

FIRST INTERNATIONAL SYMPOSIUM ON **HEALTH GIS**

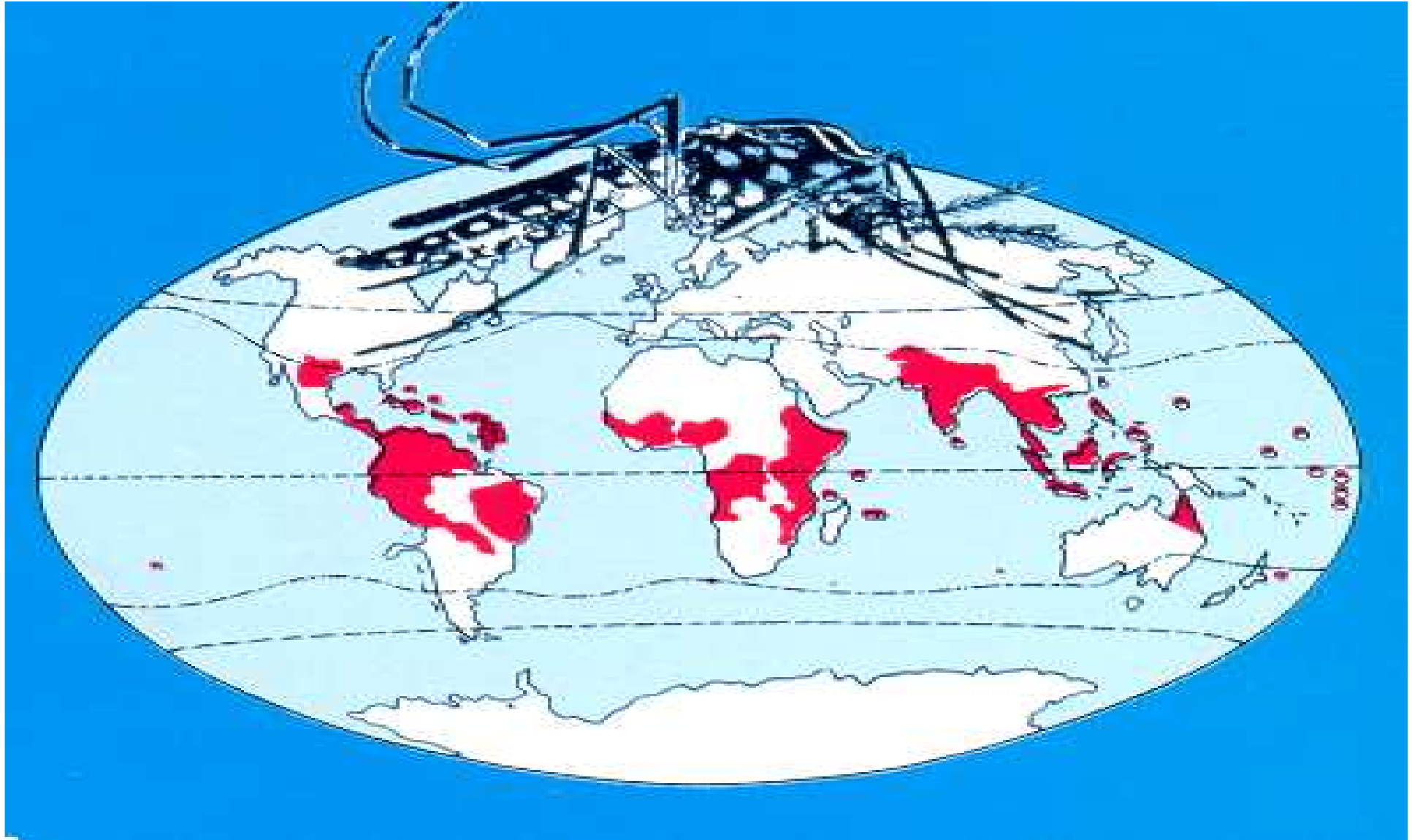
December 1-2, 2005 **BANGKOK, THAILAND**



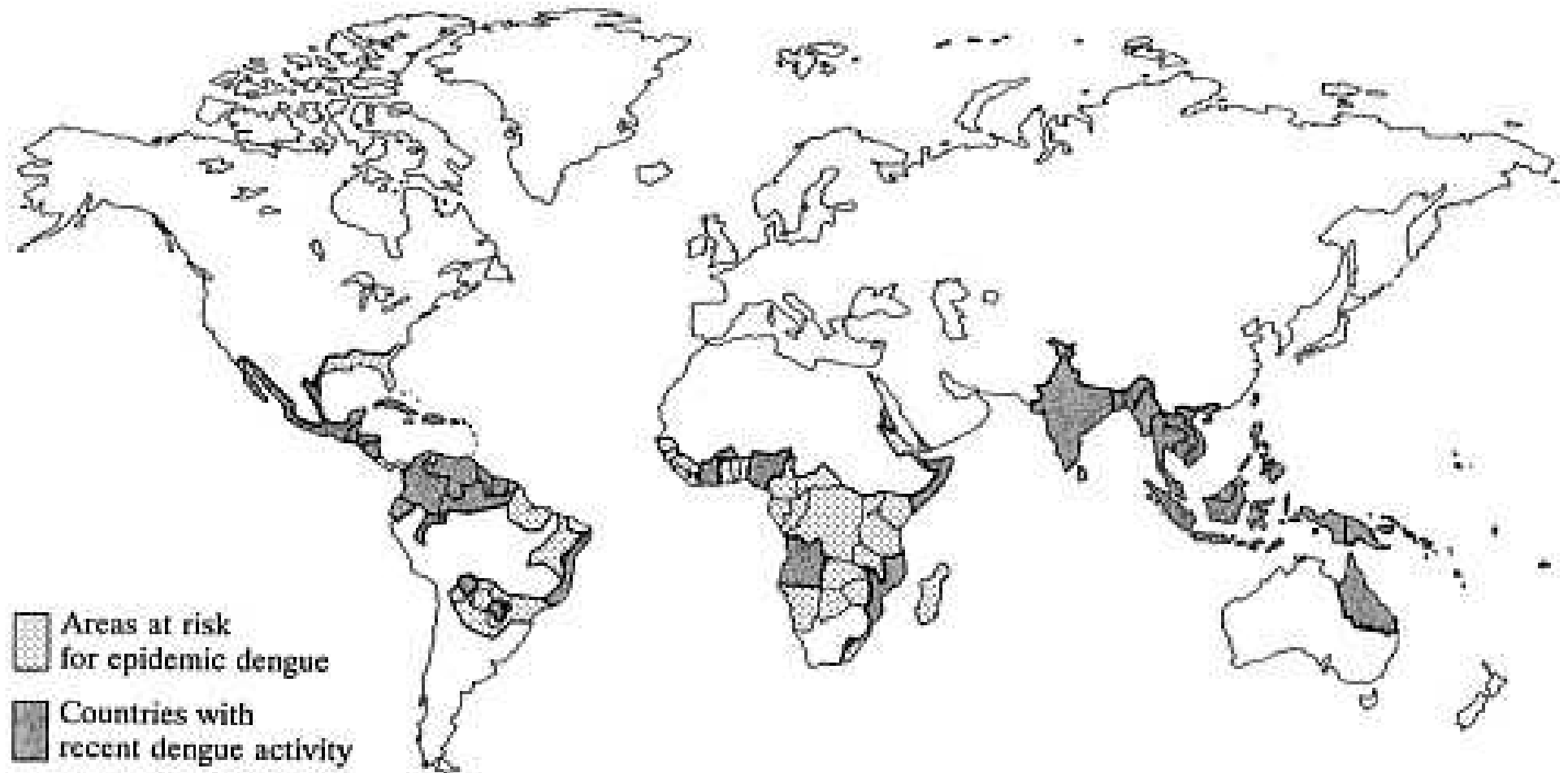
GIS for Dengue Hemorrhagic Fever in Phitsanulok, Thailand

Suchat N, Kamoltram T, Sornprasit S

Dengue Hemorrhagic Fever



Countries with recent epidemic dengue activity, the principal vector, *Aedes aegypti*.



Fly To Local Search Directions

e.g. New York, NY

Search input field

Search

Places

- My Places
 - Sightseeing
 - Google Campus
 - Google's Mountain View, California Campus is one of several
 - Grand Canyon
 - Double-click on "Colorado River View" to enter the
 - Colorado River View
 - Depress the left mouse button and

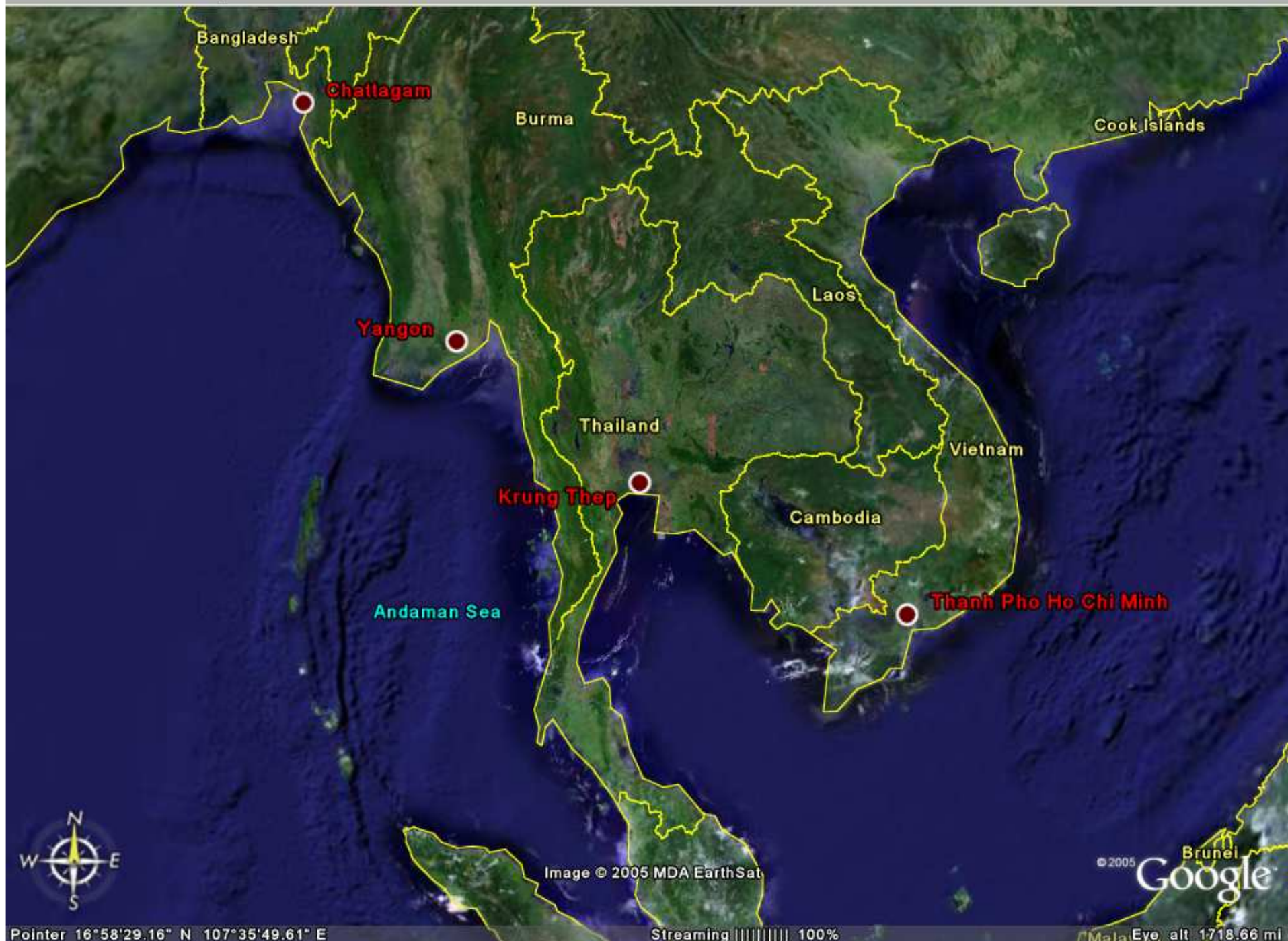
Layers

- Layers
 - National Geographic Magazine
 - Google Earth Community
 - Community Showcase
 - Google Earth Community (Unranked)
 - Dining
 - Lodging
 - Banks/ATMs
 - Bars/Clubs
 - Coffee Shops
 - Shopping Malls
 - Main Retail



Pointer 14°04'39.34" S 111°55'03.34" E Streaming 100% Eye alt 6535.76 mi

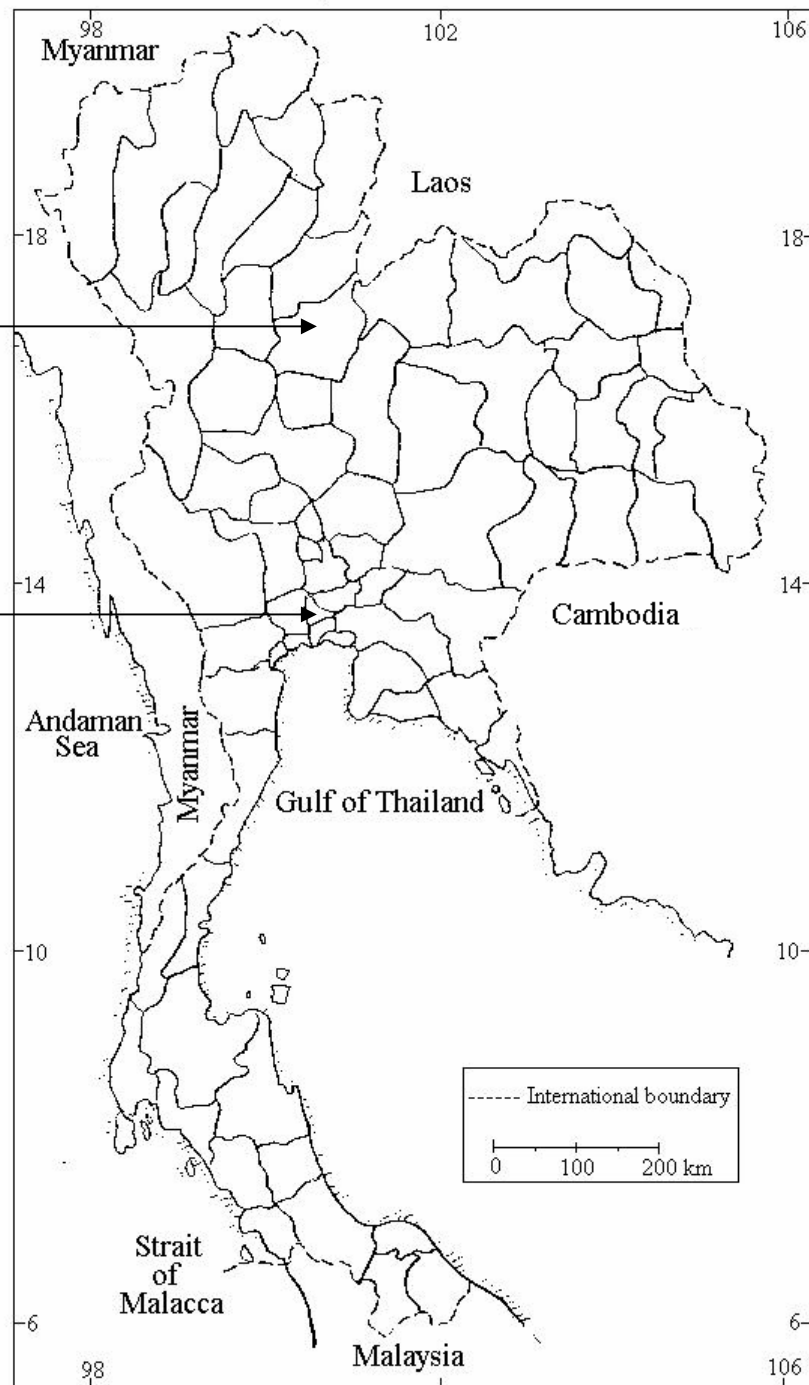
Navigation and layer controls including: Lodging, Dining, Roads, Borders, Terrain, Buildings, and a central directional pad.



- **Phitsanulok** is located in lower northern part of Thailand.
- **Phitsanulok** is 377 kms. by road from Bangkok.

Phitsanulok

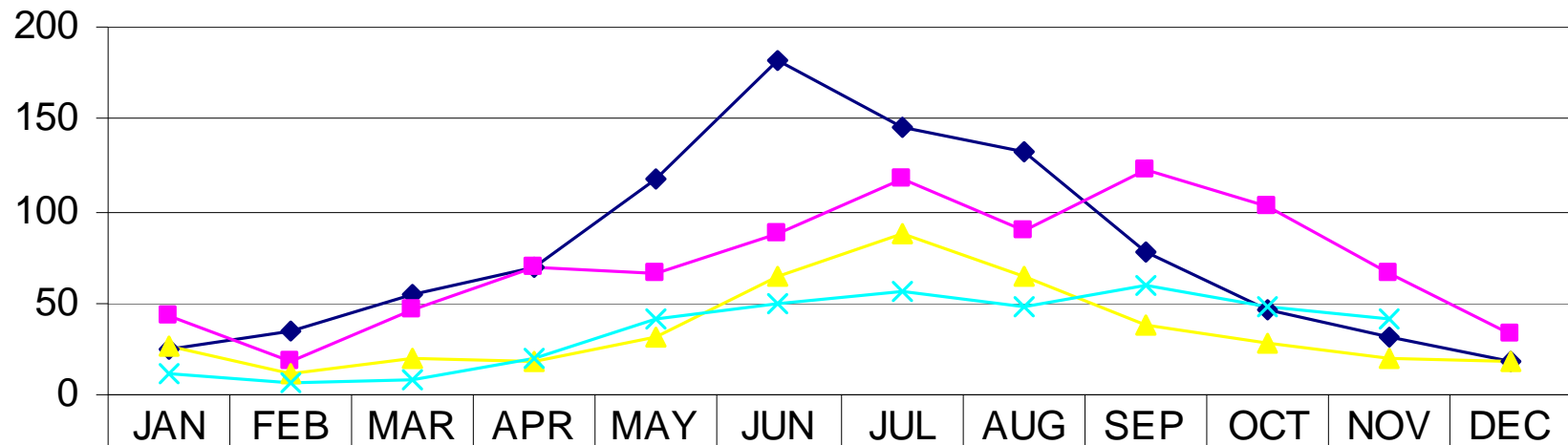
Bangkok



Phitsanulok



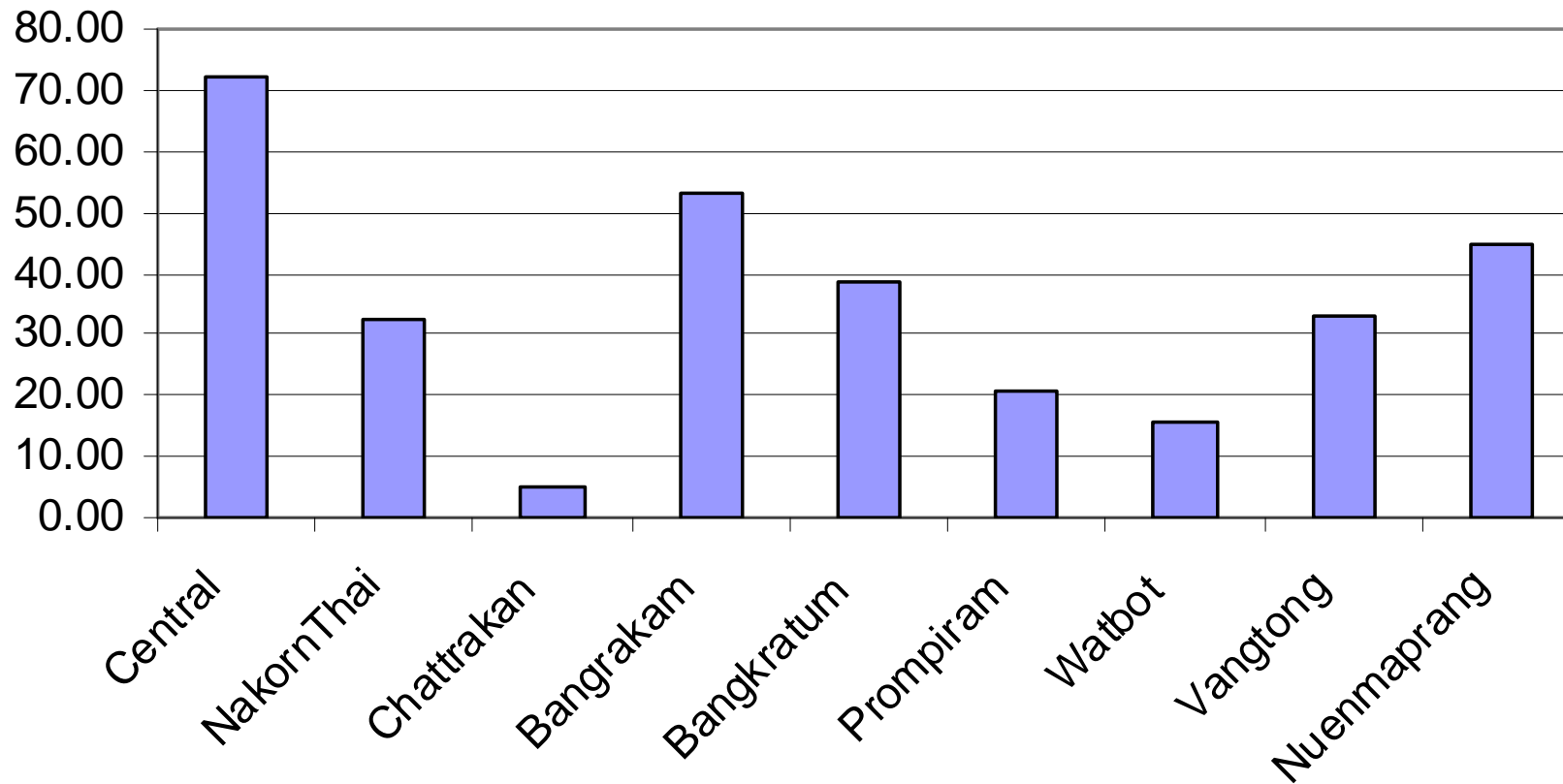
DHF (cases) in Phitsanulok 2003-2005 and Median 2001-2005



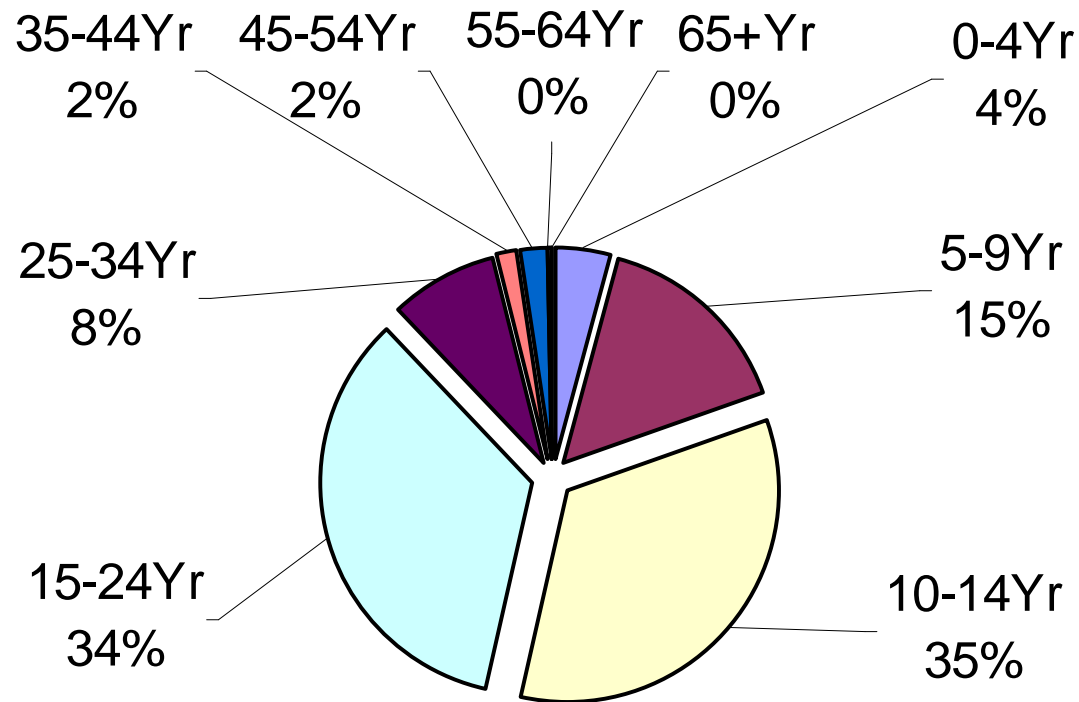
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
◆ Median	25	34	54	70	118	181	146	132	78	46	32	19
■ 2003	43	19	46	69	66	88	118	89	123	103	66	33
▲ 2004	26	12	20	19	31	64	88	64	38	28	20	19
× 2005	11	7	8	20	42	49	57	48	60	48	41	

DHF, incidence rate in 9 districts, Phitsanulok, Thailand, 2005

Per 100,000 Population



DHF in specific age groups Phitsanulok, Thailand, 2005



Phitsanulok

- 9 Districts
- 93 Sub Districts
- 1,032 Villages

ArcExplorer by ESRI

- is a GIS data viewer developed by ESRI. This freely available software offers an easy way to perform a variety of basic GIS functions, including display, query, and data retrieval applications. It can be used on its own with local data sets or as a client to Internet data and map servers.

ArcExplorer by ESRI

The screenshot shows the ArcExplorer website in a Microsoft Internet Explorer browser window. The browser title is "ArcExplorer -- GIS Data Viewer - Microsoft Internet Explorer". The address bar shows the URL "http://www.esri.com/software/arcexplorer/index.html". The website header features the ESRI logo and the text "ESRI GIS and Mapping Software". Navigation tabs include "Home", "Products", "Services", "Industries", "User Showcase", "Training & Events", "Support", and "About ESRI". The main content area is titled "ArcExplorer" and includes a sidebar with navigation links: "Main", "About ArcExplorer", "Product Overview", "Versions", "FAQ", "System Requirements", "Free Download", "Download ArcExplorer", "Resources", and "Support". The main content area features a large banner for "ArcExplorer GIS Data Viewer" with a colorful map. Below the banner, there is a paragraph describing ArcExplorer as a lightweight GIS data viewer developed by ESRI, offering an easy way to perform basic GIS functions. To the right of this text is a "Try ArcExplorer" section with a "Download Now" button. Below that is a "Showcase" section with a small image of the ArcExplorer interface and a link to "Customize ArcExplorer Web". The Windows taskbar at the bottom shows the Start button, the active window "ArcExplorer -- GIS Da...", and the system tray with the time "4:20 PM".

ArcExplorer -- GIS Data Viewer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Word Excel PowerPoint Outlook

Address http://www.esri.com/software/arcexplorer/index.html Go Links

Store Contact Us Careers

ESRI GIS and Mapping Software

Home Products Services Industries User Showcase Training & Events Support About ESRI

ArcExplorer

- Main

About ArcExplorer

- [Product Overview](#)
- [Versions](#)
- [FAQ](#)
- [System Requirements](#)

Free Download

- [Download ArcExplorer](#)

Resources

- [Support](#)

ArcExplorer GIS Data Viewer

ArcExplorer is a lightweight GIS data viewer developed by ESRI. This freely available software offers an easy way to perform a variety of basic GIS functions, including display, query, and data retrieval applications. It can be used on its own with local data sets or as a client to Internet data and map servers.

Try ArcExplorer

[Download Now](#)

Showcase

- [Customize ArcExplorer Web](#)

With ArcExplorer you can

- Freely distribute the ArcExplorer installation and

Internet

start ArcExplorer -- GIS Da... EN 4:20 PM



- Local | WWW |
- DHF101048
 -
- WATERLINE
 -
- VILLAGE
 -
- SUBDISTRICT
 -
- ROAD
 -
- RAILWAY
 -
- PCU_ALL
 -
- DISTRICT
 -

About ArcExplorer



ArcExplorer
version 2.0.800

ESRI ArcExplorer? - A GIS data explorer built with MapObjects? technology.

ArcExplorer™
GIS Data Explorer by ESRI

Copyright ? 1997 Environmental Systems Research Institute, Inc. All Rights Reserved.

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OK

System Info...



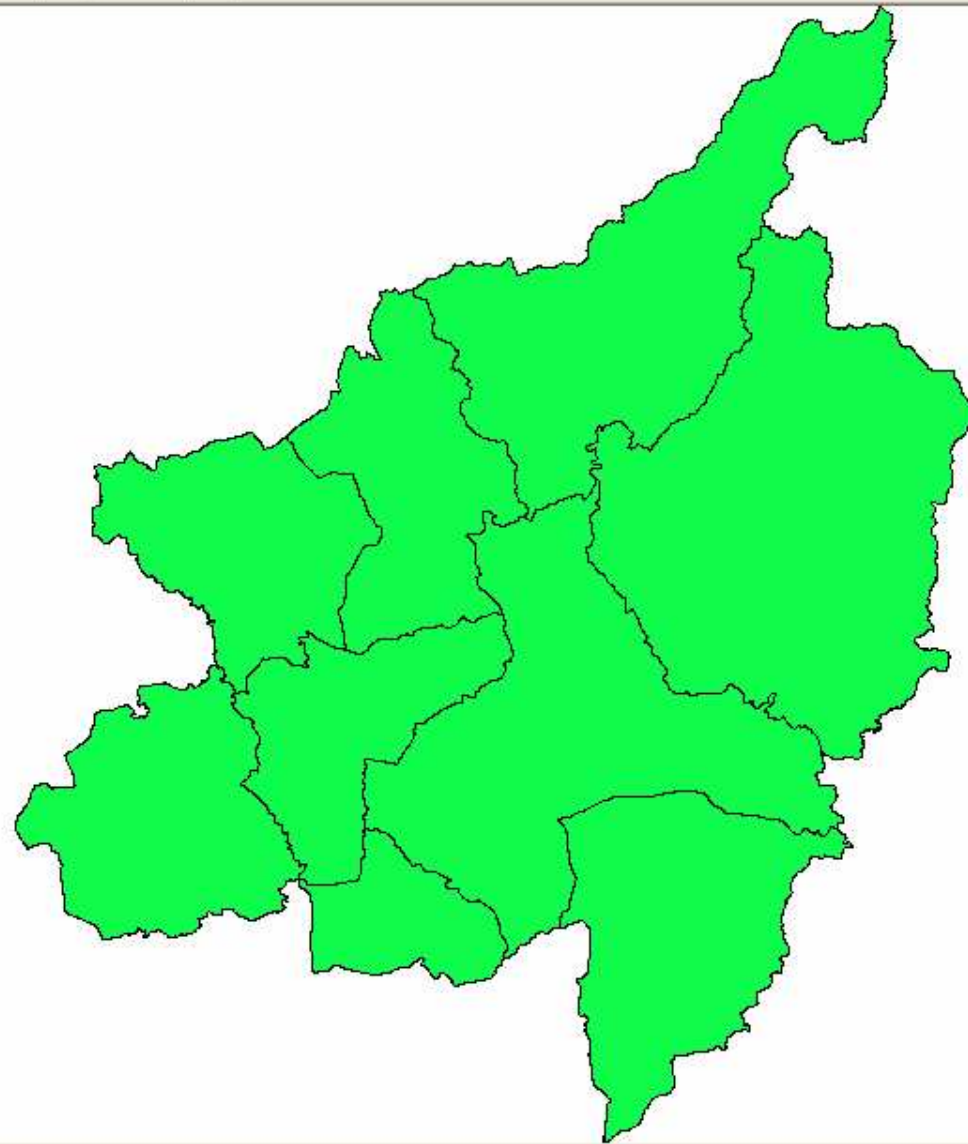
- Local | WWW |
- DHF101048
 - WATERLINE
 - VILLAGE
 - SUBDISTRICT
 - ROAD
 - RAILWAY
 - PCU_ALL
 - DISTRICT

*.DBF
*.SHP
*.SHX



- DHF101048
 - WATERLINE
 - VILLAGE
 - SUBDISTRICT
 - ROAD
 - RAILWAY
 - PCU_ALL
 - DISTRICT

*.DBF
*.SHP
*.SHX



ArcExplorer - GIS.AEP

File Edit View Theme Tools Help

Local WWW

- DHF101048
- WATERLINE
- VILLAGE
- SUBDISTRICT
- ROAD
- RAILWAY
- PCU_ALL
- DISTRICT

Identify Results

Location: X: 635,787 Y: 1,866,568

Feature: 6501

Field	Value
FeatureId	1
ACRES	16321.693
CODE_MOI	6501
CHANGWAT	พิษณุโลก
DISTRICT	Muang Phitsan...
AMPHOE	เมืองพิษณุโลก
ID	1
AREA	710972926.601
PERIMETER	156873.769

1 features found | district | Polygon

Central District

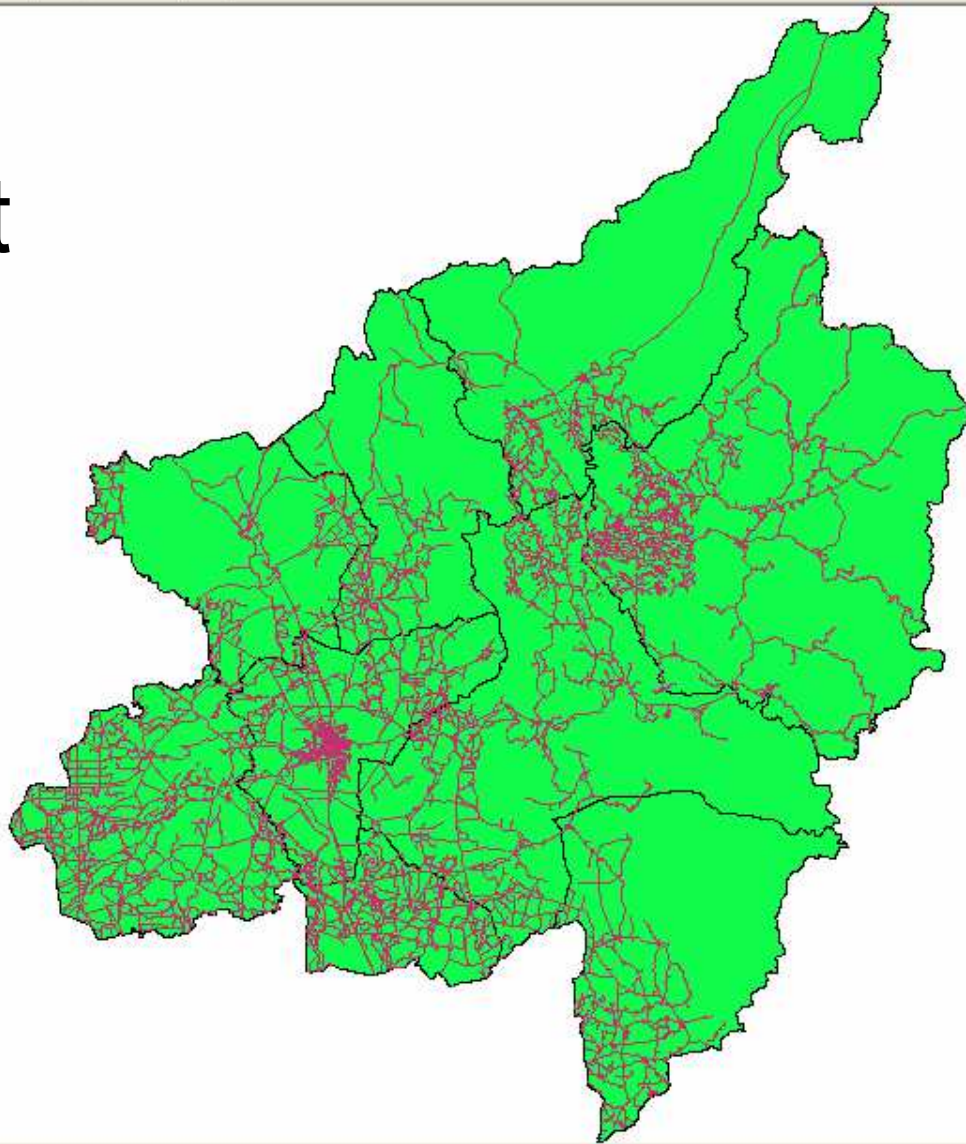
ArcExplorer is ready | Active Theme: DISTRICT

start ArcExplorer - GIS.AEP EN 9:09 AM



- Local | WWW
- DHF101048
- WATERLINE
- VILLAGE
- SUBDISTRICT
- ROAD
- RAILWAY
- PCU_ALL
- DISTRICT

Road District

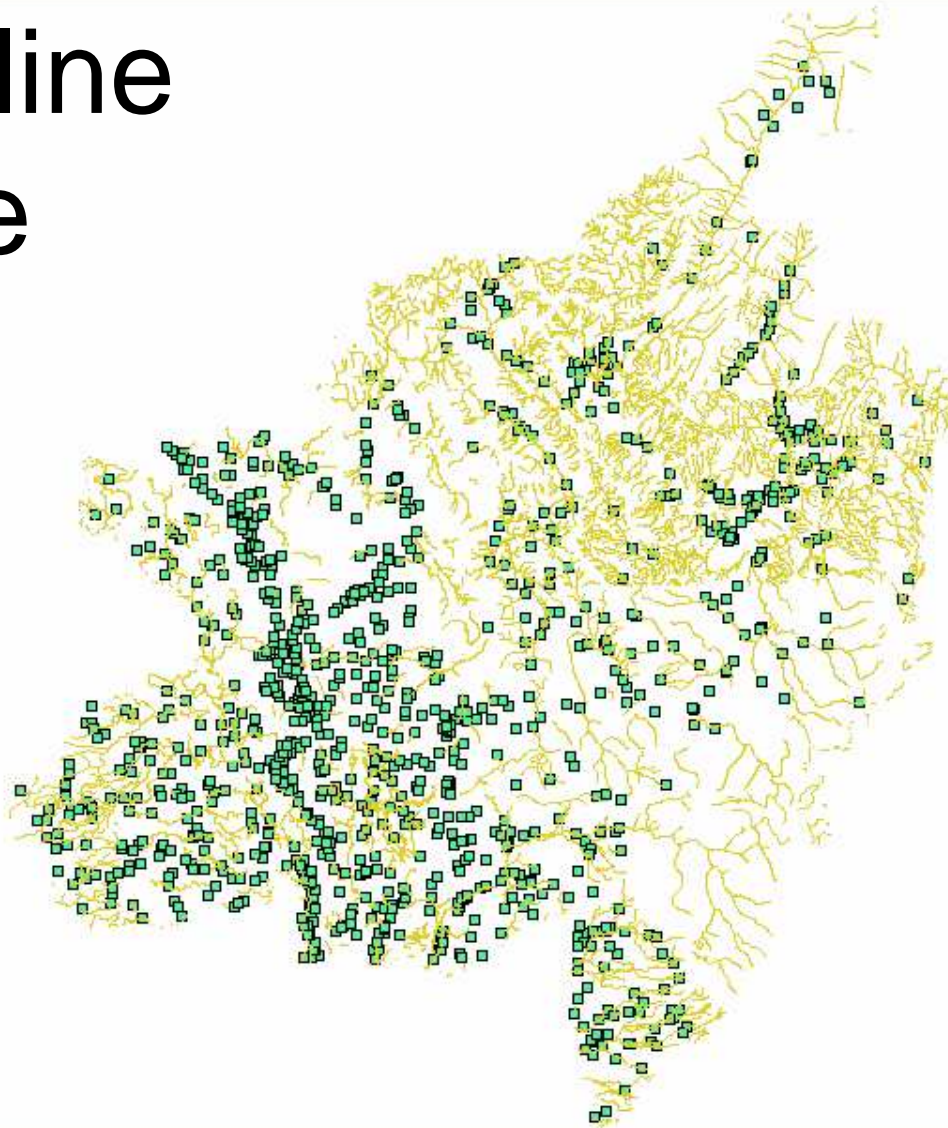




Local WWW

- DHF101048
- WATERLINE
- VILLAGE
- SUBDISTRICT
- ROAD
- RAILWAY
- PCU_ALL
- DISTRICT

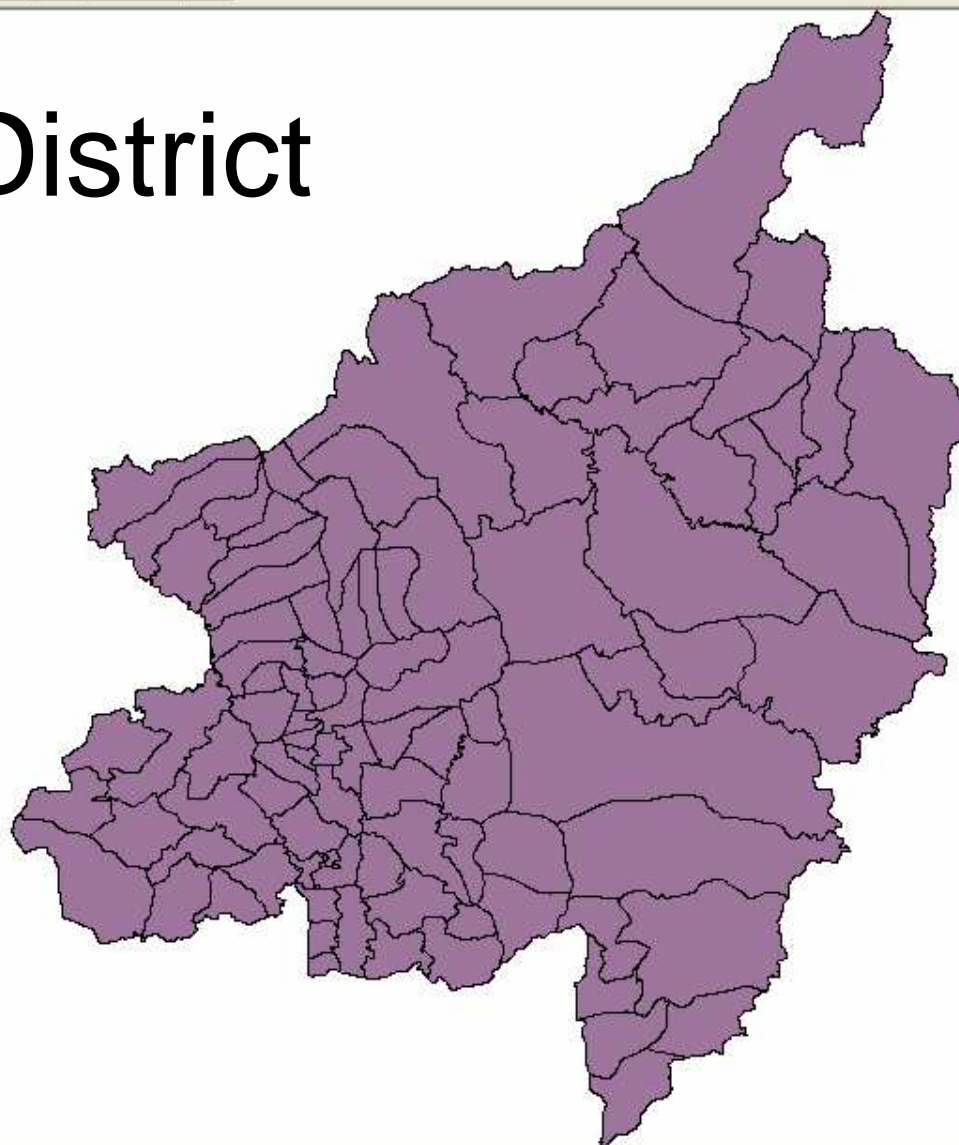
Waterline Village





- Local | WWW |
- DHF101048
- WATERLINE
- VILLAGE
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- RAILWAY
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- DISTRICT

Sub District

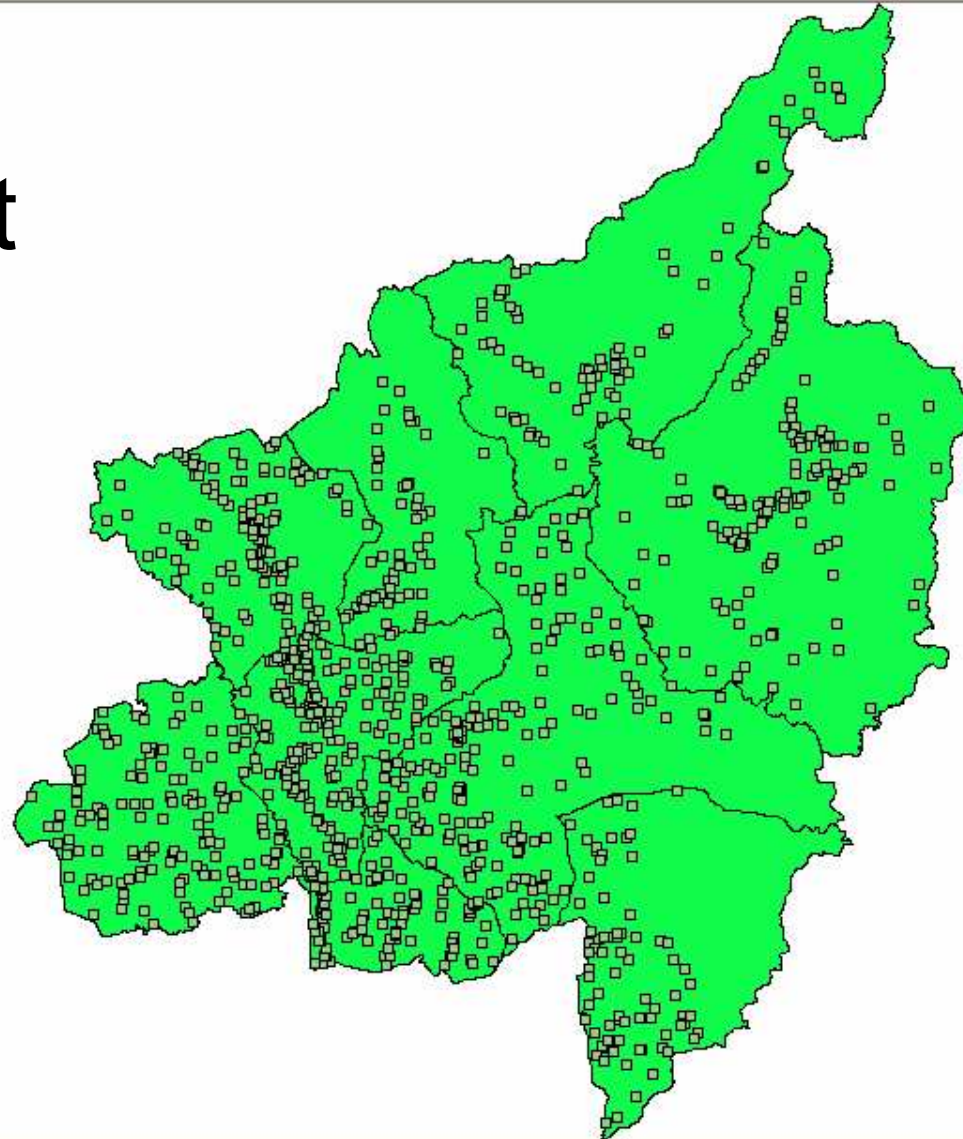




Local WWW

- DHF101048
 - WATERLINE
 - VILLAGE
 - SUBDISTRICT
 - ROAD
 - RAILWAY
 - PCU_ALL
 - DISTRICT

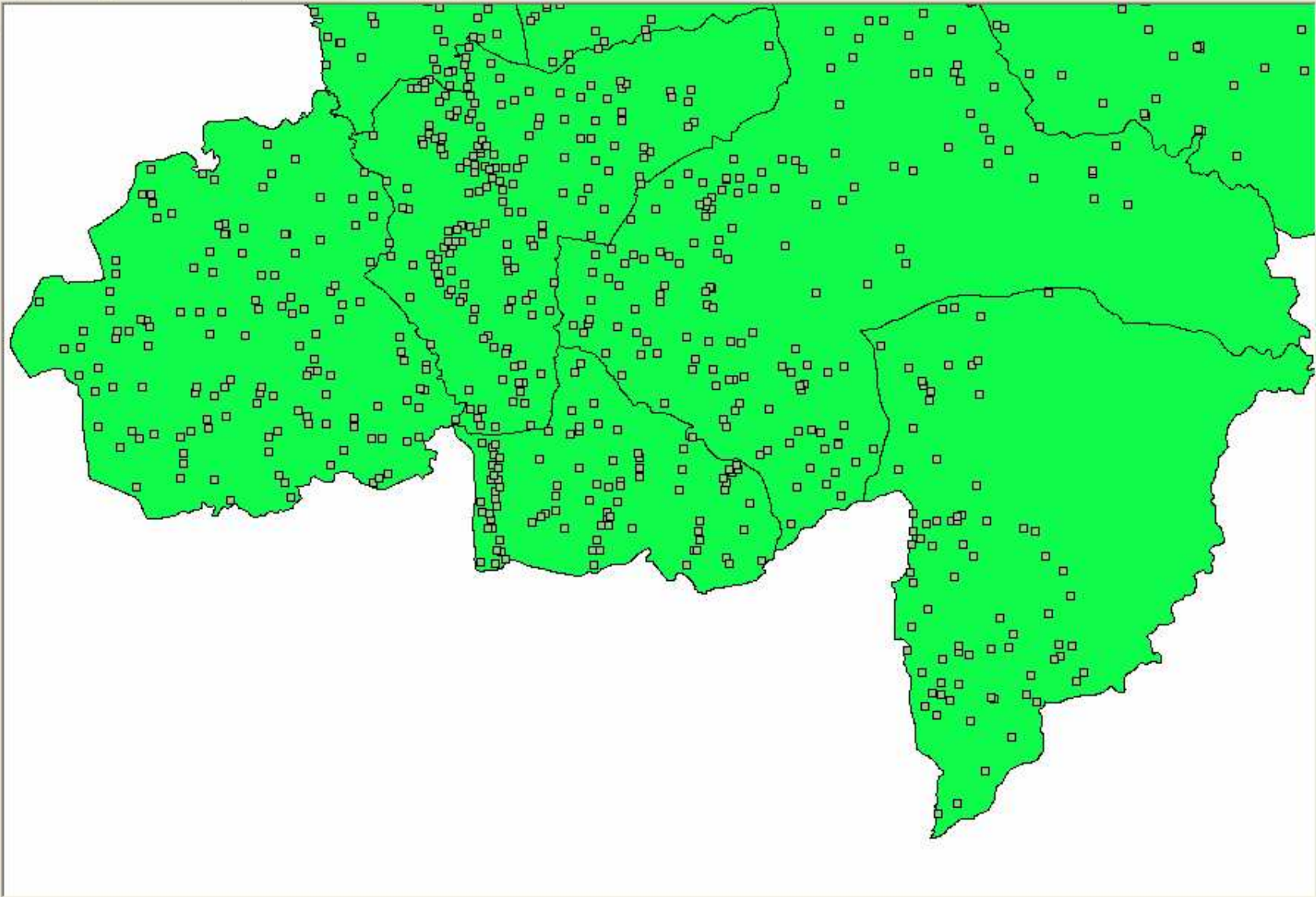
DHF District





Local WWW

- DHF101048
- WATERLINE
- VILLAGE
- SUBDISTRICT
- ROAD
- RAILWAY
- PCU_ALL
- DISTRICT



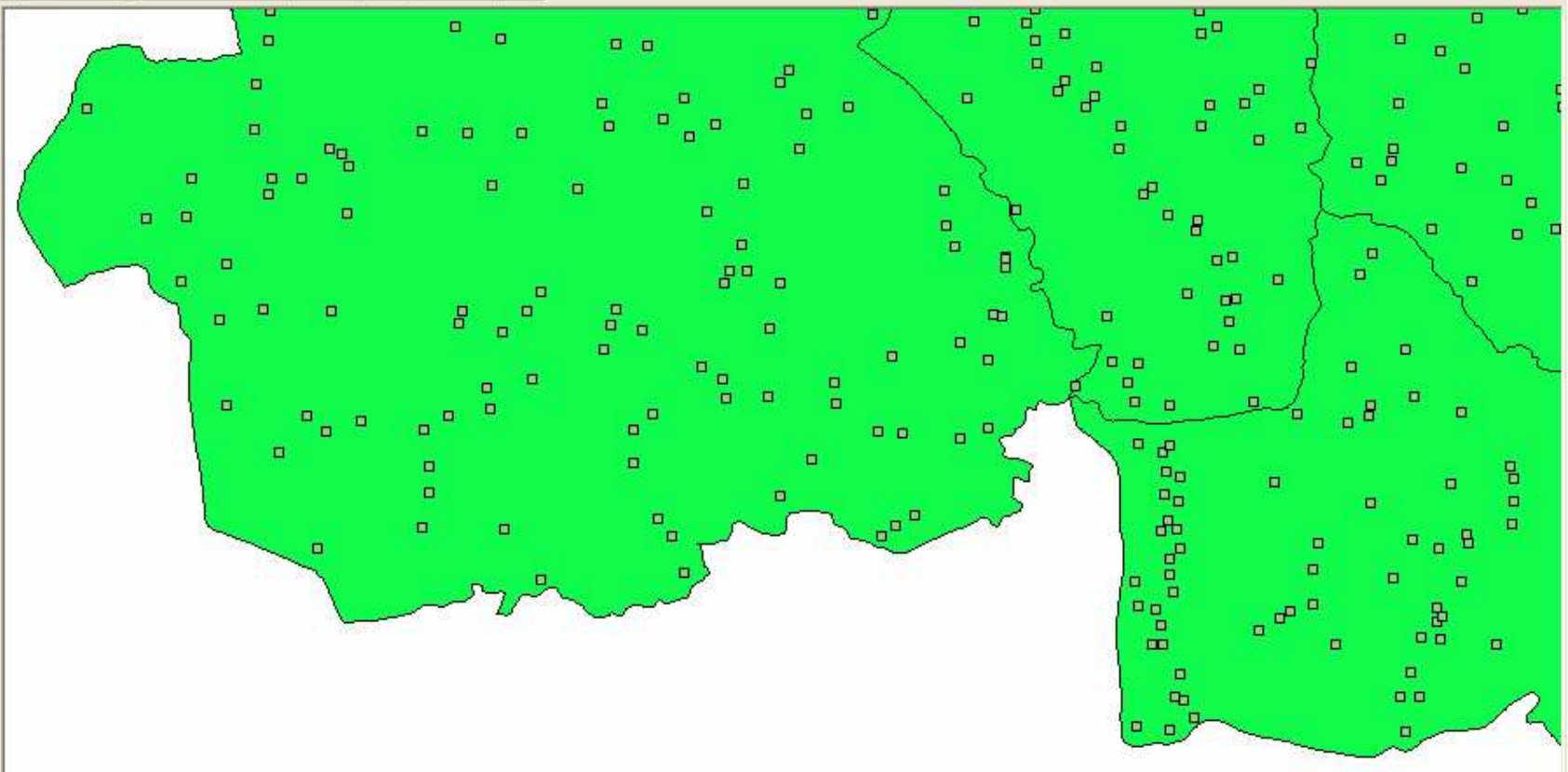
Panning tool activated

Active Theme: DISTRICT



Local WWW

- DHF101048
- WATERLINE
- VILLAGE
- SUBDISTRICT
- ROAD
- RAILWAY
- PCU_ALL
- DISTRICT



Panning tool activated

Active Theme: DISTRICT

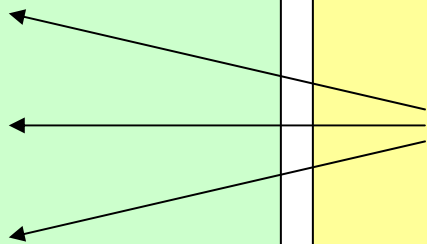
GIS and Epidemiology

- GIS

- Location
- Distribution
- Spreading
Direction

- Epidemiology

- Time (When)
- Place (Where)
- Person (Who)



View, understand, question, interpret, and visualize data

- GIS allows us to view, understand, question, interpret, and visualize data in ways simply not possible in the rows and columns of a spreadsheet.

Mosquito control



HI and CI

- In community,
House Index < 10
- In hospital and schools,
Container Index = 0

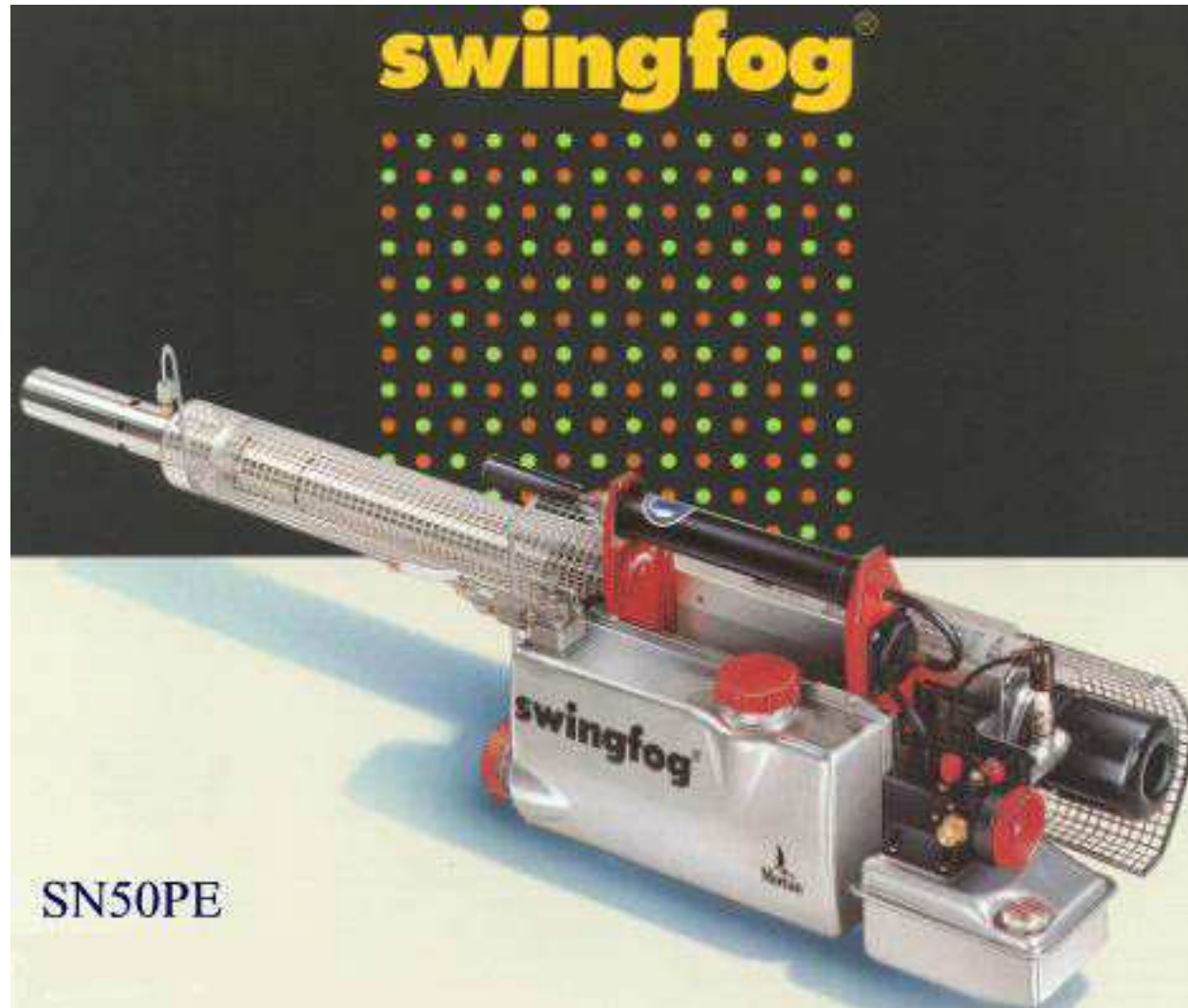
Primary school students, volunteer to get rid of larva of mosquitoes



Inspected by health volunteer that they are no mosquito larva in houses, villages, and schools



Swingfog



Thank You

The text "Thank You" is rendered in a bold, sans-serif font. Each letter is filled with a different color from a rainbow spectrum: 'T' is magenta, 'h' is red, 'a' is orange, 'n' is yellow, 'k' is light green, 'Y' is blue, and 'u' is purple. The letters are positioned on a white surface, casting soft, grey shadows to the left and slightly forward, giving them a three-dimensional appearance.