

User Manual for Environment Clearance GIS Application

Proposal Information using GIS

Submitted To

Ministry of Environment, Forest and Climate
Change Government of India (MoEFCC)

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1. General Information

1.1. Objective

The main objective of this document is to provide a user manual for the Environment Clearance GIS Application. This application for information of the proposal of Environment Clearance.

1.2. Organization of manual

The user's manual consists of following sections: **General Information, Environment Clearance GIS Application.**

The manual first describes all the GIS functionalities in the Environment Clearance GIS App, and then goes on to describe the other functionalities available in this.

2. Environment Clearance GIS App Functionalities

This section will give user an understanding of structure of Environment Clearance GIS App, the user comes to this Web GIS App and its various GIS functionalities. It explains in detail every module, the respective tools, and their functions.

2.1. Map Viewer

The user will be able to proceed to the Environment Clearance GIS App, where the Map Viewer displays all the information in spatially aware data presented in an aesthetic manner.



Fig 2.1 Map Viewer

2.2. Navigation Tools

The Map Viewer includes a set of navigation tools that make it simple for the user to move around the map area and to zoom in and out of areas of interest as they see fit.

2.2.1. Zoom Bar

This functionality allows the user to zoom and view the geographical contents at any required zoom level.

User can zoom in or zoom out by clicking the icons as shown in Fig 2.3

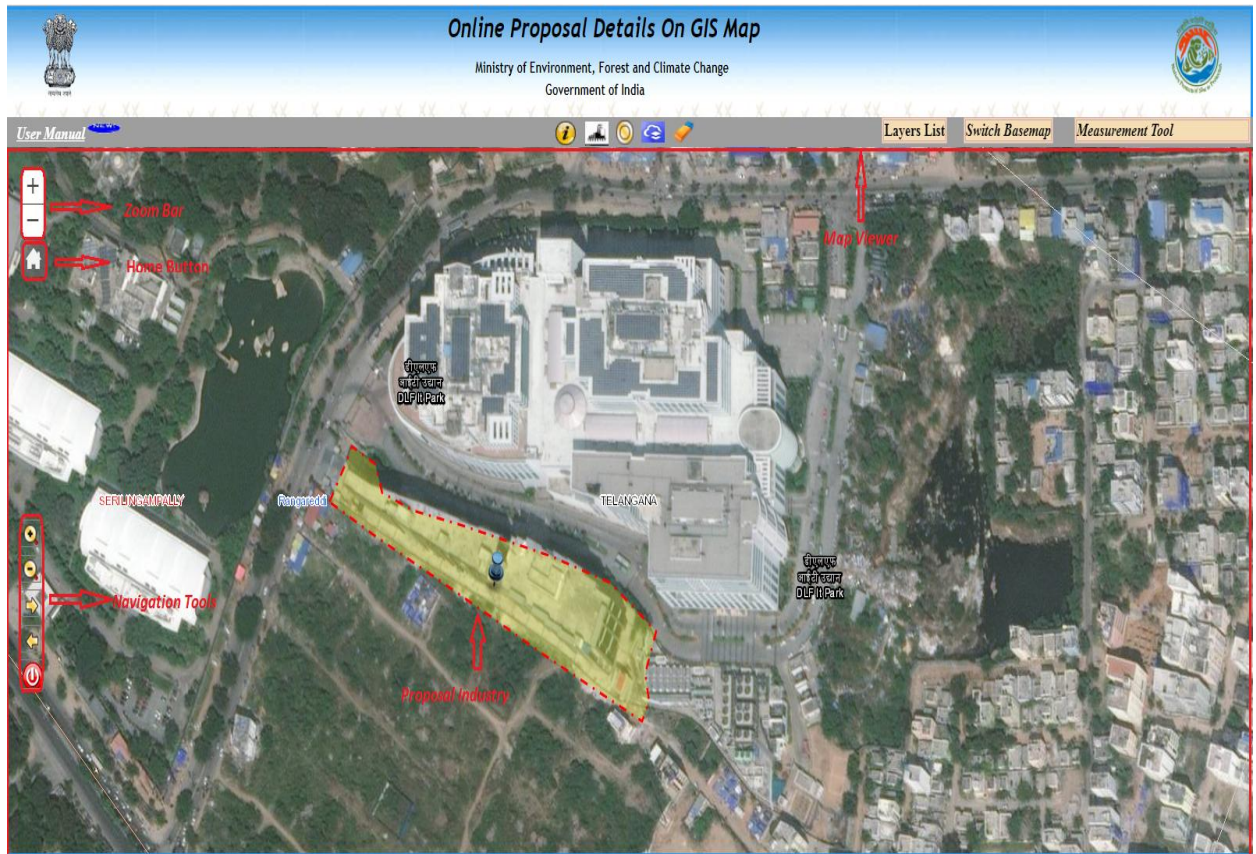


Fig 2.2 Navigation Tools And Home Button.

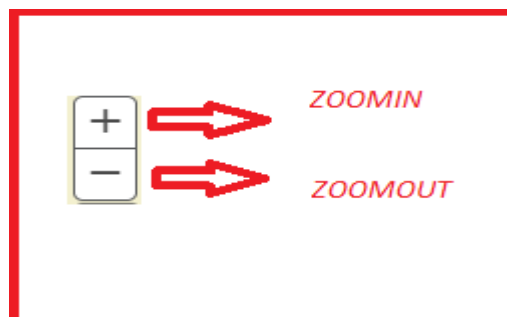


Fig 2.3 Zoom Bar

2.2.2. Zoom In

The Zoom In Navigation tool allows the user to select an area on the map and zoom into that extent of the map. On selecting the tool, the user can simply click and drag on the map to select an area he/she wants to zoom in to.

2.2.3. Zoom Out

The Zoom Out Navigation tool allows the user to select an area on the map and zoom out of that extent of the map. On selecting the tool, the user can simply click and drag on the map to select an area he/she wants to zoom out of.

2.2.4. Full Extent

The Full Extent tool allows the user to zoom back/pan out to the full extent of the map. In this case, the full extent is either the State of Environment, or the selected District, or the selected Marketing Committee.

2.2.5. Previous Extent

On selection of this tool, the map zooms/pans to the previous extent that was being viewed on the Map Viewer.

2.2.6. Next Extent

On selection of this tool, the map zooms/pans to the next extent that was being viewed on the Map Viewer prior to selection of the Previous Extent navigation tool.

2.2.7. Deactivate

The Deactivate tool allows the user to deactivate the navigation selected tool in the Map. This is useful for deactivate of selected tool.

2.3. Table of Contents

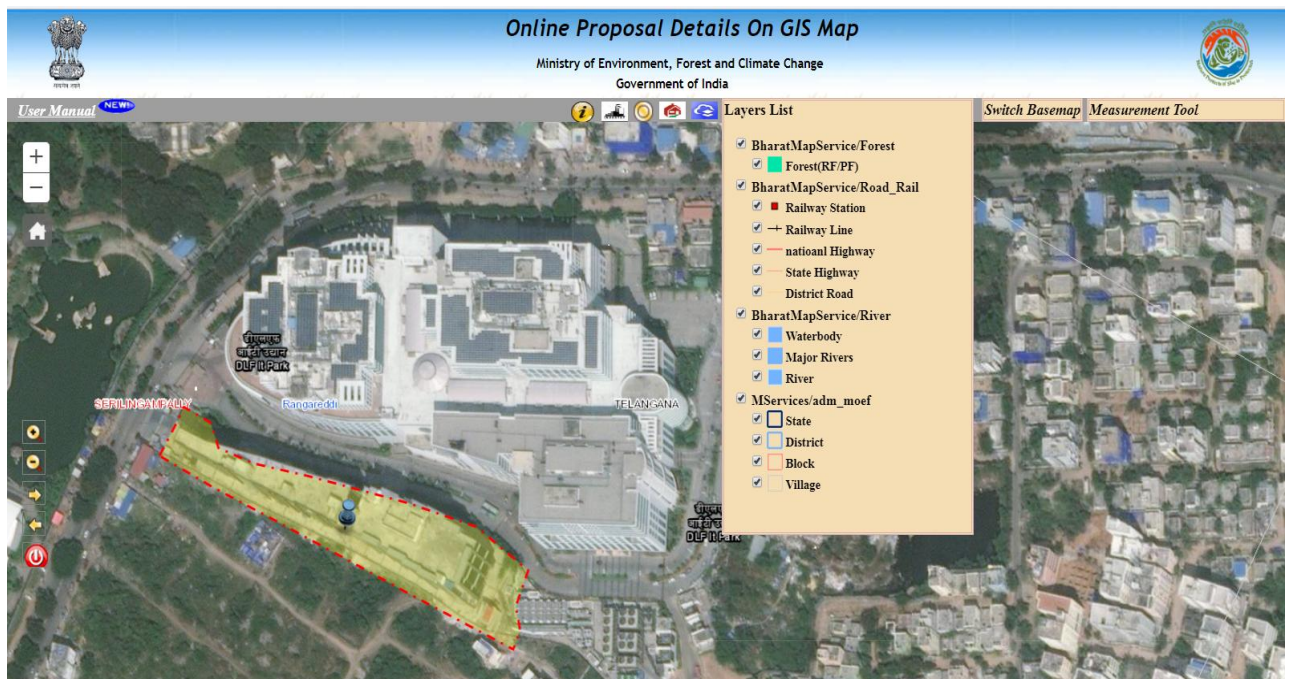


Fig 2.4 Table of Contents

User can switch on or switch off any layer view from the Table of Content by clicking the check box enabled along ever layer name.

Layer content within the dialog can be minimized or maximized to full view by clicking the arithmetic button representing '+' & '-' along side of layer titles.

Transparency of the layer features can also be controlled by adjusting the scale bar level present over the top of layer content.

Default visibility of the layer has been controlled as per the application requirement.

2.4. Switch Base Maps

A base map provides a background of geographical context for the content you wish to display.

On click of the Base Map Gallery button, a gallery of base maps will be shown in a dialog box (Fig 2.5).

By default no base map is selected. User can change the base map at any time and select the one you want by using this base map gallery. The available default base maps are "Street", "NIC Street", "No Base Map" and an option of "Imagery".

User can choose no base map on require, which in turn removes all the base maps from the map page.



Fig 2.5 Switch Base Maps

2.5. Home Button

The Home Button is created for particular map extent . It will shows the India country with particular zoom level . These home button as shown in fig 2.6

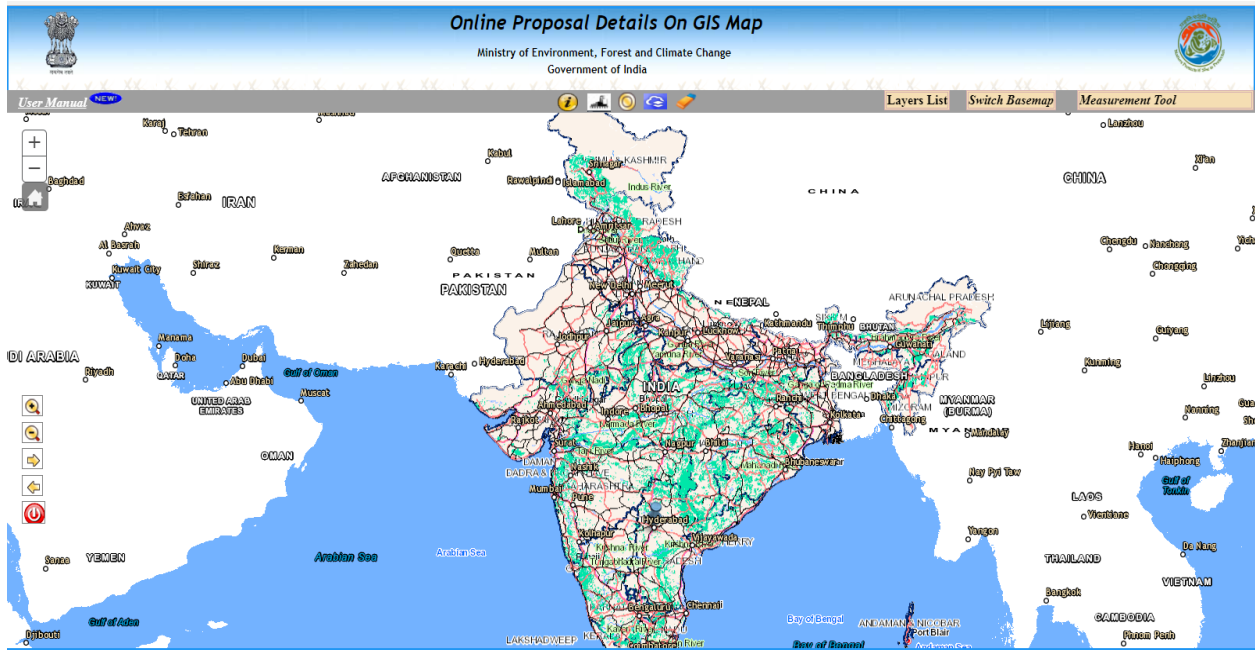


Fig 2.6 Home Button

Quickly return to the map's default start extent using the HomeButton widget. When the widget is created for the specifies an extent that will be used as the 'home extent'. As users pan and zoom around the map they can click the home button to return to the specified start extent.

2.6. Measurement Tool

User can measure the distances between any two points, calculate area, and find any location (latitude and longitude).



Fig 2.7 Measurement Tool

On click of measurement icon, measure dialog will open as shown in Fig 2.7

Figure 2.7 shows the measurement dialog with area icon selected, the three icons on the top left of the dialog describe the, area, line and point respectively.

On click of any icon will enable the draw tool cursor. User can choose the required unit from the drop down and draw over the map.

The resultant area/line length / location - lat & long will be displayed in the measurement result.

2.7. Identify Tool

User can Identify for any of the features on the map by using this tool.

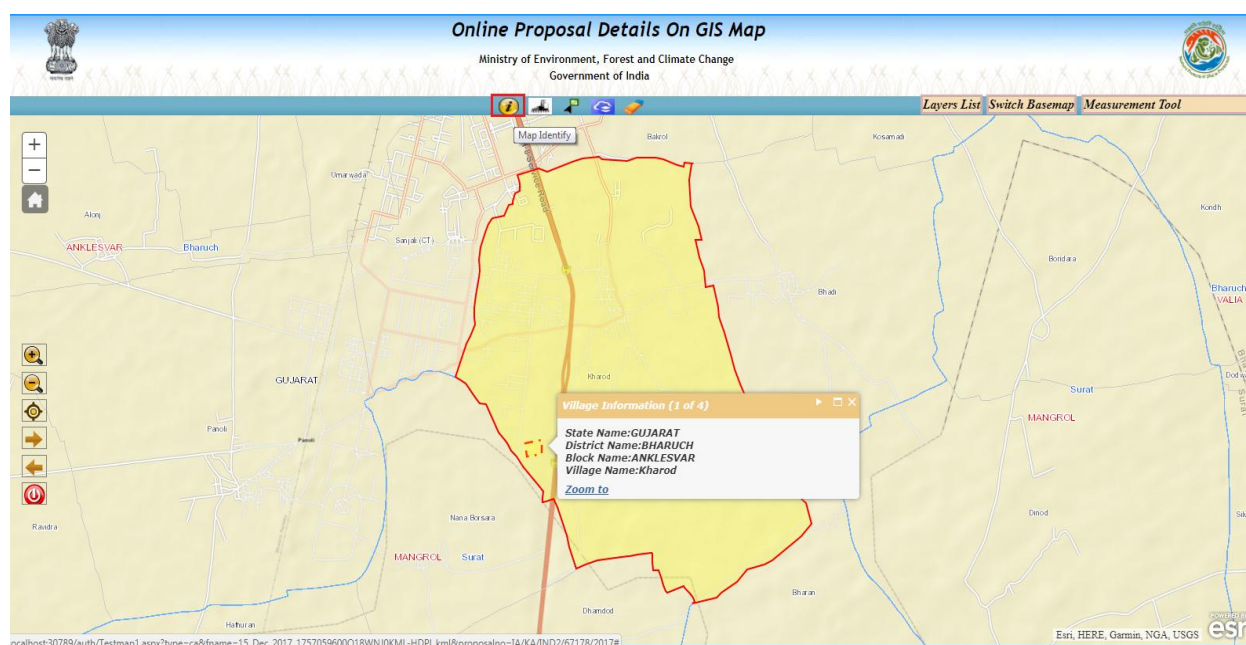


Fig 2.8 Identify Tool

On click of Identify icon, then click on particular location in map dialog will open as shown in Fig 2.8

Figure 2.8 shows the identify dialog with a layer selected from which the features has to be found.

On Click of the layer, a list of fields is populated in the info template . On click of the field, the user can shows the required identify value .

Whenever user click on particular location then corresponding identify fields are appear in info window .These identify tool mainly shows geo graphical information of selected location.

2.8. Thematic Mapping Module

This module allows the user to visualize the map data based on any particular theme he/she desires to view.

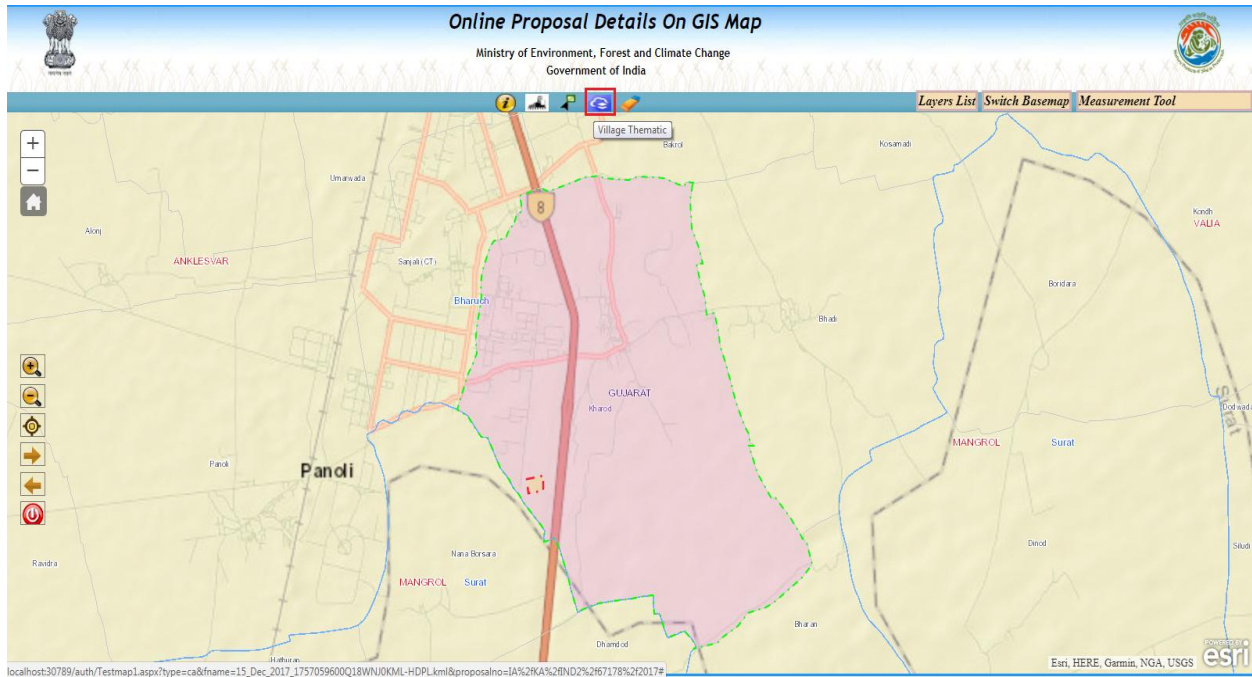


Fig 2.9 Thematic Mapping Module

On click of thematic icon, the thematic dialog will open as shown in Fig 2.9

Figure 2.9 shows the thematic dialog with a layer selected from which the features have to be thematically rendered.

On click of the thematic icon , then corresponding village will be applied thematic .

Once click on thematic icon corresponding village thematic will be applied. As shown in Fig 2.9

In this village thematic , if industry occupies two villages then two thematic colors will be appear,

these village thematic is mainly shows how many villages are occupied by the industry.

2.9. Clear Thematic Module

This module allows the user to visualize the map data based on any particular theme he/she desires to view.

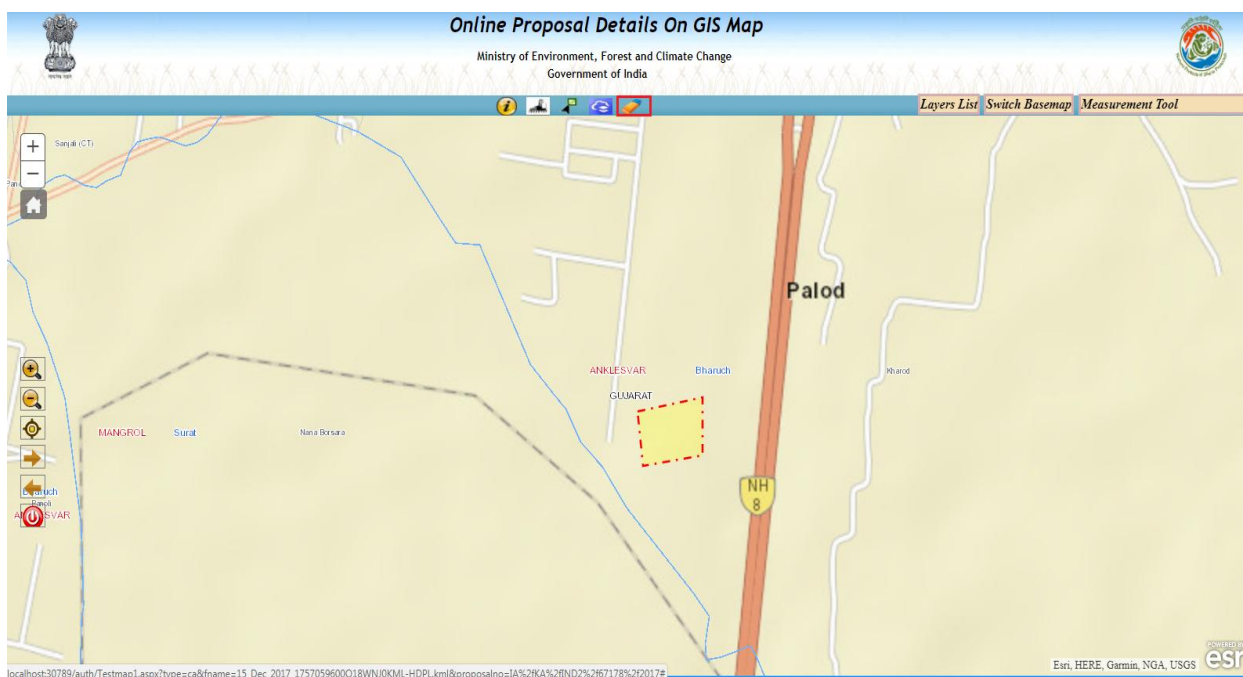


Fig 2.10 Clear Thematic Module

On click of thematic Clear icon, the map will be as shown in Fig 2.10

Figure 2.10 shows the thematic clearance, it will clear the thematic of all occupied villages.

These village thematic clearance is mainly useful for clearance of thematic graphics.

In these village thematic shows how many villages are occupied by a industry. Also, green color

boundary included for easy understanding, displayed on the screen as shown in Fig 2.10

2.10. Proximity Buffer

The Proximity buffer tool opens on click of the Proximity Buffer icon as shown in Fig 2.11. This tool consists of below modules, they are:

- Circular Buffer

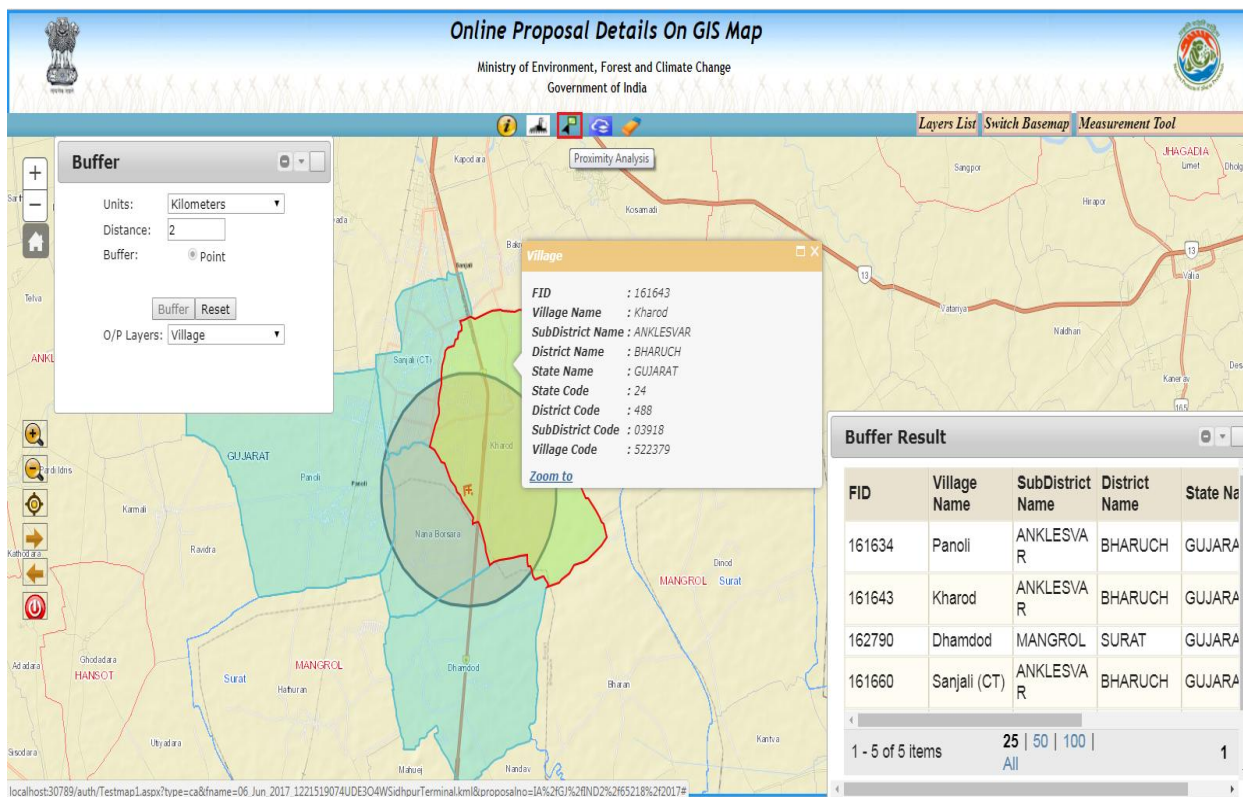


Fig 2.11 Buffer

On selecting the Feature Buffer radio button as shown in Fig 2.11, the user can access the Feature Buffer functionality. The user can select the required unit of measurement from the Units drop down menu, and input the required distance for the buffer in the distance text box.

Then, the user has to select the required feature layer from which the buffer feature has to be selected. On selection of the feature layer, the user will be prompted to select the feature on the map.

On selection of the feature on the map, the user can select the output feature layer, which will identify all the features from that layer which are in proximity to the selected feature as per the defined buffer distance.

Once all of the above is done, the buffer is drawn on the map and the resulting selected features are highlighted on the map as shown in Fig 2.11. The result is then populated in a grid and displayed in the Buffer Result dialog.

The Circular buffer lets the user identify features that are in proximity to a point selected on the Map.

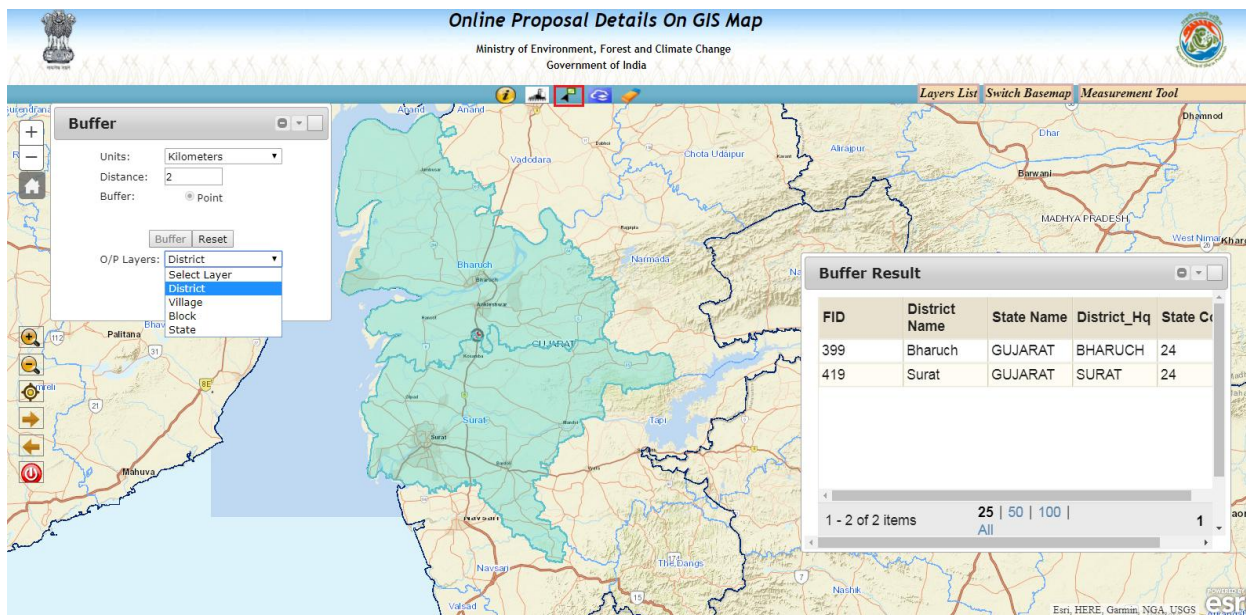


Fig 2.12 Circular Buffer

On selecting the Circular Buffer radio button as shown in Fig 2.12, the user can access the Circular Buffer functionality. The user can select the required unit of measurement from the Units drop down menu, and input the required distance for the buffer in the distance text box.

Then, the user has to select point on the map around which the circular buffer has to be drawn.

On selection of the point on the map, the user can select the output feature layer, which will identify all the features from that layer which are in proximity to the selected point as per the defined buffer distance.

Once all of the above is done, the buffer is drawn on the map and the resulting selected features are highlighted on the map as shown in Fig 2.12. The result is then populated in a grid and displayed in the Proximity Result dialog.

The user can select any one of the result from the grid and the map will zoom and pan to that feature.

2.11.Proposal Details

The Environment Clearance GIS Web App has different stages of proposal clearance. Mainly they are:

- Proposal in Under Process Stage
- Proposal in Granted Stage

2.11.1. Proposal Under Process Stage

Firstly Proponent apply the proposal and it will receive by member secretary .After checking of all the documents of proposal , member secretary verify the proposal and it will shows the project under examination of EC .

1. If member secretary found lack of documents then he will made EDS(Essential Details Sought).
- 2.If member secretary required additional documents he will make ADS(Additional Document Sought).



Fig 2.13 Proposal Details Under Process Stage

2.11.2. Proposal Granted Stage

Whenever user click on industry graphics on Map Proponent details will be appear. In this Granted stage , If Member secretary does not any EDS(Essential Details Sought), ADS(Additional Document Sought) then he will grant the proposal. In this stage granted proposal letter will be issued by Member secretary. Below shows Proposal details

- 1.Proposal Number.
- 2.Project Submission Date.
- 3.File Number.
- 4.Project Sector.
- 5.Nearest Railway Station.
- 6.Distance From Nearest Railway Station.
- 7.Nearest Airport.
8. Distance From Nearest Airport.
9. Nearest Town.
- 10.Distance From Nearest Town.
- 11.Location.
- 12.Project Current Status.
- 13.Granted Date(If proposal Granted).
- 14.Granted Letter(If proposal Granted).
- 15.Proposal Name.



Fig 2.14 Granted Proposal Details