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# TerraLook

## Increased Access to Satellite Images



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- ❑ Access problems
- ❑ TerraLook (“Protected Area Archive”)
  - Demonstration
  - Current status
  - Relationship to SERVIR
  - Outreach



Iguazu Falls National Parks  
Brazil and Argentina

# Some Uses for Images

## Observe

- Another perspective
- Difficult or dangerous places
- Large areas

## Measure

## Assess

## Monitor

## Communicate



Venezuela

# Images Can Answer Simple Questions...

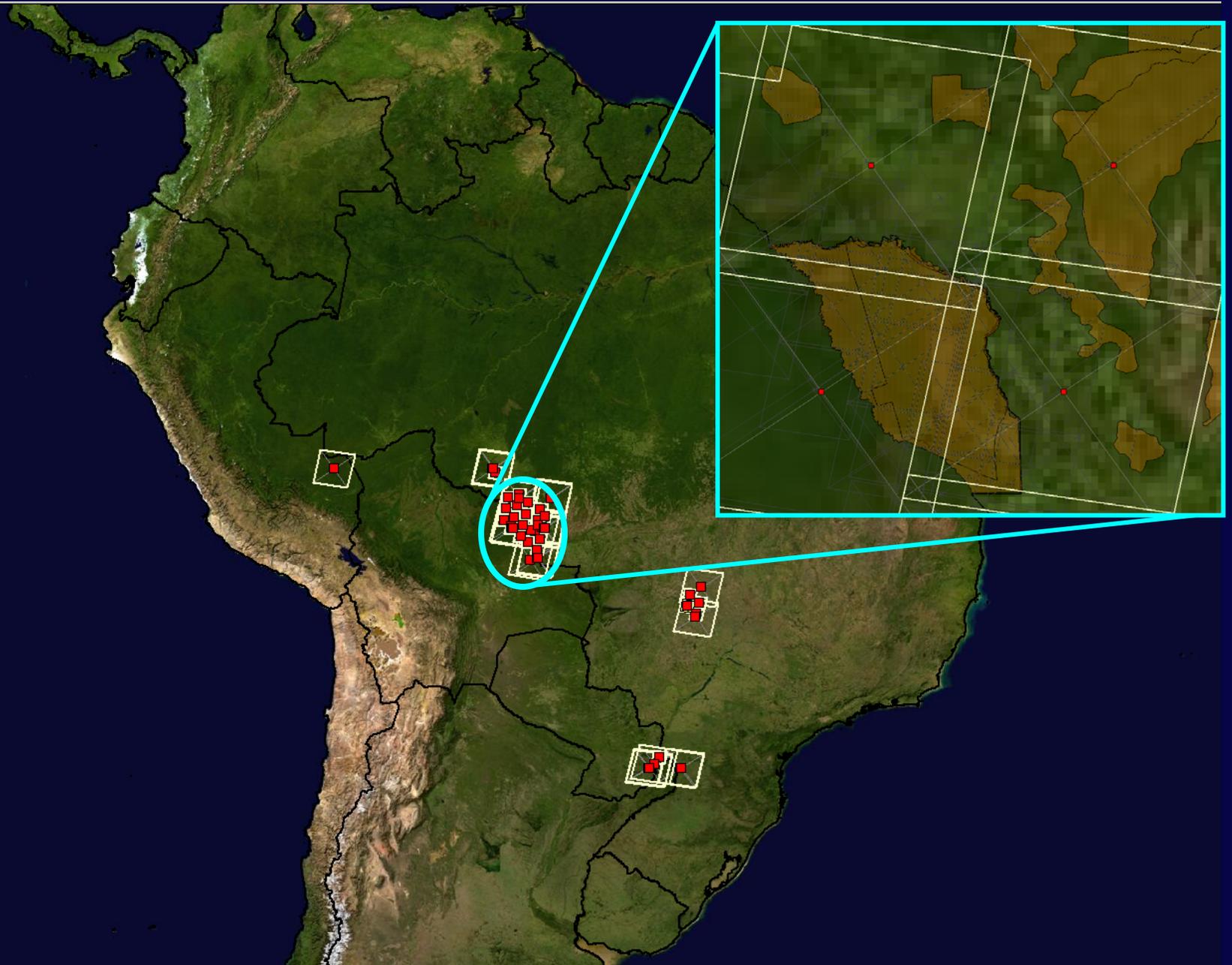
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- How much deforestation has occurred?
- How can I communicate a problem to the director?
- How much of my PA has been encroached by agriculture?

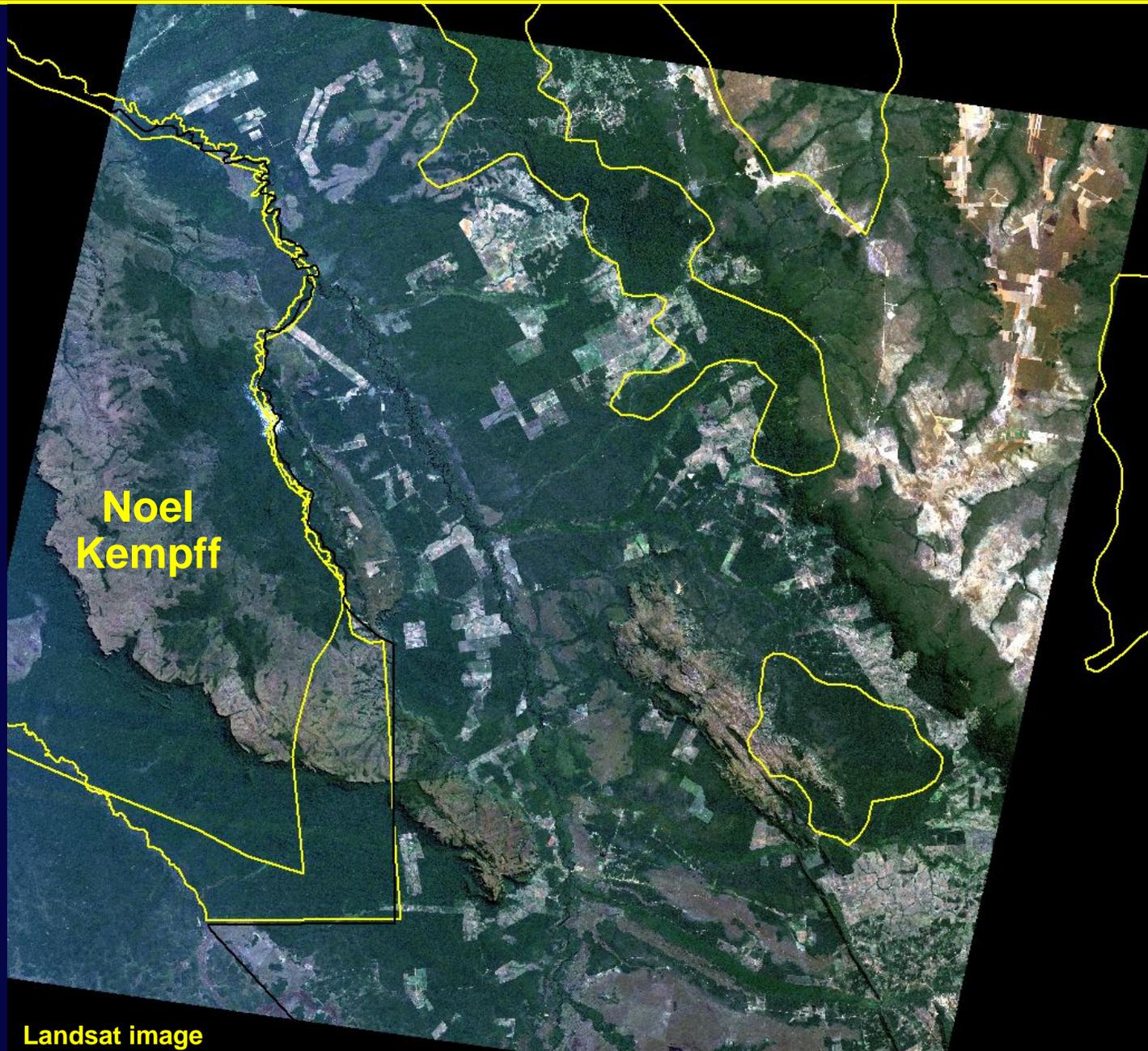
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# Usage Examples

# Noel Kempff Mercado NP & WHS, Bolivia

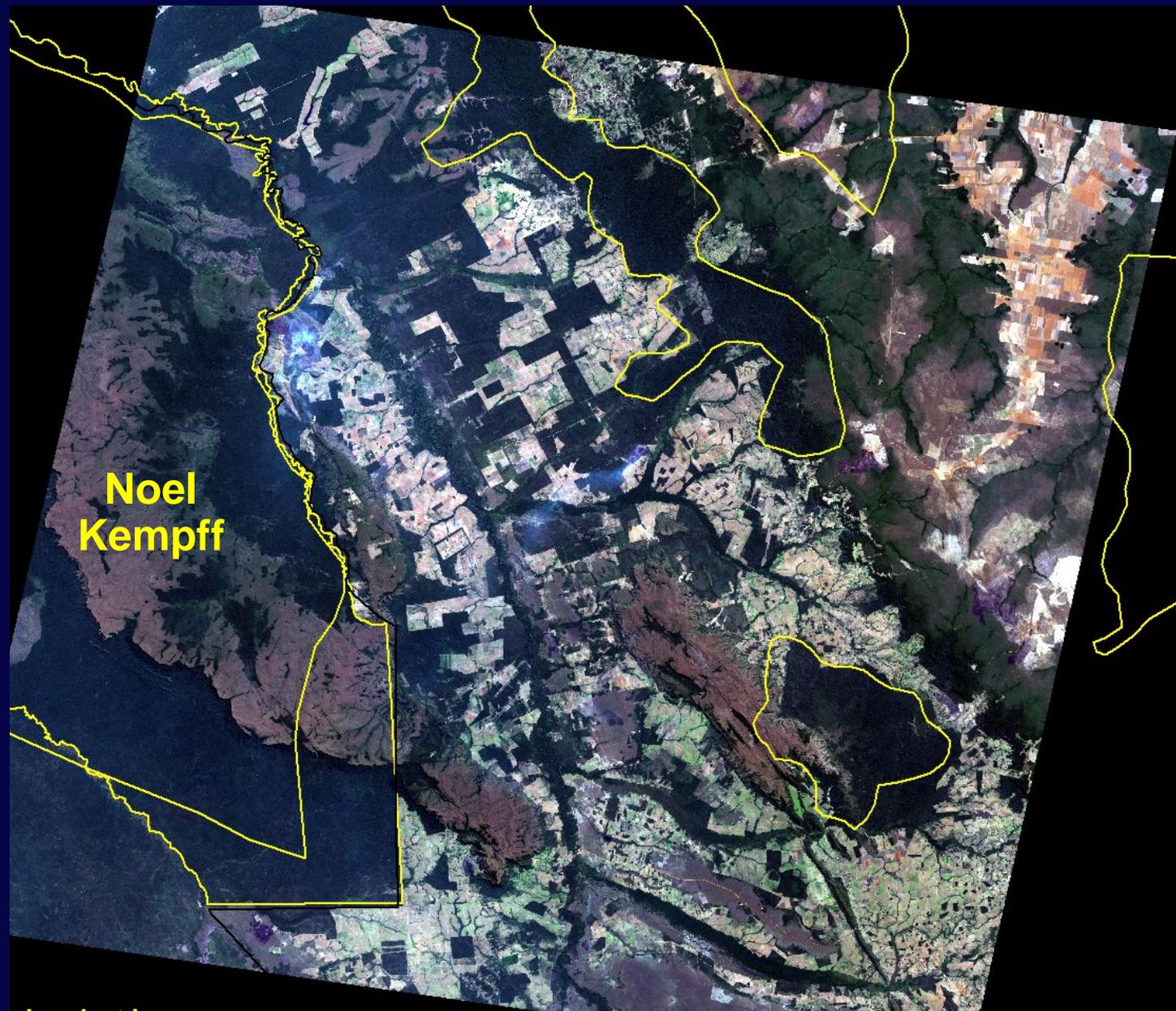


1988



Noel  
Kempff

2000



May 2007

Landsat image

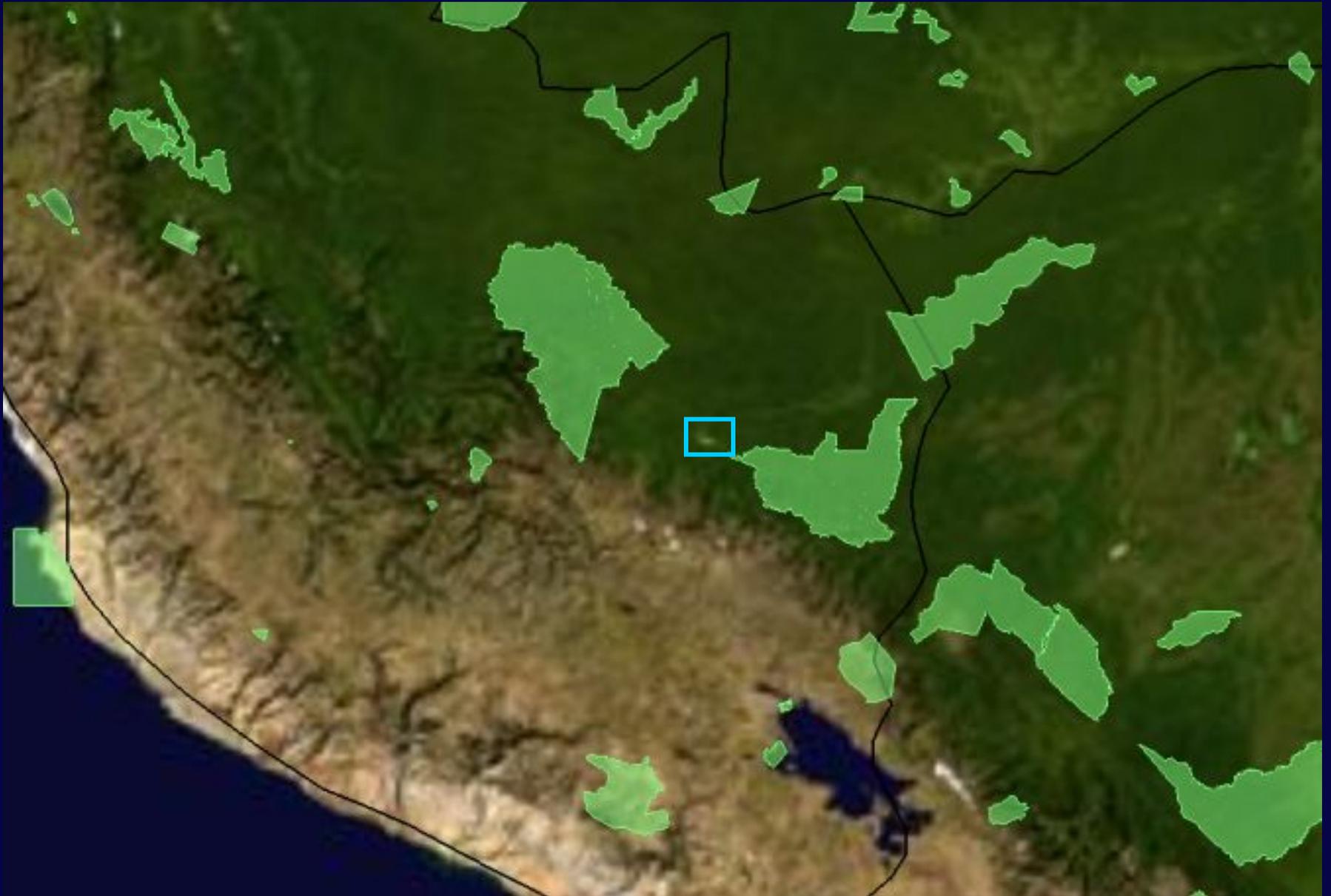
TerraLook

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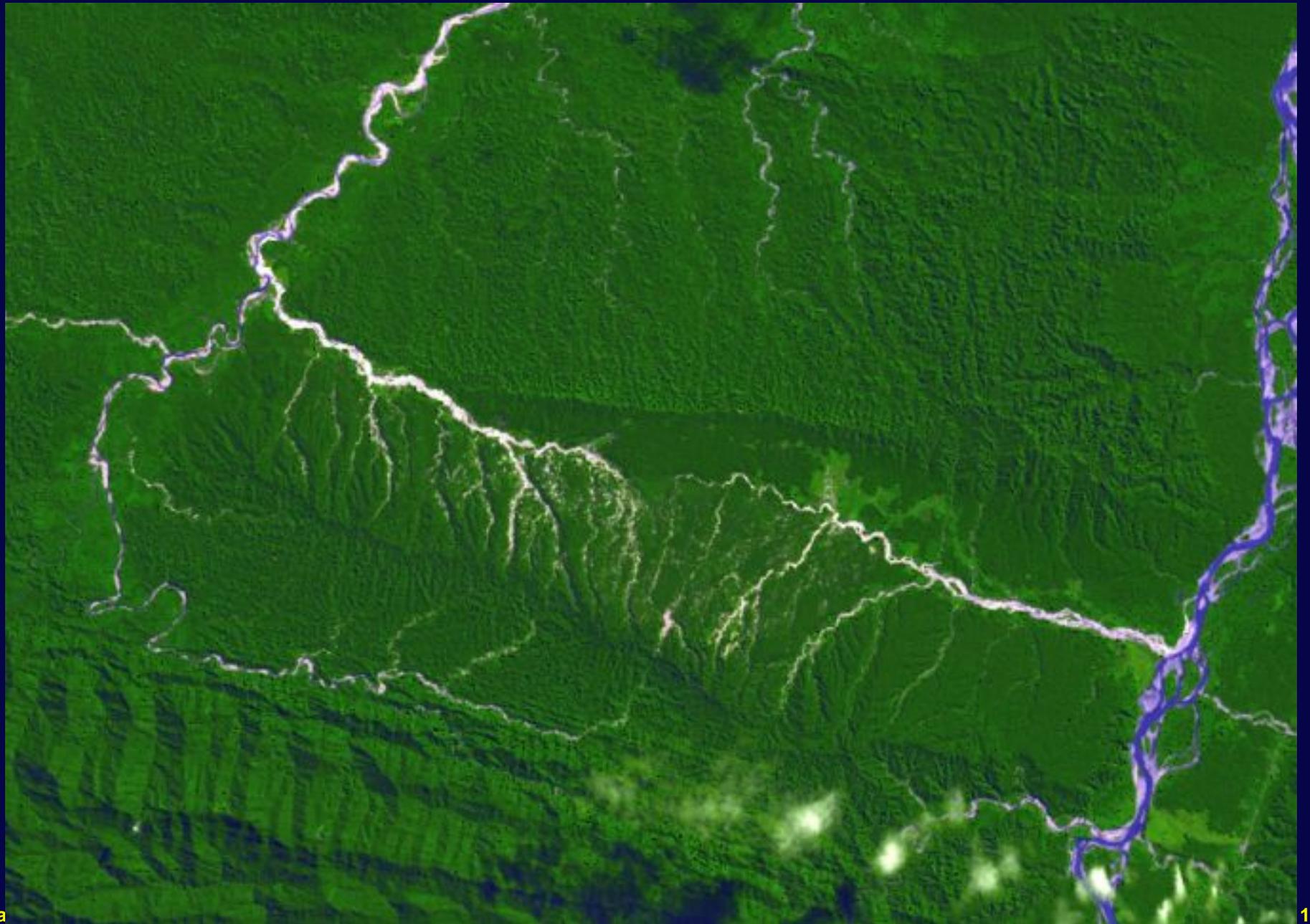
# In Peru...



# ...Near Tambopata National Park



1986



2000



# Where can I find an image like that for *my* area?



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**So...there is a problem**

# Solutions

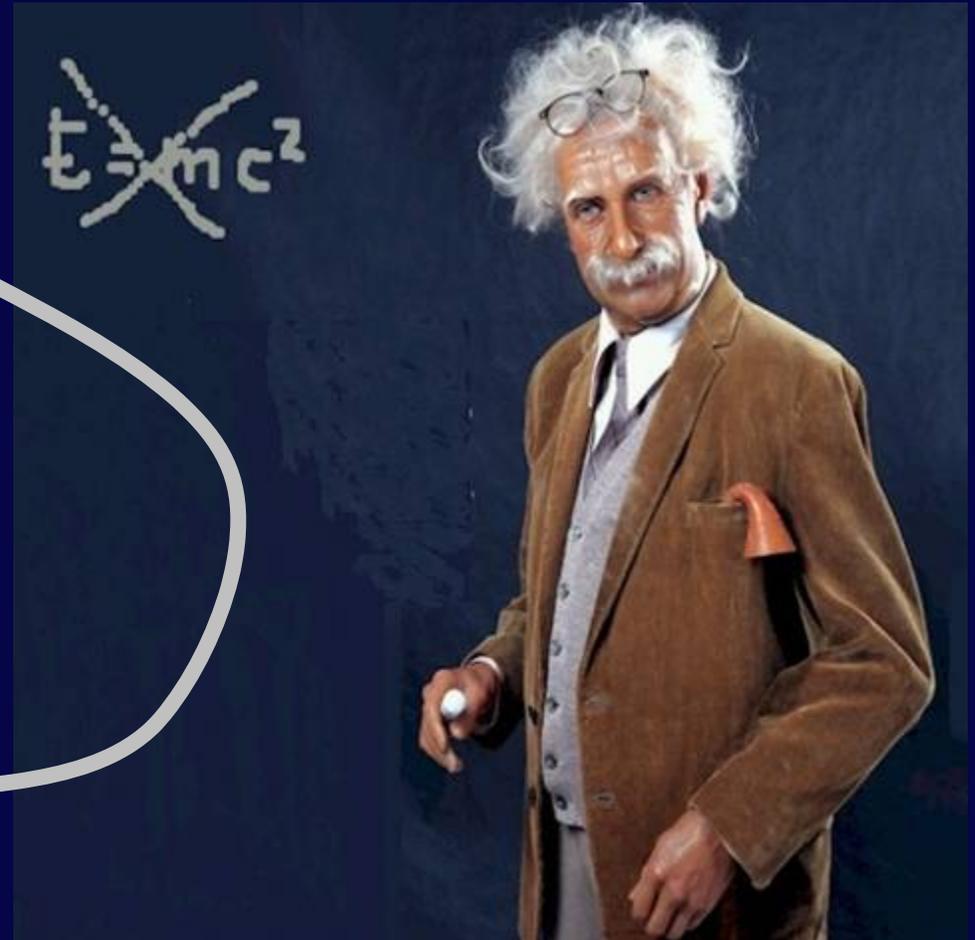
Two solutions are possible:

1. Training

2. Make satellite data easier to

- Obtain
- Use

TerraLook



# What Is TerraLook?

- \* 1. Collections of images on a particular theme
  - Images from 1975, 1990, 2000, 2000+
- 2. Simple toolkit to use them
- Minimal machine and human requirements



Coco River  
Nicaragua

# Who Is It For?

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- Conservation practitioners**
- Development planners**
- Educators**
- People who need to communicate a problem or idea**
- Anyone who can benefit by easy access to images**

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# Demonstration

# Creating a Collection: USGS

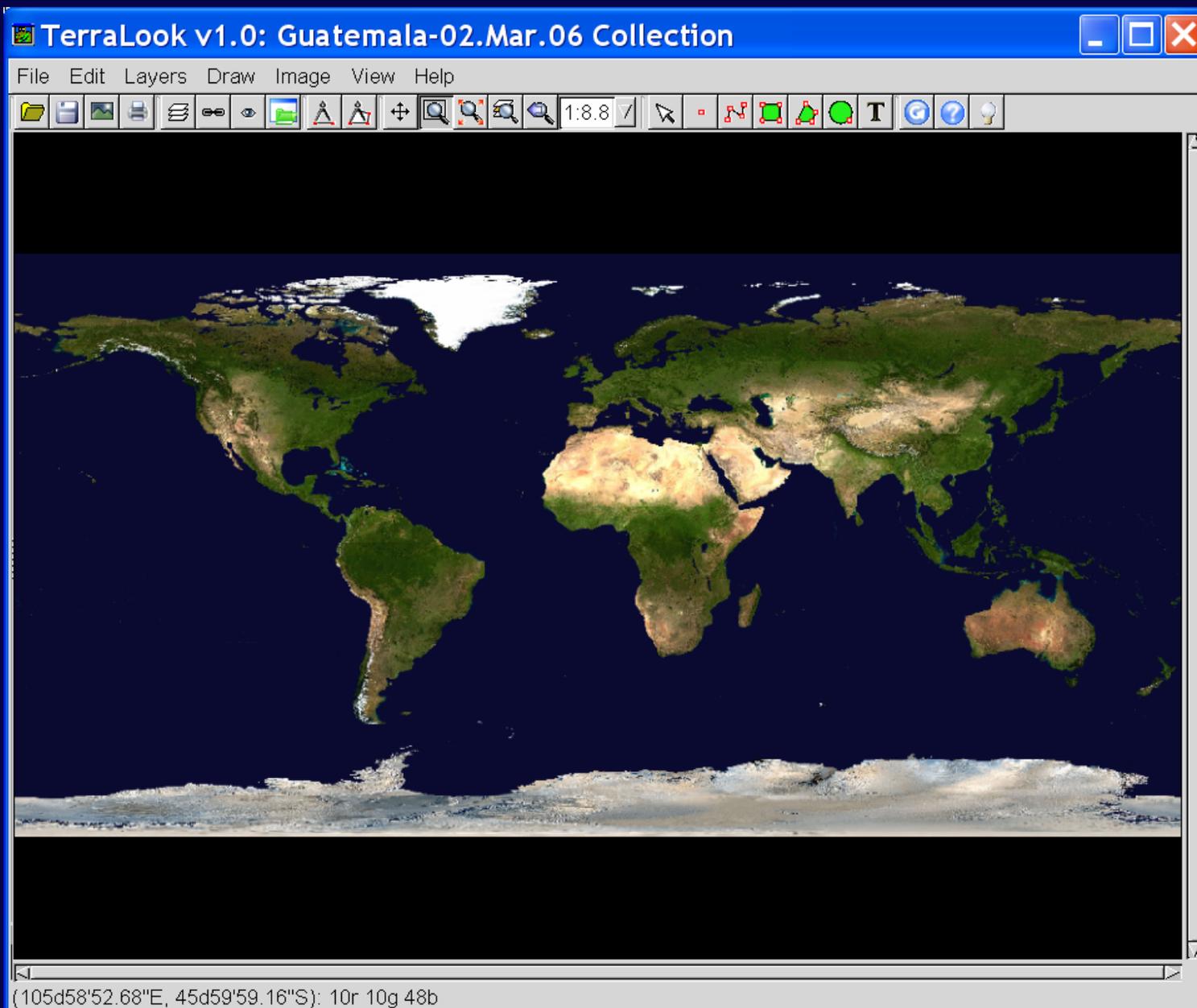
The screenshot shows the USGS Global Visualization Viewer interface. The main window displays a satellite image of a landscape with a yellow selection box. The interface includes a menu bar (Sensor, Resolution, Map Layers, Tools, File, Help), a toolbar, and a control panel on the left. The control panel contains fields for WRS-2 Path/Row (19, 36), Lat/Long (34.6, -84.3), Max Cloud (100%), and Scene Information (ID: ELP019R036\_7T19990910, Cloud Cover: 30%, Date: 1999/9/10). There are also buttons for Prev Scene, Next Scene, Add, Delete, and Order, and a list titled 'TL Tri-Dec ETM+ Scene List'. The status bar at the bottom shows '1000m No Limits Set' and 'Lat/Long: 37.514378, -82.632492 degrees'.

<http://edc2.usgs.gov/terralook>

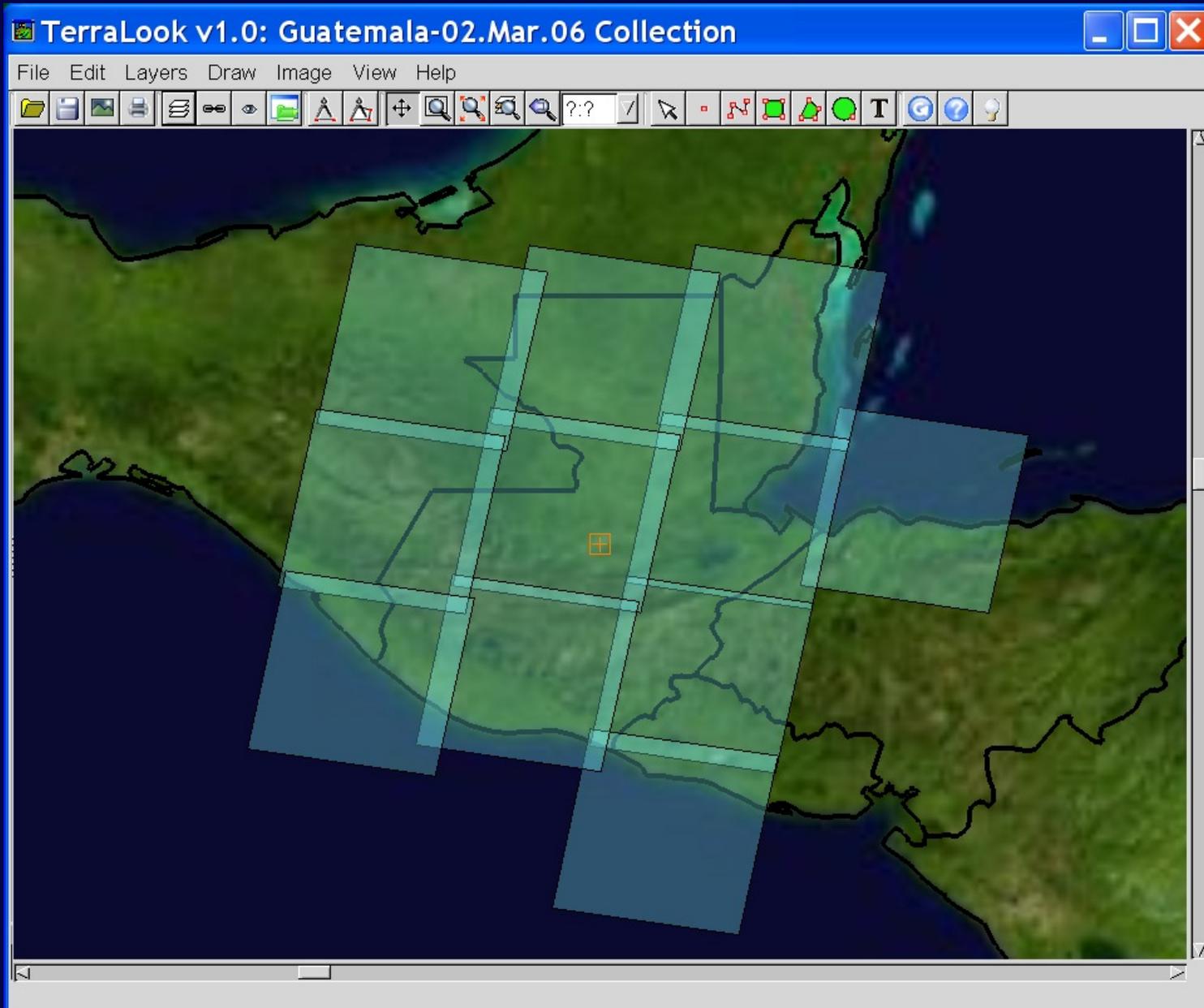
## Steps

1. Select images
2. Order
3. Download

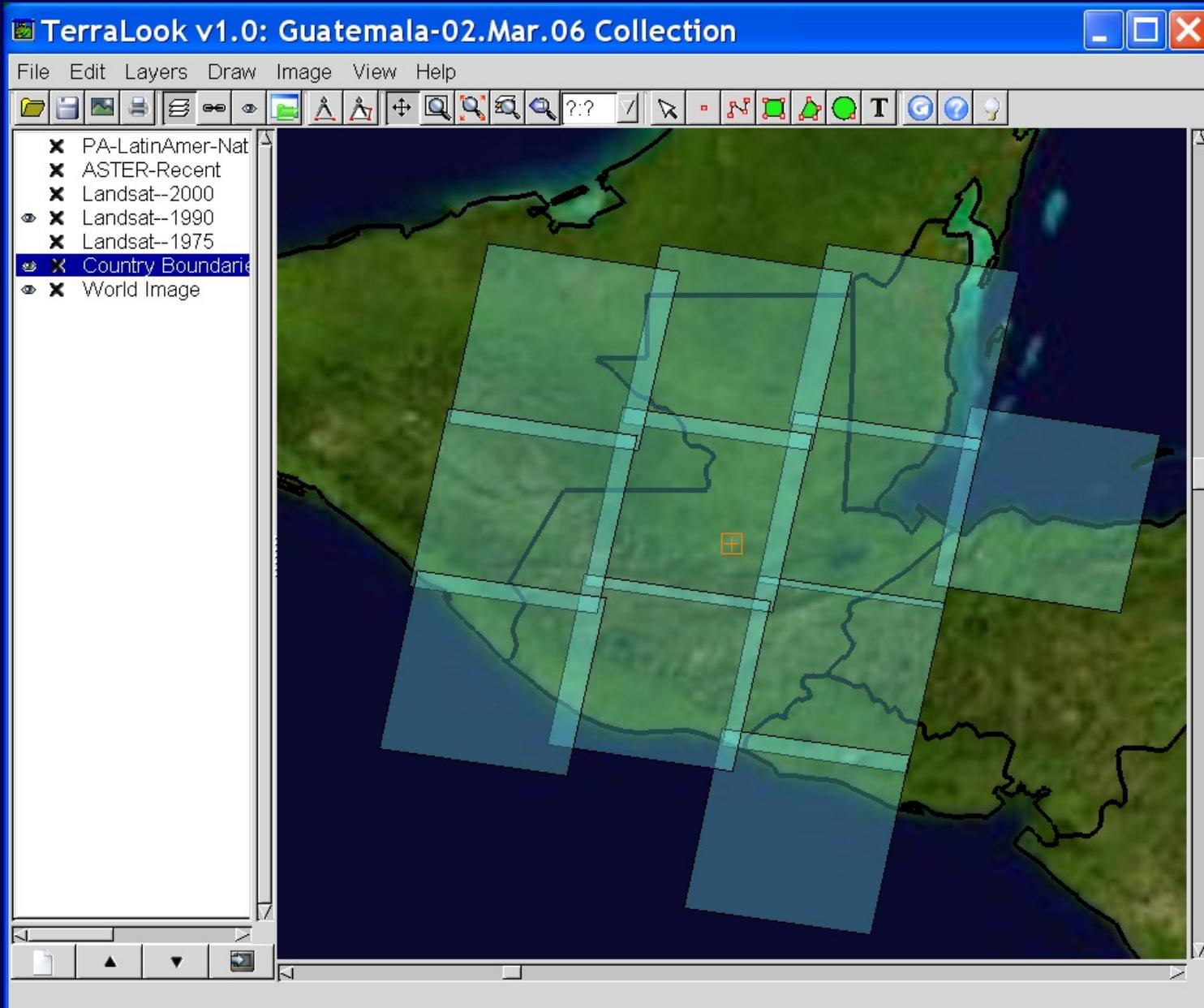
# Toolkit: Locator Map



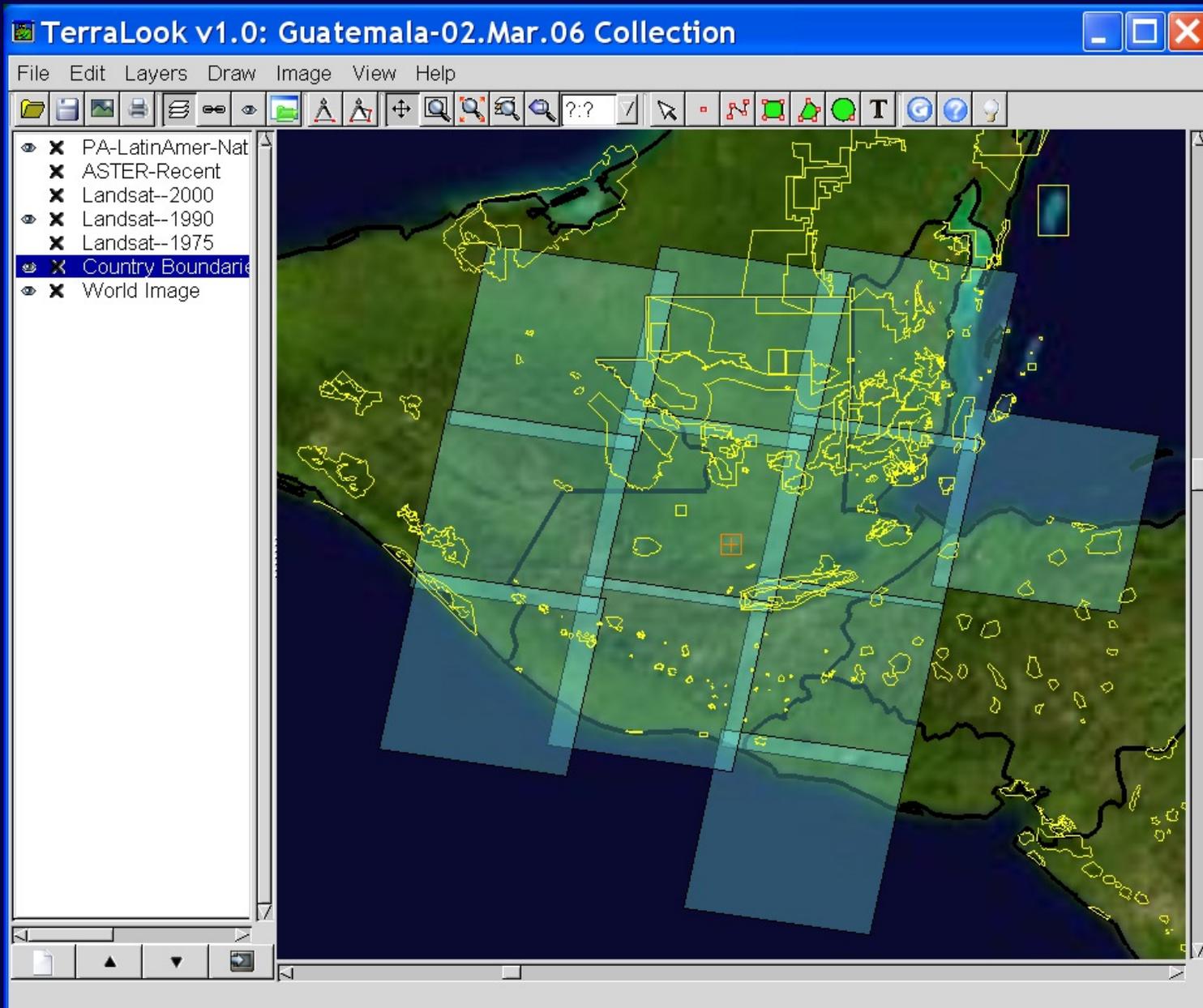
# Open Collection



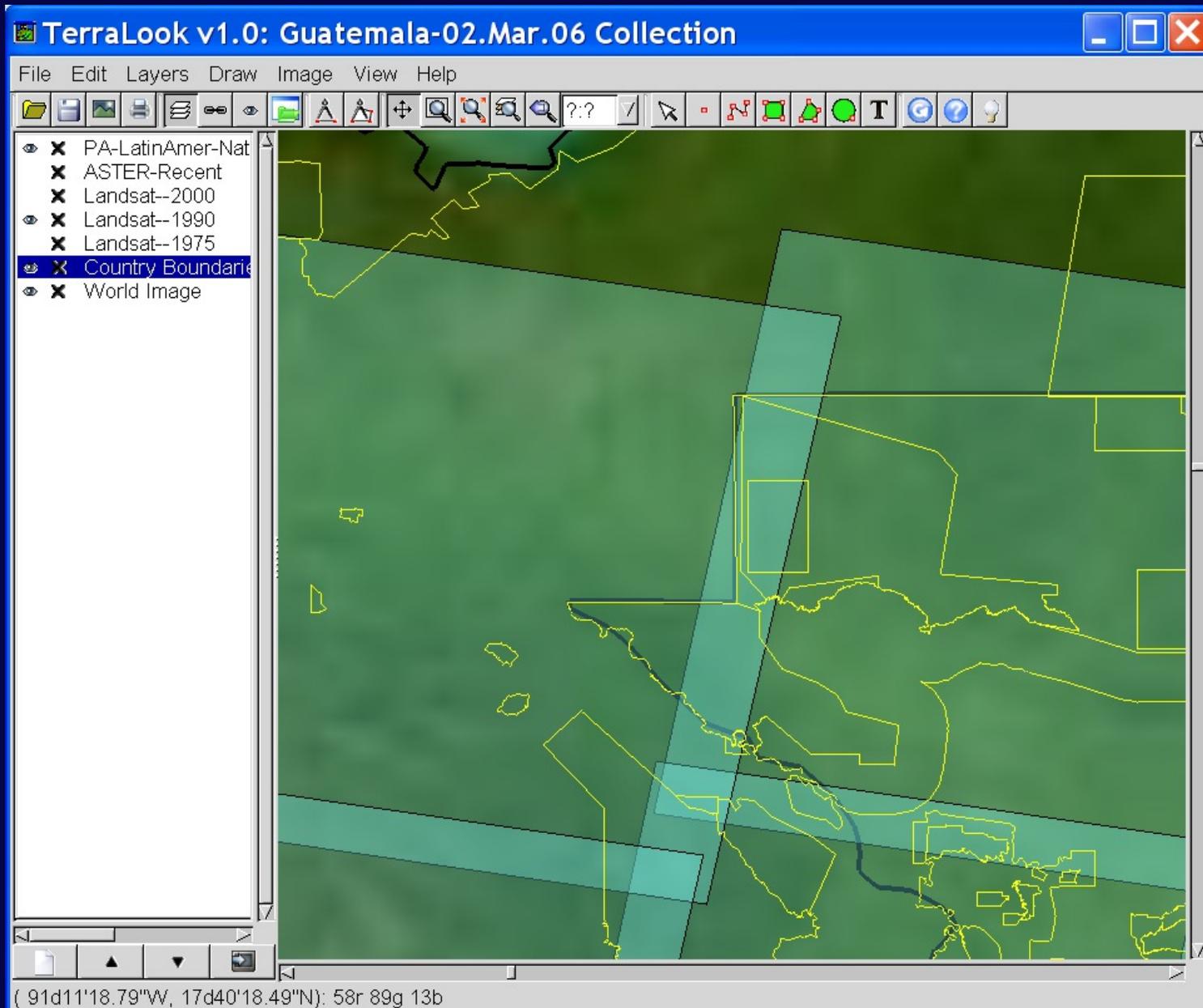
# Turn on Layer Manager



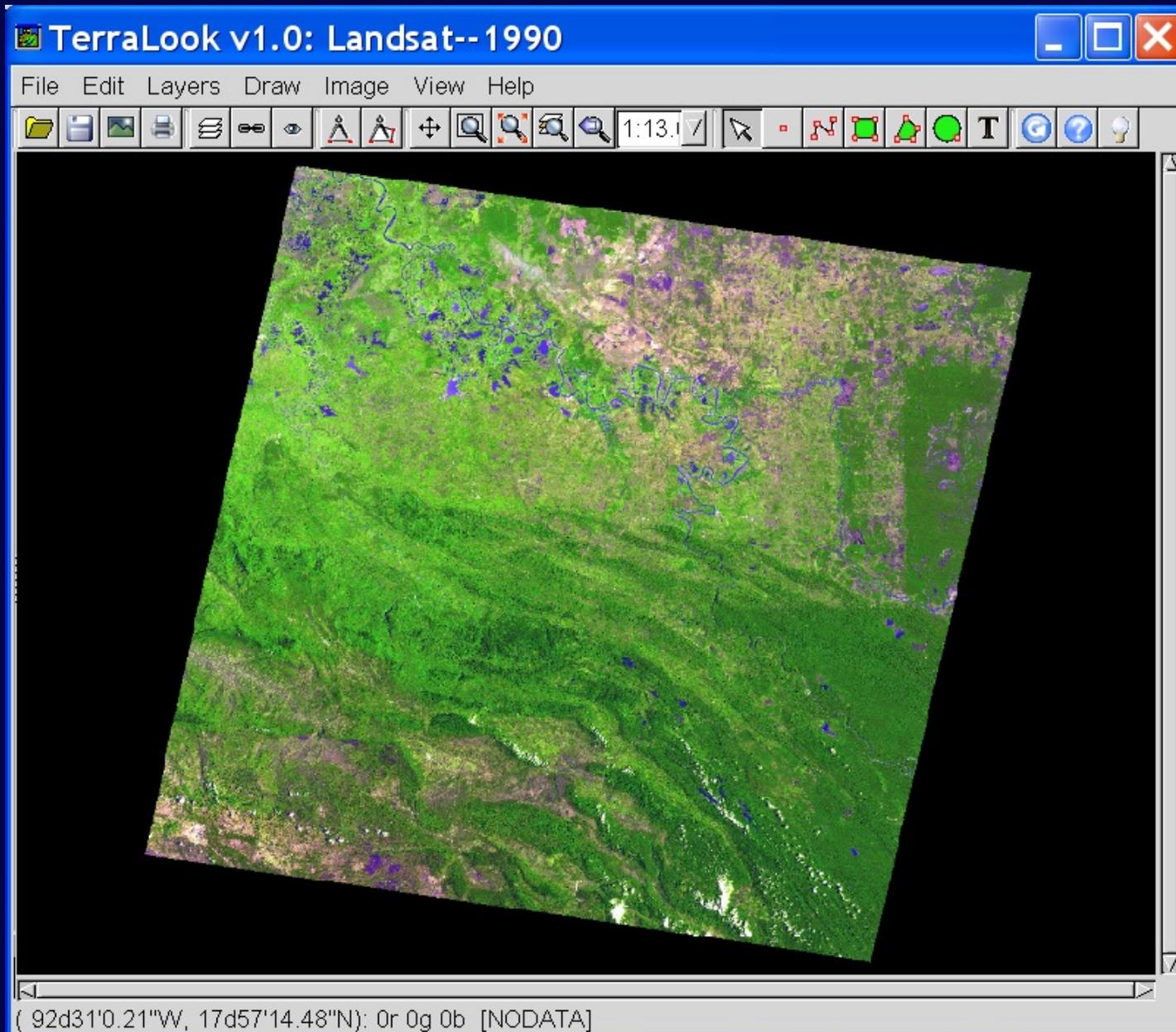
# Add PA Boundaries



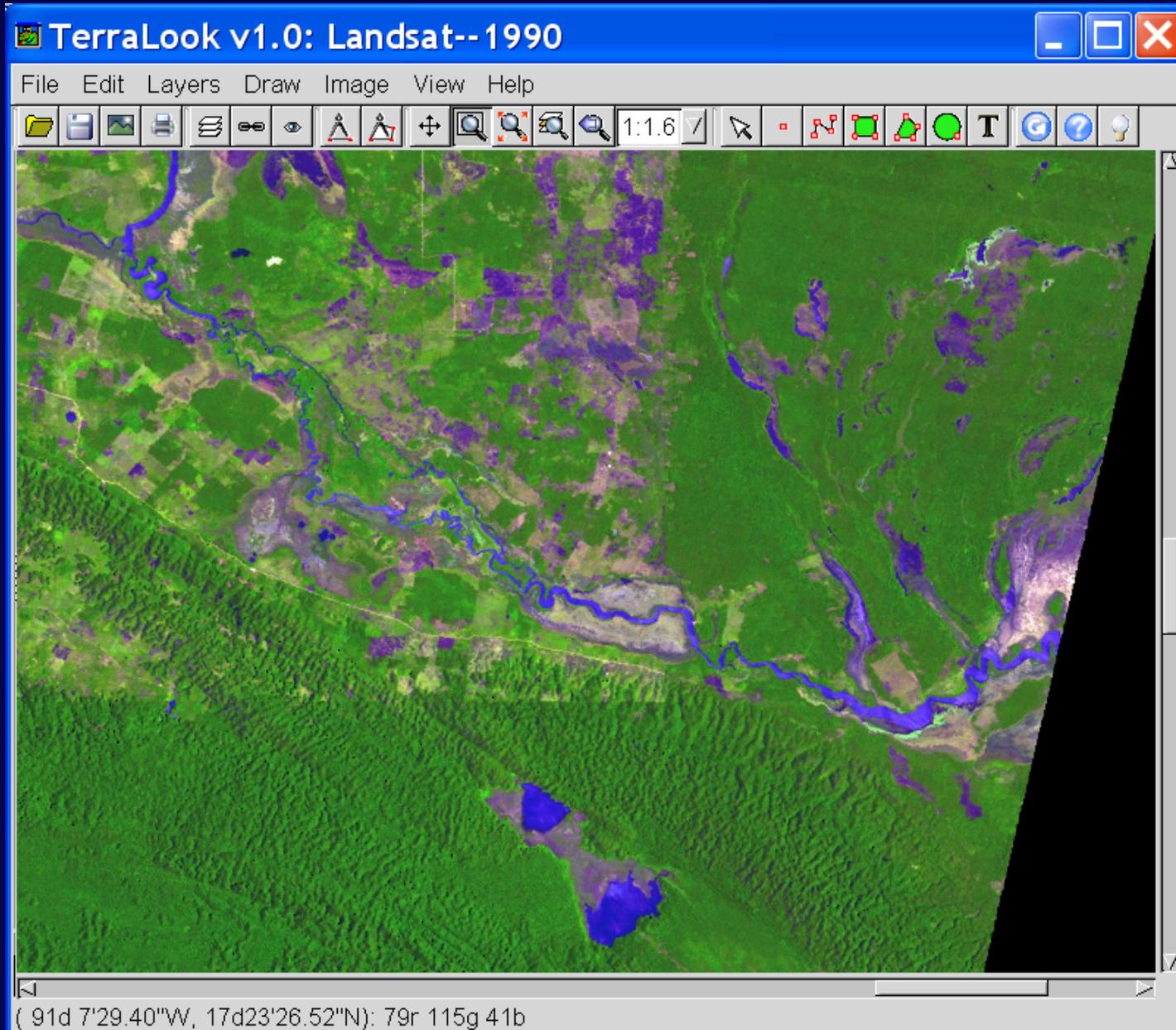
# Zoom to Area of Interest



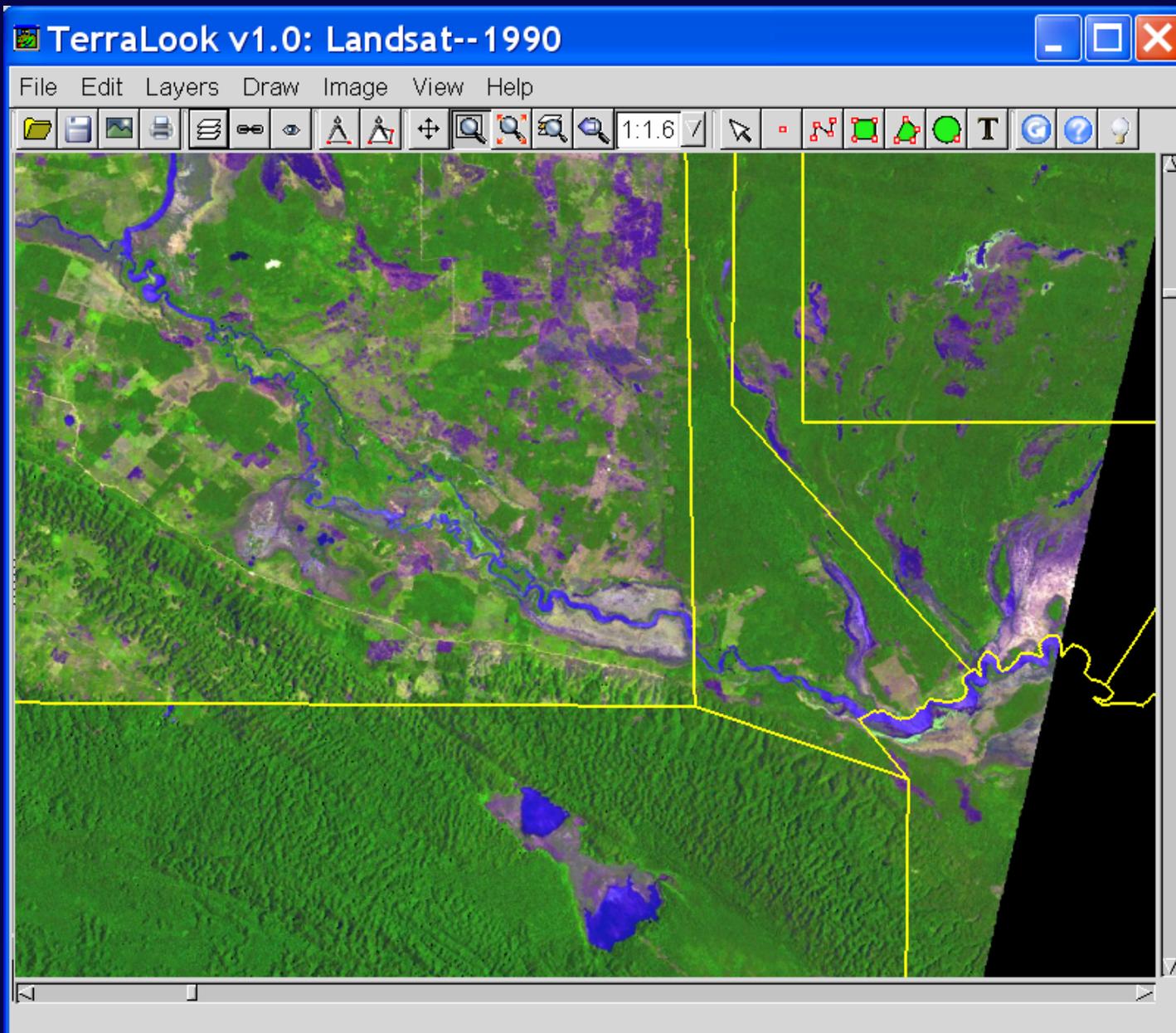
# Open Image



# Zoom to Border Area



# Display PA Boundaries

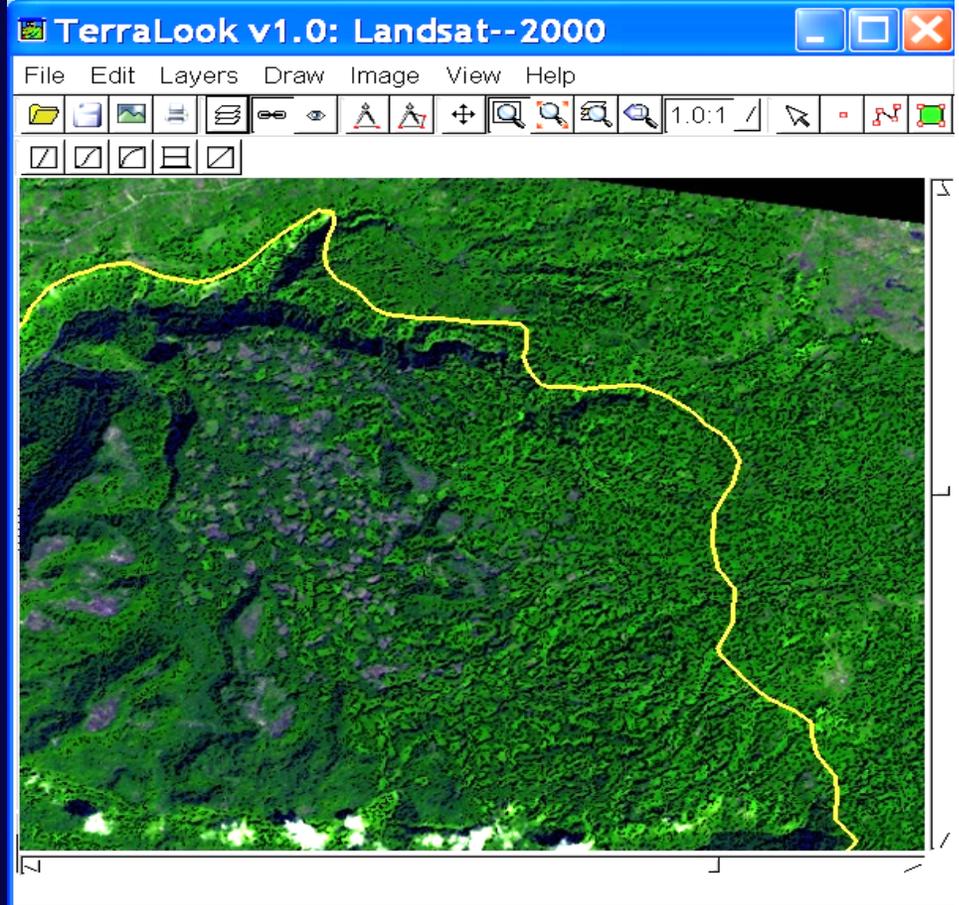
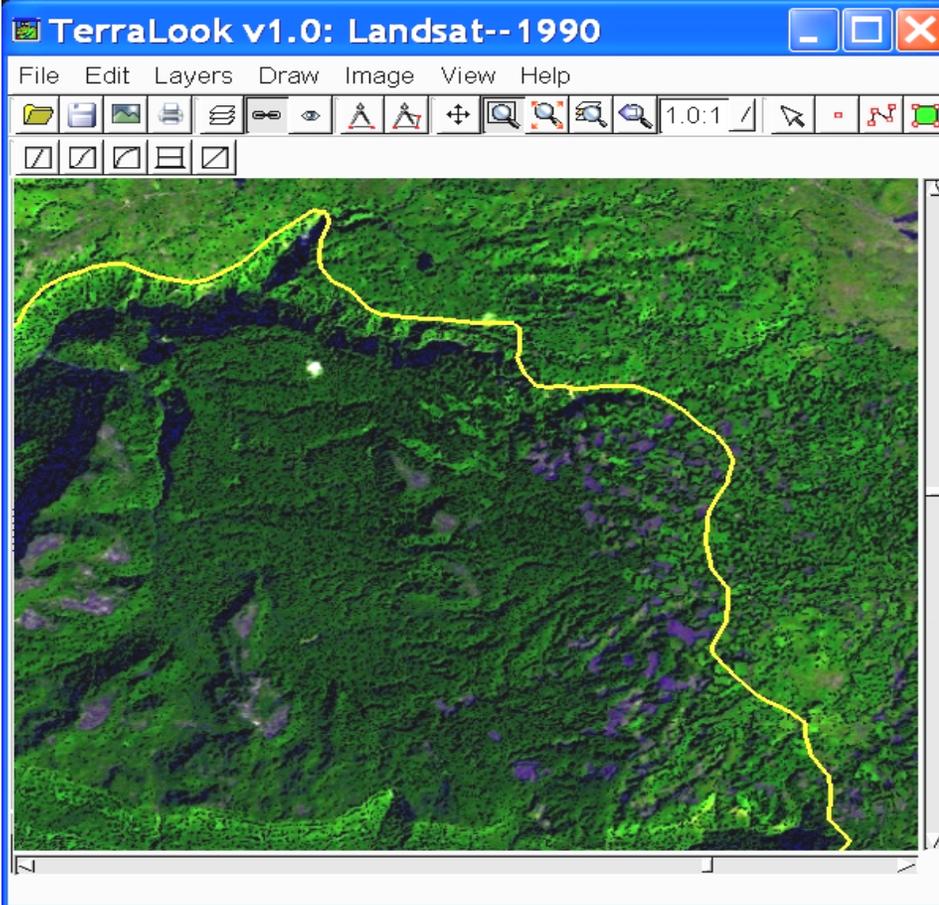


# Change Analysis

*In Laos...*

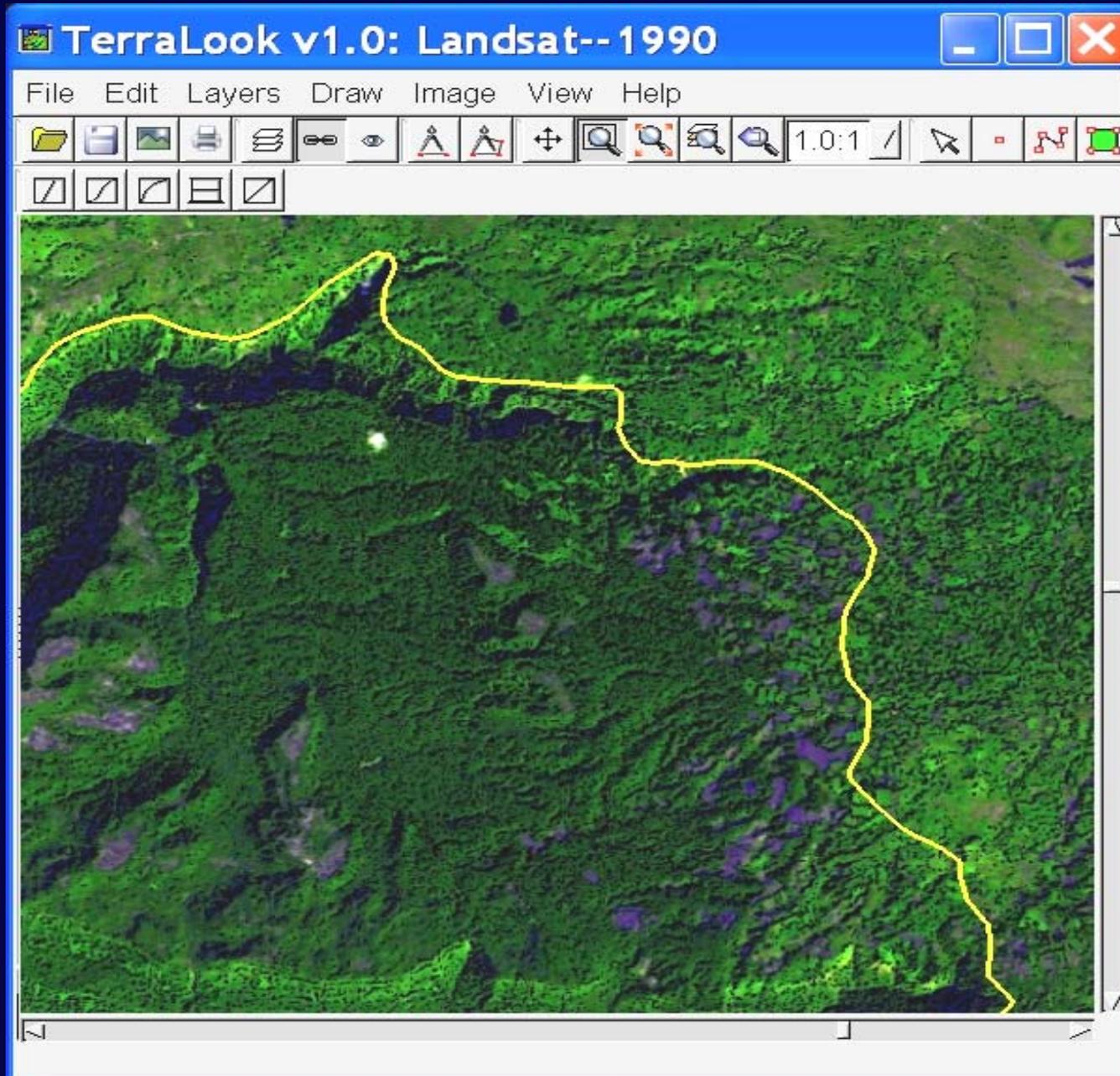
**1990**

**2000**



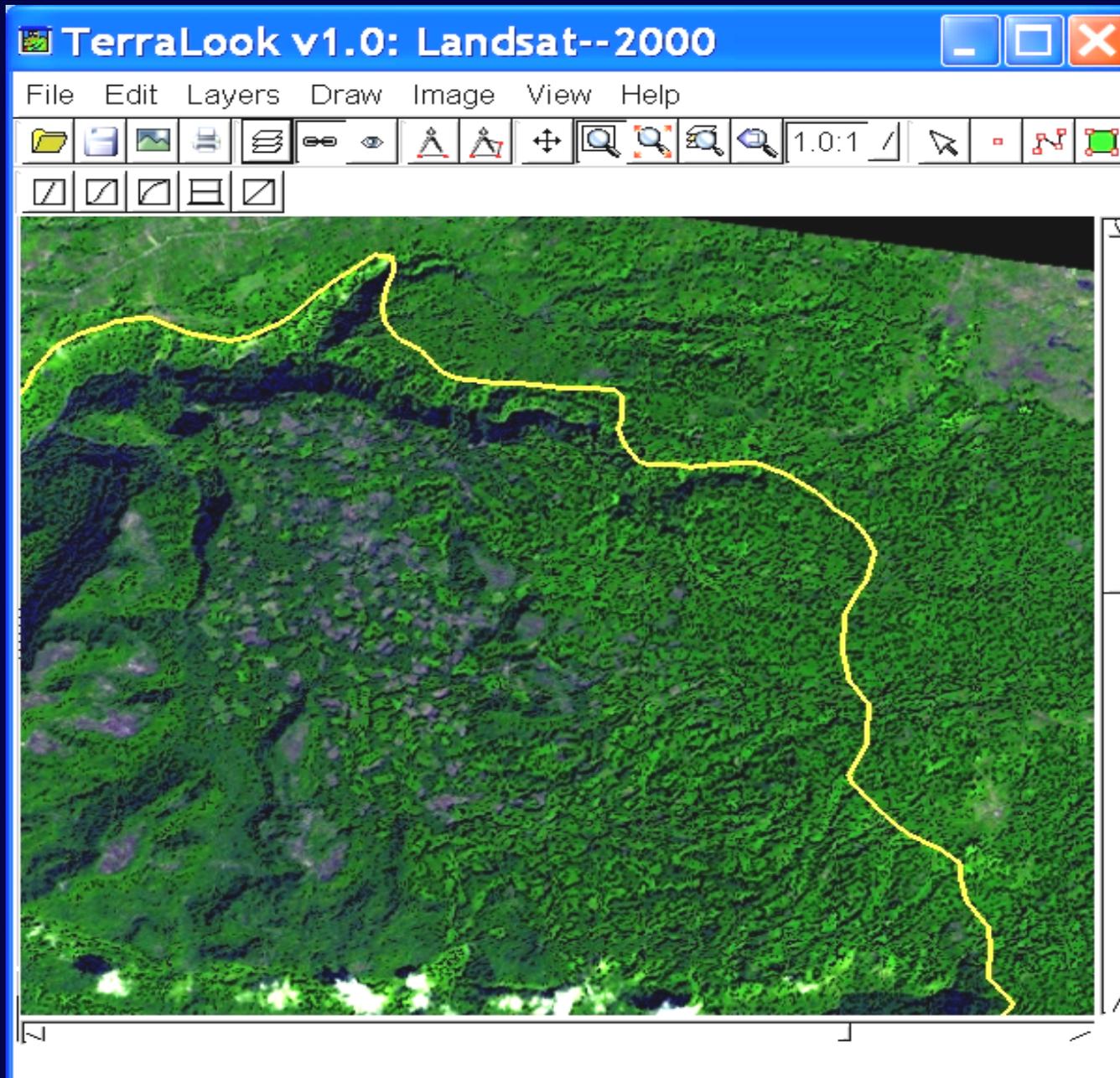
# Change Analysis: Flicker

1990

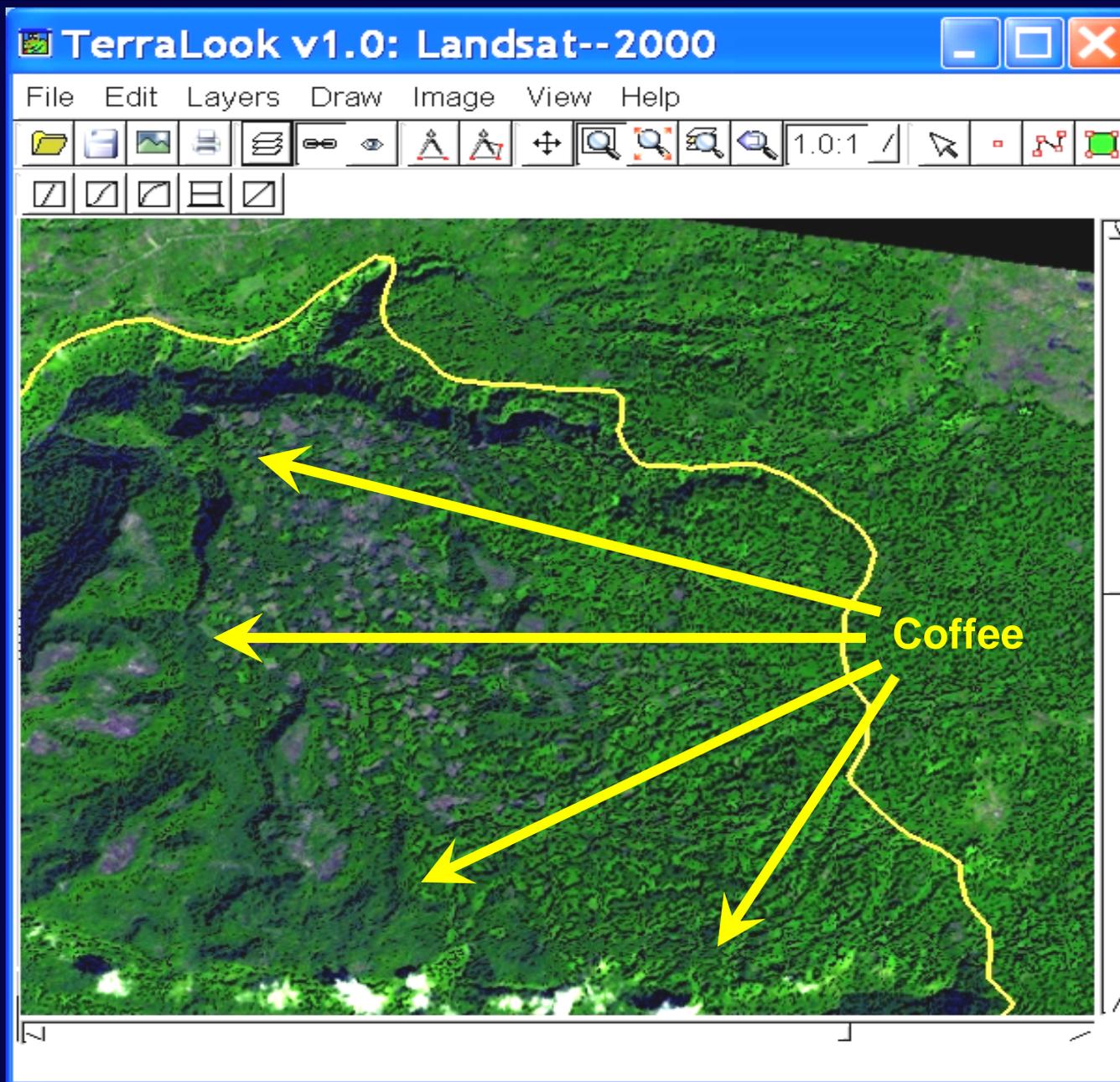


# Change Analysis: Flicker

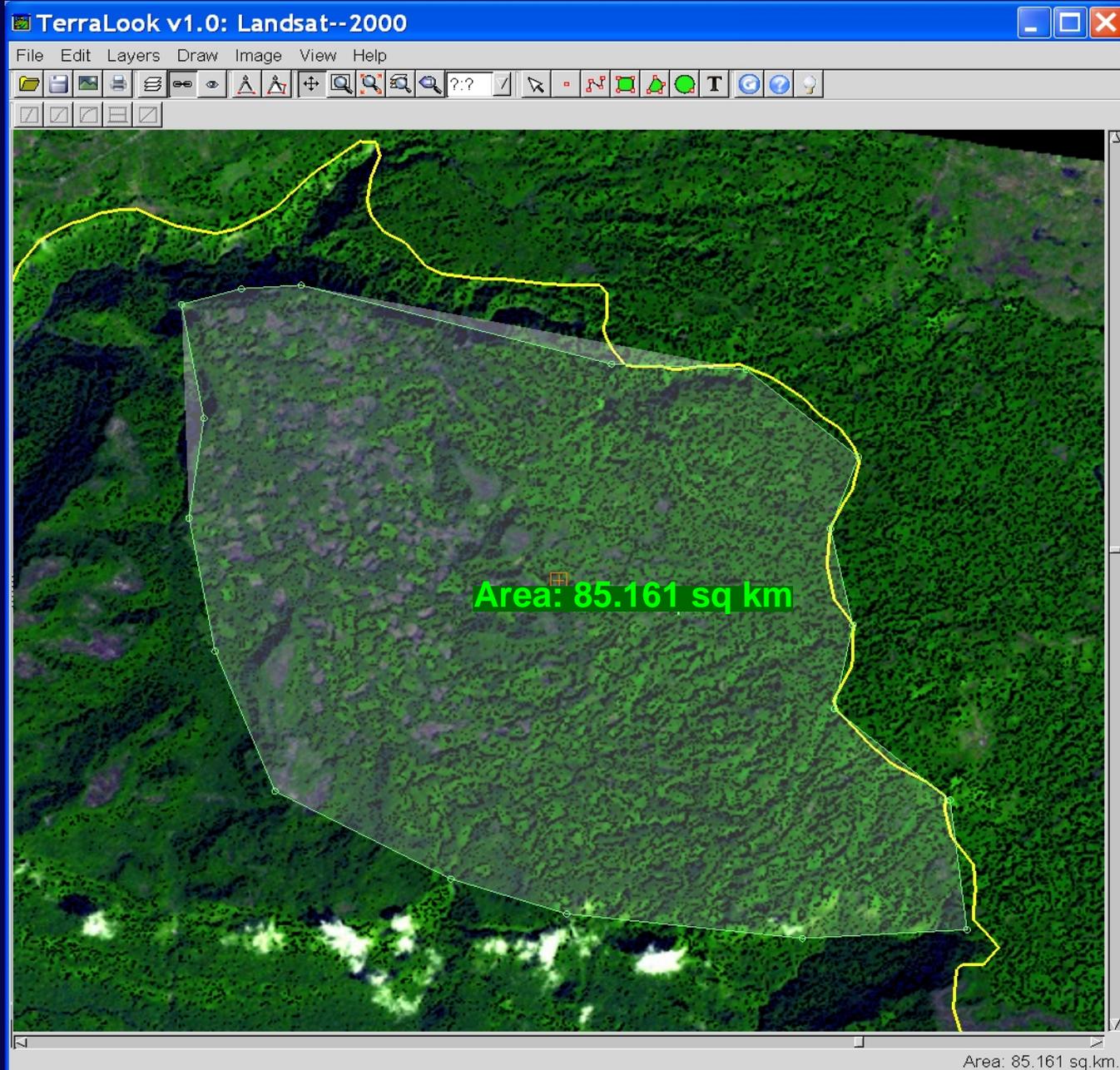
2000



# Annotate Image: Communication



# Measure Area or Distance



# Toolkit Capabilities

- Image display, roam, zoom
- Change analysis tools
- Measure
- Image annotation
- Overlay display, create, edit
- GPS point ingest
- Image enhancement
- Image mosaicking
- 3-D viewing (prelim)
- Advanced capabilities



# Outreach Plans

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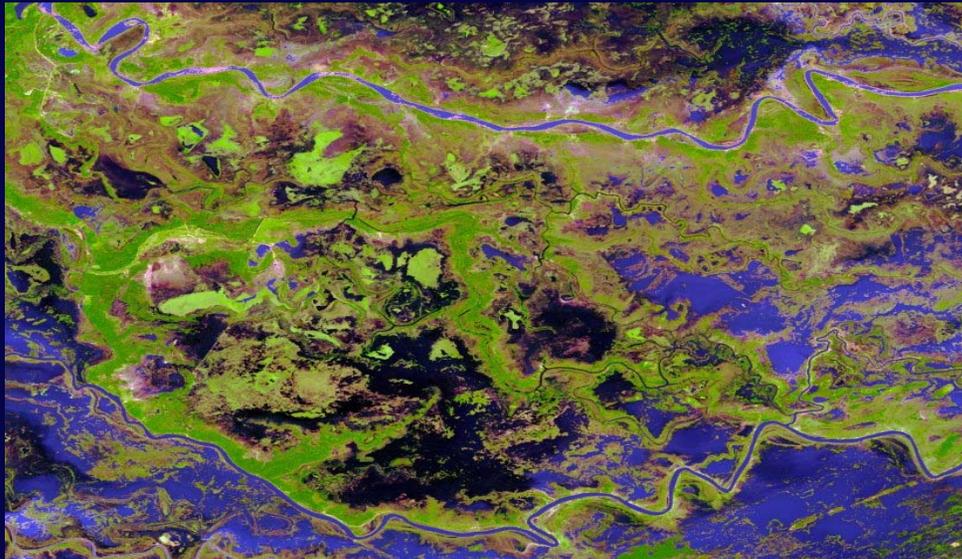
- ❑ **Work with regional and local organizations**
  - **Act as local “hubs”**
  - **Connect TerraLook to other orgs and local users**
  - **May offer training**
- ❑ **Create TerraLook distribution package**
  - **Explains TerraLook**
  - **Explains possible hub roles**
  - **Contains training materials**
- ❑ **Possible hubs include SERVIR, IABIN, RANPA, African “regional centers”, country PA and GIS agencies...**

# Summary: Ordering New Collections

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- ❑ USGS Website (not yet publicized)
- ❑ User selects scenes, USGS generates the Collection
- ❑ Download via ftp

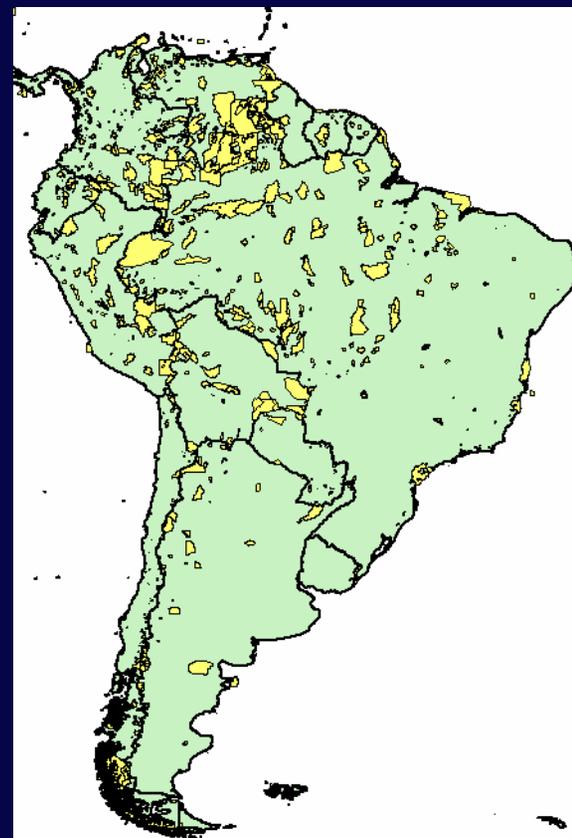
<http://edc2.usgs.gov/terralook>



## Also: Archived Collections

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- Central America
- Amazon Basin
- Most of Southeast Asia
- India
- Some of Africa
- Others...



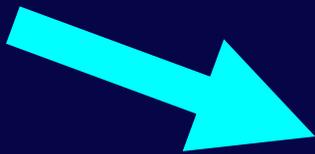
<http://asterweb.jpl.nasa.gov/terralook>

# Summary: Toolkit

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- ❑ **Version 1.0 available 3 March 2007**
  - **English and (most of) Spanish**
- ❑ **Free Open Source software**

**<http://terralook.sourceforge.net>**



Shrimp ponds  
near Machala  
Ecuador

<http://edc2.usgs.gov/terralook>

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**The End**