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How to Use TerraLook Collections

An Introduction to Viewing and Analyzing TerraLook Images

EROS Training and Education

U.S. Department of the Interior
U.S. Geological Survey

Learning Objectives

- After completing this module the student should be able to:
  - open a TerraLook Collection
  - open and compare TerraLook images
  - add vector information from a shapefile
  - interpret images and save the interpretation as a shapefile
  - annotate TerraLook images
  - save images as graphics
  - use “Help”

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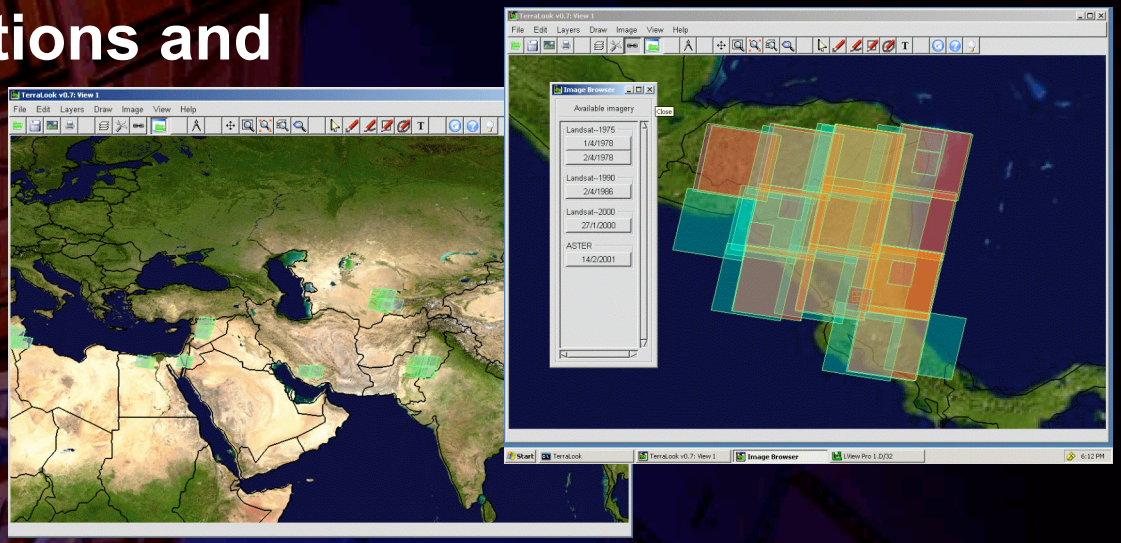
Overview

- TerraLook Collections are designed for use in documenting changes to the Earth's surface.
- The TerraLook Collections and Software are available at no cost.
- The TerraLook Software "understands" TerraLook collections and makes it easy to compare and interpret images.



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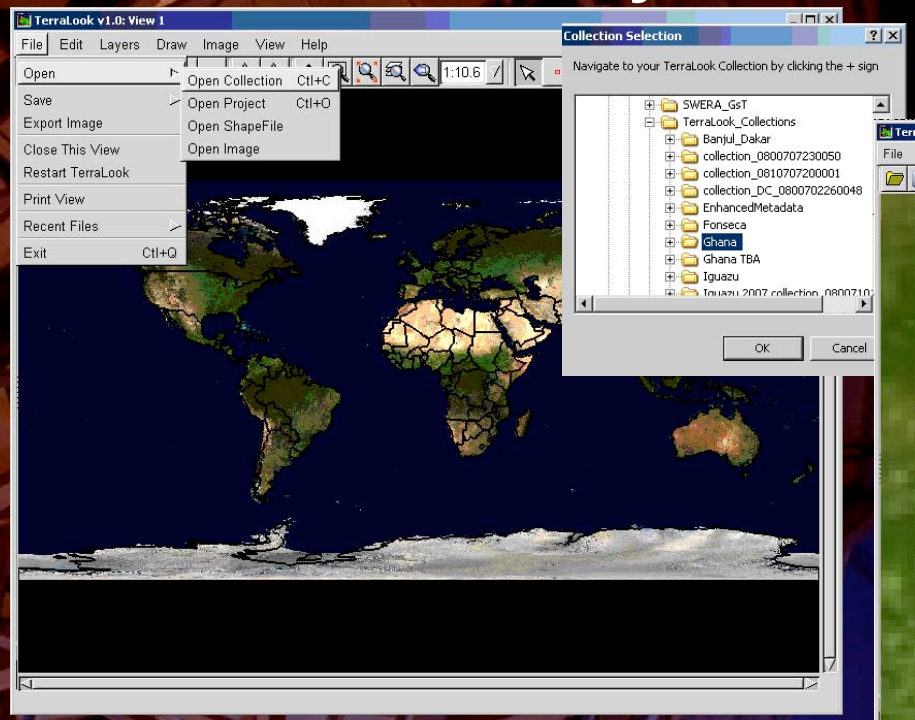
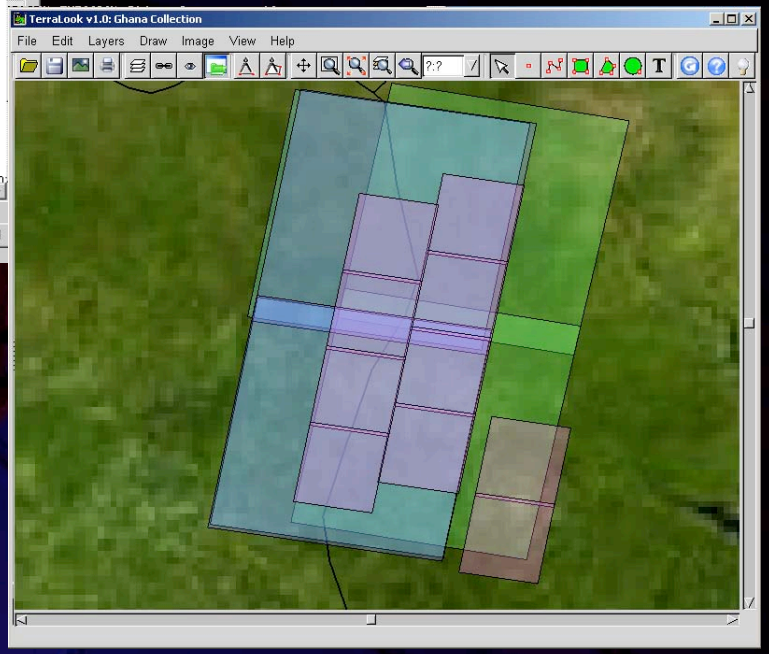
Opening a TerraLook Collection

- Open a Collection by going to “Open > Open Collection.”
- Select the directory containing the collection.



The collection will open zoomed in with the image footprints displayed.



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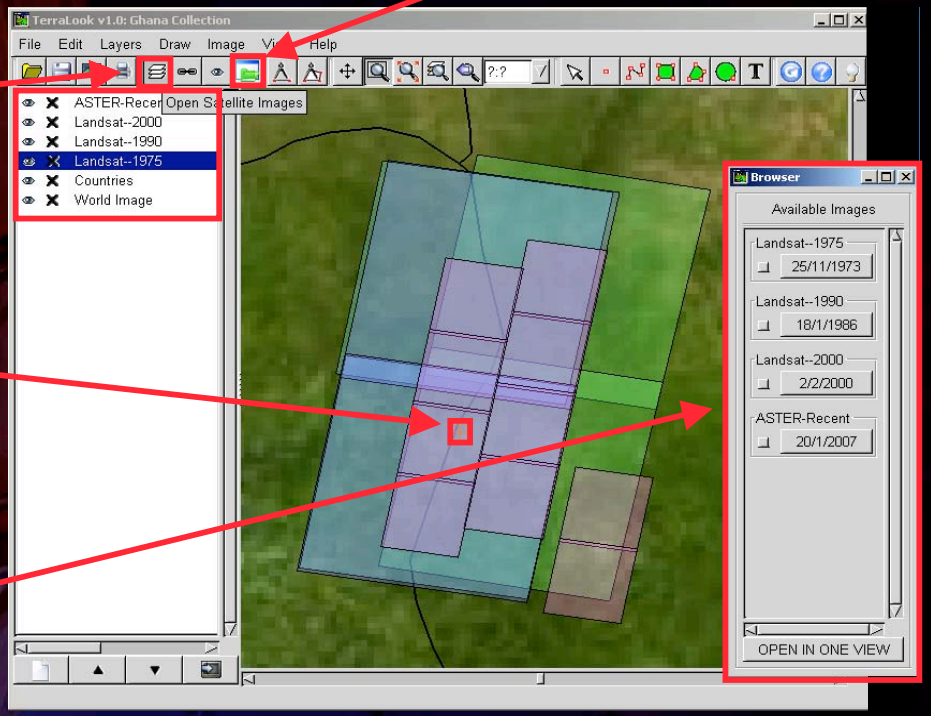
Finding Images in Collection

- Confirm that the "Open Satellite Images" icon is selected.
- Use the toggle layer manager icon to turn layers on and off.
- Click on a location of interest and a "Browser" window to open a listing all of the images covering that point.



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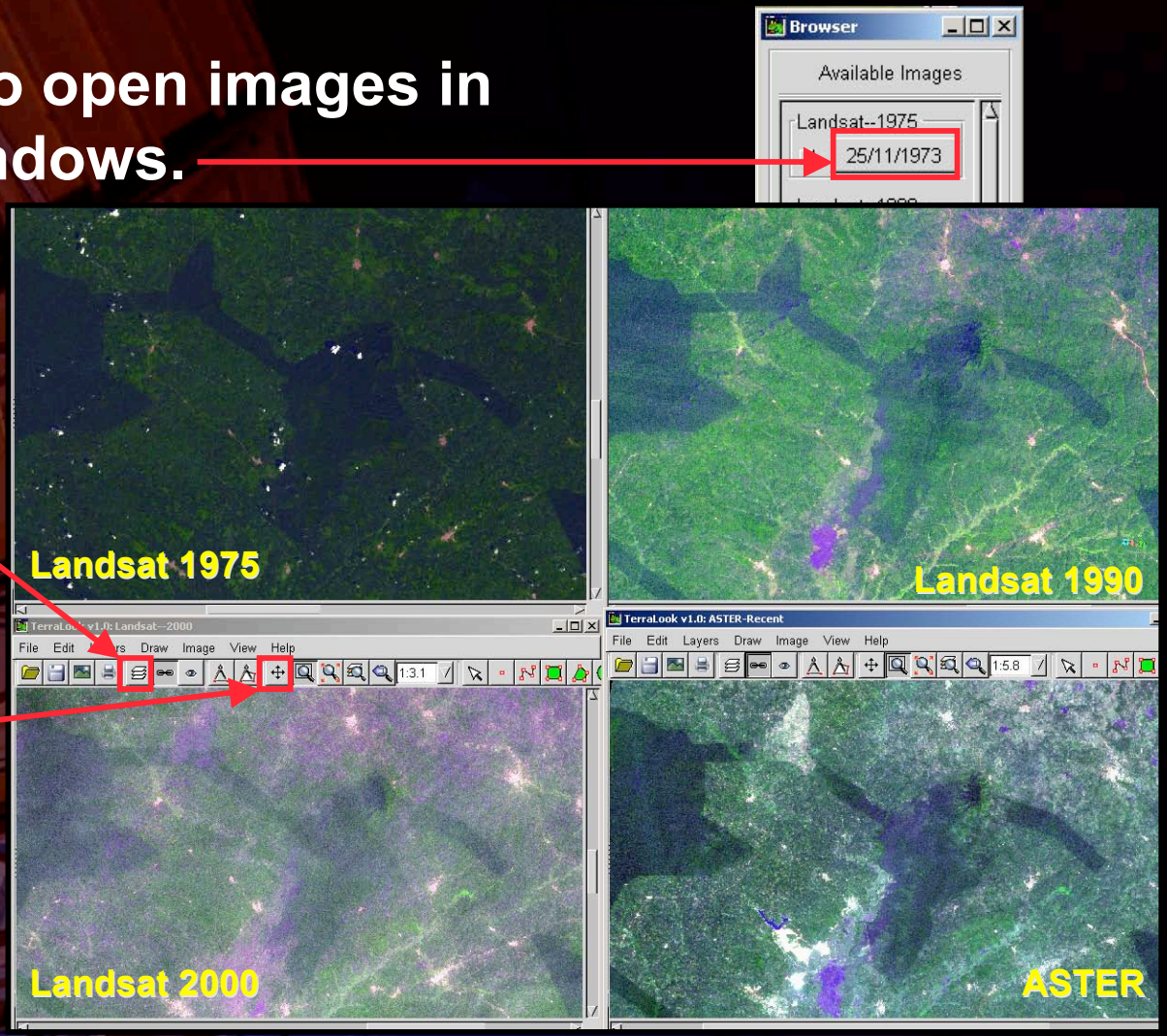
Opening/Comparing Images Using Link

- Click on a date to open images in date-specific windows.
- Click on the link icon to link all windows
- Click on zoom icon to enlarge images



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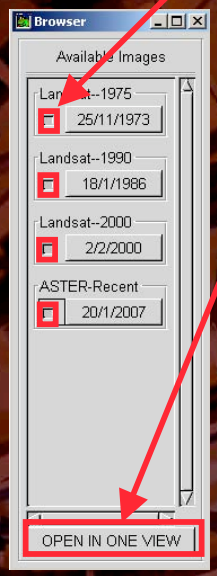
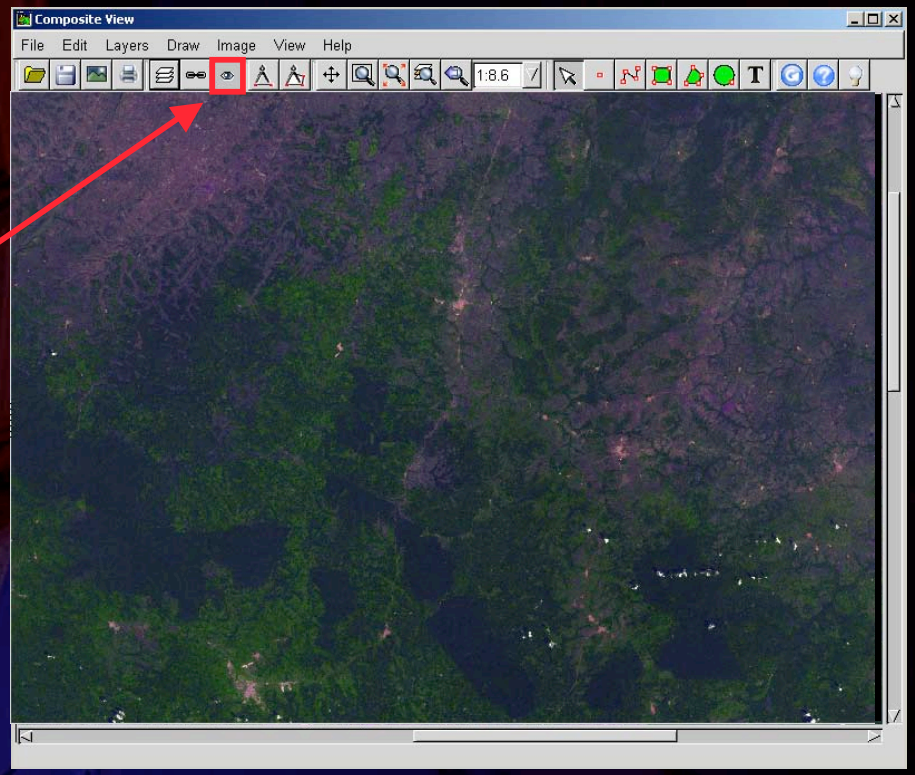
Comparing Images with Composite View

- Flicker images using Composite View window
  - In the browse window, select images by clicking in small check boxes.



- Click on "Open in One View" to open the Composite View.
- The flicker tool is automatically selected.
- Right click in the Composite View window to change dates.



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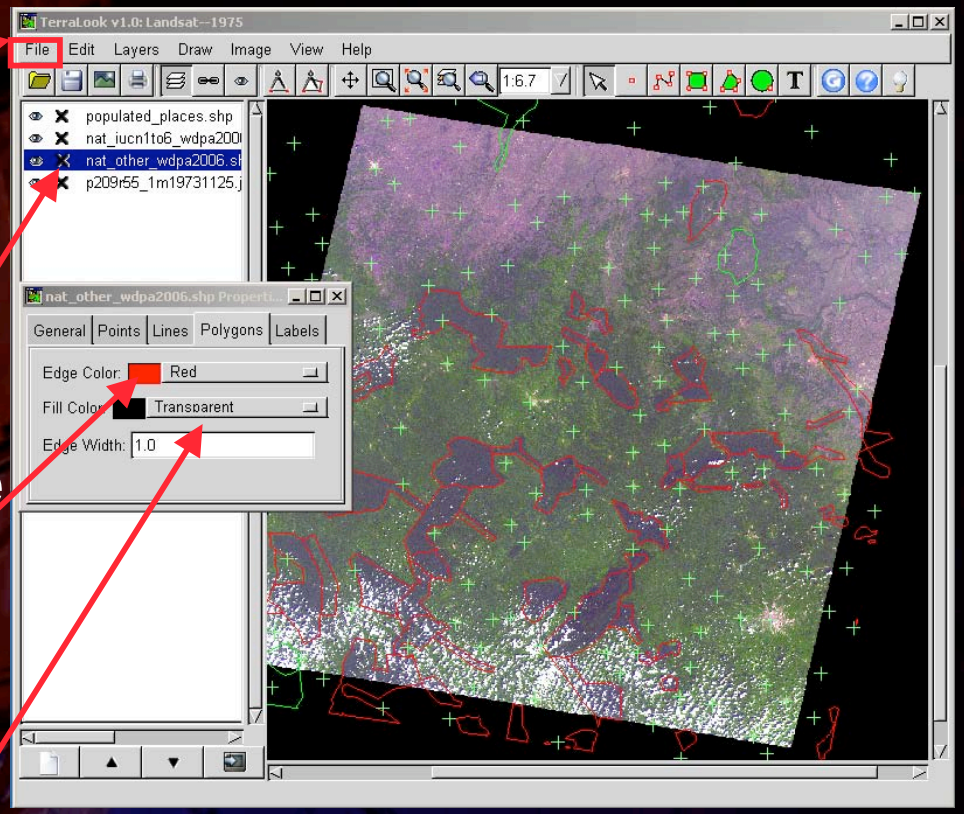
Adding Existing Vector Information

- Display protected area and city shapefiles by going to "File > Open Shapefile."
- Right click on the layer name to change symbology.
- Change the color of polygon boundaries and make polygons transparent.



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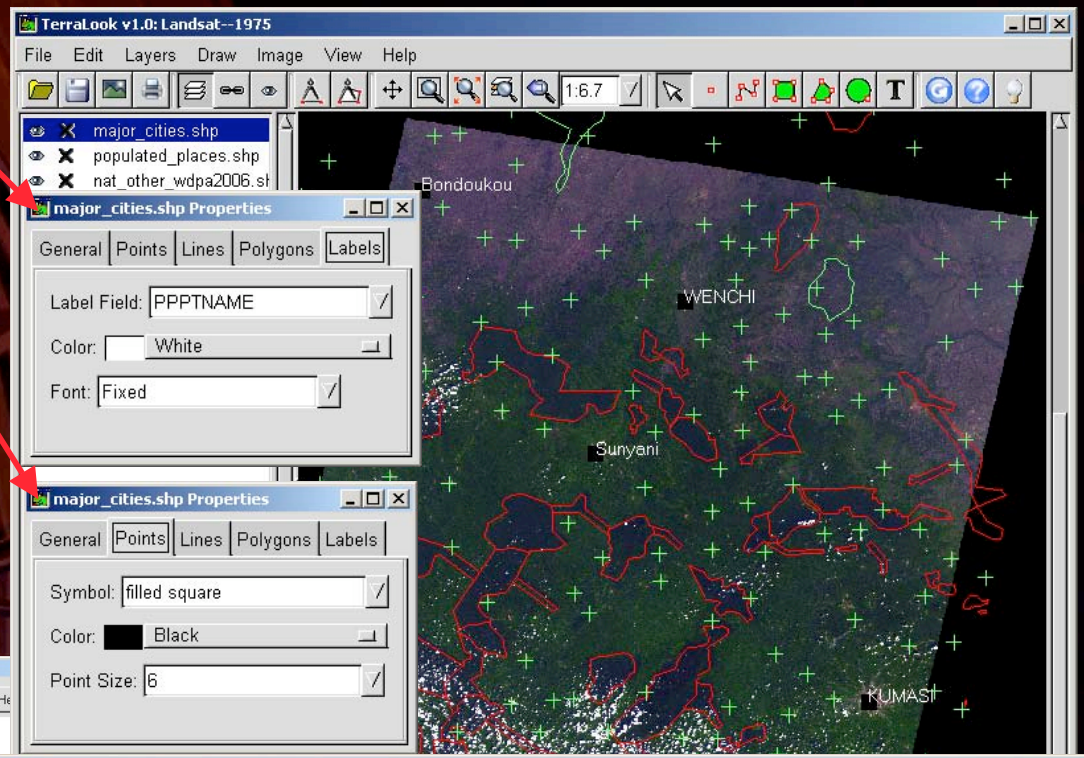
Labeling Existing Vector Information

- Label cities:
  - select attribute
  - select point symbology
- Open the Attribute Table to see attributes in shapefiles



Layer Attributes: major_cities.shp

Show New layer Tools

	PPPTNAME	SIZE
0	KUMASI	Large
1	ABENGOUROU	Large
2	Sunyani	Large
3	WENCHI	Large
4	Bondoukou	Large
5	DAMONGO	Large

Browser | TerraLook v1.0: Landsat...

Layer Attributes: nat_iucn1to6_wdpa2006.shp

Show New layer Tools Help

	AREANAME	ISO3	COUNTRY	DESIGNATE	STATUS	IUCNCAT	SITE_CODE	EST_DATE	AREA_HA	
0		CIV		National Park	Reclassified	II	7523	19680101	1150000	In late 1980's most management activities ceased in th
1	Boabeng-Fiema	GHA	Ghana	Wildlife Sanctuary	Designated	IV	26462	19740101	444	
2	Mole	GHA	Ghana	National Park	Designated	II	669	19710101	484040	
3	Bui	GHA	Ghana	National Park	Designated	II	671	19710101	182060	
4	Bia	GHA	Ghana	National Park	Designated	II	672	19740101	7800	
5	Bia	GHA	Ghana	Game Production Reserve	Designated	VI	5150	19740101	22800	

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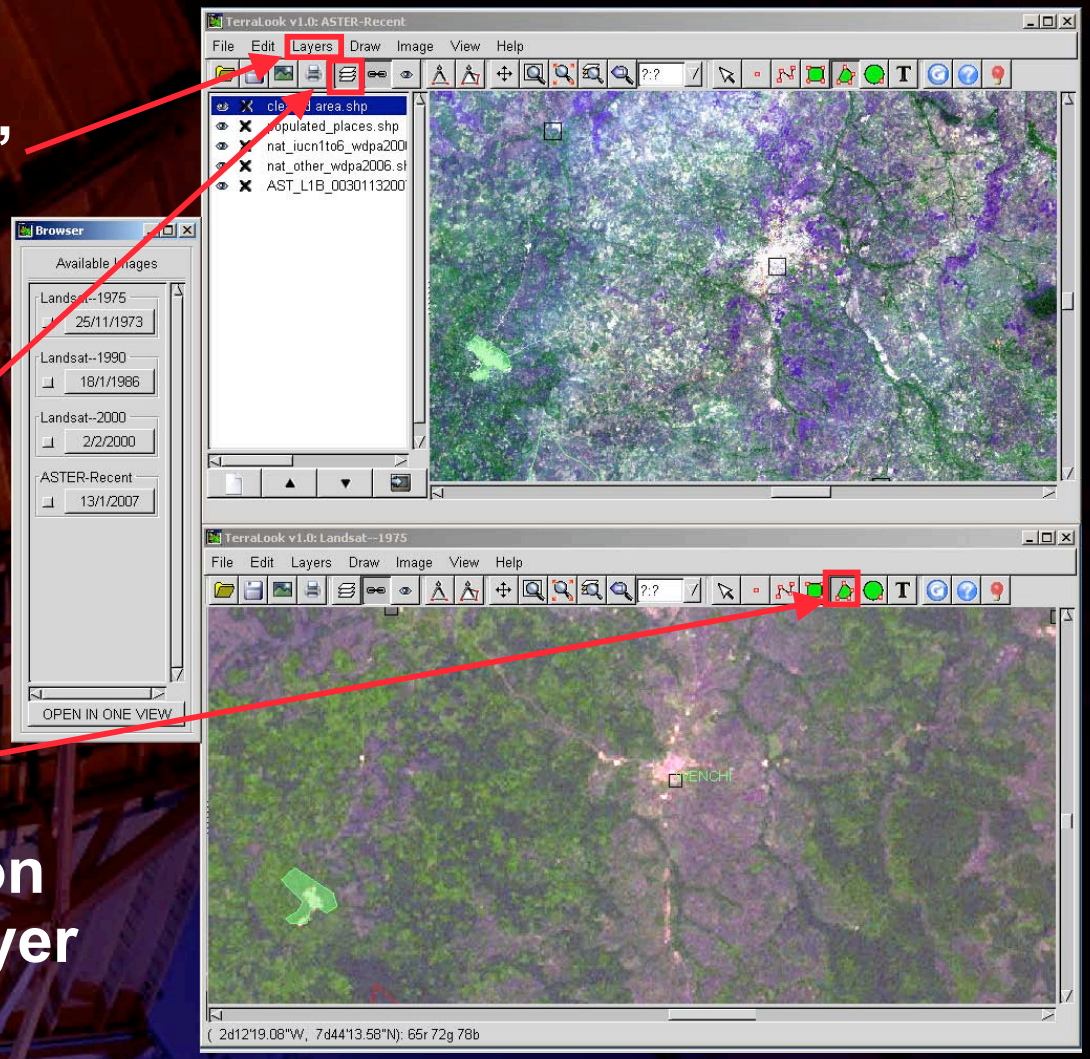
Creating a New Vector Layer

- Go to "Layers > Create New Layer" to create a new layer
- Toggle the layer manager icon to change the name of the new layer
- Use the polygon icon to add new polygon data to the new layer



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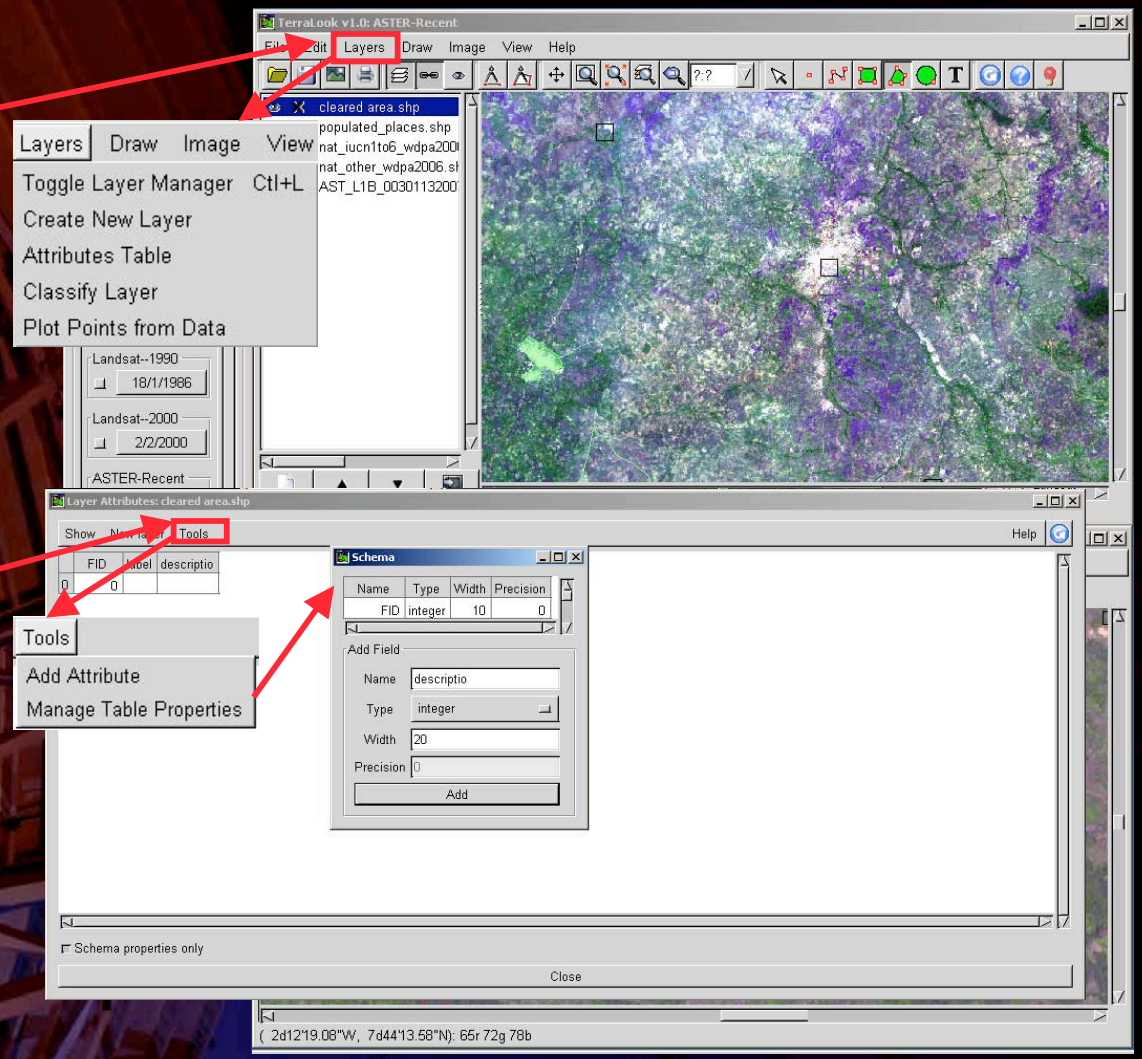
Adding New Vector Attributes

- Use “Layers > Attributes Table” to add information
- Go to “Tools > Manage Table Properties” to add fields
- Click inside the table to add values



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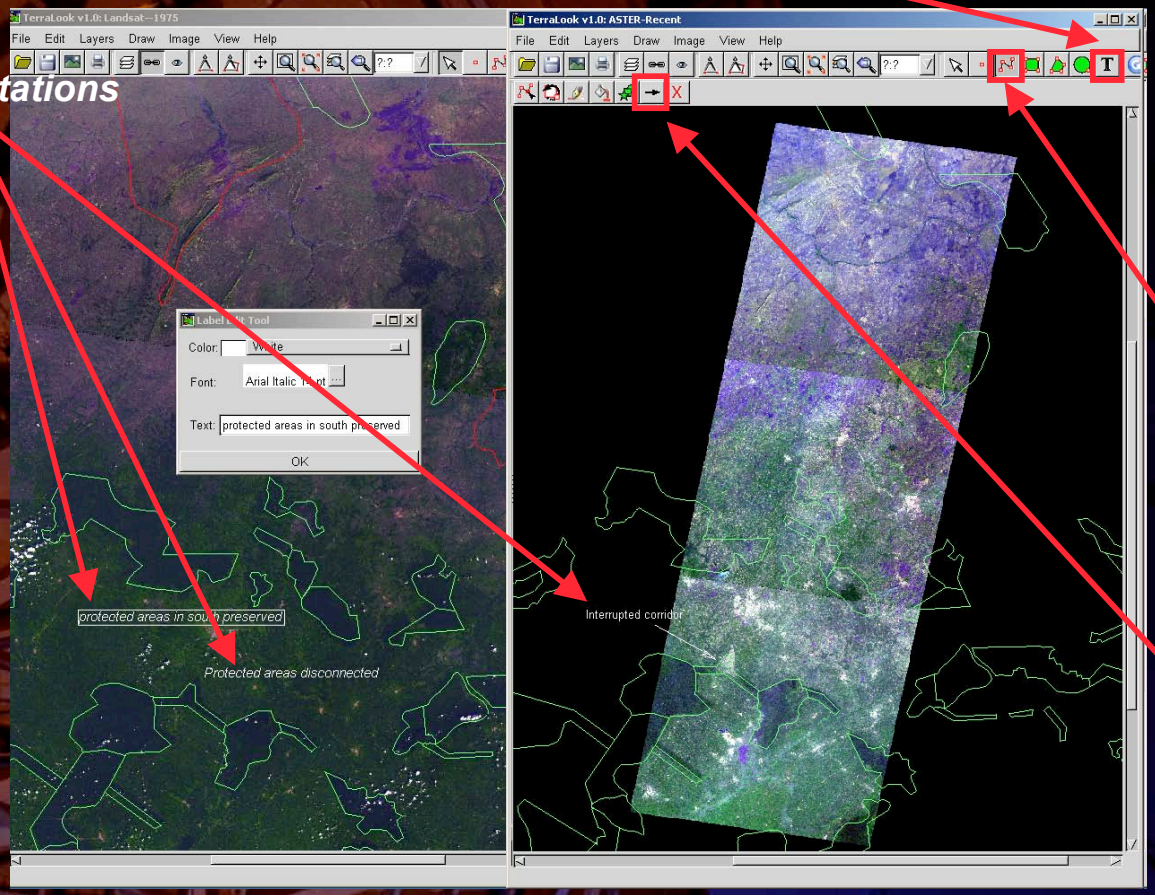
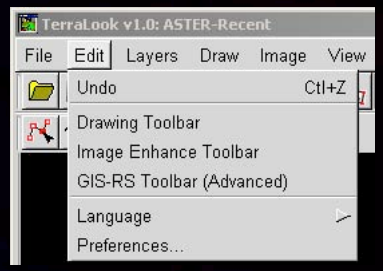
Annotating Images

- Use the annotate icon to place text on the images.





- Arrows can be inserted by using first the line tool, then the make arrowhead tool.

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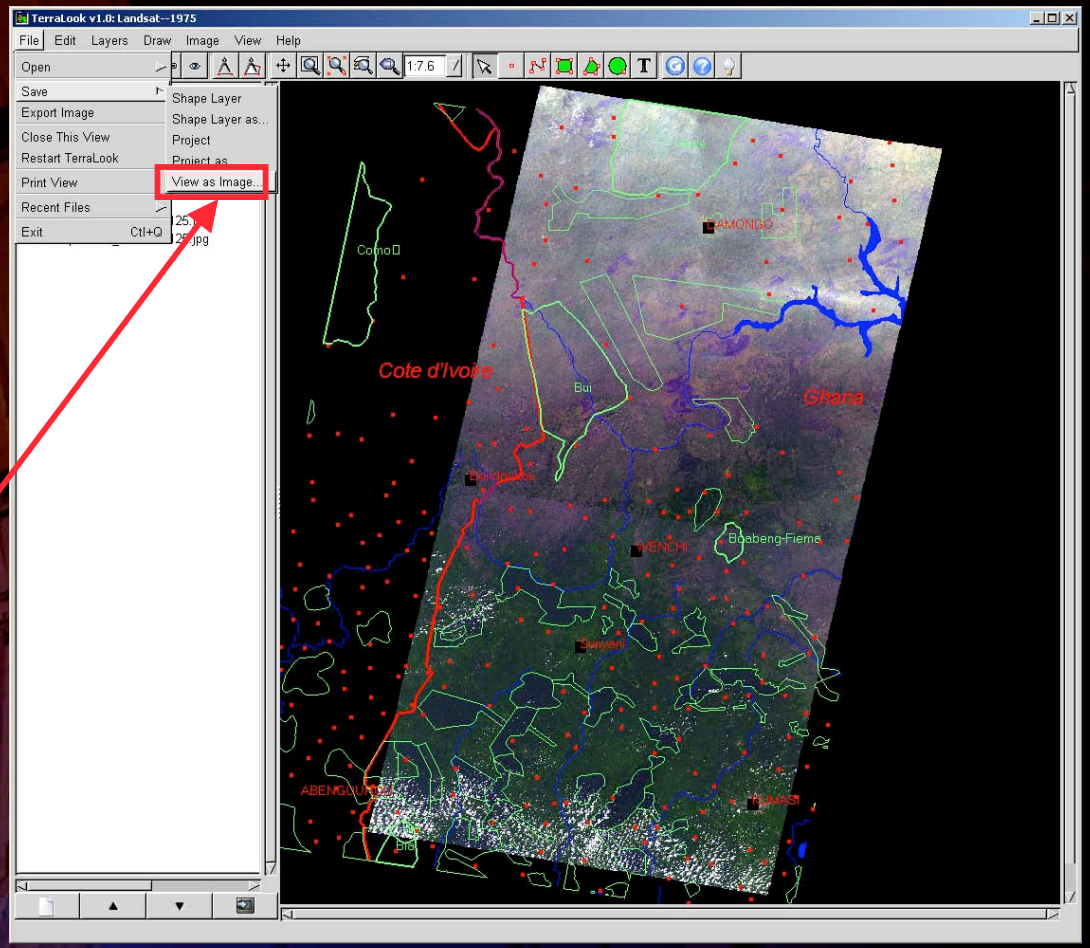
Saving Images as Graphics

- Use the layer manager to
  - select,
  - label,
  - symbolize, and
  - order layers.
- Go to “File > Save > View as Image” or click on the icon.
- The image will be saved as a JPEG.



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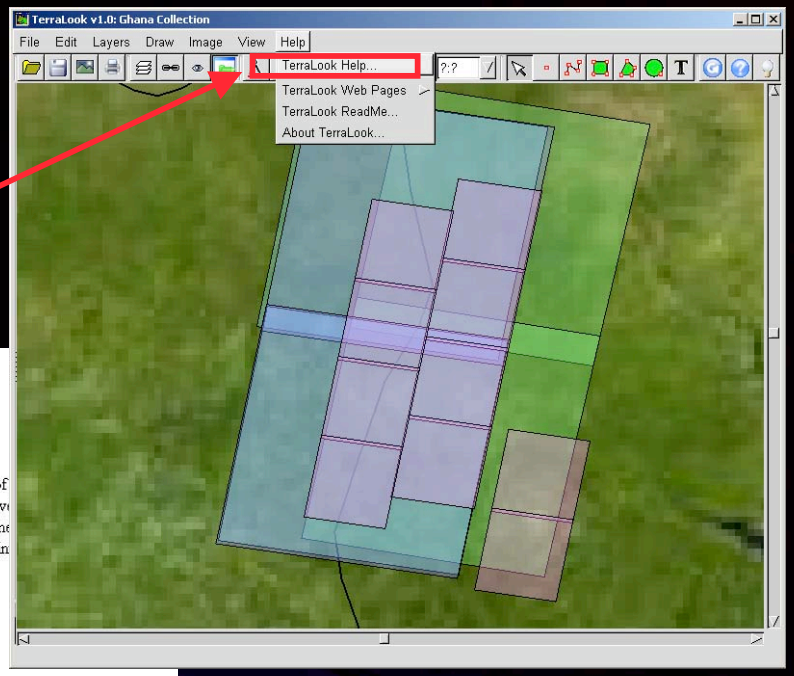
Using Help Documentation

- For assistance, go to the "Help > TerraLook Help" menu.



TerraLOOK
built on OpenEV

Help

A Collection is a group of images in a particular format. TerraLook provides quick access to these images, according to the year of satellite sensor used. Don't have a Collection? Download one from http://asterweb.jpl.nasa.gov/paa. You can access this w Help->Webpage menu entry. Note that Collections are generally large and so may be difficult to download without a fast internet conne ASTER team that operates the site, they ***may*** be able to send the collection out on CD or DVD. Starting sometime in early 2007, this in the official site to be operated by the US Geological Survey.

Quick Start Guide

- Opening a Collection
- Adding Layers
- Creating and Editing Shapes
- Adding Labels
- Measuring Distance and Area
- Plot Points from Data
- Saving Work
- Printing
- TerraLook Screencasts (online soon!)

About TerraLook

- About the TerraLook Project
- Installing TerraLook
- TerraLook Collections and Satellite Sensors

Using TerraLook

- The User Interface
  - Menu options
  - Iconbar tools
  - Toolbars
  - Layer Manager
    - Raster Properties Dialog
    - Vector Properties Dialog
    - Point Query Properties Dialog
- Interactive Python Shell
- 3D Views
- Setting Application Preferences
- File Formats
- Performance Tuning
- Customization

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TerraLook Web Sites

- USGS EROS TerraLook (http://terralook.cr.usgs.gov)
- NASA JPL TerraLook (http://asterweb.jpl.nasa.gov/terralook)
- TerraLook software (http://terralook.sourceforge.net)

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Exercises

- Open and compare TerraLook images) (30 Minutes)
- Overlay existing and create new vector data (40 minutes)
- Annotate image and save as graphic (20 minutes))

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Open and compare TerraLook

- Open TerraLook Collection
- Open images from multiple epochs
- Link and zoom images
- Use Browser window to select images in multiple epochs and open in composite window
- Flicker through the epochs in the composite window

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Overlay vector data

- Open shapefile and turn on layer manager
- Change symbology of shapefile
- Label shapefile
- Open and view the attribute table
- Create new vector layer and edit layer name
- Click on the polygon icon and digitize boundary
- Add attribute to new layer add value

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Annotate image and save as graphic

- Add annotation to image
- Draw arrow on image
- Label and symbolize vector data on image
- Save image as JPEG graphic

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