CIETmap: open source GIS and epidemiology software from the CIET group

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The CIET group:

- bring scientific research methods to local government and community levels
- worked in 48 countries worldwide on a range of topics including sexual violence and HIV/AIDS, land mine awareness, prenatal care, education, water and sanitation
- dedicated to building the community voice into planning; capacity building
CIET levels of analysis:

- **level 0**: coverage and outcomes (% of children vaccinated)

- **level 1**: individual risk (odds ratios): the risk of an unvaccinated child compared with a vaccinated one

- **level 2**: gains: # of children spared if all were vaccinated

- **level 3**: combined gains: the net effect of different interventions (vaccination, food supplements etc)

- **level 4**: investment options – the best combination of interventions with the available resources
Use of GIS and maps in health planning: communication of evidence

• spatial perspective of access or risks

• visually summarise complex data

• can be less intimidating than charts or graphs
However...

• GIS software can be expensive (particularly in the developing country context)

• designed for use by GIS technicians and require training not easily available

• most are not designed in an epidemiological/health planning context
CIETmap: free GIS and analysis software

• analysis module can combine data from various sources; produce frequencies etc.

• data can be seamlessly linked to maps (raster and vector)

• CIETmap can be customized in order to accommodate specific groups

• free to academic, non-profit and community researchers
The analysis module is capable of most types of epidemiological analysis. It allows for basic frequencies through to epidemiological models of gains.
Vector maps can display layers like administrative boundaries and geographic features; and layers can be classified based on fields in the database.
Raster maps are interpolated from a set of sample points (communities) that are weighted to represent the population. The map shows the percentage of households with access to clean water, with different shades indicating the range of percentages:

- **0 - 20%**
- **21 - 40%**
- **41 - 60%**
- **61 - 80%**
- **81 - 100%**
The morph map module can be used to show the change in a variable over time (time-series), or to model the effect of a program (gains).

% without sufficient food
% without sufficient food after implementing Program A
% without sufficient food after implementing Program A and Program B
CIETmap: free GIS and epidemiology software helping to build the community voice into planning

Who can use CIETmap?
• planners and decision makers
• academics and researchers
• other non-GIS technicians

CIETmap can be customized
• additional modules
• custom colour palettes
• preference settings
• help files/training modules
CIETmap v1.0: technical specifications

• built using OpenEv and Python

• installation file: approx 12mb, expands to 20mb

• Windows platform

• currently in 29th beta format; expected release: Fall 2004

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