


QGIS

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IIIT-HYDERABAD

Introduction to QGIS

- Quantum GIS (QGIS) is a GIS tool for managing geographical data, 3-D analysis, statistical analysis.
- QGIS is *Free and Open Source* software.
- It is an official project of OSGEO (Open Source Geospatial Foundation) 
- Available under **GNU General Public License**; having support for vector, raster, and database formats.
- QGIS is translated into **70** languages (Hindi, Tamil, Malayalam, Telugu)
- Plug-ins available to expand compatibility and functionality.
- Extensive help and documentation is available.

Who uses open source?

90% of supercomputers

80% of internet servers

70% of smart phones *

Who uses open source GIS?

ESRI


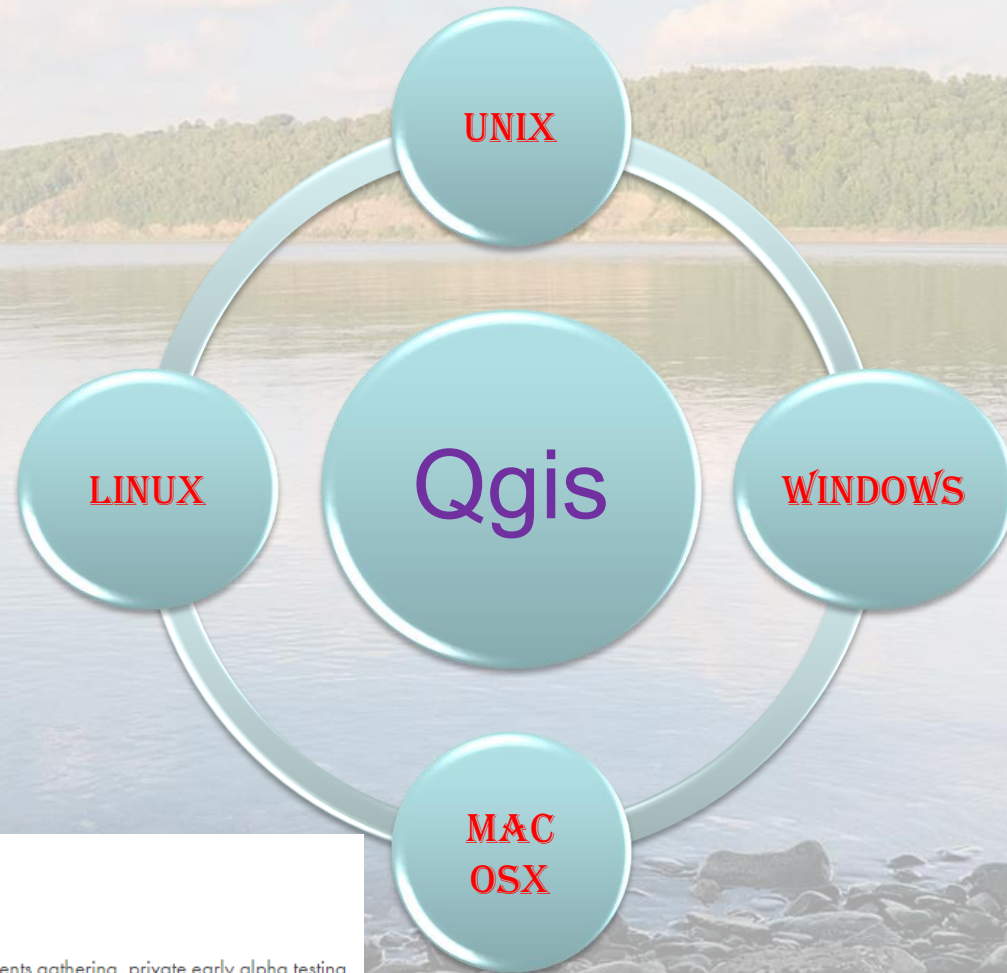
IDRISI

ERDAS

Google

many others . . .

➤ QGIS is multiplatform GIS that runs on



QGIS - Experimental
OPENGIS.ch Business
This app is compatible with all of your devices

QField in the wild

Posted on June 15, 2015 by marco — 2 Comments ↓

QField Experimental is out, after a couple of months of requirements gathering, private early alpha testing and foremost tons of emails requesting access to the testes group we decided today to put the current BETA version in the playstore. This means that from now on you can install QField just like any other android app by using the playstore.



ANDROID version of Qgis is also available for mobile phones

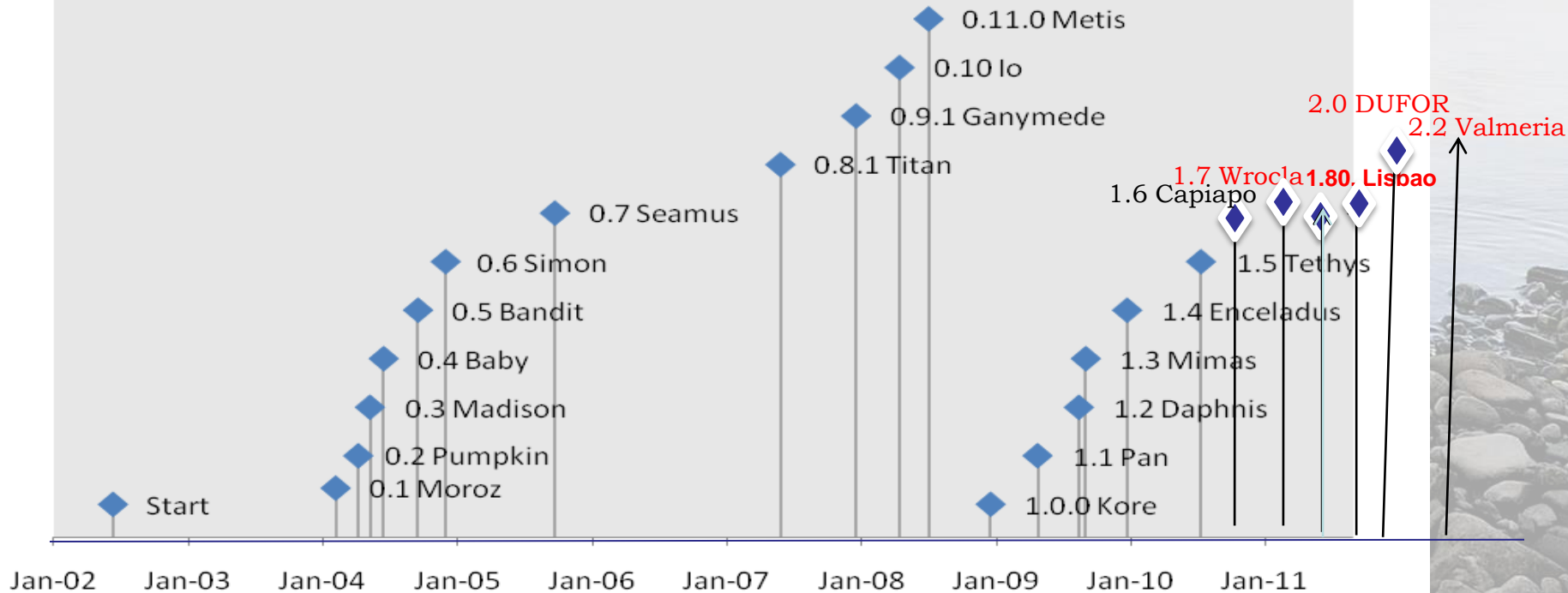
History

Gary Sherman in February 2002 started to develop a gis. Quantum GIS can also be used as graphical user interface to GRASS from version 1.2.

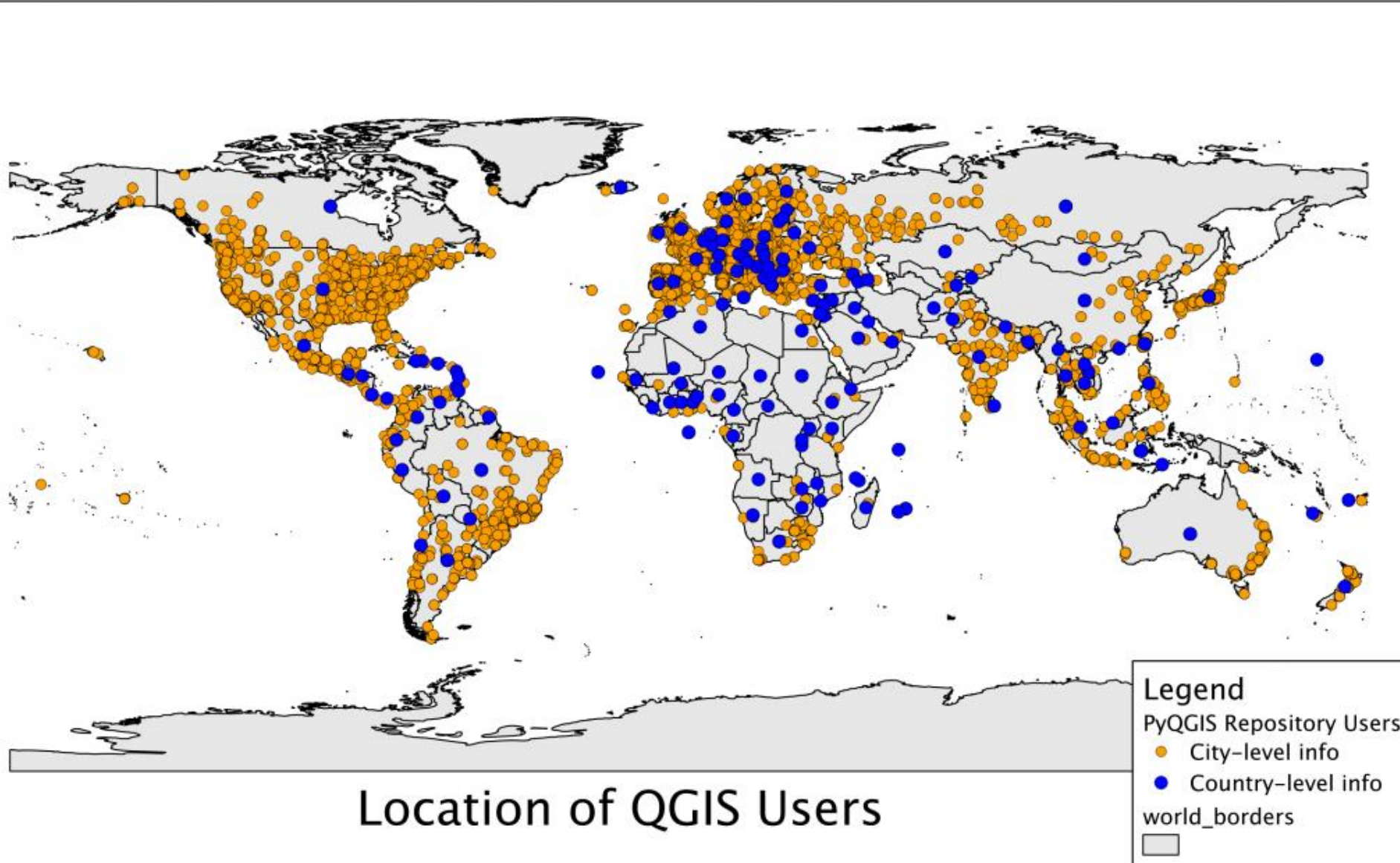
The first release → **July 19, 2002.**

The current version → **Qgis 2.10 Pisa**

QGIS Timeline



Quantum GIS Users around the World



Location of QGIS Users



GIS Data Formats



Raster

- Data are divided into cell, pixels, or elements
- Cells are organized in arrays
- Each cell has a single value
- Perhaps the most common example of raster data is a **digital image**

Vector

Data are associated with **points, lines, polygons or boundaries** enclosing areas

Points are located by coordinates

Lines are described by a series of connecting vectors (line segments described by the coordinates of the start of the vector, its direction, and magnitude or length)

Areas or polygons are described by a series of vectors enclosing the area

QGIS_DATA TYPES

MAP DATA

- Contains the **location and shape** of geographic features.
- Maps use three basic shapes to present real-world features:
points, lines, and areas (called polygons)

ATTRIBUTE DATA

- Tabular data is the **descriptive data** that GIS links to map features.
- Ex specific areas information like states, census tracts, cities, etc., often comes packaged with map data.

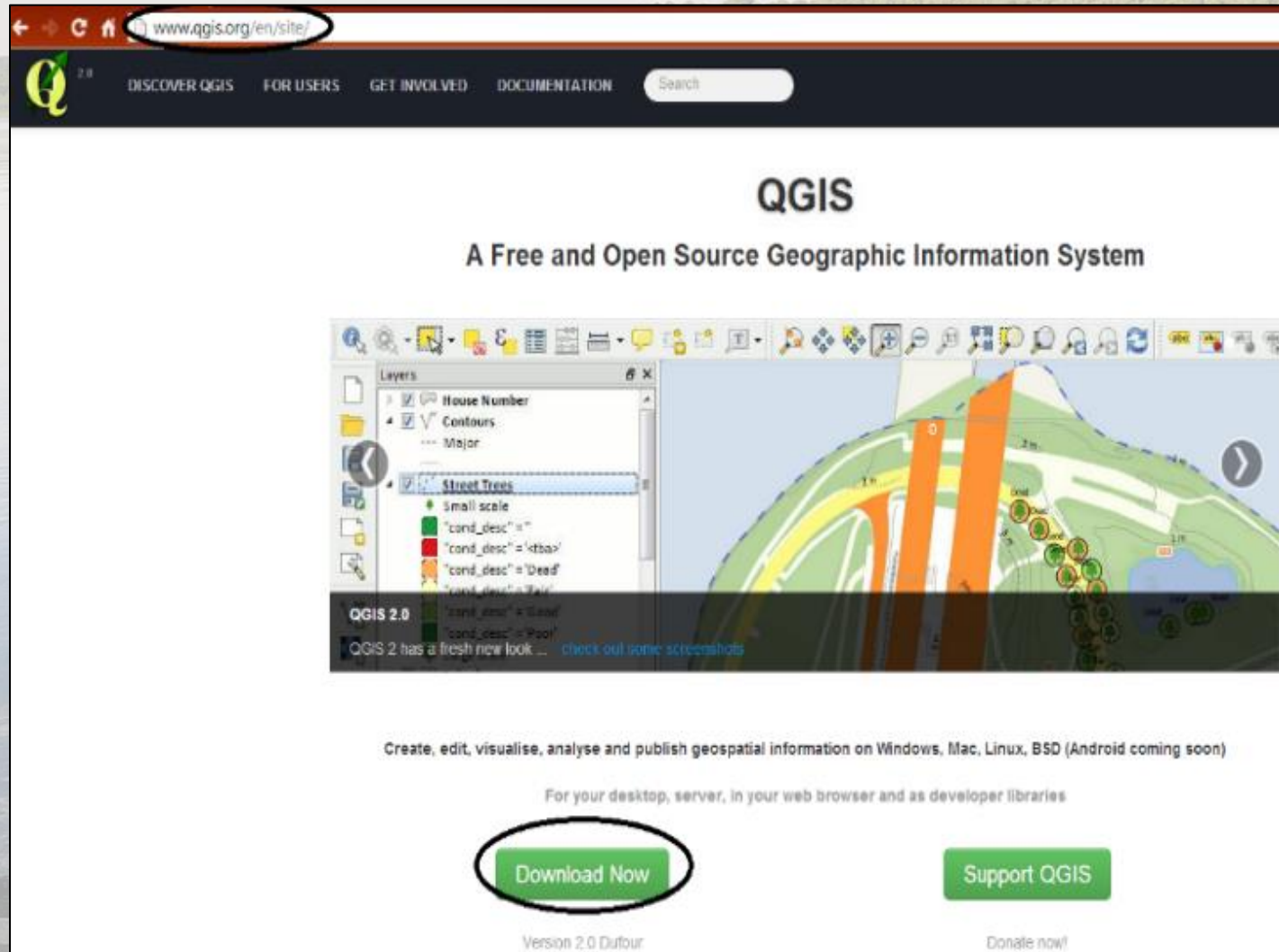
IMAGE DATA

- Features are represented as **a matrix of cells**
- Image data ranges from satellite images and aerial photographs to scanned maps

Getting Started

Installation:

Get the latest information of binary packages at the QGIS website at <http://www.qgis.org/en/site/>



The screenshot shows the QGIS website homepage. The browser address bar displays www.qgis.org/en/site/. The navigation menu includes "DISCOVER QGIS", "FOR USERS", "GET INVOLVED", and "DOCUMENTATION", along with a search bar. The main heading reads "QGIS A Free and Open Source Geographic Information System". Below this is a large image of the QGIS desktop application interface, showing a map with various layers like "House Number", "Contours", and "Street Trees". At the bottom of the page, there is a "Download Now" button circled in black, and a "Support QGIS" button. The footer text includes "Version 2.0 Dufour" and "Donate now!".



1

Menu Bar

2

Tool Bar

3

Map Legend

4

Map View/ Canvas area

Layers

Layers Browser

Shortest path

Start

Stop

Criterion Length

Length

Time

Calculate Export Clear

Help

Coordinate Capture

Copy to clipboard

Start capture

Status Bar

Coordinate: 2.091,-1.195 5 Scale :.1451611 Render EPSG:4326

❑ The **menu bar** provides access to numerous QGIS features.



Project Edit View Layer Settings Plugins Vector Raster Database Help

❑ The **toolbars** offers additional tools for interacting with the map. Hold the mouse over the particular icon, a short description of the tool's purpose will be displayed.

Every menu bar can be moved around according to your needs. Additionally every menu bar can be switched off using your right mouse button context menu holding the mouse over the toolbars

❑ The **map legend area** sets the visibility

❑ QGIS - maps are displayed in map **canvas area**

❑ The map overview panel provides a full extent view of layers added

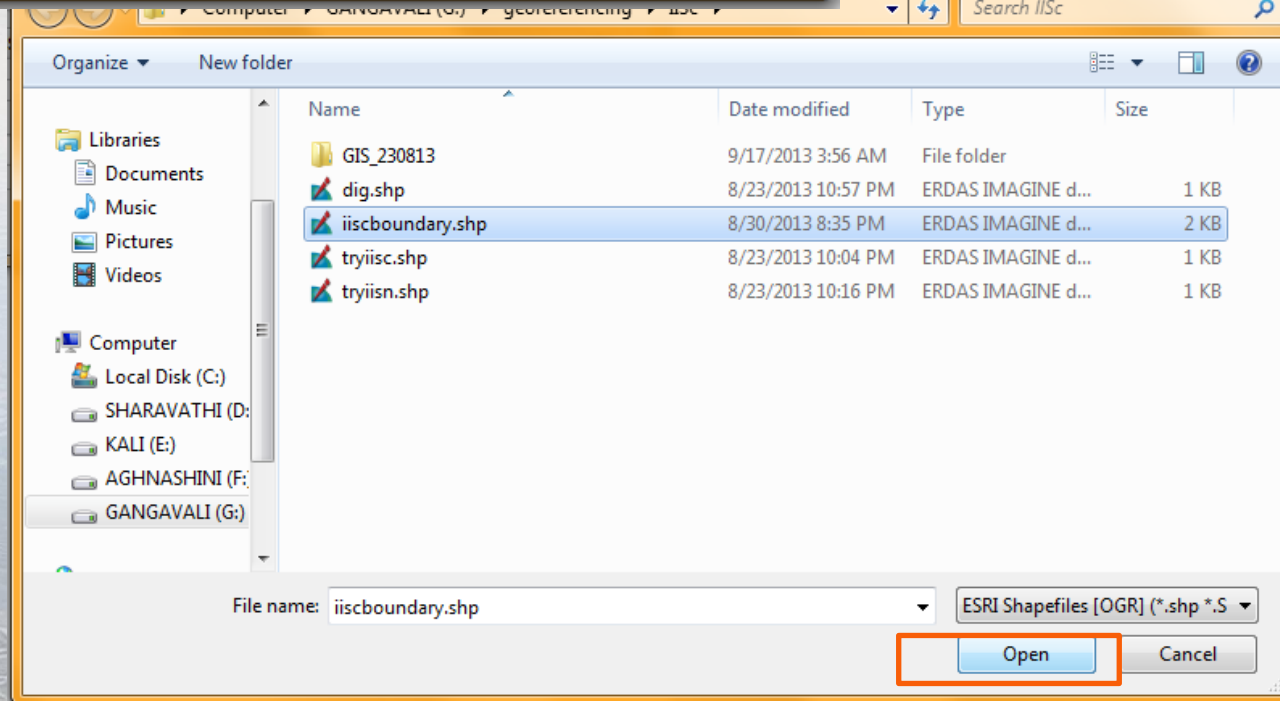
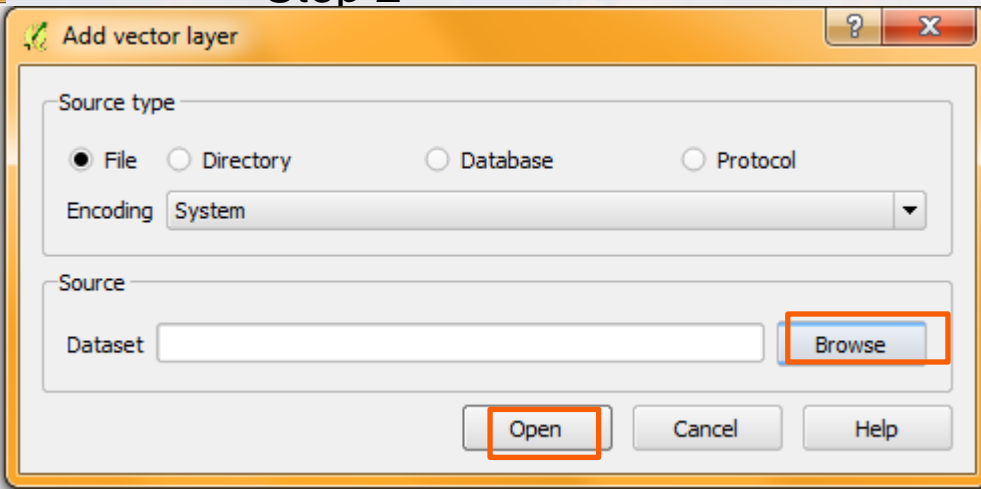
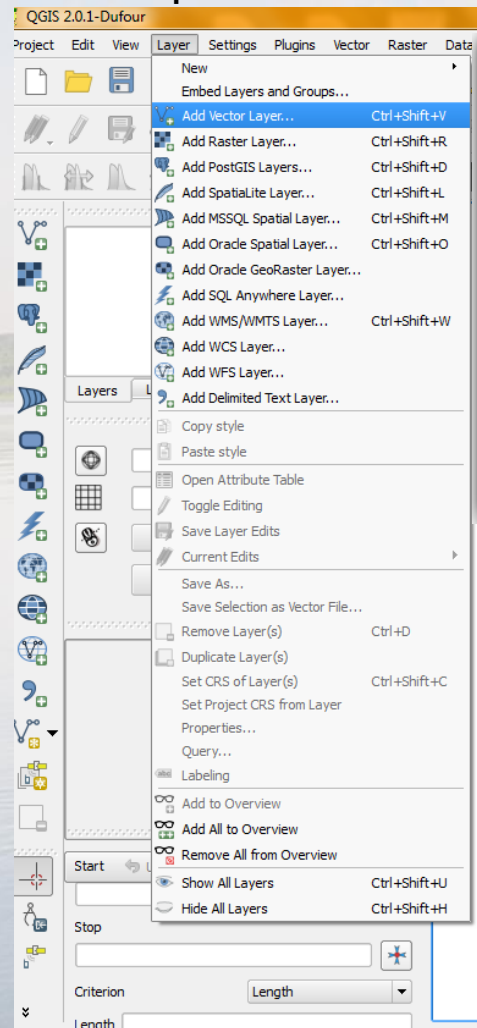
❑ The **status bar** shows the current position in map coordinates

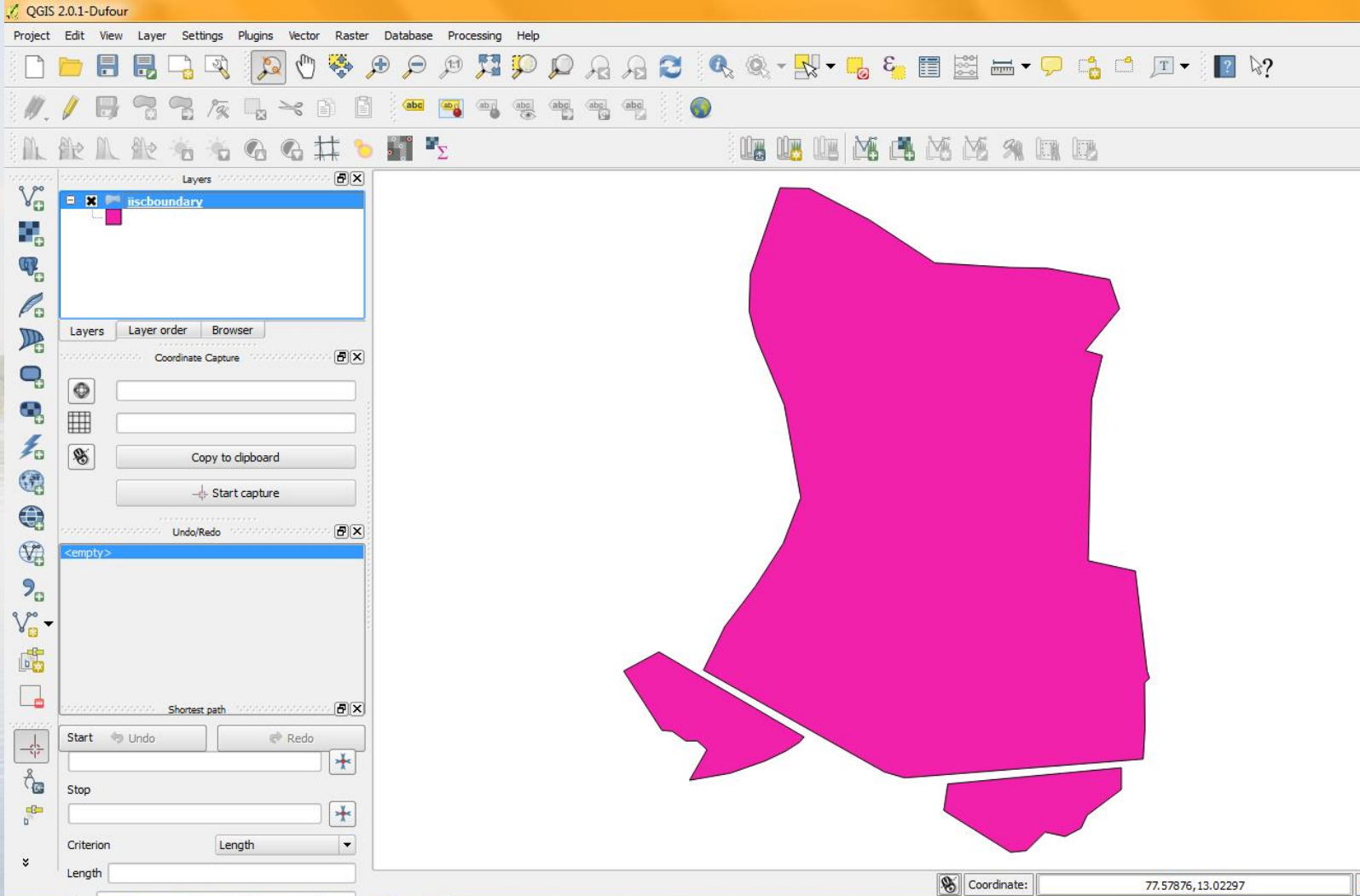
Working with vector data

Step 1

Step 2

Step 3





Improving the performance

Select **properties** by right click on the layer name; the properties dialogue box will be opened with multiple options i.e. **General, Styles, Lables, Attributes, Metadata, Actions, Diagram overlay.**

Improving performance

QGIS 2.0.1-Dufour

Project Edit View Layer Settings Plugins Vector Raster Database Processing Help

Layer Properties - iiscboundary

Fields

Id	Name	Type	Type name	Length	Precision	Comment	Edit widget	Alias
0	Name	QString	String	80	0		Line edit	
1	descriptio	QString	String	80	0		Line edit	
2	timestamp	QString	String	80	0		Line edit	
3	begin	QString	String	80	0		Line edit	
4	end	QString	String	80	0		Line edit	
5	altitudeMo	QString	String	80	0		Line edit	
6	tessellate	int	Integer	10	0		Line edit	
7	extrude	int	Integer	10	0		Line edit	
8	visibility	int	Integer	10	0		Line edit	

Attribute editor layout:

Python Init function:

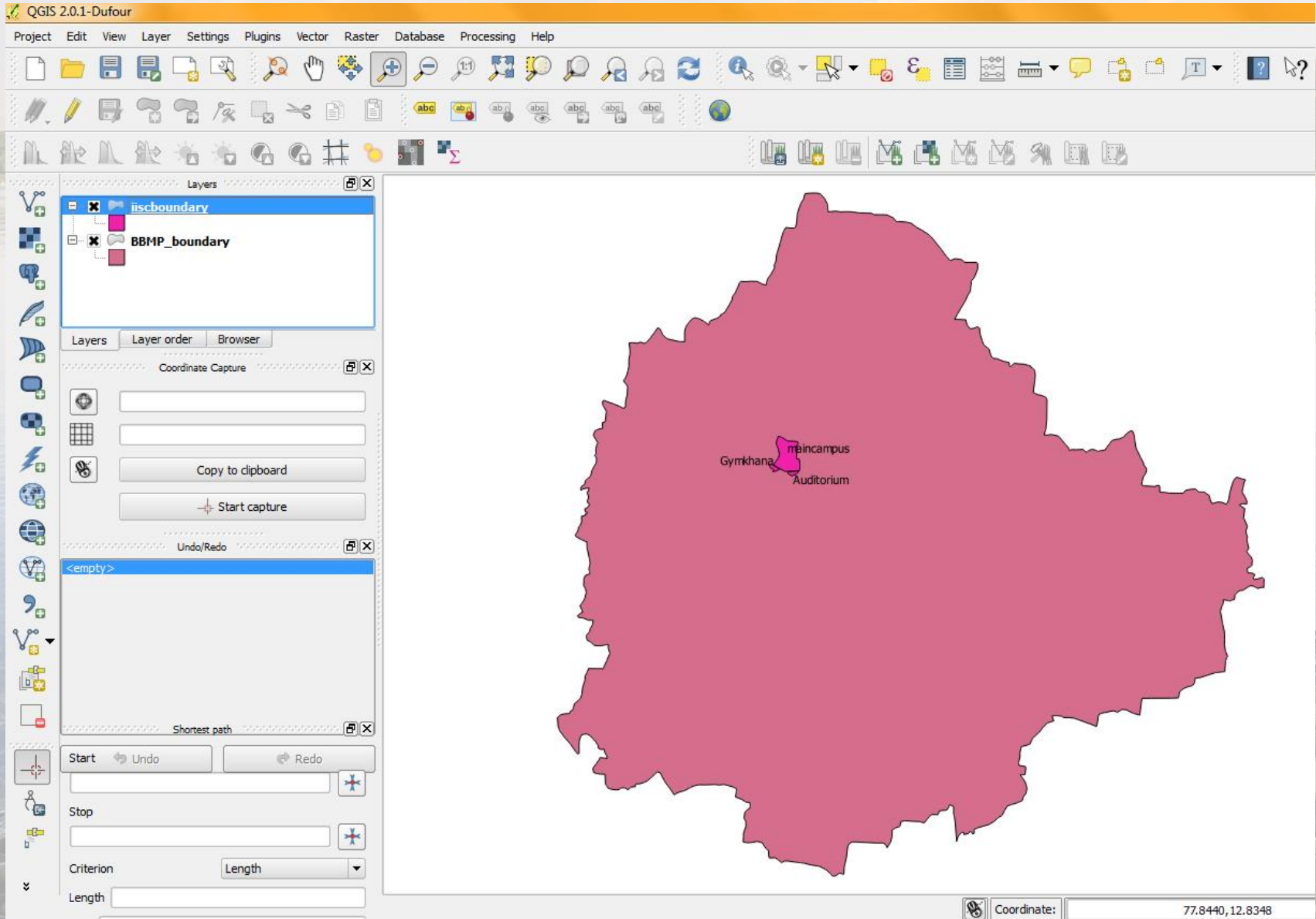
Restore Default Style Save As Default Load Style ... Save Style

OK Cancel Apply Help

Coordinate: 77.55314, 13.01678

OVERLAYING

We can overlay one vector on another by adding a vector layer.



Paper Map to Digital Map



Paper Map

Printing

Digital Map

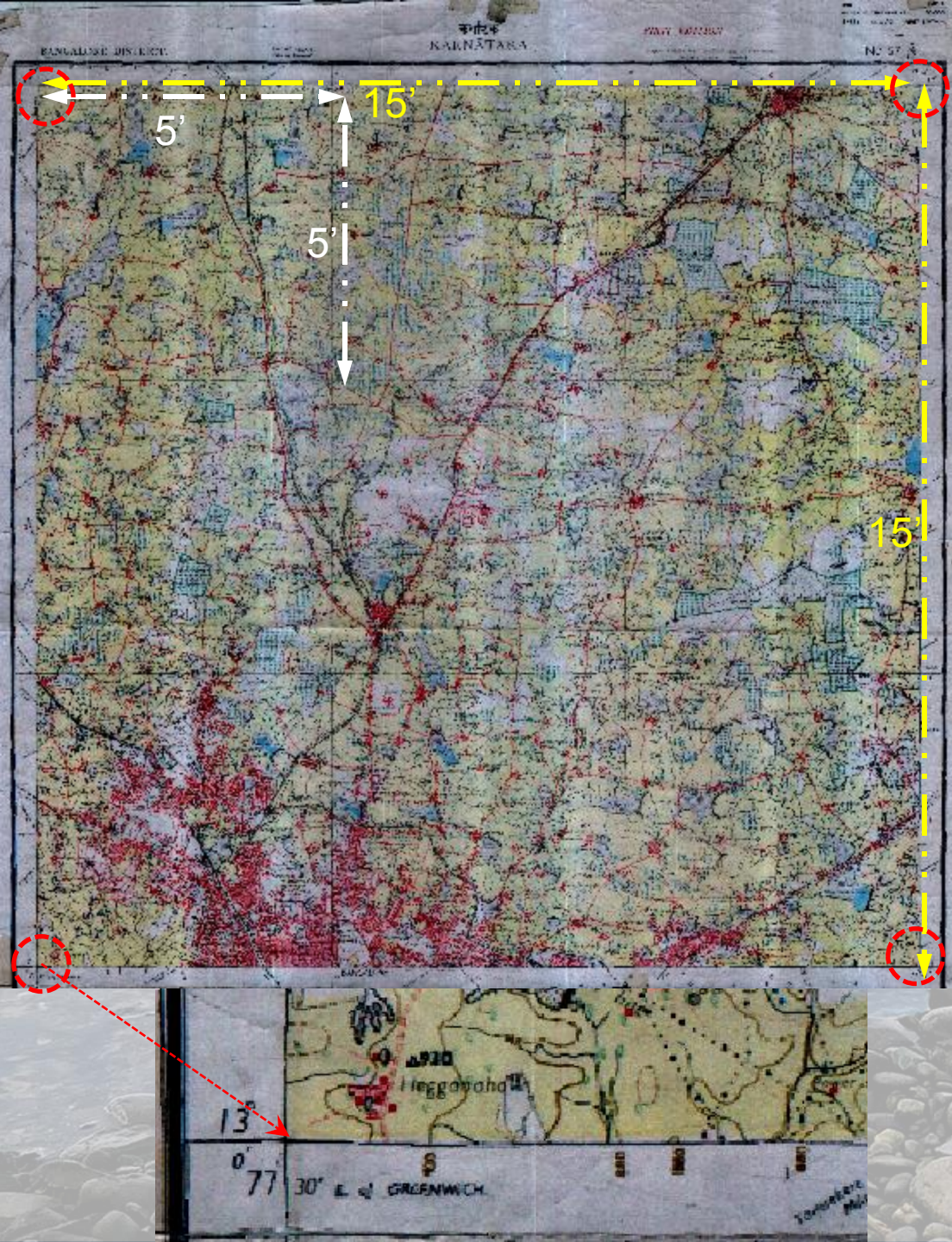
Conversion

Scanning



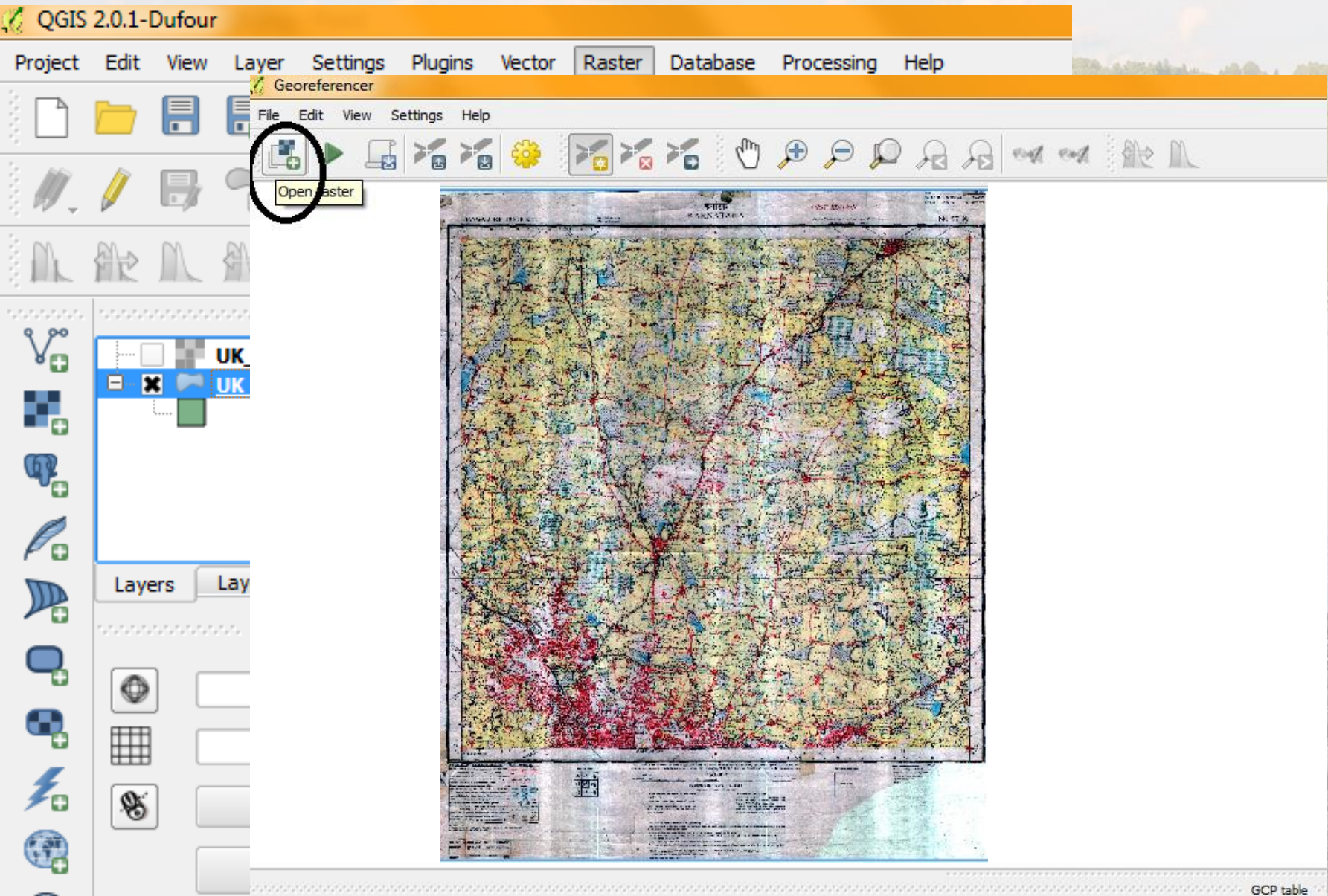
Reading Coordinates in toposheet

- 1: 50000
- Scanned toposheets have no geographical reference i.e., they are in the rectangular coordinate system



Geo referencing:

Geo referencing usually refers to the method by which locations in the raster and vector GIS files are related to real earth-surface positions.



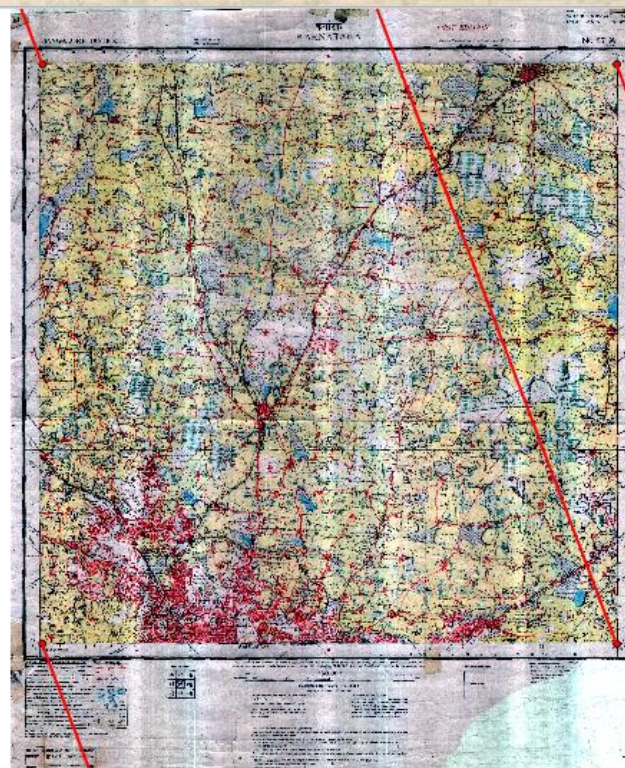
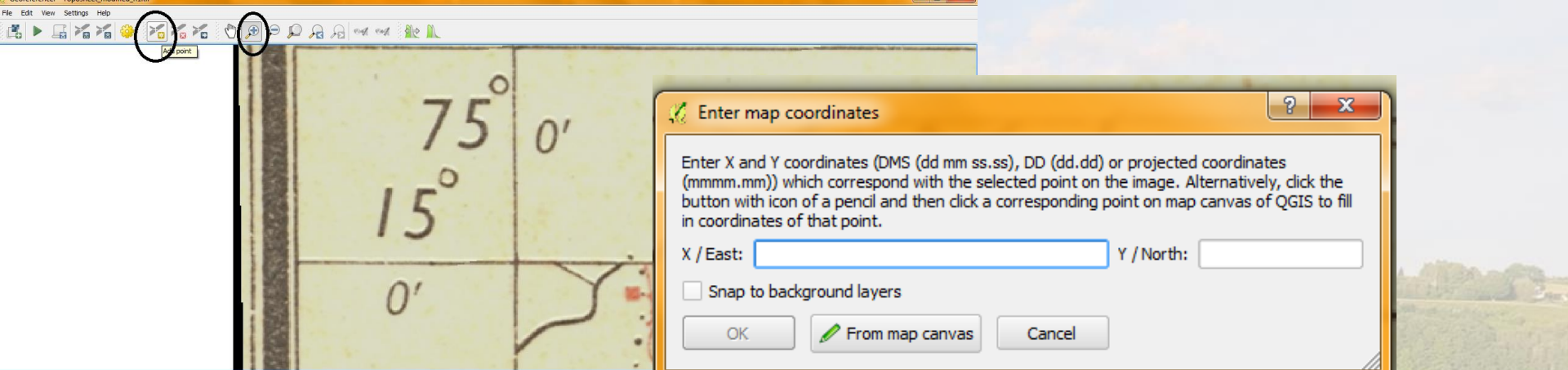
To start geo referencing an unreferenced raster, we must load it using the button. The raster will show up in the main working area of the dialog. Once the raster is loaded, we can start to enter reference points.

Using the Add Point button, add points to the main working area and enter their coordinates

For this procedure you have two options:

- a) Click on a point in the raster image and enter the X and Y coordinates manually
- b) Click on a point in the raster image and choose the button from map canvas to add the X and Y coordinates with the help of a georeferenced map already loaded in the QGIS map canvas.
- c) With the button, you can move the GCPs in both windows, if they are at the wrong place.

Continue entering points. You should have at least 4 points, and the more coordinates you can provide, the better the result will be. There are additional tools on the plugin dialog to zoom and pan the working area in order to locate a relevant set of GCP points.

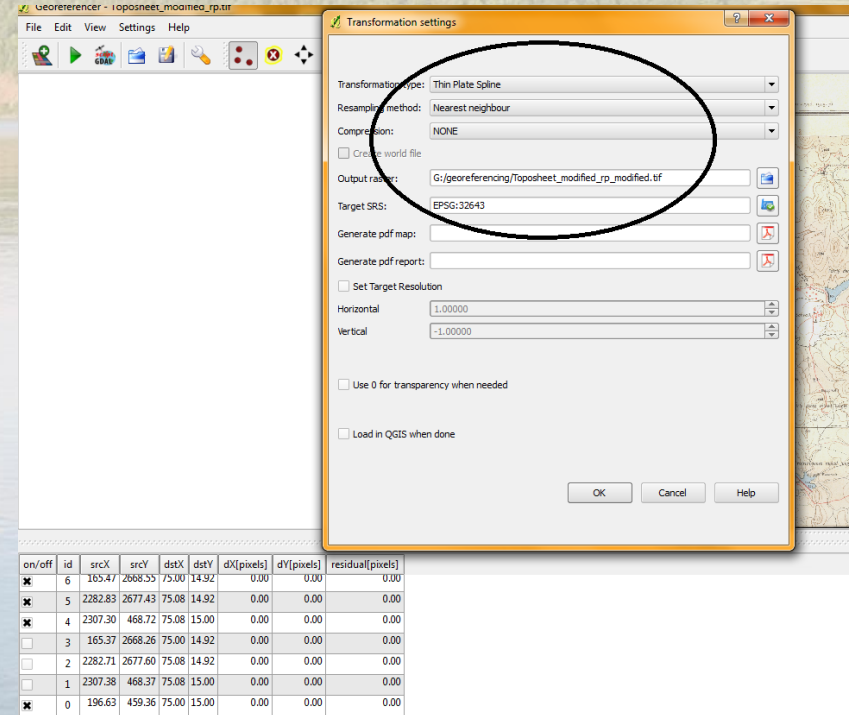


GCP table

on/off	id	srcX	srcY	dstX	dstY	dX[pixels]	dY[pixels]	residual[pixels]
✘	0	70.51	-0.00	77.50	13.25	-0.28	-0.74	0.80
✘	1	70.55	-0.00	77.75	13.25	0.28	0.74	0.80
✘	2	70.55	-0.04	77.75	13.00	-0.28	-0.74	0.80
✘	3	70.51	-0.04	77.50	13.00	0.28	0.74	0.80

- After entering GCP's click on **Settings** option in Georeferencing menu bar select Transformation Settings option.

- A drop box will be displayed and select options as shown in the below image.

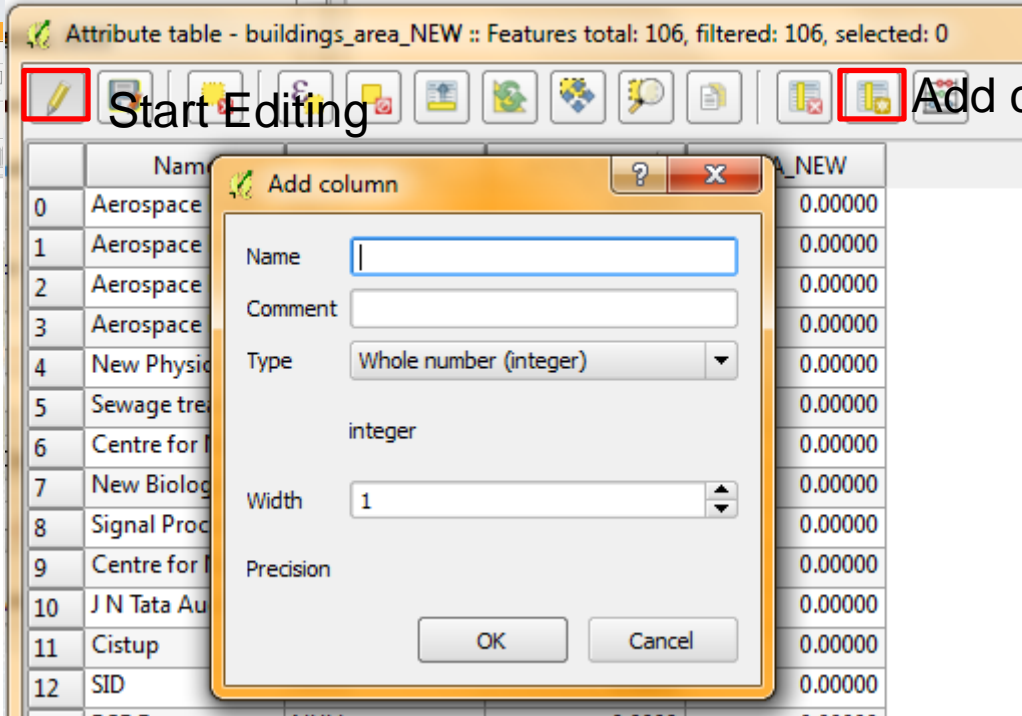
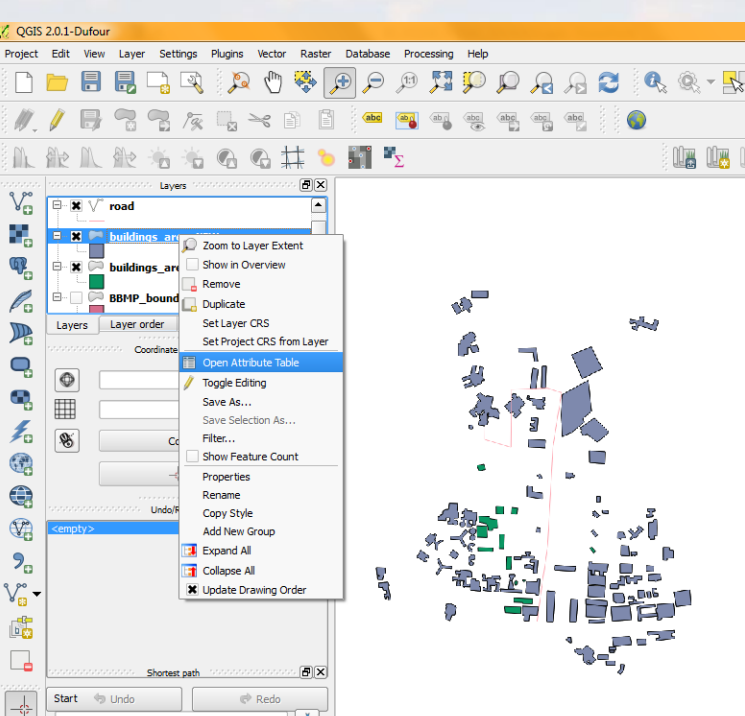


- Specify output file name and transformation parameters and projection system then click OK.

Database ingest-querying

- Data ingestion is the process of obtaining, importing, and processing data.
- Process : involves altering individual files by editing their content and fit into a larger document.

Editing Attribute Information



Start Editing

Add column



Save edits and stop toggle edit

Add Attribute Information

	Name	Descriptio	AREA_N	AREA_NEW	name
0	Aerospace Dept	NULL	0.0000	0.00000	NULL
1	Aerospace Lab2	NULL	0.0000	0.00000	NULL
2	Aerospace Lab1	NULL	0.0000	0.00000	NULL
3	Aerospace Lab3	NULL	0.0000	0.00000	NULL
4	New Physics	NULL	0.0000	0.00000	NULL
5	Sewage treatm...	NULL	0.0000	0.00000	NULL

QGIS 2.0.1-Dufour

Project Edit View Layer Settings Plugins Vector Ras...

Layers

- road
- buildings_area_NEW
- buildings_area
- BBMP_boundaries

Layers Layer order

Coordinate

Undo

Start Undo

Stop

Criterion

Length

Toggle the editing state of the current layer

Attribute table - buildings_area_NEW :: Features total: 106, filter

ID	Name	Descriptio	Area	Perimeter
0	Aerospace Dept	NULL		
1	Aerospace Lab2	NULL		
2	Aerospace Lab1	NULL		
3	Aerospace Lab3	NULL		
4	New Physics	NULL		
5	Sewage treatm...	NULL		
6	Centre for Neur...	NULL		
7	New Biological ...	NULL		
8	Signal Processi...	NULL		
9	Centre for Nan...	NULL		
10	J N Tata Auditor...	NULL		
11	Cistup	NULL		
12	SID	NULL		
13	ECE Department	NULL		
14	High Voltage E...	NULL		
15	Management S...	NULL		
16	Enterprenuersi...	NULL		
17	Materials Engin...	NULL		
18	Computer Scie...	NULL		
19	Electrical Engg ...	NULL		
20	Civil Dept Main...	NULL		
21	SERC	NULL		
22	New Girls Hostel	NULL		
23	N Block	NULL		

Show All Features

Field calculator

Only update selected features

Create a new field

Output field name: _____

Output field type: Whole number (integer)

Output field width: 10 Precision: 0

Update existing field

AREA_N

Function List

- Operators
- Conditionals
- Math
- Conversions
- Date and Time
- String
- Color
- Geometry
 - xat
 - yat
 - \$area
 - \$length
 - \$perimeter
 - \$x

Selected Function Help

\$area function

Returns the area size of the current feature.

Syntax

\$area

Arguments

None

Example

\$area → 42

Operators

= + - / * ^ || ()

Expression

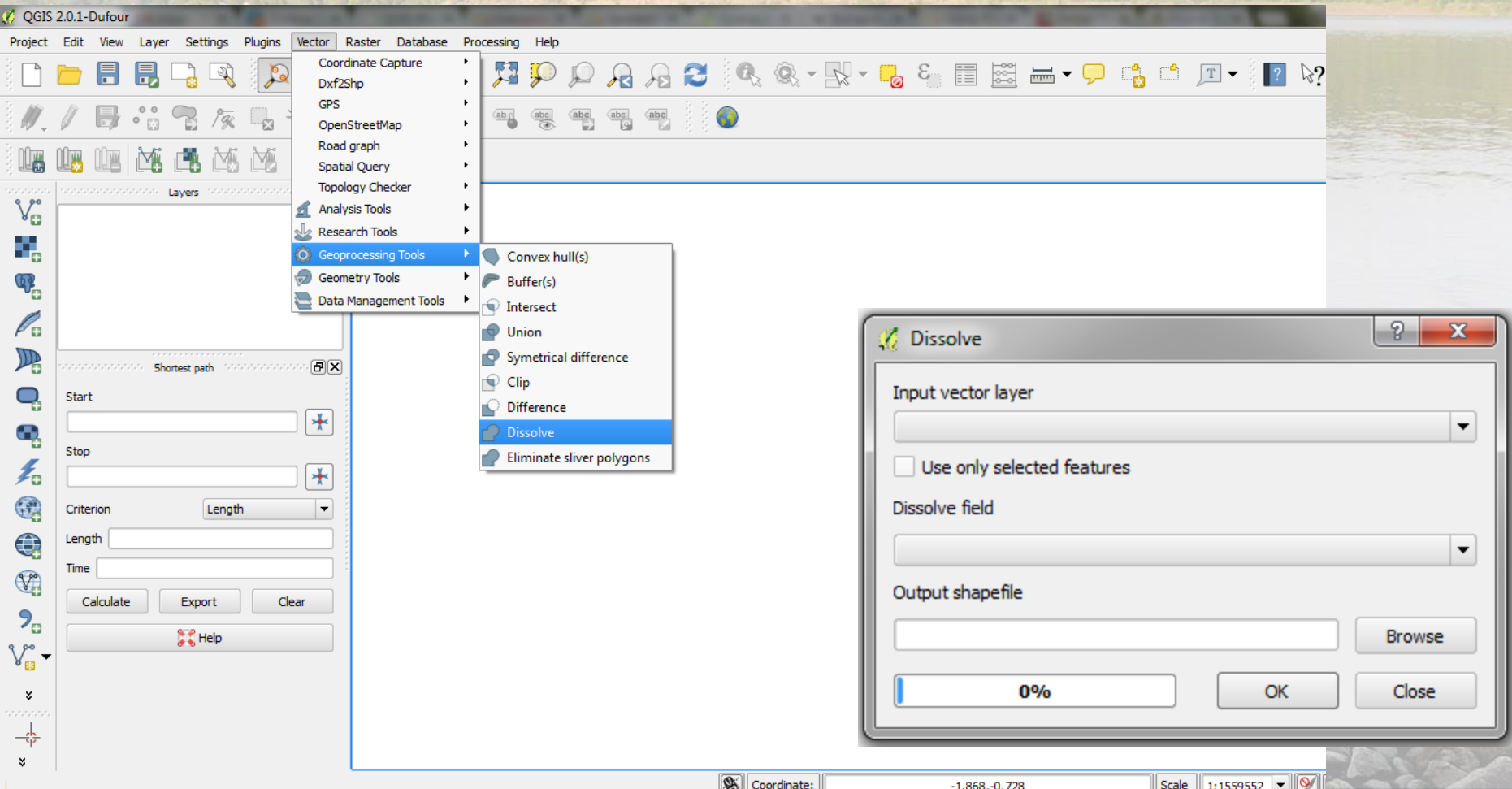
\$area |

Output preview: 4.95109645726188e-07

OK Cancel Help

Dissolve

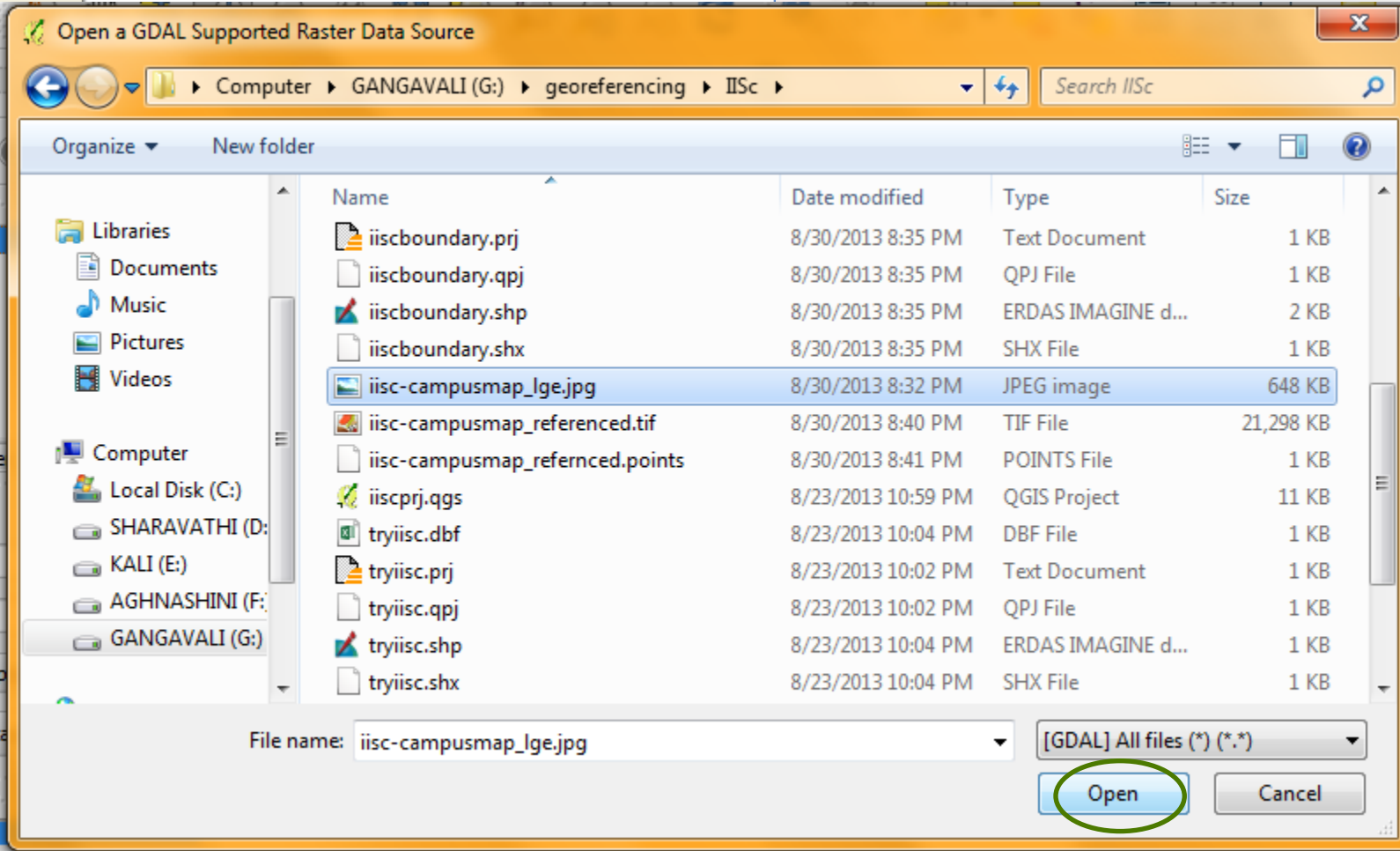
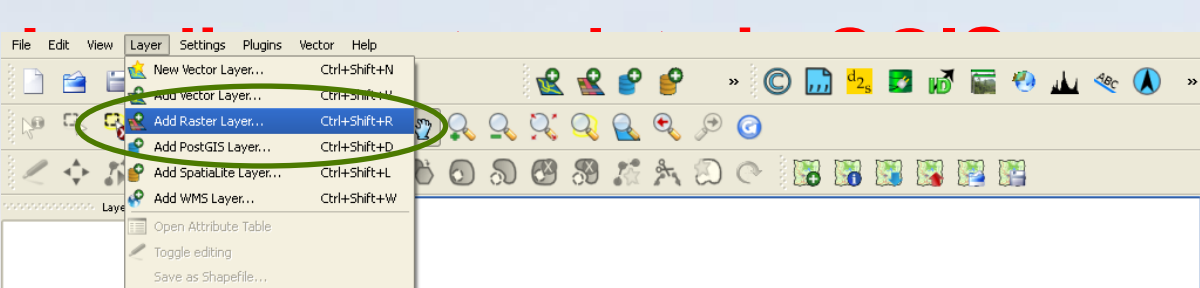
- Create a new column with having same id.
- Use Vector → Geoprocessing tools → Dissolve



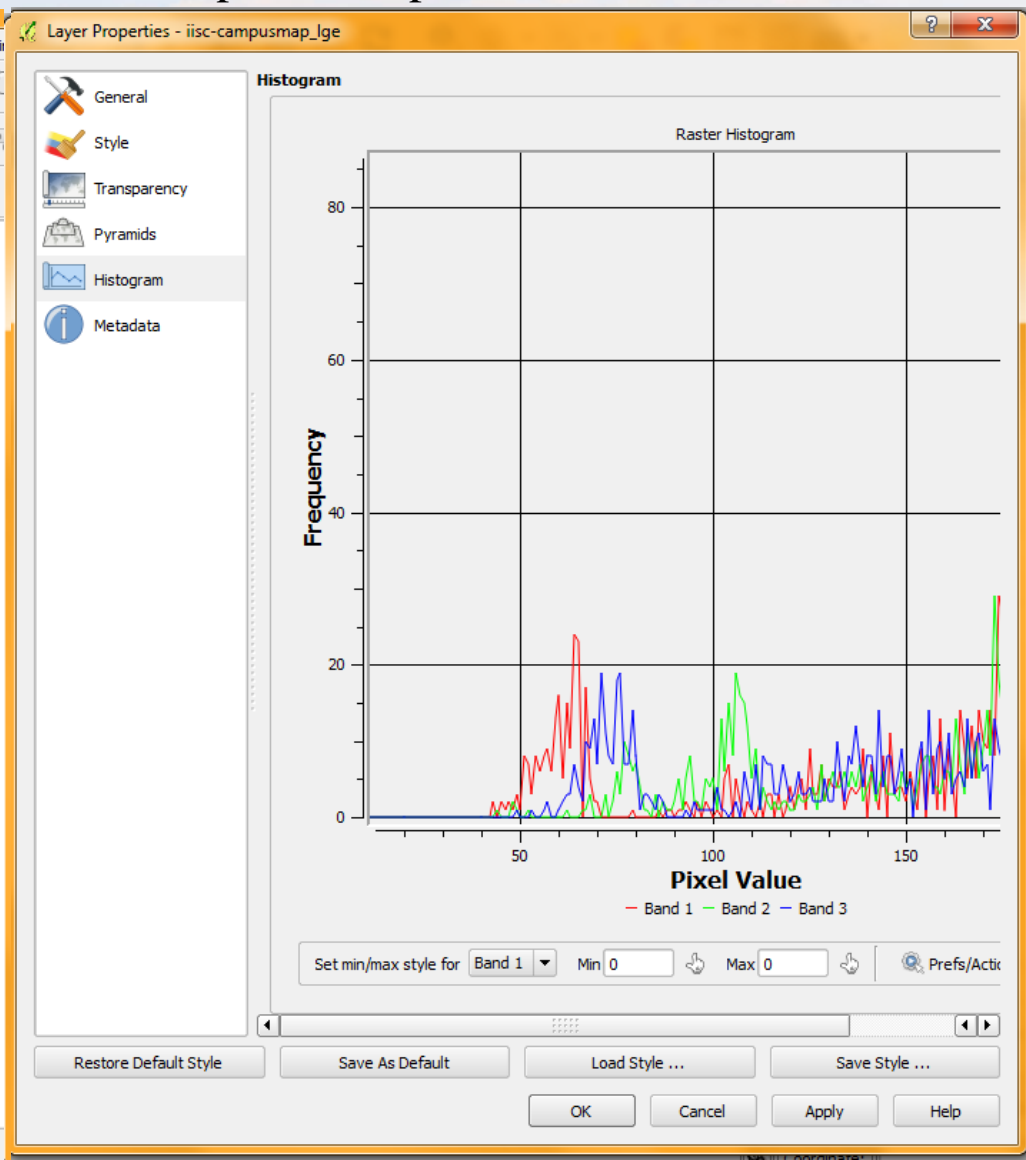
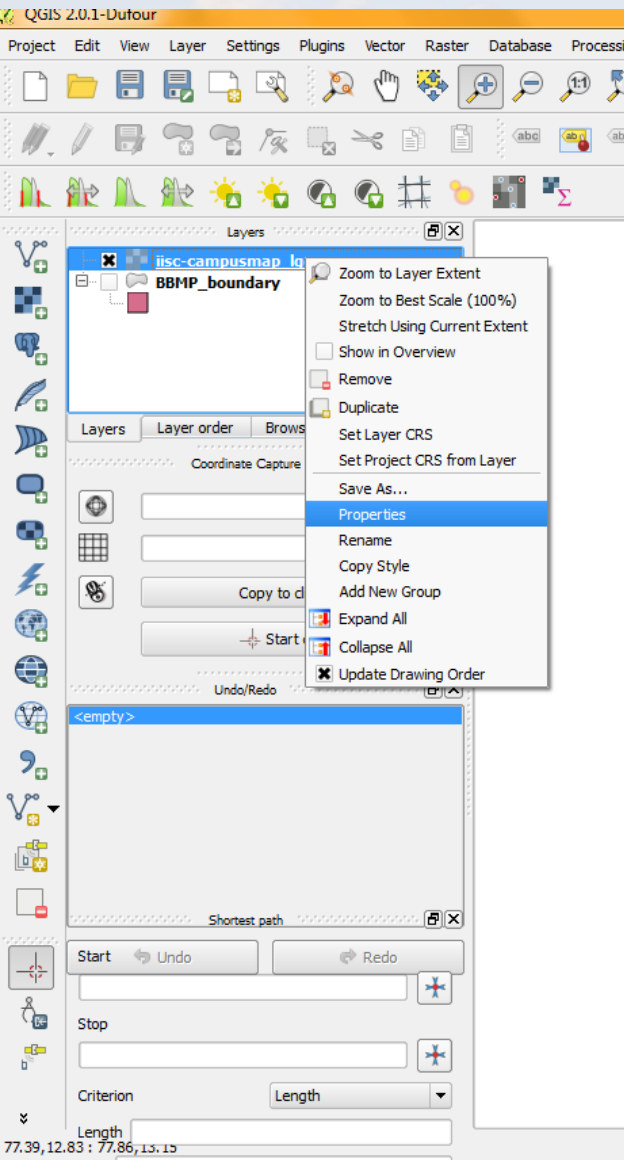
Working with raster data:

QGIS supports a number of different raster formats and uses **GDAL** libraries

- Arc/Info Binary Grid
- Arc/Info ASCII Grid
- GRASS Raster
- Geo TIFF
- JPEG
- Spatial Data Transfer Standard Grids (with some limitations)
- USGS ASCII DEM
- ERDAS Imagine(.img)

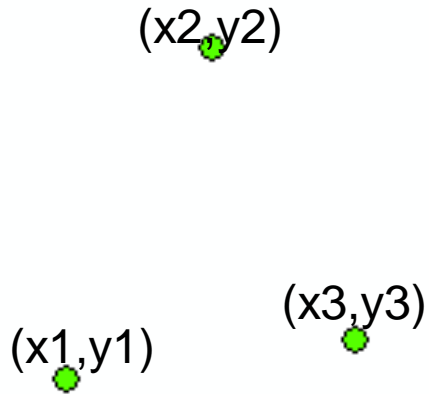


Improve the performance

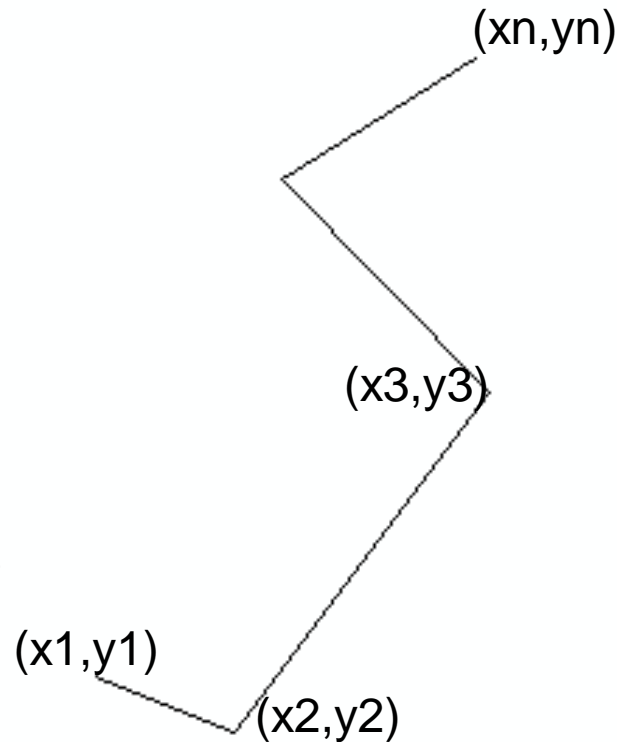


Digitising

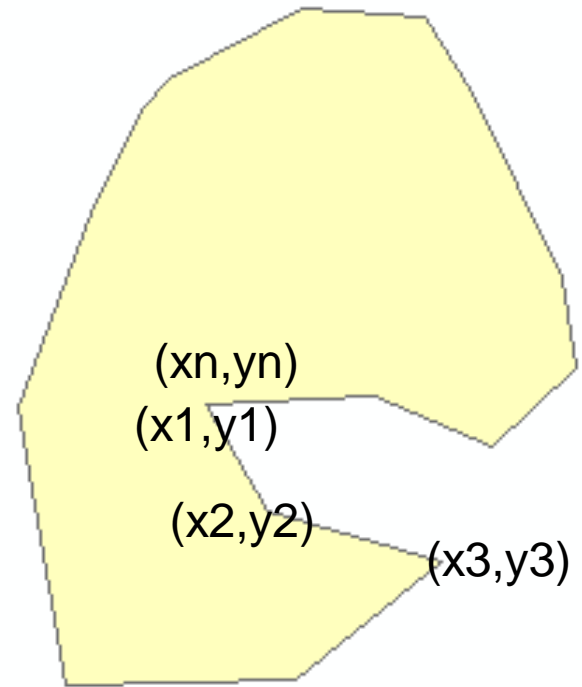
- Process of representing features as points, lines and polygons.



Example: Light towers,
Bus stops, Schools etc

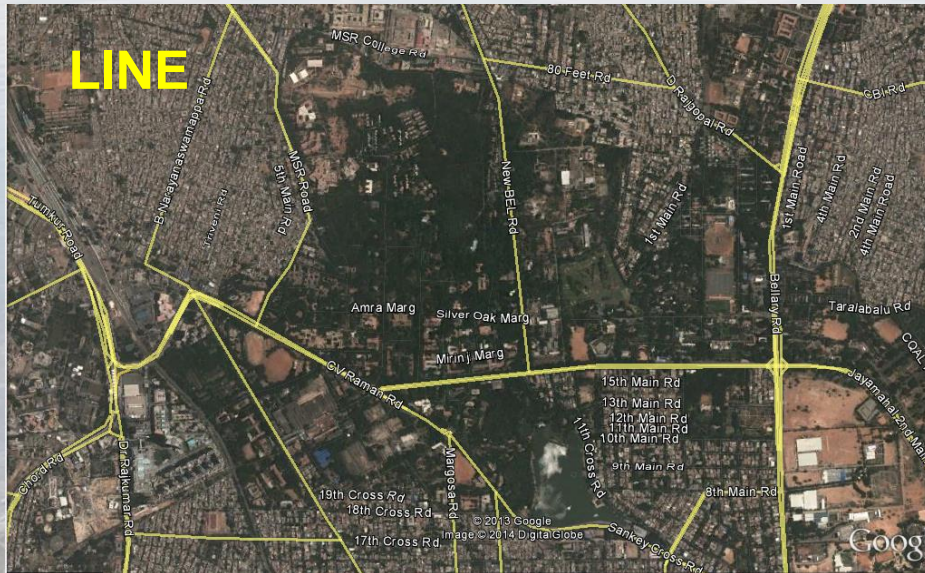
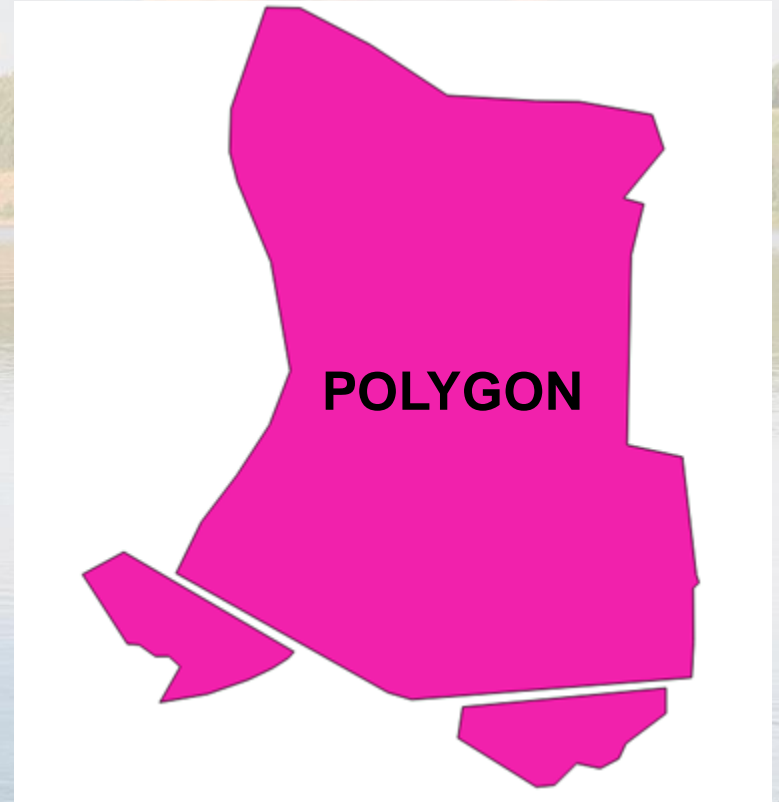
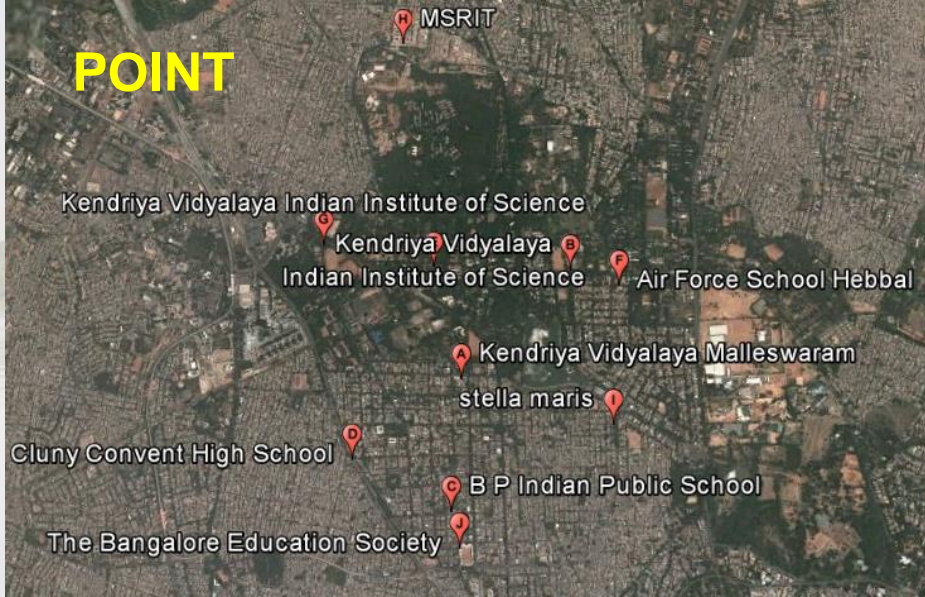


Example: Road network,
Stream Network etc.



Example: Forests, political
boundaries .. etc

Features



File Edit View Layer Settings Plugins Vector Raster Help

New

- New Shapefile Layer... Ctrl+Shift+N
- New SpatialLite Layer ... Ctrl+Shift+A
- Raster calculator ...
- Add Vector Layer... Ctrl+Shift+V
- Add Raster Layer... Ctrl+Shift+R
- Add PostGIS Layer... Ctrl+Shift+D
- Add SpatialLite Layer... Ctrl+Shift+L
- Add WMS Layer... Ctrl+Shift+W
- Open Attribute Table
- Save edits
- Toggle editing
- Save as...
- Save Selection as vector file...
- Remove Layer(s) Ctrl+D
- Properties...
- Query...
- Add to Overview Ctrl+Shift+O
- Add All to Overview
- Remove All From Overview
- Hide All Layers Ctrl+Shift+H
- Show All Layers Ctrl+Shift+U
- Labeling

Layers

- Topost
- UK_SV

Create a New Shapefile layer

New Vector Layer

Type

Point Line Polygon

CRS ID Specify CRS

New attribute

Name

Type

Width

Attributes list

Name
NAME
AREA
ID

Save As

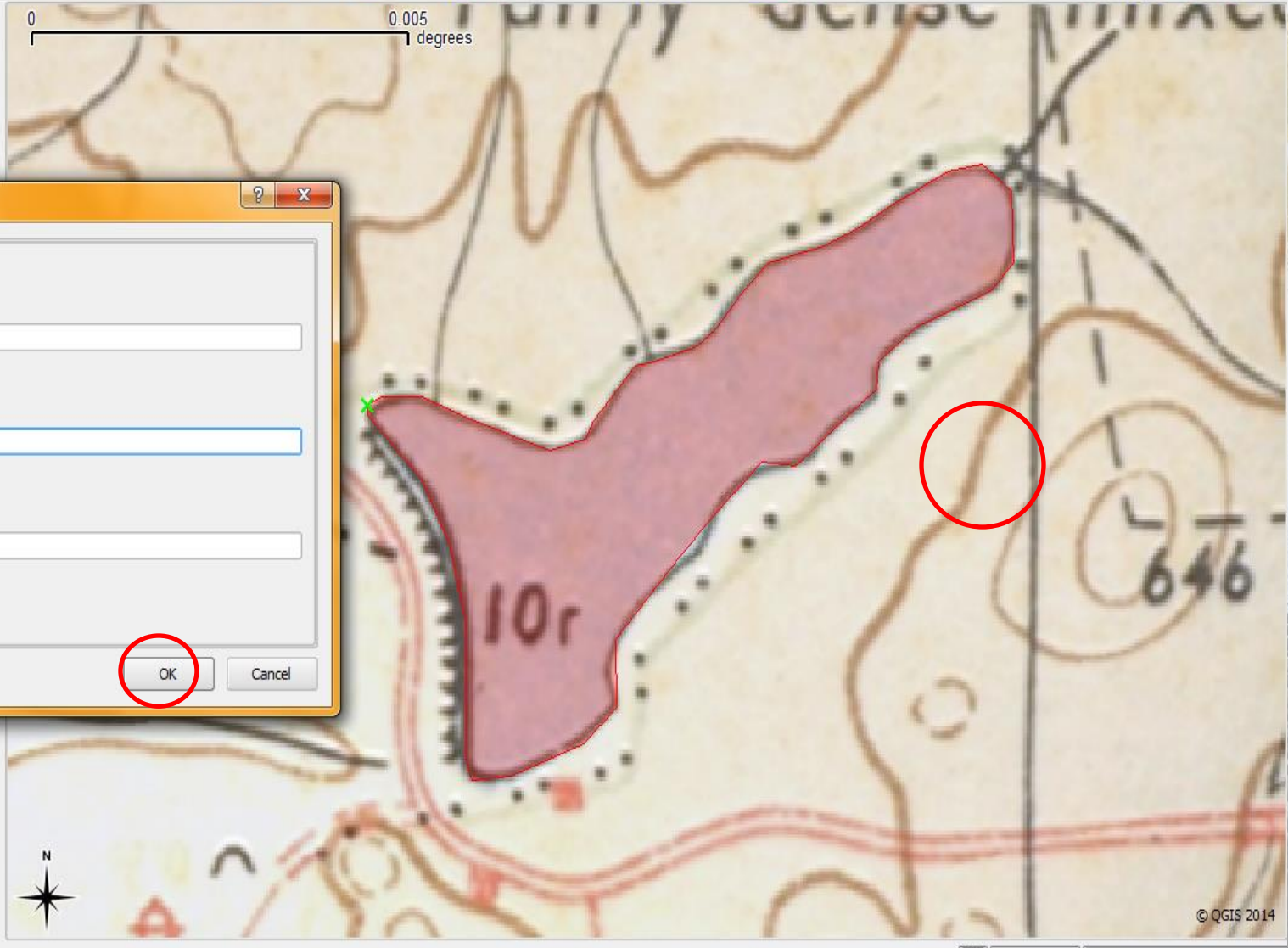
Look in: C:\Users\BHARATH_SHARAVATHI\Desktop

Name	Size	Type	Date Modified
OUT_ARC		Fil...der	1/28/2...:47 PM
PCAOUT		Fil...der	2/8/20...:29 AM
01BHARATH_SE...METRICS.docx	24 KB	doc...ile	1/13/2...:30 PM
1973pca_f.dat	1 KB	dat File	2/3/20...:53 PM
1973pca_f.xls	4 KB	xls File	1/13/2...:29 PM
1973pca_N.xls	27 KB	xls File	1/23/2...:08 PM
2013pca_f.xls	29 KB	xls File	1/11/2...:04 AM
Academic Regulations forPhD.pdf	442 KB	pdf File	1/10/2...:36 AM
ArcMap.exe	1 KB	Ink File	1/23/2...:33 AM
BHARATH_SETTU...IIIT_HYD.docx	41 KB	doc...ile	1/10/2...:59 PM
BHARATH_SETT...JOURNAL.docx	1.4 MB	doc...ile	2/3/20...:15 PM
BHARATH_SETT...AL_SPSS.docx	1.5 MB	doc...ile	2/7/20...:15 PM
BIOPHYSICAL.docx	20 KB	doc...ile	2/5/20...:26 PM
BISGOD_N.geprint	5 KB	gep...ile	1/26/2...:11 PM
CPCA_13.xls	39 KB	xls File	2/3/20...:37 PM

File name: Save

Files of type: Cancel

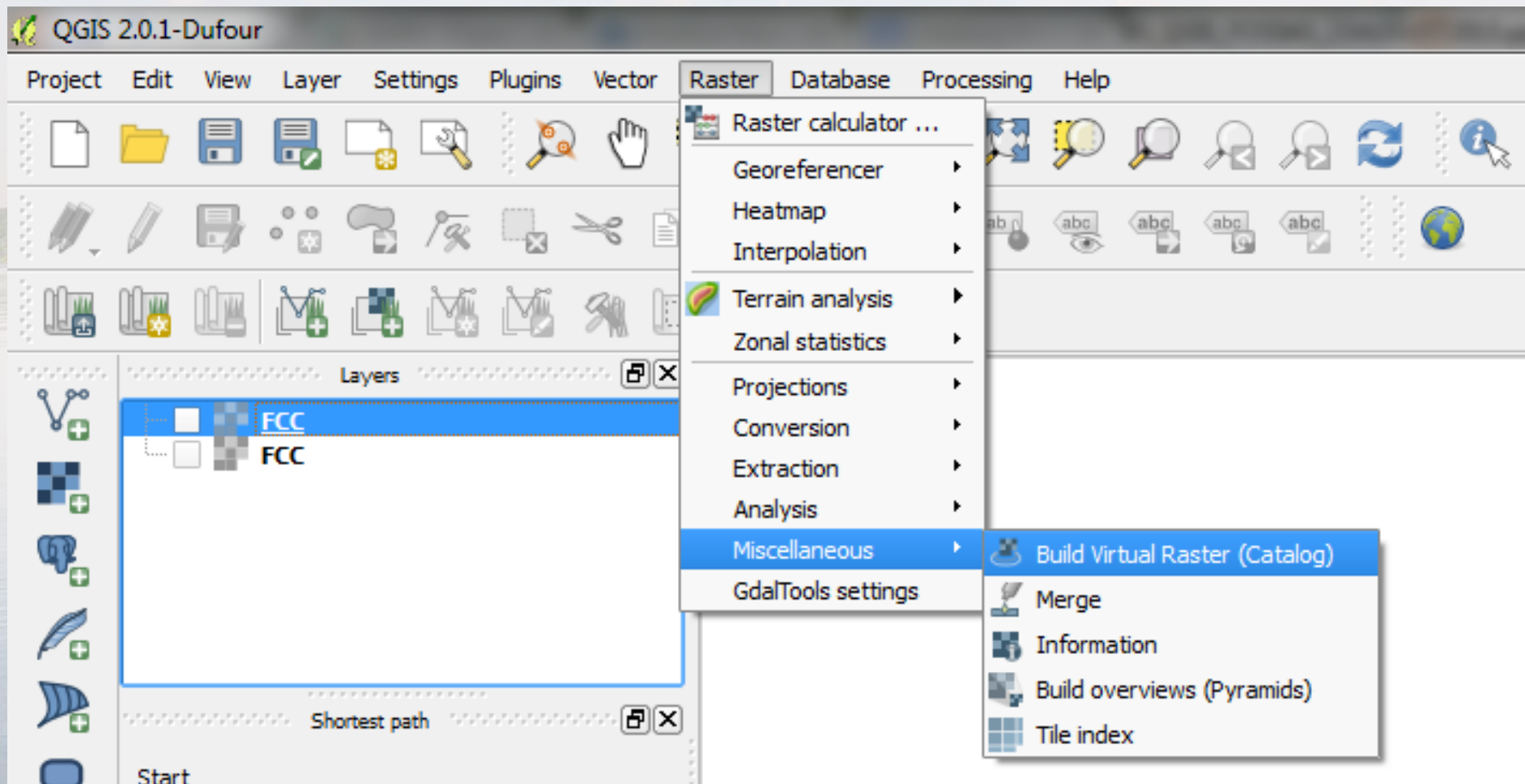
Encoding:

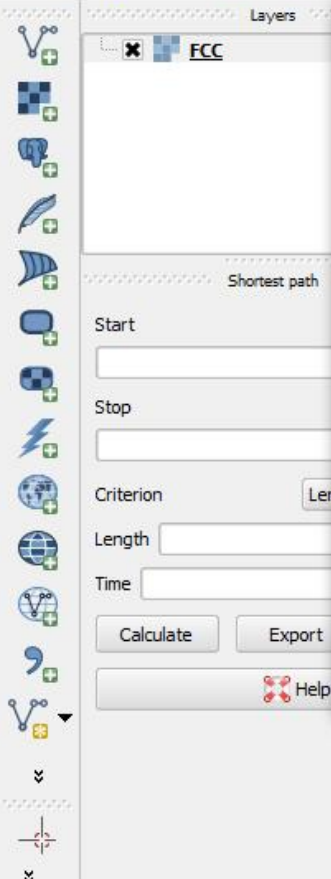


Attributes - WATER_DIG

ID (int)	<input type="text" value="1"/>
NAME (txt)	<input type="text" value="NULL"/>
AREA (int)	<input type="text"/>

Creating FCC-False Color Composite



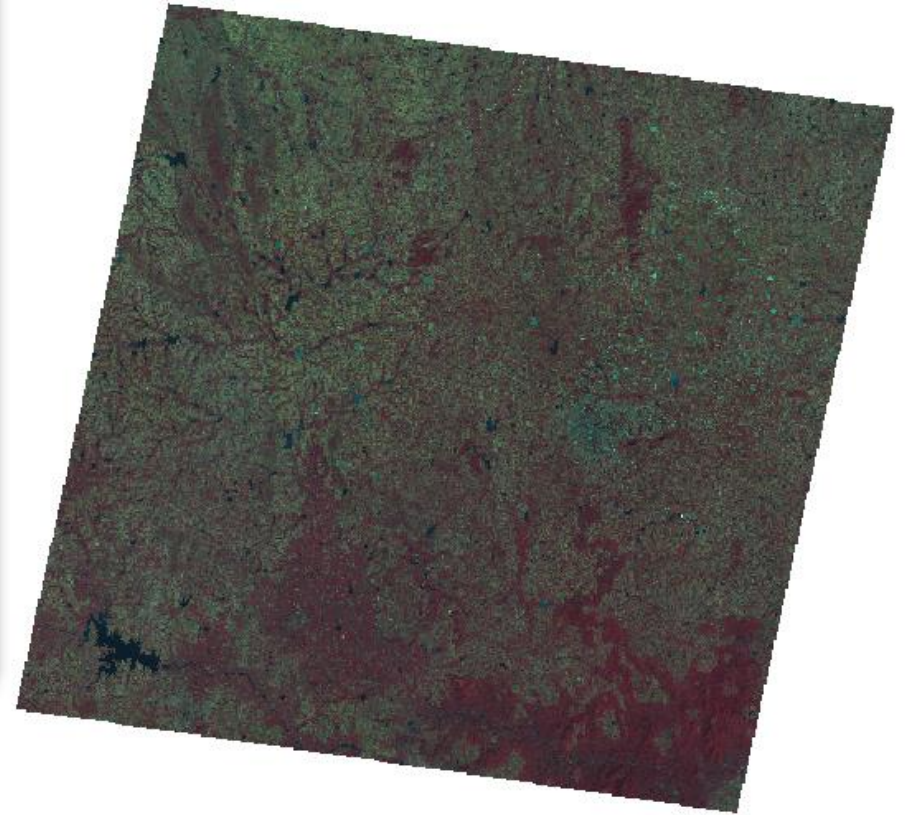


Build Virtual Raster (Catalog)

- Use visible raster layers for input
- Choose input directory instead of files
- Input files:
- Output file:
- Resolution: Average
- Source No Data: 0
- Separate
- Allow projection difference
- Load into canvas when finished

```
gdalbuildvrt -resolution average -separate -  
srcnodata 0 "C:/Users/ewrg-  
sharavathi/Desktop/FOSS 4G @  
CISTUP/Data/Raster/FCC.vrt" "C:/Users/ewrg-  
sharavathi/Desktop/FOSS 4G @  
CISTUP/Data/Raster/p114r051_7t20001127_z43_n  
n20.tif" "C:/Users/ewrg-sharavathi/Desktop/FOSS
```

OK Close Help



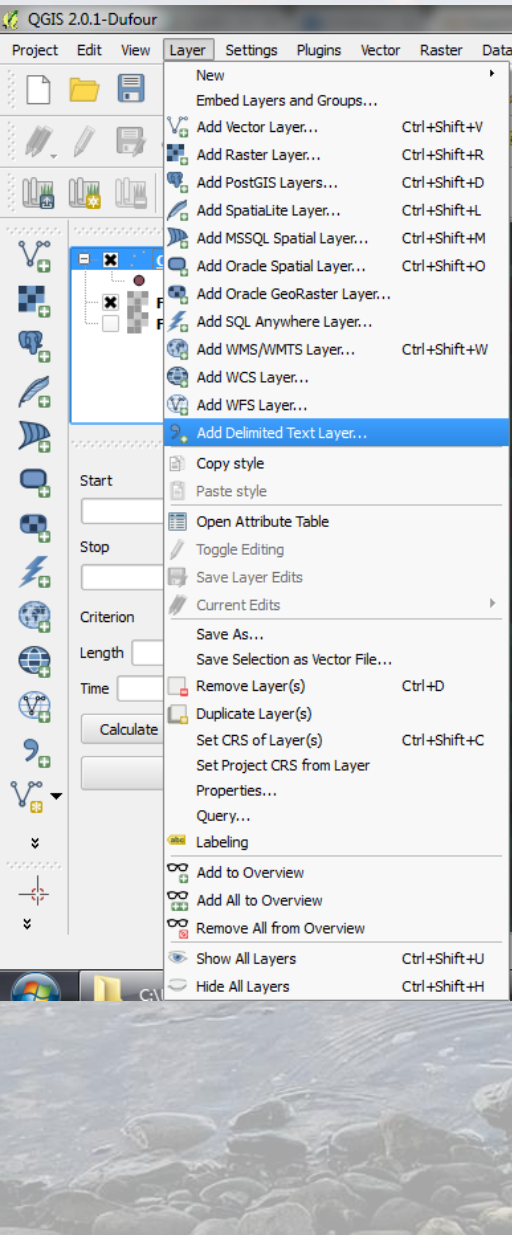
QGIS Plugins

Plugin Manager provides a resource to load or unload plugins.

-- **Core Plugins** are automatically part of every QGIS distribution. They are written in one of two languages: C++ or Python.

– **External Plugins** are currently all written in Python. They can be added to QGIS using the Plugin Installer.

Importing text files



The dialog box 'Create a Layer from a Delimited Text File' is shown. It contains the following fields and options:

- File Name:** C:/Users/ewrg-sharavathi/Desktop/FOSS 4G @ CISTUP/Data/VECTOR/IISc/Coordrinates.txt
- Layer name:** Coordrinates
- Encoding:** UTF-8
- File format:** Custom delimiters (selected)
- Other delimiters:** Comma (checked), Tab, Space (checked), Colon, Semicolon
- Record options:** Number of header lines to discard: 0, First record has field names (checked)
- Field options:** Discard empty fields (checked)
- Geometry definition:** Point coordinates (selected), Well known text (WKT), No geometry (attribute only table)
- X field:** Longitude, **Y field:** Latitude
- Layer settings:** Use spatial index (checked), Use subset index, Watch file

	id	Latitude	Longitude
1	A	13.029728	77.562933
2	B	13.027613	77.571387
3	C	13.014682	77.5572446
4	D	13.014142	77.565995
5	E	13.017071	77.560549

Buttons: OK, Cancel, Help

Interpolation

Interpolation is used to create continuous surface from discrete points.

A lot of real world phenomena are continuous - elevations, soils, temperatures etc.

If we wanted to model these, it is impossible to take measurements throughout the surface.

Hence, the field measurements are taken at various points along the surface and the intermediate values are inferred by a process called ‘interpolation’.

In QGIS, interpolation is achieved using the built-in Interpolation plugin.

Create Layer

Add Layer

Embed Layers and Groups...

Add from Layer Definition File...

Copy style

Paste style

Open Attribute Table

Toggle Editing

Save Layer Edits

Current Edits

Save As...

Save As Layer Definition File...

Remove Layer/Group Ctrl+D

Duplicate Layer(s)

Set Scale Visibility of Layer(s)

Set CRS of Layer(s) Ctrl+Shift+C

Set Project CRS from Layer

Properties...

Query... Ctrl+F

Labeling

Add to Overview

Add All to Overview

Remove All from Overview

Show All Layers Ctrl+Shift+U

Hide All Layers Ctrl+Shift+H

Show Selected Layers

Hide Selected Layers

Add Vector Layer... Ctrl+Shift+V

Add Raster Layer... Ctrl+Shift+R

Add PostGIS Layers... Ctrl+Shift+D

Add SpatialLite Layer... Ctrl+Shift+L

Add MSSQL Spatial Layer... Ctrl+Shift+M

Add Oracle Spatial Layer... Ctrl+Shift+O

Add WMS/WMTS Layer... Ctrl+Shift+W

Add WCS Layer...

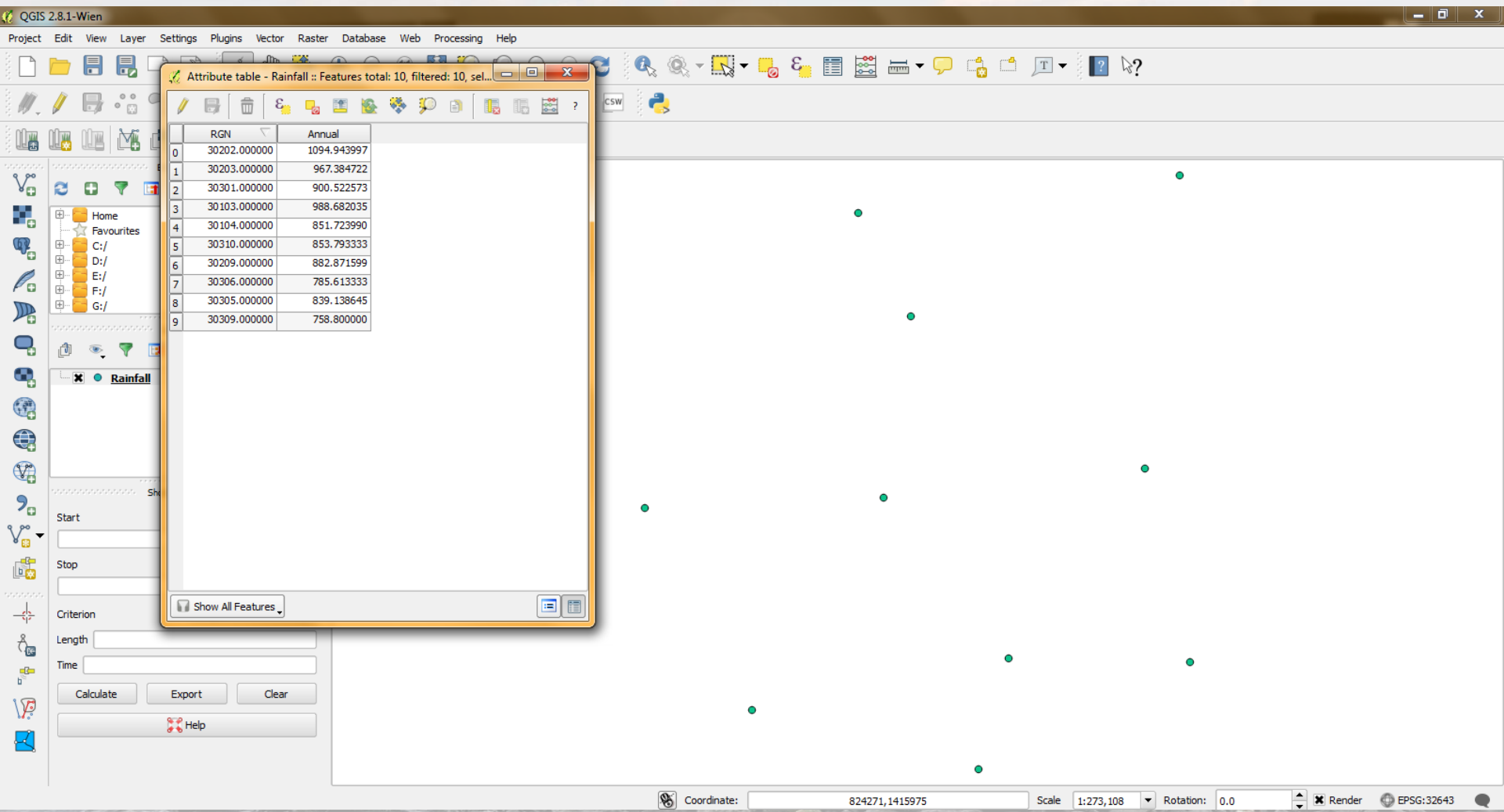
Add WFS Layer...

Add Delimited Text Layer...

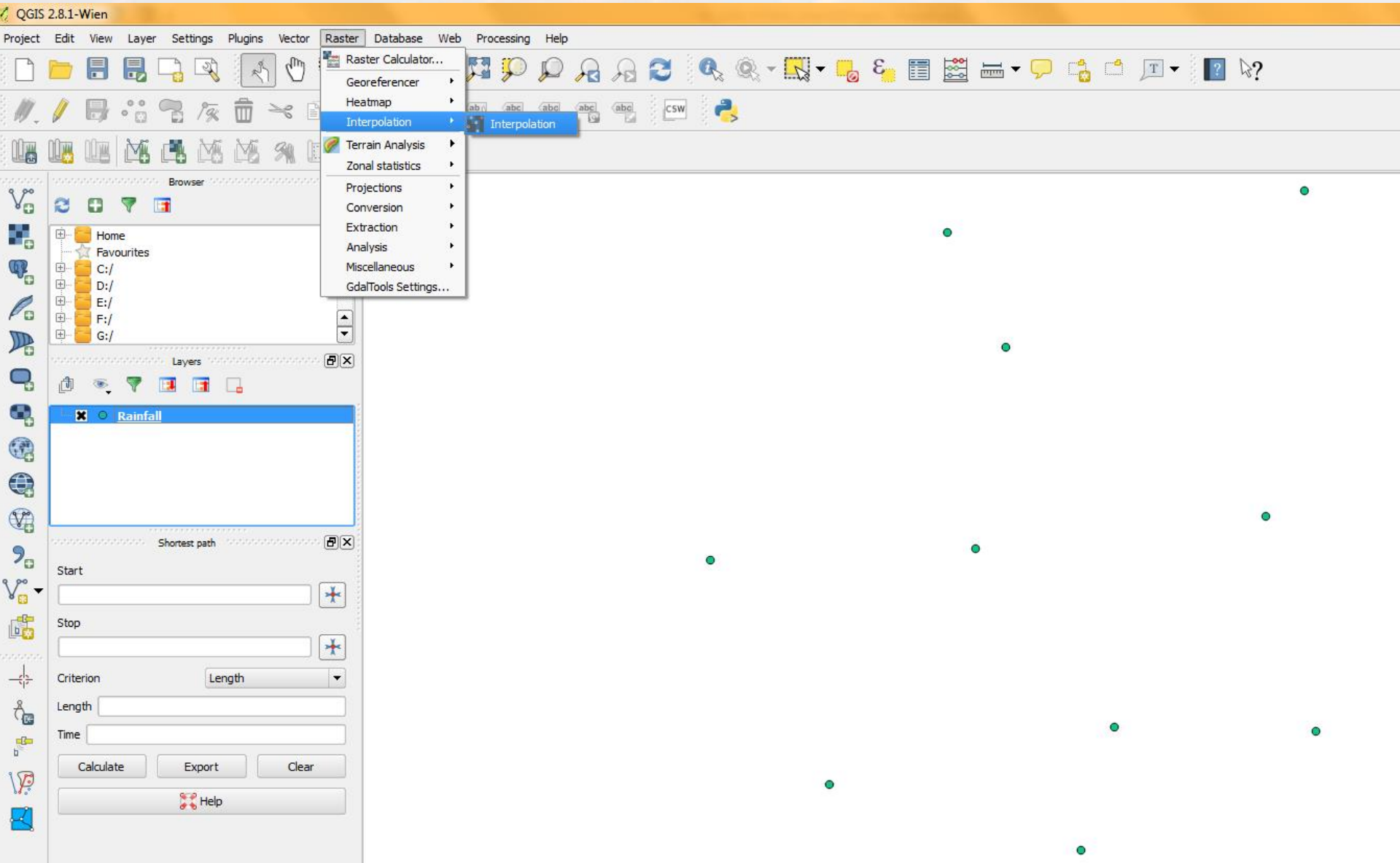
Browser Layers

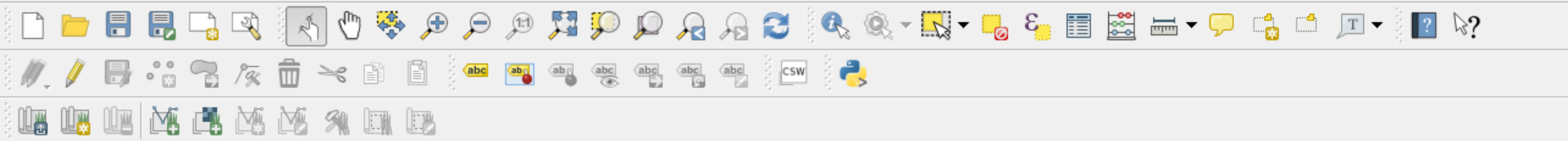
Import rainfall data and display it

Open attribute table to see the details



Click on Raster → Interpolation → Interpolation





Browser

- Home
- Favourites
- C:/
- D:/
- E:/
- F:/
- G:/

Layers

- Rainfall

Shortest path

Start:

Stop:

Criterion: Length

Length:

Time:

Calculate Export Clear

Help

Interpolation plugin

Input

Vector layers: Rainfall

Interpolation attribute: Annual

Use z-Coordinate for interpolation

Add Remove

Vector layer	Attribute	Type
Rainfall	Annual	Points

Output

Interpolation method: Triangular interpolation (TIN)

Number of columns: 1394 Number of rows: 1523

Cellsize X: 30.00000 Cellsize Y: 30.00000

X min: 760353 X max: 802200

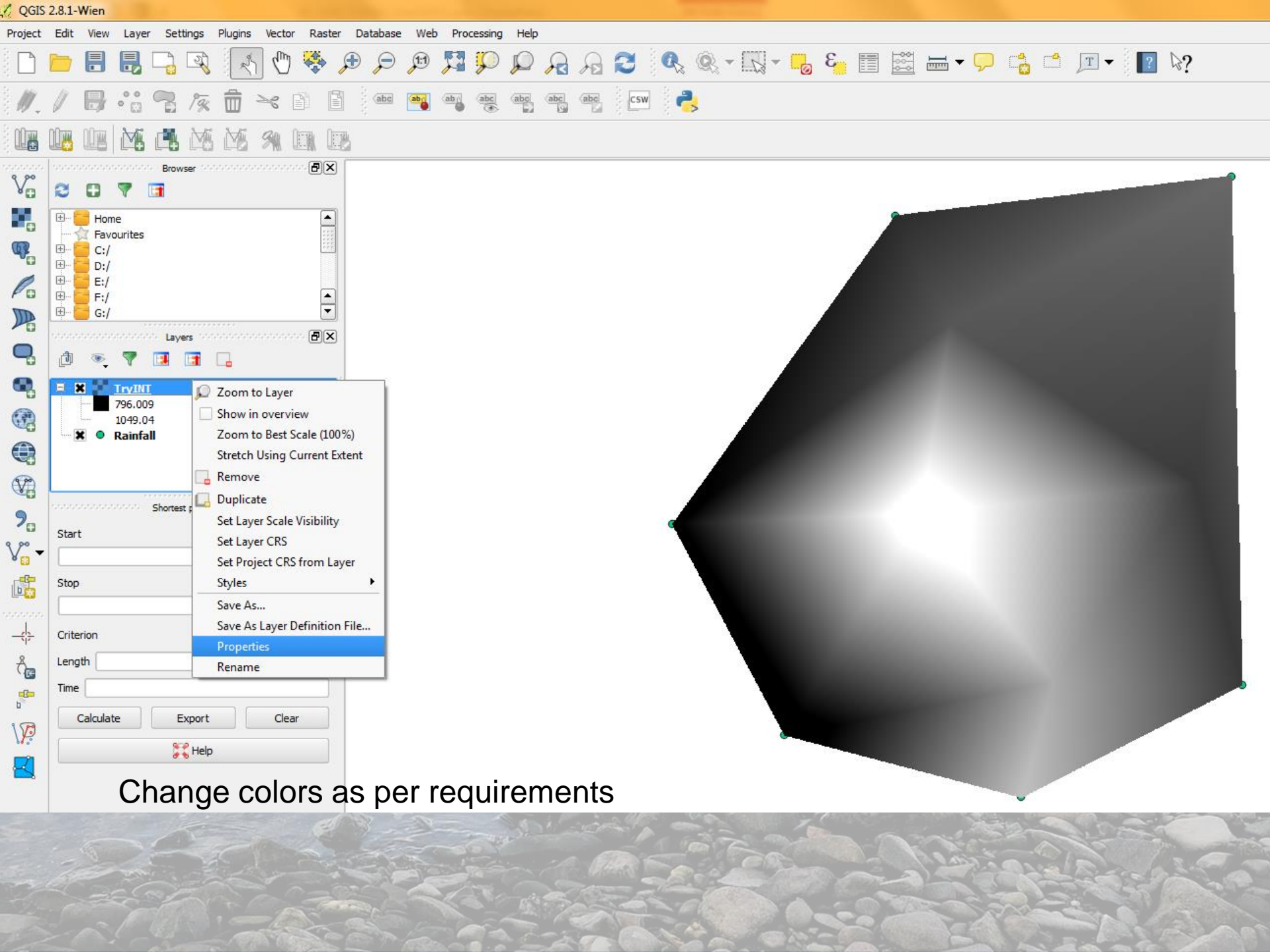
Y min: 1.41524e+06 Y max: 1.46093e+06

Set to current extent

Output file: H:/TryINT.img

Add result to project

































OK Cancel



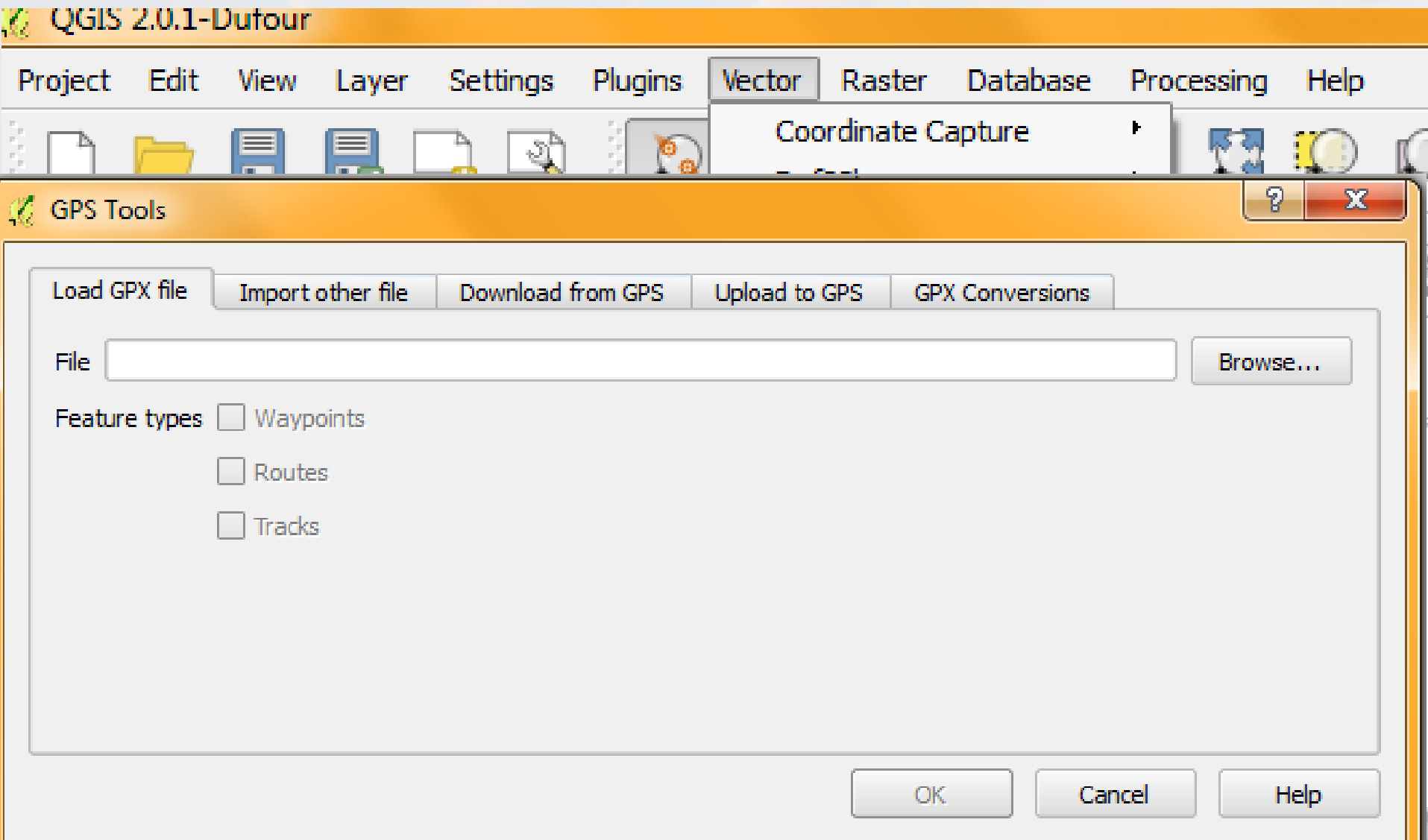
Change colors as per requirements

Print Composer

- Simple maplayouts made easy
- Apply map, legend, north arrow and text
- Using external programmms (inkscape) for finetuning.
- Lots of paperformats supported
- Logo inclusion, legend, labels, northarrow
- PNG/SVG/PDF support
- Adjustable drawing scale
- Separate DPI settings

Icon	Purpose	Icon	Purpose
	Load from template		Save as template
	Export to an image format		Export as PDF
	Export print composition to SVG		Print or export as Postscript
	Zoom to full extent		Zoom in
	Zoom out		Refresh view
	Add new map from QGIS map canvas		Add Image to print composition
	Add label to print composition		Add new legend to print composition
	Add new scalebar to print composition		Add basic shape to print composition
	Add arrow to print composition		Add attribute table to print composition
	Select/Move item in print composition		Move content within an item
	Group items of print composition		Ungroup items of print composition
	Raise selected items		Lower selected items
	Move selected items to top		Move selected items to bottom
	Align selected items left		Align selected items right
	Align selected items center		Align selected items center vertical
	Align selected items top		Align selected items bottom

Importing GPS data



Working with online re-sources

Openstreet map

Bhuvan

Google earth etc....,

The screenshot displays the QGIS 2.0.1-Dufour software interface. The 'Vector' menu is open, showing options like 'Coordinate Capture', 'Dxf2Shp', 'GPS', 'OpenStreetMap', 'Road graph', 'Spatial Query', 'Topology Checker', 'Analysis Tools', 'Research Tools', 'Geoprocessing Tools', 'Geometry Tools', and 'Data Management Tools'. The 'OpenStreetMap' option is selected, and its sub-menu is visible, containing 'Download data', 'Import topology from XML', and 'Export topology to SpatialLite'. The 'Download data' option is highlighted. In the foreground, the 'Download OpenStreetMap data' dialog box is open. It has a title bar with a question mark and a close button. The 'Extent' section has three radio buttons: 'From map canvas' (selected), 'From layer' (with a dropdown menu showing 'Coordrinate'), and 'Manual'. Below these are four text input fields containing the coordinates: '13.0301', '77.5484', '77.5802', and '13.0138'. The 'Output file' section has a text input field with the path 'C:\Users\sharavathi\Desktop\FOSS 4G @ CISTUP\Data\Raster\try.osm' and a browse button. At the bottom, there is a file size indicator '3.1 MB', a blue progress bar, and 'OK' and 'Close' buttons.

WMS Manager

Bhuvan Catalogue provides some of the WMS Services available, User can input WMS URL for listing the Layers.

Search Catalogue Input WMS URL

WMS Services

WMS URL

eg: <http://bhuvan5.nrsc.gov.in/bhuvan/wms?>

Load Layers

Clear List

Remove Layers

Overlay	Layername
	http://bhuvan5.nrsc.gov.in/bhuvan/wms?
<input type="checkbox"/>	vector:ALL_Wildlife_NP_Conservation_Reserve_HP
<input type="checkbox"/>	vector:AM_LS
<input type="checkbox"/>	vector:AN_GM50K_0506
<input type="checkbox"/>	vector:AN_L3_LULC
<input type="checkbox"/>	vector:AN_LN50K_0506
<input type="checkbox"/>	vector:AN_LULC50K_0506
<input type="checkbox"/>	vector:AN_LULC50K_1112

The map shows a satellite view of a region with a network of orange lines representing water bodies or infrastructure. A menu is open over the map with the following options: Add Content, Add Layer, Draw Tool, Measure Area, Measure Length, and WMS Manager. A 'Base Hydrology' window is also visible, showing a map with pink lines. A tooltip at the bottom of the map says 'Click to add Bhuvan WMS or External WMS Layers'.



Layer Settings Plugins Vector Raster Databases

- New
- Embed Layers and Groups...
- Add Vector Layer... Ctrl+Shift+V
- Add Raster Layer... Ctrl+Shift+R
- Add PostGIS Layers... Ctrl+Shift+D
- Add SpatialLite Layer... Ctrl+Shift+L
- Add MSSQL Spatial Layer... Ctrl+Shift+M

Add Layer(s) from a Server

Layers | Layer Order | Tilesets | Server Search

Bhuvan

Connect | **New** | Edit | Delete

ID	Name	Title	Abstract

Image encoding

Options

Layer name

Tile size

Feature limit for GetFeatureInfo

Ready

Add Layer(s) from a Server

Layers | Layer Order | Tilesets | Server Search

Create a new WMS connection

Connection details

Name

URL

If the service requires basic authentication, enter a user name and optional password

User name

Password

Referer

- Ignore GetMap URI reported in capabilities
- Ignore GetFeatureInfo URI reported in capabilities
- Ignore axis orientation (WMS 1.3/WMTS)
- Invert axis orientation
- Smooth pixmap transform

OK | Cancel | Help

Ready

Layers Layer Order Tilesets Server Search

Bhuvan

Connect

New

Edit

Delete

Load

Save

Add default servers

ID	Name	Title	Abstract
747	vector:JK_WS	JK_WS	
749	vector:JR_BRB_K...	JR_BRB_KNJ_P1...	
751	vector:JR_BRB_K...	JR_BRB_KNJ_P1...	
753	vector:JR_BRB_K...	JR_BRB_KNJ_P1...	
755	vector:JR_BRB_L...	JR_BRB_LTT_P1...	
757	vector:JR_BRB_L...	JR_BRB_LTT_P1...	
759	vector:JR_BRB_L...	JR_BRB_LTT_P1...	
761	vector:KA_ERO5...	KA_ERO50K_0506	
762	ERO_50K_0506		
763	vector:KA_GM50...	KA_GM50K_0506	

Image encoding

 PNG PNG8 JPEG GIF TIFF

Coordinate Reference System (4641 available)

Layer name vector:KA_ERO50K_0506

Tile size

Feature limit for GetFeatureInfo

10

WGS 84



Add

Close



Help


1 Layer(s) selected





Layers  

- vector:KA_ER050K_0506
- vector:AN_LULC50K_0506
- Coordrinates
- Coordrinates
- FCC
- FCC

Shortest path  

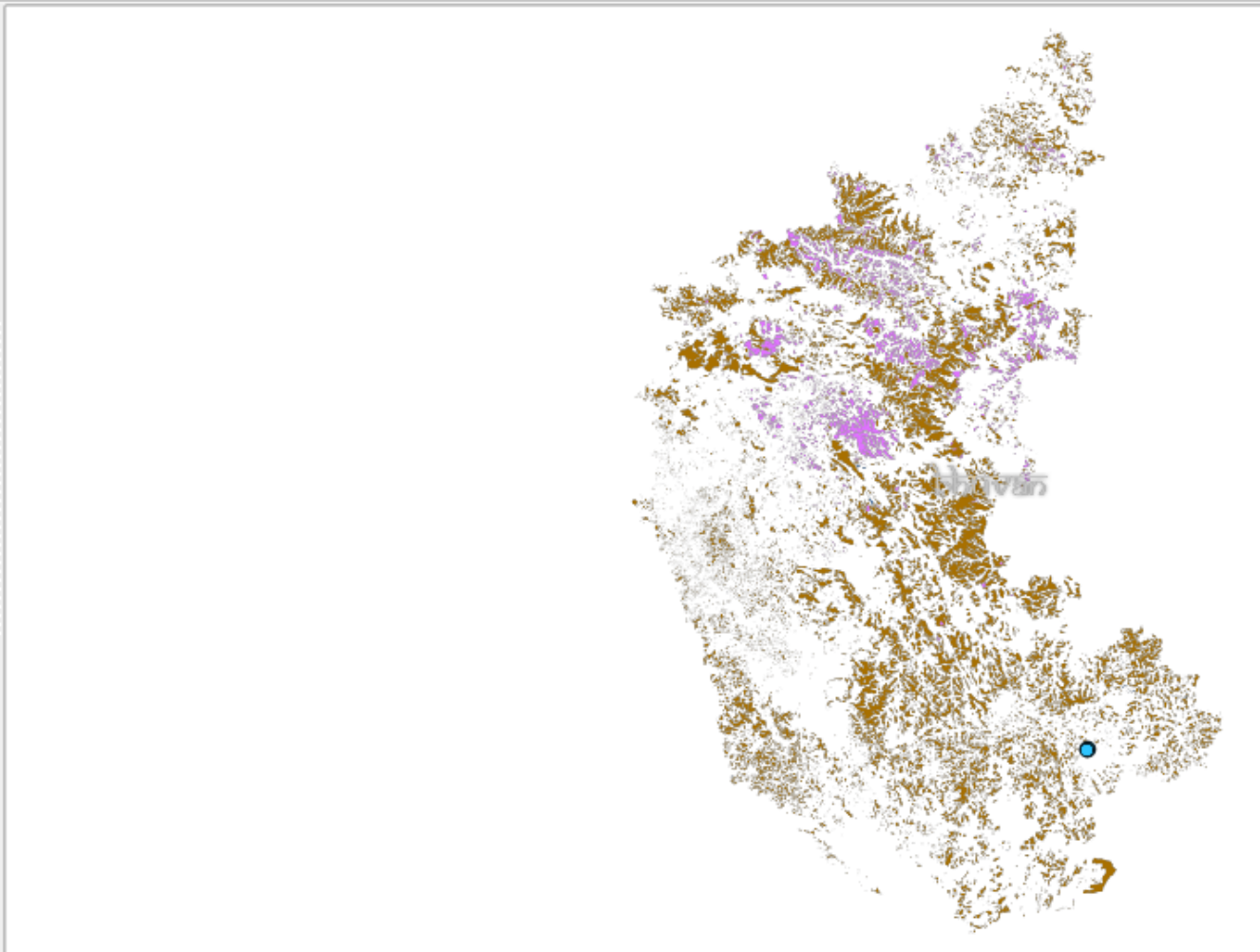
Start 

Stop 

Criterion 

Length

Time



HELP FROM QGIS

?

??

?

WEB SITE

(www.qgis.org/en/)

QGIS has active community support, update and upgrades

2.0 DISCOVER QGIS FOR USERS GET INVOLVED DOCUMENTATION Search

Discover what makes QGIS the leading Open Source desktop GIS

QGIS is the best GIS tool in the Free and open-source software (FOSS) community.

DISCOVER

[QGIS Features](#) [QGIS Screenshots](#) [QGIS Case Studies](#) [Supporting Organizations](#) [Commercial Support](#)

About QGIS

QGIS is a user friendly Open Source Geographic Information System (GIS) licensed under the GNU General Public License. QGIS is an official project of the Open Source Geospatial Foundation (OSGeo). It runs on Linux, Unix, Mac OSX, Windows and Android and supports

QGIS Support

Mailing Lists

QGIS has a bunch of mailing lists. See [Mailinglists](#) for the different available lists.

If you are going to ask questions please read this: [How to ask a QGIS question?](#)

Searchable Mailing Lists

Nabble (<http://nabble.com> *nr*) keeps a history of a lot of mailinglists.

If you go to the [osgeo](#) section of it: <http://osgeo-org.1560.x6.nabble.com/> *nr* you see there is a QGIS section also, where you can do a search over all QGIS lists, or refine it to eg only the users list.

Forums

QGIS does not have a forum. Please either search in StackExchange (see below), or via <http://nabble.com> *nr* in the history of our [Mailinglists](#) (see above)

StackExchange

On <http://qgis.stackexchange.com> *nr* you can ask QGIS questions also. If you use the tag 'qgis' you'll see all QGIS related questions and answer: <http://qgis.stackexchange.com/?tags=qgis> *nr*

Chat

A lot of the development buzz will be spoken on IRC.

There is a #qgis channel on freenode.net

You can also use a web interface: <http://webchat.freenode.net/?channels=#qgis> *nr*

TODO: write something about the IRC etiquette?

User Groups

TODO

Issue Tracker

If you want to file bugs or issues, you need an osgeo ID. You can create an account here: https://www2.osgeo.org/cgi-bin/ldap_create_user.py *nr*

More info to be found here: <http://hub.qgis.org/wiki/quantum-gis/Bugreports> *nr*

All issues can be browsed here: <http://hub.qgis.org/projects/quantum-gis/issues> *nr*

Commercial Support

You can also get support from companies near you, please visit this page: [Commercial support](#).



BLOG

BUGS

 **Quantum GIS Blog**
Dev-Speak and other QGIS Ramblings...

Bugs | Forum

Recent blog posts

- Quantum GIS on steroids
- Annotation tools
- Announcing the release of QGIS 1.4.0 'Enceladus'
- Carson Farmer's report back on the Vienna Hackfest
- Vienna Hackfest 2009 Report Back
- Introducing the QGIS Hackfest (Vienna 2009) crew
- Announcing the release of QGIS 1.3.0 'Mimas'
- Announcing the releases of QGIS 1.0.2 (stable) and QGIS 1.1.0 'Pan' (unstable).
- Summer of Code project: Label placement
- QGIS and Google Summer of Code 2009

[more](#)

Category

- Developer
 - Building QGIS
- News
- Releases
- Tutorials

Quantum GIS runs on Linux formats (in your GPS, etc)

Quantum GIS on steroids

Submitted by Martin Dobias on Mon, 2010-05-10 19:20. [News](#)

I'm very happy to announce that I've been accepted for this year's Google Summer of Code program! The full list of participants within OSGeo can be found [here](#).

My proposal aims to improve speed and responsiveness of Quantum GIS when doing commonly used operations such as map browsing. This should be achieved by adding threading support to the process of rendering and by optimizing related routines. The user interface should feel snappy even when browsing large datasets.

Read on for the proposal details.

► [Martin Dobias's blog](#) | [Login](#) or [register](#) to post comments | [Read more](#) | 813 reads

Annotation tools

Submitted by mhugent on Sat, 2010-04-03 13:52.

Since a few days, the annotation tools are contained in the developer version of QGIS. In this blogpost, I'd like to explain what those tools are and how to use them.

► [mhugent's blog](#) | [Login](#) or [register](#) to post comments | [Read more](#) | 1899 reads


Announcing the release of QGIS 1.4.0 'Enceladus'

Submitted by Tim Sutton on Sun, 2010-01-10 22:16. [News](#)

Intro

Browser: <https://trac.osgeo.org/qgis/>

news | others | users | gmail | zimbra | Other Bookmarks

 **QUANTUM GIS**

Login | Settings | Help/Guide | About Trac

Wiki | Timeline | Roadmap | Browse Source | View Tickets | Search

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Welcome to the Quantum GIS Project Management Site

This site provides project management support, bug/issue tracking, and viewing of the Subversion source code repository. For more information, see [Using Trac with QGIS](#).

Login

To submit issues you need an [OSGeo id](#)

Report a Bug

Use the [New Ticket](#) button to report a bug. You must have an account and be logged in to submit a bug. But you should probably read [Using Trac with QGIS](#) for a brief explanation first.

Project Statistics

Project statistics and developer activity can be viewed at <http://www.ohloh.net/projects/3663>.

Useful bug queues and Bug Triage

What is a bug triage? Its a short term focussed period of bug squashing. Click the triage links for more info.

FOR USERS

[Download](#) | [QGIS Plugins](#) | [Documentation](#) | [Features](#) | [Getting Help](#) | [Press](#) | [Commercial Support](#)

Download QGIS

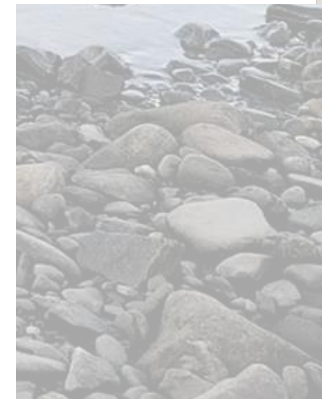
QGIS is a cross-platform Open Source Geographic Information system.

For Linux, Windows, OSX, BSD and beta Android.

[Download QGIS](#)

Check out our visual changelog, for what is changed since QGIS 1.8

[Visual Changelog for 2.0](#)



USER MAILING LIST

- Messages sorted by: [\[subject \]](#) [\[author \]](#) [\[date \]](#)
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Ending: Thu May 27 07:16:19 EDT 2010

Messages: 214

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- [\[Qgis-user\] Mobile GIS - gvSIG Mini for Android 0.2.0 released](#) *Paolo Cavallini*
 - [\[Qgis-user\] Mobile GIS - gvSIG Mini for Android 0.2.0 released](#) *Miguel Montesinos*
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- [\[Qgis-user\] v.generalize/GRASS plugin question](#) *Paolo Cavallini*
- [\[Qgis-user\] Annotation Plugin for QGIS?](#) *Bruce, Bob (CON)*
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THA Q M

