



## Ministry of Forests and Soil Conservation REDD Implementation Centre

Develop National Database of Basic Attributes of all Forest Management Regimes and Develop National REDD+ Information System or Registry

Contract No: (FCPF/REDD/S/QCBS-24)



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Technical Working Document n. 11 to Final Report

### User Manual

### Online GIS Platform

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# User Manual Steps for Accessing Online GIS <sup>1</sup>

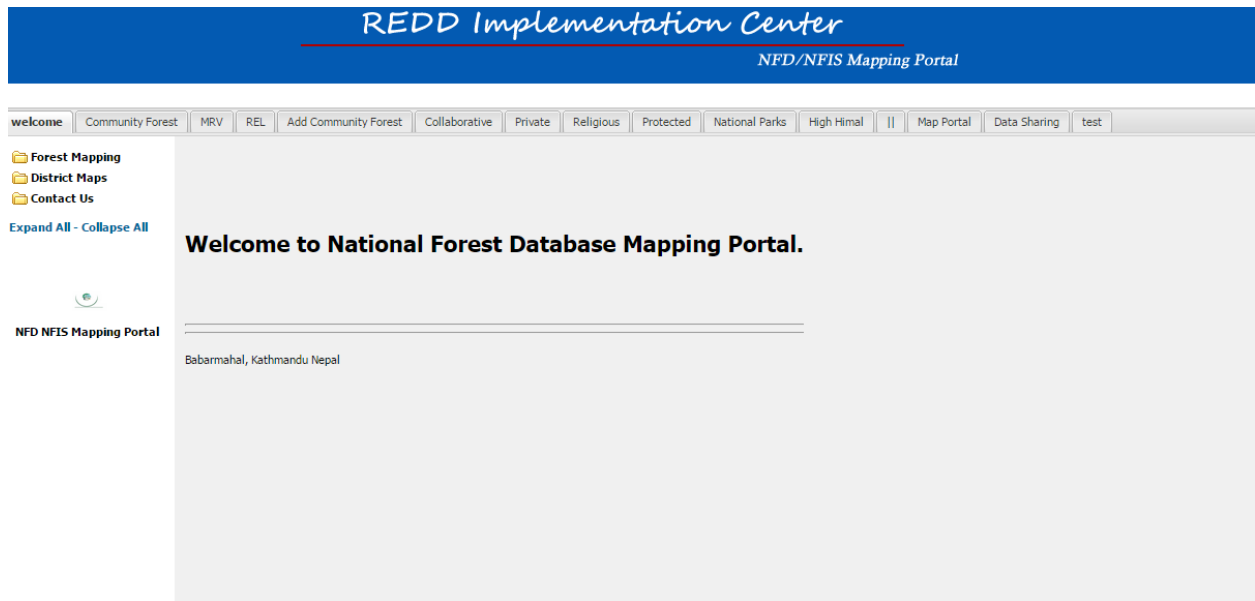
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<sup>1</sup> Detailed user manual with defined address will be updated when the system fully operationalize and installed public.

## 1 Viewing map layers

Interface of NFD/NFIS Mapping Portal. It can be open click GIS menu of main page of NFD/NFIS portal.

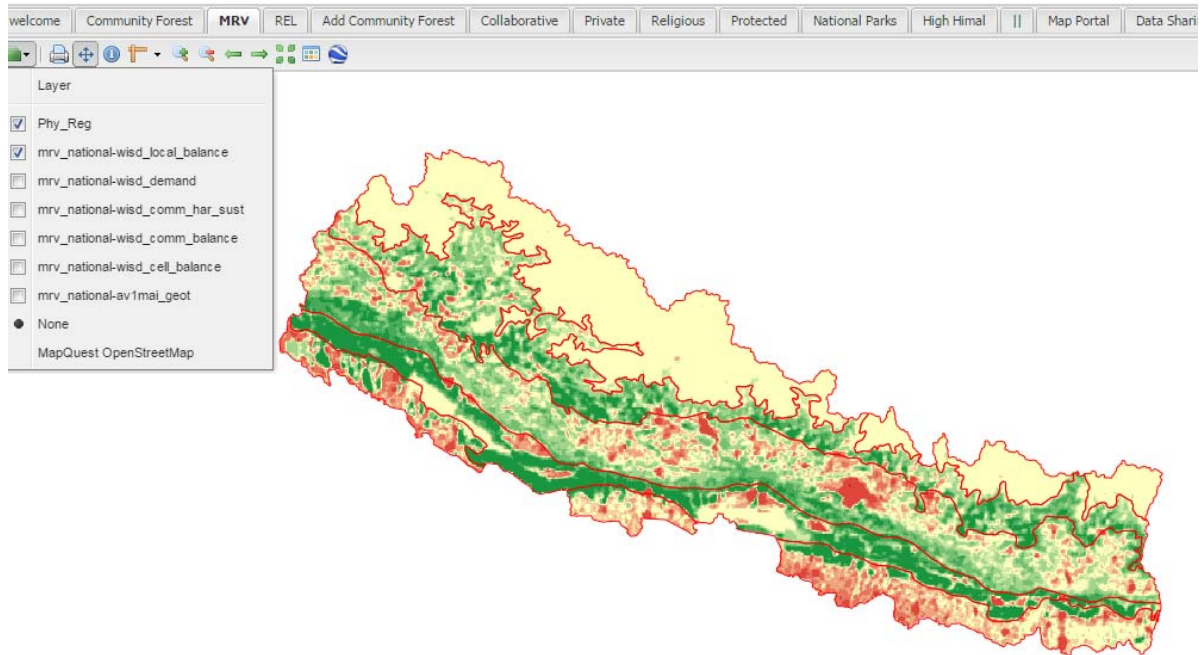
Menus and Icons are arranged on left and top of the interface.



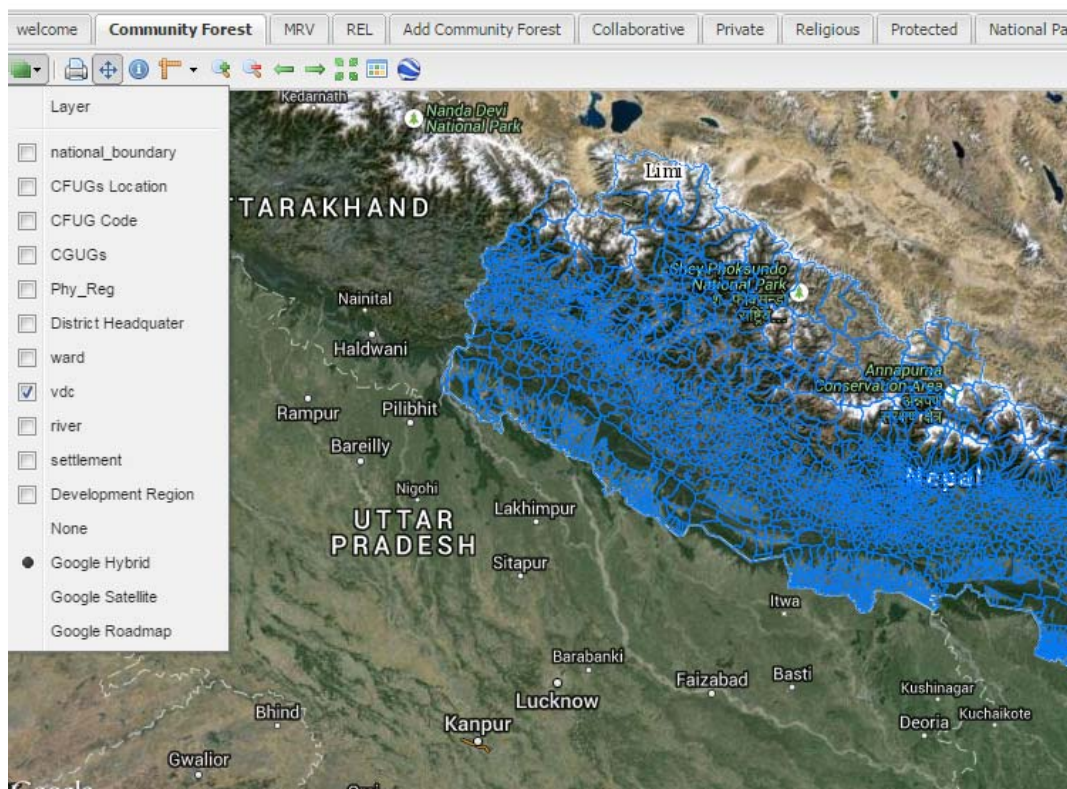
Click left pane to see desired map. There are different on top of each interface for

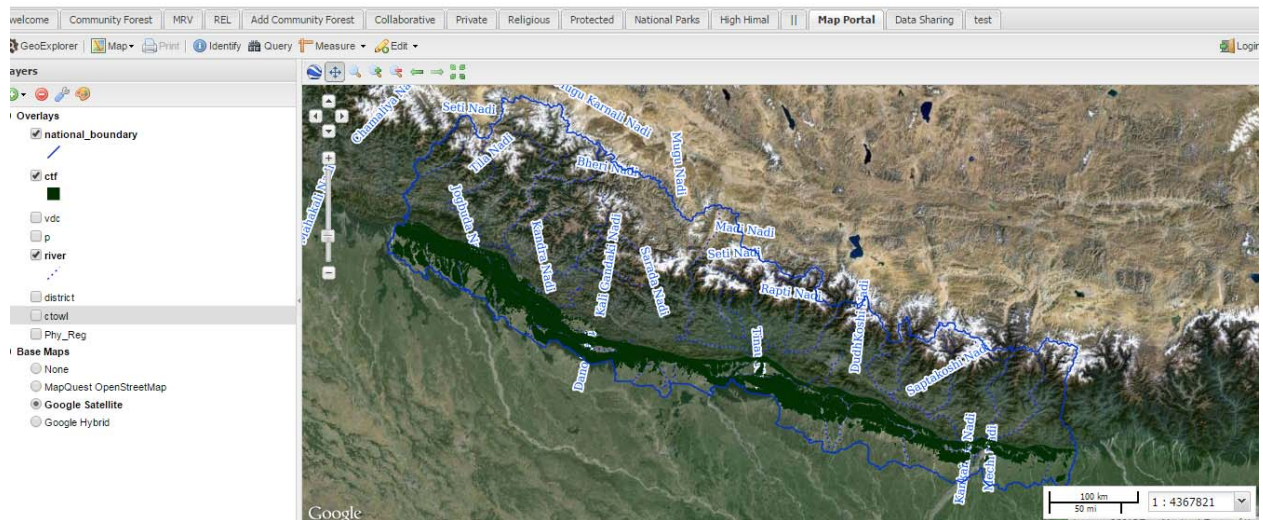
- Selecting layers
- Panning
- Zoom in and Zoom out
- Legend

Select check box to visualize required layer.



Can be selected multiple layers and background layer.





Maps with Google background

## 1.1 Adding and Uploading spatial data

For uploading existing shape file click add button on the menu. It will require user authentication to upload.

**Authentication Required** ✕

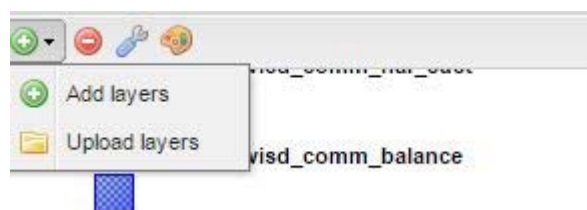
The server <http://202.45.144.208:8080> requires a username and password. The server says: GeoServer Realm.

User Name:

Password:

Log In
Cancel


Fig login interface



Layers » **Upload layers**

Title:

Description:


Data:  

**Options**

Browse the required file and click upload.

**Options**

Workspace:  

Store:  

CRS:

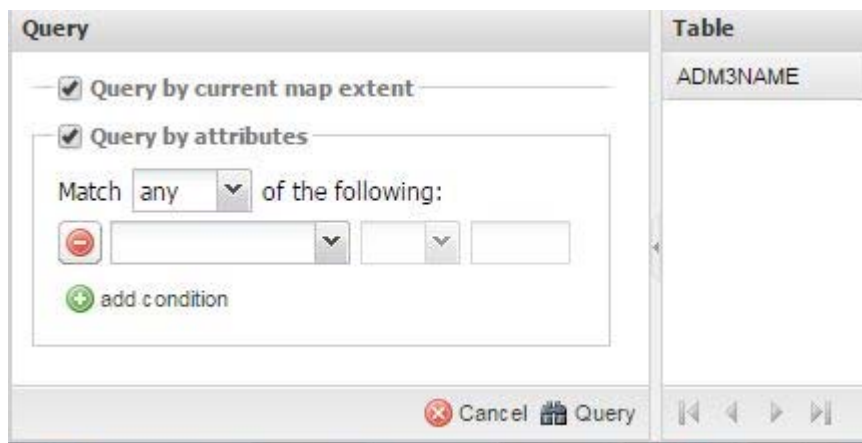


Click option to select workspace, data store and reference system.



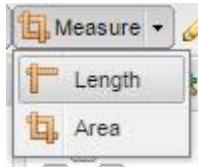
## 1.2 Querying

Querying is possible providing different search criteria. Select the layer to query and provide required query statement. You can query more than one condition. To select multiple condition select add condition.



### 1.3 Measuring tool

You can measure area, length of map online. Click measuring tool

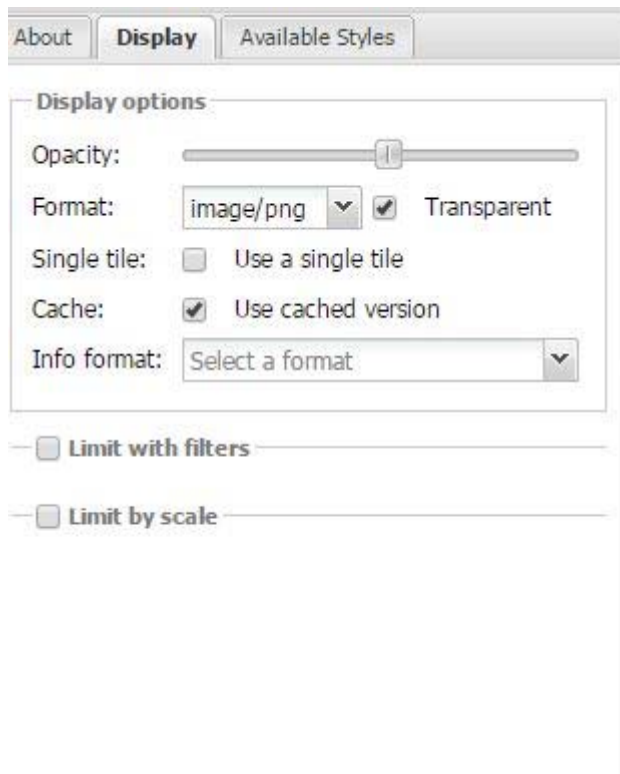


### 1.4 Styling

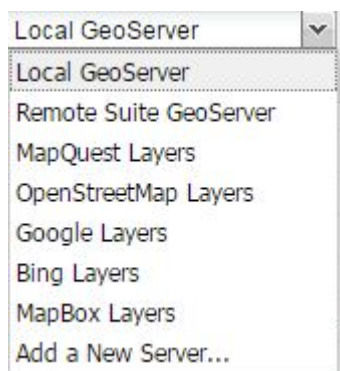
To change color and text automated styling tool is available. Select default style to view the the current style. Click edit icon to change the current style.



On display section you can change opacity so that you can see underlying layers when they are overlapped.



Adding baselayers and remote servers. You can select Google, Bing and other baselayers. If you have other Geoserver location you can add the Remote Geoserver layers in your current map interface.



Exporting Map layers in other formats pdf, jpeg, kml and shape file. Log on the geoserver main page and select layer preview. On view drop down menu select the desired format. While clicking it automatically downloads the required format of map.



Username  Password  Remember me

- About & Status
  - About GeoServer
- Data
  - Layer Preview
- Demos

Powered by Boundless

## Layer Preview

List of all layers configured in GeoServer and provides previews in various formats for each.

Results 51 to 62 (out of 62 items)

Type	Name	Title	View
	geo.mrv_national-av1ma1_geot	mrv_national-av1ma1_geot	OpenLayers <input type="button" value="Go"/>
	seamn.mrv_national-wisd_cell_balance	mrv_national-wisd_cell_balance	OpenLayers <input type="button" value="Go"/>
	geo.mrv_national-wisd_comm_balance	mrv_national-wisd_comm_balance	OpenLayers <input type="button" value="Go"/>
	geo.mrv_national-wisd_comm_har_sust	mrv_national-wisd_comm_har_sust	OpenLayers <input type="button" value="Go"/>
	geo.mrv_national-wisd_demand	mrv_national-wisd_demand	OpenLayers <input type="button" value="Go"/>
	geo.mrv_national-wisd_local_balance	mrv_national-wisd_local_balance	OpenLayers <input type="button" value="Go"/>
	mrv:ludhi_study_area	Ludhi study area	OpenLayers <input type="button" value="Go"/>
	mrv:ludhi_forest_strata	Ludhi forest Strata	OpenLayers <input type="button" value="Go"/>
	mrv:ludhi_dense_p_plots	ludhi dense plots	OpenLayers <input type="button" value="Go"/>
	mrv:lc_national_parks	LC national park	OpenLayers <input type="button" value="Go"/>
	mrv:kaay_study_area	kaay study area	OpenLayers <input type="button" value="Go"/>
	seamn	seamn	OpenLayers <input type="button" value="Go"/>

- OpenLayers
- Applications
  - Google Earth
  - GeoExplorer
- WMS Formats
  - AtomPub
  - GeoRSS
  - GeoTiff
  - GeoTiff 8-bits
  - GIF
  - JPEG
  - KML (compressed)
  - KML (network link)
  - KML (plain)
  - openlayers
  - PDF
  - PNG
  - PNG 8bit
  - SVG
  - Tiff

## 2 Adding GPS points

Mostly forest boundaries are measured by using GPS survey. This GPS data are require processing to create boundary and it requires GIS skills and software. NFDNFIS has developed interface that it can be uploaded GPS points in the center database. It automatically makes GPS location on map .

### 2.1 Single co-ordinates

For individual GPS point click GPS point on left pane and it will show data input form where you can enter X and Y. The generate maps can be visualize in desktop QGIS or online in NFDNFIS Mapping portal.

localhost:8087/gps/public.cfug\_gps\_point.php?operation=insert

**Gps Point**

Save Cancel

id \*

Sn

Cfug Name

X

Y

Geom

\* - Required field

Save Cancel

PAGE LIST

- Gps Point
- GPS points all
- GPS Point

## Forestry Boundary x, y

1 2 ... 11 ... 51 ... 101 ... 141 Define page size

[Add new](#) [Delete selected](#) [Refresh](#)

<input type="checkbox"/>	Actions	Id	Sn	Cfug Name	X	Y
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	1	1	TAN/BI/13/2	507,158.0000	3,096,404.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	2	2	TAN/BI/13/2	507,097.0000	3,096,403.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	3	3	TAN/BI/13/2	507,040.0000	3,096,450.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	4	4	TAN/BI/13/2	507,016.0000	3,096,529.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	5	5	TAN/BI/13/2	506,950.0000	3,096,650.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	6	6	TAN/BI/13/2	506,875.0000	3,096,625.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	7	7	TAN/BI/13/2	506,831.0000	3,096,546.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	8	8	TAN/BI/13/2	506,741.0000	3,096,552.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	9	9	TAN/BI/13/2	506,750.0000	3,096,498.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	10	10	TAN/BI/13/2	506,789.0000	3,096,483.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	11	11	TAN/BI/13/2	506,806.0000	3,096,408.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	12	12	TAN/BI/13/2	506,851.0000	3,096,390.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	13	13	TAN/BI/13/2	506,958.0000	3,096,335.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	14	14	TAN/BI/13/2	507,083.0000	3,096,248.0000
<input type="checkbox"/>	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Copy</a>	15	1	TAN/BI/30/10	509,534.0000	3,088,141.0000

## 2.2 Multiple co-ordinates for boundary

For complete boundary you can add all point once (Starting and Ending Point) . It require reference system and it crates forest boundary .

The screenshot shows a web application interface for 'Forestry Boundary points'. On the left is a 'PAGE LIST' sidebar with options: 'Gps Point', 'GPS points all' (selected), and 'GPS Point'. The main content area has a title 'Forestry Boundary points' and a 'Define page size' dropdown set to '1'. Below the title are 'Add new' and 'Refresh' buttons. A table displays the following data:

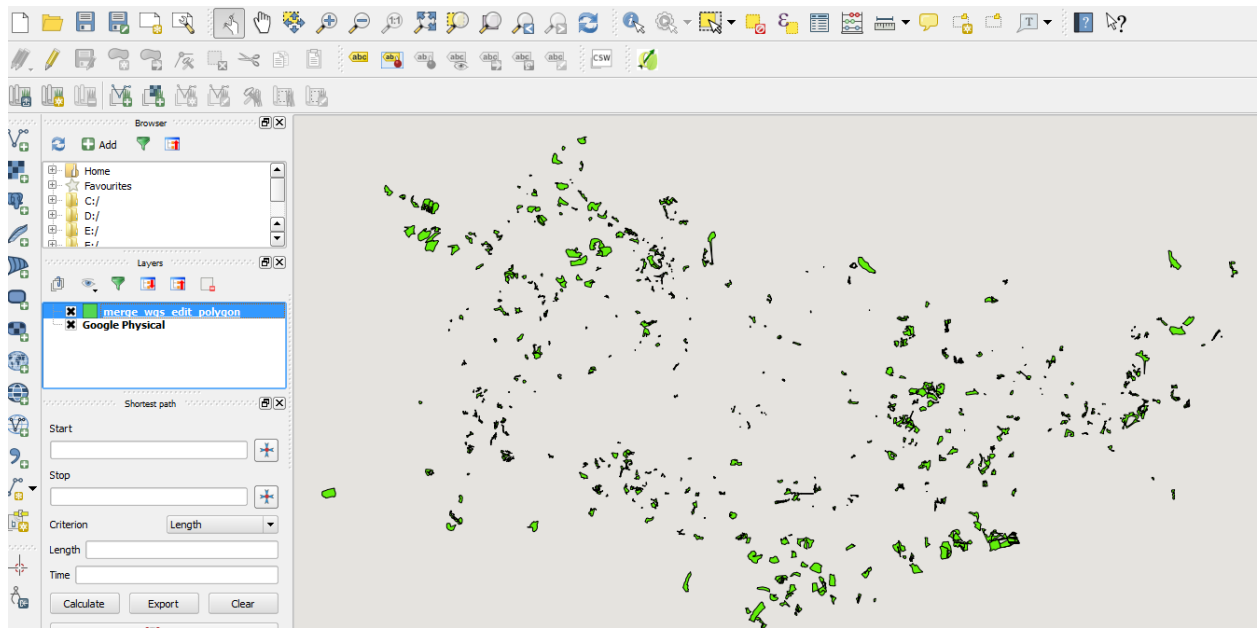
Actions	Id	Cfug Name	Gps	Gps Wgs
View Edit Delete Copy	1	BGL/BB/13/05	716404 3132456 716411 3132665 716151 3132577 716368 3132468 , 716... more	POLYGON((83.2068089446934 28.3003966338379,83.2069192019037 28.302280697442... more
View Edit Delete Copy	2	BGL/MA/06	751120 3134890 751077 3134882 751018 3134859 750989 3134845 , 750... more	NULL
			750901 3134573	

A modal window titled 'Gps' is open, displaying a list of coordinates: 716404 3132456, 716411 3132665, 716151 3132577, 716368 3132468, 716349 3132310, 716390 3132160, 716366 3132159, 716266 3132052, 715948 3131880, 715838 3131901, 715P6 3131942, 715695 3131878, 715611 3131812, 715616 3131717, 715665 3131570, 715655 3131492, 715727 3131478, 716404 3132456. A 'Close window' button is at the bottom right.

The screenshot shows a web application interface for 'Gps Point Entry Geographic'. On the left is a 'PAGE LIST' sidebar with options: 'Gps Point', 'GPS points all', and 'GPS Point' (selected). The main content area has a title 'Gps Point Entry Geographic' and a 'Define page size' dropdown set to '11'. Below the title are 'Add new' and 'Refresh' buttons, and a 'Quick search' input field. A table displays the following data:

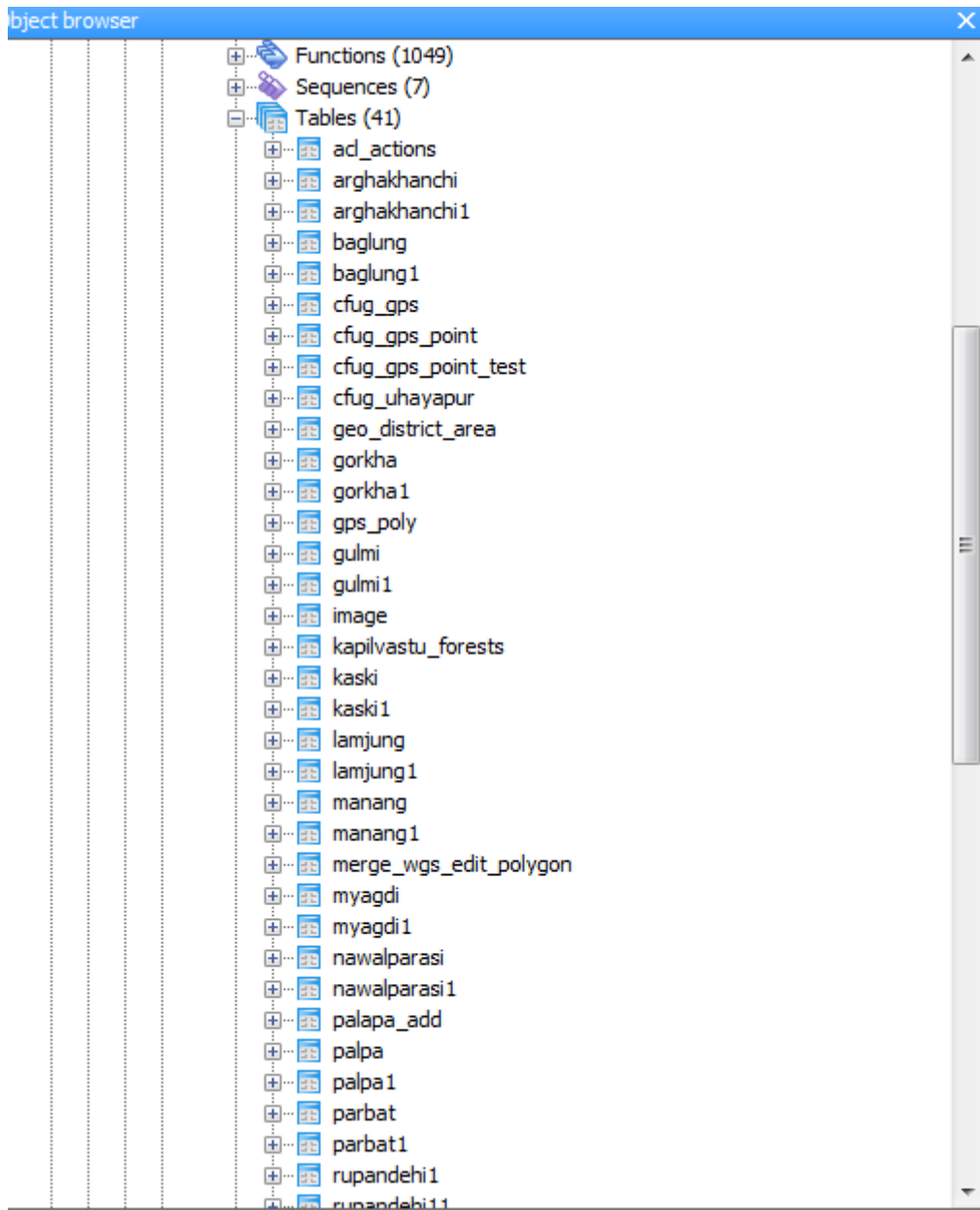
Actions	Id	Sn	Cfug Name	X	Y	Geom
View Edit Delete Copy	1	1	TAN/BI/13/2	507,158.0000	3,096,404.0000	0101000020847F000000000000058F41E410000000AA9F4741
View Edit Delete Copy	2	2	TAN/BI/13/2	507,097.0000	3,096,403.0000	0101000020847F000000000000064F31E4100000080A99F4741
View Edit Delete Copy	3	3	TAN/BI/13/2	507,040.0000	3,096,450.0000	0101000020847F000000000000080F21E4100000000C19F4741
View Edit Delete Copy	4	4	TAN/BI/13/2	507,016.0000	3,096,529.0000	0101000020847F000000000000020F21E4100000080E89F4741
View Edit Delete Copy	5	5	TAN/BI/13/2	506,950.0000	3,096,650.0000	0101000020847F000000000000018F11E410000000025A04741
View Edit Delete Copy	6	6	TAN/BI/13/2	506,875.0000	3,096,625.0000	0101000020847F00000000000000ECEF1E410000008018A04741
View Edit Delete Copy	7	7	TAN/BI/13/2	506,831.0000	3,096,546.0000	0101000020847F00000000000003CEF1E4100000000F19F4741
View Edit Delete Copy	8	8	TAN/BI/13/2	506,741.0000	3,096,552.0000	0101000020847F00000000000004ED1E4100000000F49F4741
View Edit Delete Copy	9	9	TAN/BI/13/2	506,750.0000	3,096,498.0000	0101000020847F00000000000008BED1E4100000000D99F4741
View Edit Delete Copy	10	10	TAN/BI/13/2	506,789.0000	3,096,483.0000	0101000020847F000000000000094EE1E4100000080D19F4741
View Edit Delete Copy	11	11	TAN/BI/13/2	506,806.0000	3,096,408.0000	0101000020847F00000000000008BEE1E4100000000AC9F4741
View Edit Delete Copy	12	12	TAN/BI/13/2	506,851.0000	3,096,390.0000	0101000020847F00000000000008CEF1E4100000000A39F4741
View Edit Delete Copy	13	13	TAN/BI/13/2	506,958.0000	3,096,335.0000	0101000020847F000000000000038F11E4100000080879F4741
View Edit Delete Copy	14	14	TAN/BI/13/2	507,083.0000	3,096,248.0000	0101000020847F00000000000002CF31E41000000005C9F4741
View Edit Delete Copy	15	1	TAN/BI/30/10	509,534.0000	3,088,141.0000	0101000020847F000000000000078191F4100000080868F4741
View Edit Delete Copy	16	2	TAN/BI/30/10	509,723.0000	3,088,115.0000	0101000020847F00000000000006C1C1F4100000080798F4741
View Edit Delete Copy	17	3	TAN/BI/30/10	509,679.0000	3,088,098.0000	0101000020847F00000000000000BC1B1F4100000000718F4741
View Edit Delete Copy	18	4	TAN/BI/30/10	509,821.0000	3,088,164.0000	0101000020847F0000000000000F41D1F410000000928F4741
View Edit Delete Copy	19	5	TAN/BI/30/10	509,721.0000	3,088,408.0000	0101000020847F0000000000000641C1F4100000000C904741

Points entered and automatic mapping code generated by the application

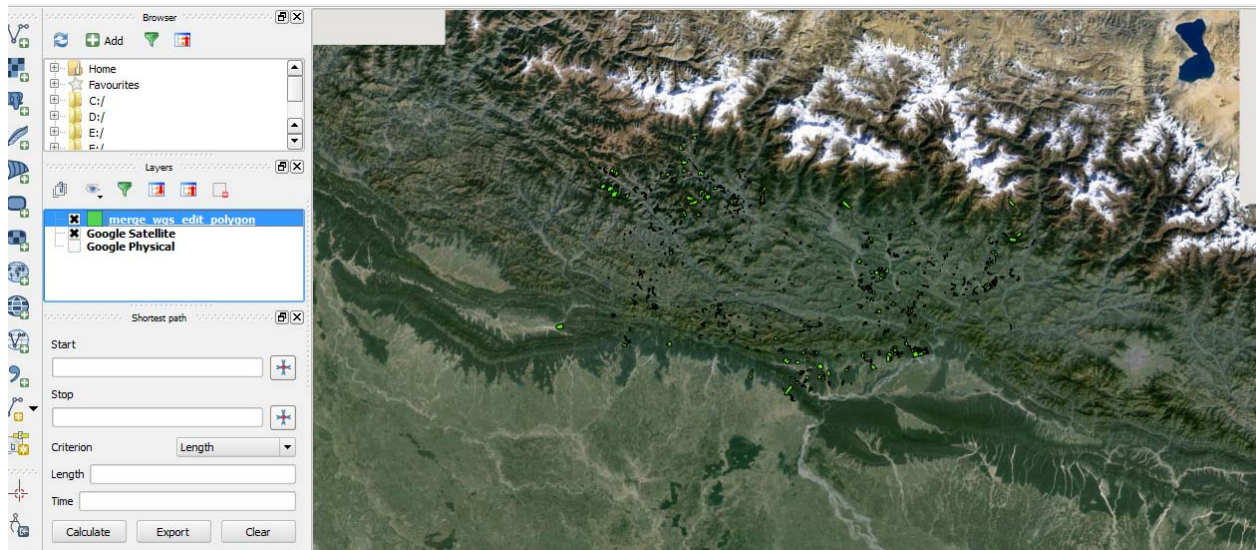


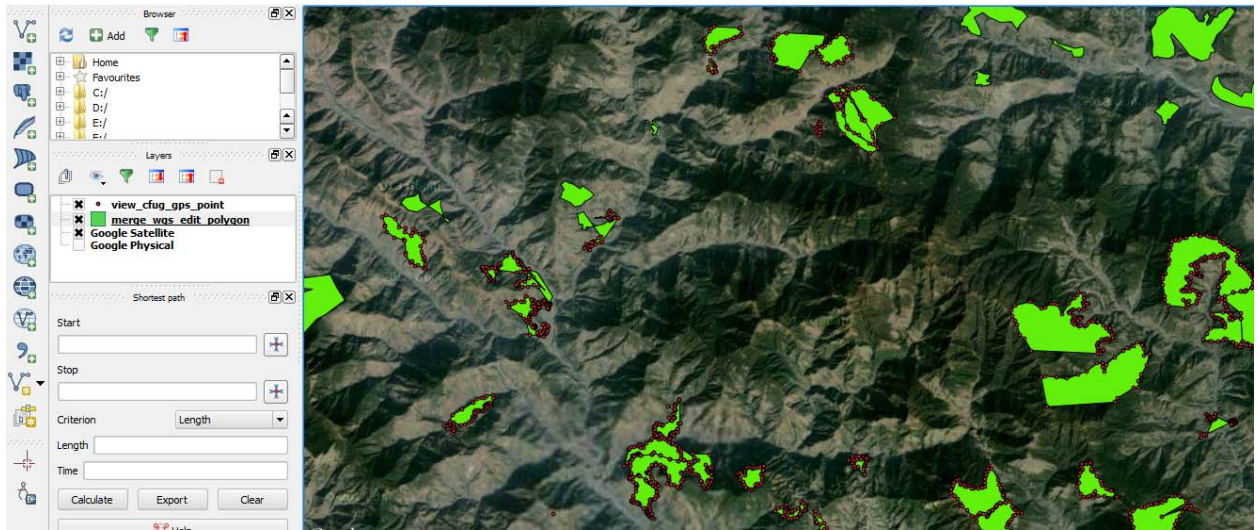
CFUG boundaries viewed on QGIS



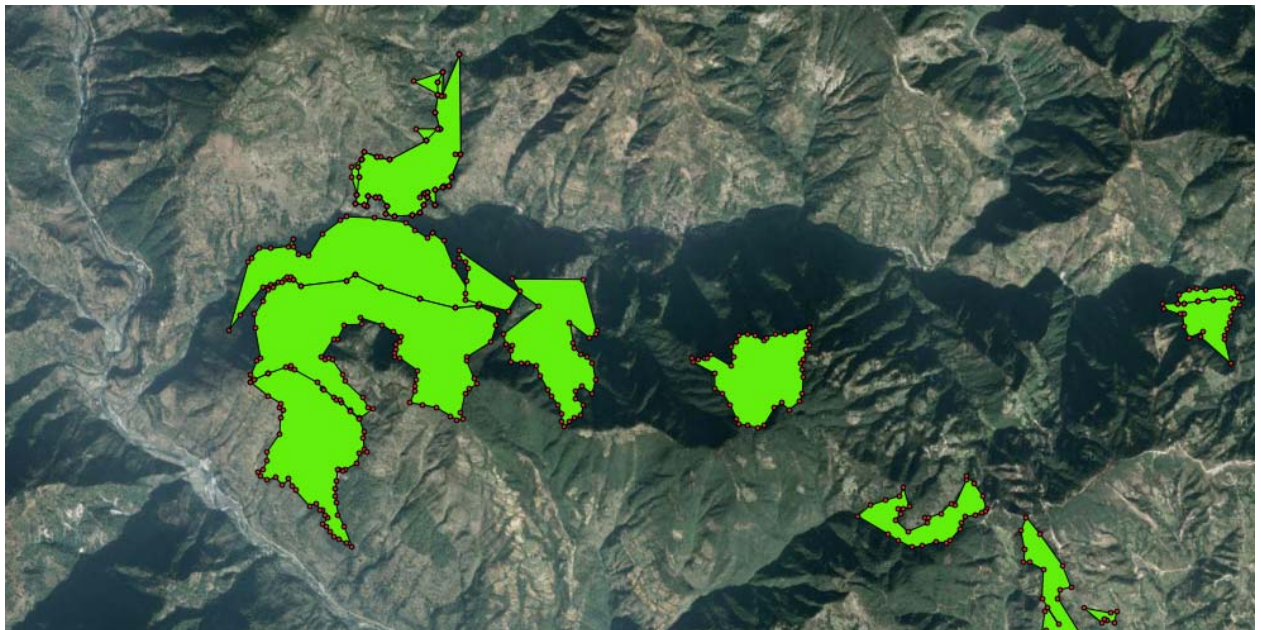


Database of western region Districts GPs point.





CFUG boundaries created entered GPS points



## 2.3 uploaded in PostGIS

