Report

The User's Guide describes EPA's Global Emissions Database (GloED) software. Some greenhouse gas emissions data are supplied with the software. However, the user is encouraged to use his own data.

The objective of this project is not to supply data, but rather to supply the tools for generating, storing, and displaying data.

The software is supplied on 3.5 in. (8.9 cm) floppy diskettes and will run only on personal computers (IBM PCs or compatible computers). Other minimum computer requirements are a 286 processor, 25 Mb of available hard disk space, an EGA-compatible display, and 400 kb of RAM available to DOS prior to loading the program. The GloED program installs itself from the diskettes after prompting the user to select a location for the program on the computer's hard drive. A status bar indicates percent completion of the installation.

GloED is a tool for generating estimates of global emissions on a country- and source-specific basis. Most of the emissions data in GloED are the product of two numbers: emission factors and activity data. The emission factor is the amount of emissions per source (e.g., methane emissions per coal mine). The activity data are the number of sources (e.g., the number of mines). The emission factor can vary spatially (e.g., by country), and the activity data usually do. There is no provision for consideration of emission controls except to the extent that they are integral to the emission factor. However, the user can construct "controlled" and "uncontrolled" datasets, or datasets with any other assumptions. Note fields are provided for documentation of the assumptions. GloED stores emission factors and activity data separately, each with its own reference, allowing the user to evaluate or change

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only one component of the emission estimate.

The user selects one or more data sets and then has the option of narrowing the scope of the inventory by selecting several countries, source categories, and pollutants. The final set of data selected is called a scenario. GloED also can accept data provided by user-input. Consequently, the emissions inventories can be updated as new data become available to the user. GloED calculates an emissions inventory based on the scenario generated by the user.

The contents of the emissions inventories can be reported in a variety of ways. A text summary of the emissions inventory will print a tabular breakdown of the results by country, source category, and/or pollutant. GloED also can develop a color pie chart or bar chart showing the countries with the greatest quantity of estimated emissions in a form that allows easy comparison among them. Finally, GloED can project the results of an emissions inventory onto a global map, using different colors to designate the type and distribution of pollutants in the selected

scenario. These output formats can be viewed on the screen, saved to a file, or printed as hard copy. The data also can be exported to Lotus, dBase, or ASCII.

Each level of the program has a menu that allows the user to select the operations that the program will perform at that level. The user can select the actions in the menu by clicking a mouse cursor on the desired menu selection, by navigating the menu with the arrow and tab keys of the computer keyboard, or by typing the first letter of the selection. The GloED main menu always appears along the top of the screen and is a set of pull-down menus, which means that the user can "pull down" further options by selecting a menu item. When the user selects a menu option—either with a mouse or with the cursor keys—GloED will lead the user to the screens that apply to that menu option. The seven primary menu choices and their general functions are listed below. The primary and secondary menu choices are presented in **bold** face.

- **Scenario**—This menu allows the user to **Load** a previously created scenario, **Generate** a new scenario,

**Combine** elements of two or more scenarios, **Edit** an existing scenario, or **Delete** a previously created scenario.

- **Database**—This menu allows the user to call up the database **Editor** to add or modify data, or to **Re-build** the database.
- **Mapping**—Allows the user to display the emissions inventory in the form of a thematic map.
- **Reports**—Allows the user to generate reports of the results of the inventory calculation in **Text** form (as tables) or as graphics (**Pie** charts or **Bar** charts).
- **Exports** — Allows the user to use GloED to automatically generate a Lotus **1-2-3** spreadsheet or a **dBase** file, or to export the data as an **ASCII** file.
- **Tools** — This option allows the user to use the **Units Converter** of GloED as a stand alone tool, or to access the **Lotus Importer**.
- **Exit** —Allows the user to leave the program.

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*The complete report consists of paper copy and computer product, entitled "User's Guide for GloED Version 1.0, the Global Emissions Database,"*

*Paper Copy (Order No. PB98-120025; Cost: \$41.00)*

*Computer Product (Order No. PB98-500580; Cost: \$97.00)*

*The above products will be available only from: (cost subject to change)*

*National Technical Information Service*

*5285 Port Royal Road*

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*Telephone: 703-487-4650*

*The EPA Project Officer can be contacted at*

*Air Pollution Prevention and Control Division*

*National Risk Management Research Laboratory*

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