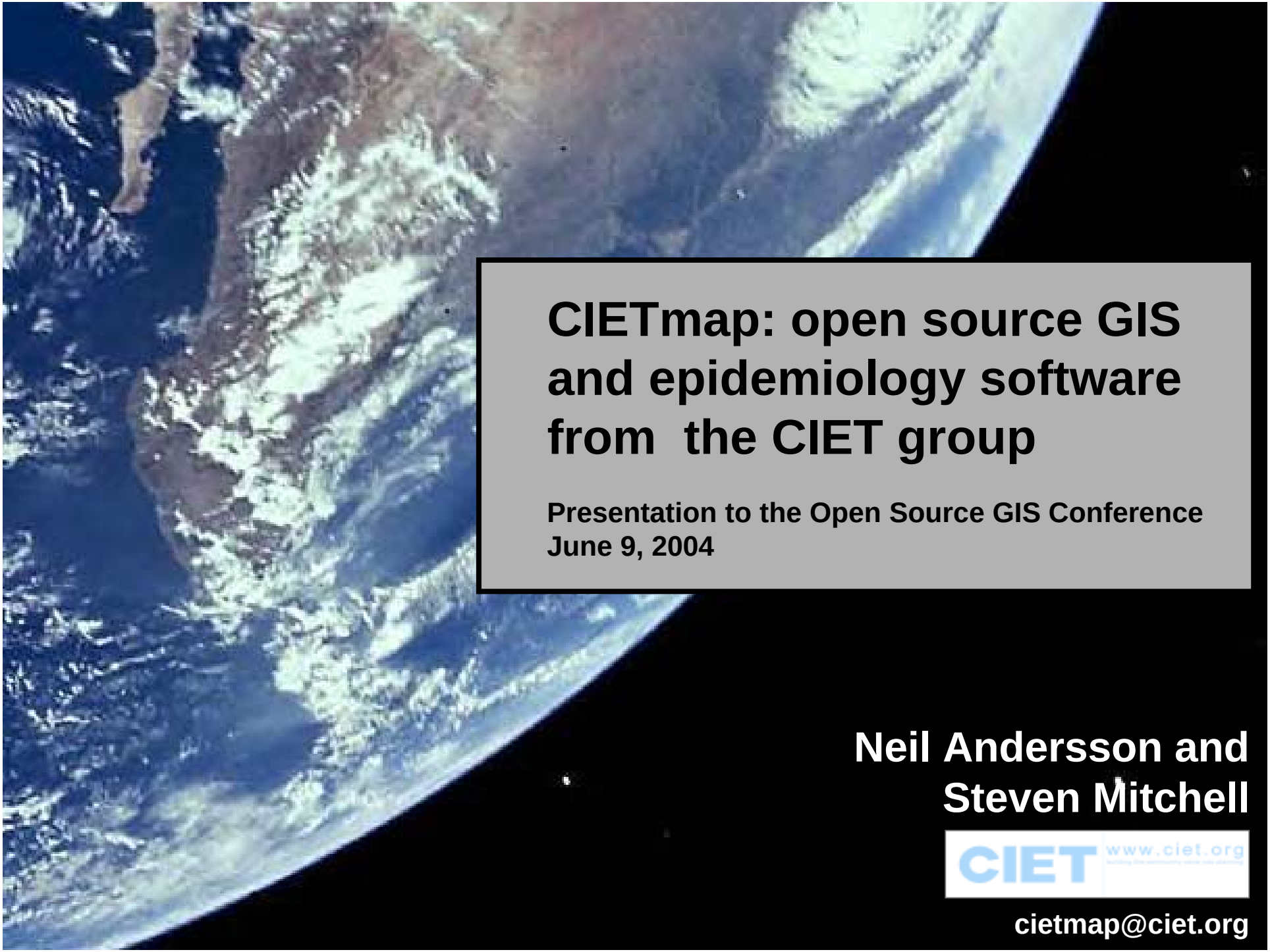

CIETmap: open source GIS and epidemiology software from the CIET group

Presentation to the Open Source GIS Conference
June 9, 2004

Neil Andersson and Steven Mitchell

CIET www.ciet.org

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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

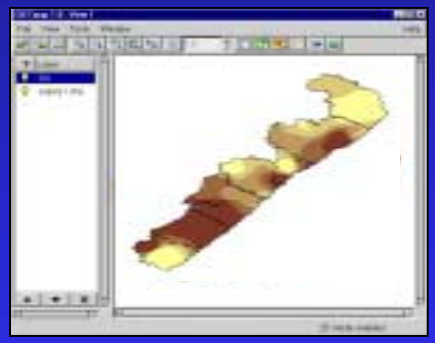
- spatial perspective of access or risks
- visually summarise complex data
- can be less intimidating than charts or graphs

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.



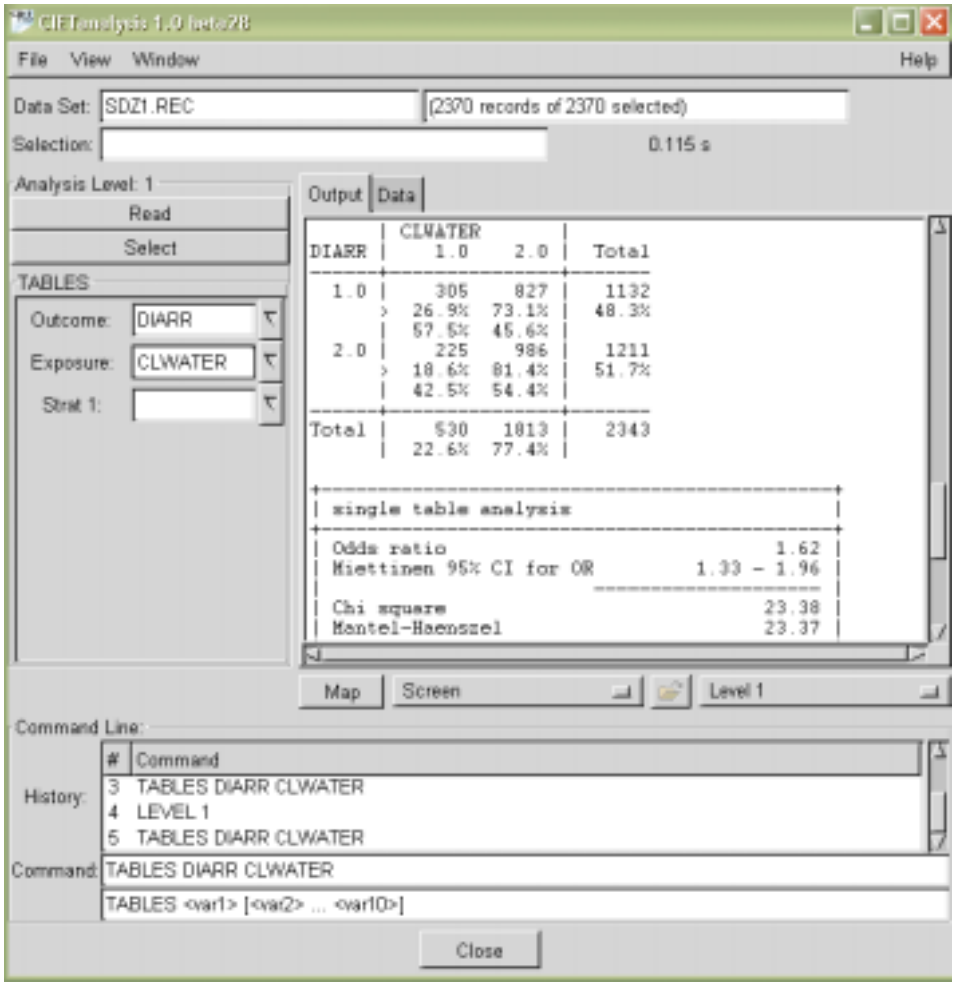
- data can be seamlessly linked to maps (raster and vector)

- CIETmap can be customized in order to accommodate specific groups

- free to academic, non-profit and community researchers

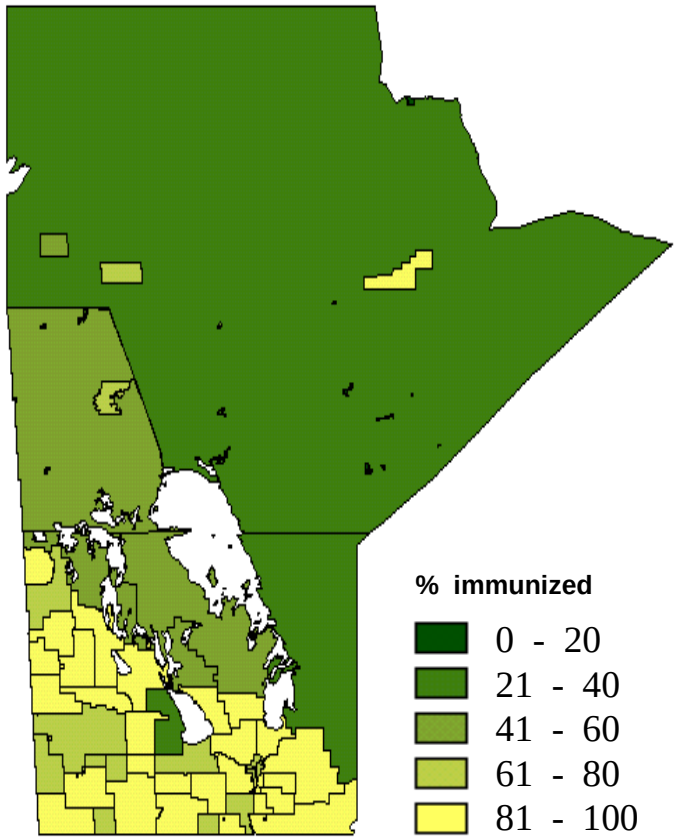
CIETmap: analysis module

The analysis module is capable of most types of epidemiological analysis. It allows for basic frequencies through to epidemiological models of gains



CIETmap: vector maps

Vector maps can display layers like administrative boundaries and geographic features; and layers can be classified based on fields in the database

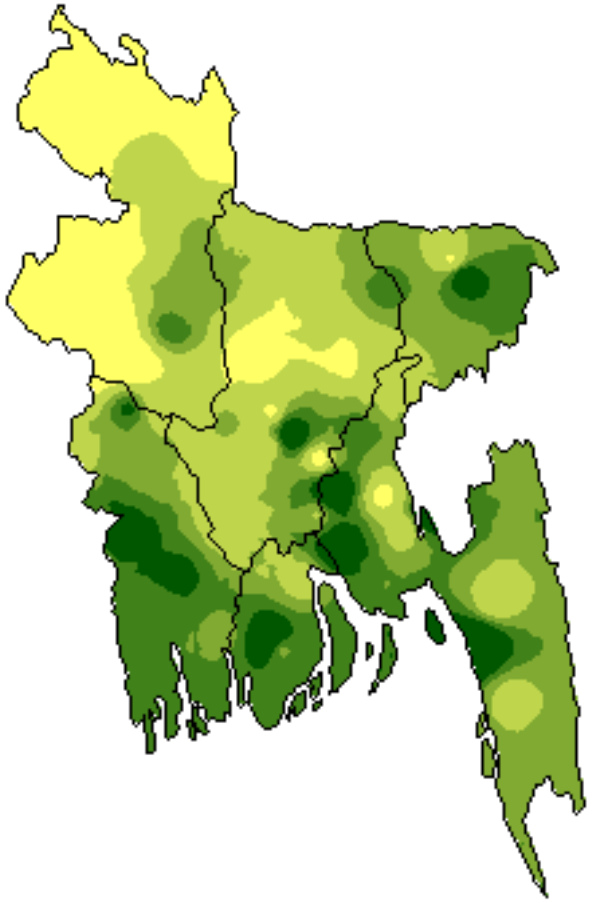


CIETmap: raster maps

Raster maps are interpolated from a set of sample points (communities) that are weighted to represent the population

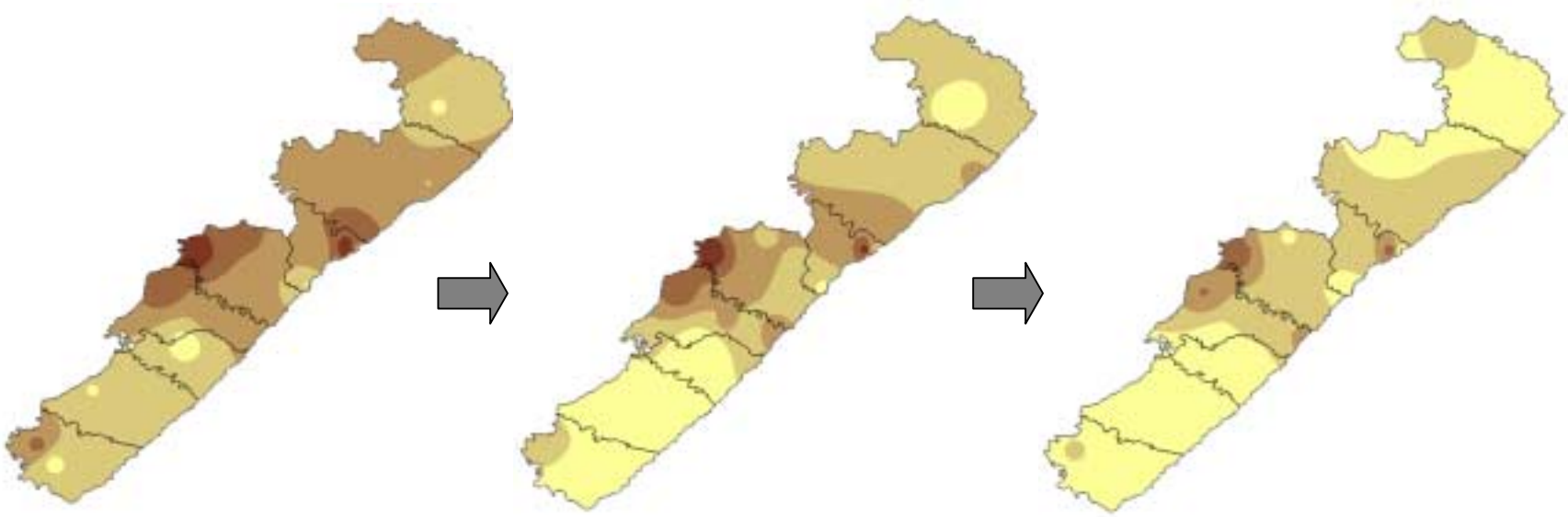
% of households with access to clean water

- 0 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100



CIETmap: morph maps

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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