



GLOBAL EMISSIONS INVENTORY ACTIVITY (GEIA) Overview

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GEIA--

- ✿ Has been developing and distributing state-of-the-art global inventories and information since 1990
- ✿ Is a cross-cutting activity of International Global Atmospheric Chemistry Program
- ✿ Maintains communication through GEIA Center at geiacenter.org

GEIA Organization

- ✿ Convenors: Jos Olivier and Derek Cunnold
- ✿ GEIA Center Director: Paulette Middleton
- ✿ International Coordinating Committee: Olivier, Cunnold, Middleton, Carmen Benkovitz, Gregg Marland, Ann McMillan, Jozef Pacyna, Trevor Scholtz

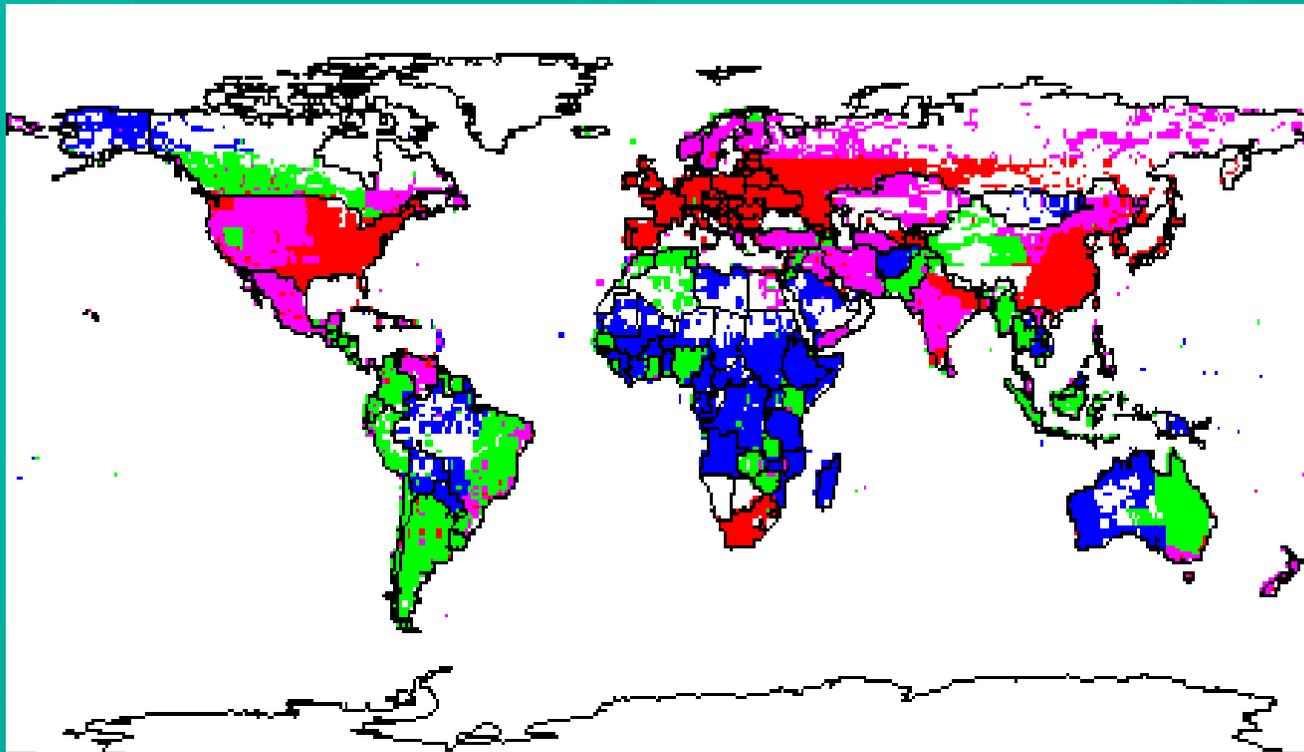
Contact: Paulette@rand.org for general information and
Check geiacenter.org for specific data base contacts

GEIA Principals

GEIA seeks to provide:

- ✿ Data on 1x1 degree grid worldwide and country by country
- ✿ Data evaluation, intercomparisons and updates
- ✿ Sectoral, seasonal and historical information for inventories

GEIA Data Example -- CO₂



GEIA Achievements

- ✿ Core of dedicated participants
- ✿ 25 projects with completed inventories for most
- ✿ GEIA communication hub <geiacenter.org>
- ✿ 11 international planning workshops (next in Paris, June 2001)
- ✿ Growing user community (over 300 on the e-mail network)
- ✿ Expanded links to related data base and modeling efforts
- ✿ Enhanced QA and updating protocols

Data Status

Available

- Ammonia (A)
- Black Carbon (A)
- Carbon Dioxide (A)
- Carbon Monoxide (A)
- Chlorofluorocarbons (A)
- Lead (A)
- Mercury
- Methane (N)
- Sulfur and Nitrogen Oxides (A)
- Nitrous Oxide
- Reactive Chlorine Emissions (A&N)
- Volatile Organic Compounds (A&N)
- Aircraft Emission
- Lightning
- Nitrogen Oxides in Soils (A)
- Sulfur from Volcanoes (N)
- Population
- Cropland

In Progress

- Dimethylsulfide (N)
- Organochlorines (A)
- Radionuclides (N)
- Methane (A)
- Primary Particles (A&N)
- International Shipping
- Biomass Burning (A & N)

GEIA QA

- ✿ International teams are developing data and updates
- ✿ Peer review is required for each GEIA inventory
- ✿ Consistency checks are done for data transferred to the web site
- ✿ User comments on data are relayed to project directors
- ✿ *Add detailed visualization on web site to enhance QA checking**
- ✿ *Provide detailed guidelines for users to check data**
- ✿ *Promote GEIA-wide discussion of data and applications**

GEIA Data Plans

- ✿ Inventories for every 10 years over past 50 years
- ✿ Seasonal cycles for emissions
- ✿ Dependence of natural emissions on soil moisture and temperature
- ✿ Biomass burning as a function of burning temperature and land use practices
- ✿ Organohalide and other outstanding emissions
- ✿ Distinguish between emissions into the canopy and those that reach the global atmosphere

GEIA Outreach Plans

- ✿ Default data for current GEIA gaps
- ✿ Expanded web links
- ✿ Specific references to use of GEIA data
- ✿ Contact information for new users and developers
- ✿ Additional data visualization suggestions
- ✿ Additional user feedback suggestions

Please send your suggestions and comments to Paulette@rand.org