ODISHA SPATIAL DATA INFRASTRUCTURE IMPLEMENTATION

User’s Guide

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1. INTRODUCTION

Odisha Spatial Data Infrastructure (OSDI) is a mechanism to promote geospatial data sharing at all levels of government, private, non-profit sectors and academia.

The OSDI Geoportal provides easy and convenient ways to search, discover and use geospatial data resources. The primary goal of the OSDI Geoportal is to improve access to Odisha state geographic data portfolio, and expand the creative use of those data resources. The OSDI Geoportal strives to increase information transparency, and is committed to creating an open environment for accessing important government derived geographic data. The benefits derived from Geoportal will encourage information sharing, and promote efficiency and effectiveness in providing individuals and organizations timely and accurate geographic information for better and more informed decision making.

1.1. Purpose

This document titled ‘Odisha Spatial Data Infrastructure Implementation – User’s Guide’ will help users to walk through the features in the OSDI Application and provides guidelines on how to use the functionality, tools, and queries and generate reports in OSDI Implementation.

1.2. Audience

The intended audience of this User’s Guide are Portal Administrators, Department Users and Citizens of Odisha.
2. GETTING STARTED

This section guides you through the steps required to log in to Portal as an Admin User/Editor/Viewer/Citizen roles.

Here, in this application the users have been categorized based on their roles, namely Administrator, Editor, Viewer, and Citizen.

The following table illustrates details of each user and type of default role assigned to them.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Type of User</th>
<th>Role Assigned</th>
<th>Access Privilege</th>
<th>Description of Privilege assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Administrator</td>
<td>Administrator</td>
<td>CRUD Matrix (Create, Read, Update and Delete)</td>
<td>These users should have an access for the following features:&lt;br&gt;• Configure Users, Roles, Departments &amp; Designations&lt;br&gt;• Using Custom reports&lt;br&gt;• Editing the GIS layers&lt;br&gt;• Creating Map Services&lt;br&gt;• Creating and managing GeoMedia Workspaces&lt;br&gt;• Layer Symbology&lt;br&gt;• Adding new GIS layer data to GSS</td>
</tr>
<tr>
<td>2</td>
<td>Department Head</td>
<td>Editor</td>
<td>CRU (Create, Read, and Update)</td>
<td>These users should have an access for the following features:&lt;br&gt;• Map Navigation&lt;br&gt;• Using Predefined queries&lt;br&gt;• Using Custom reports/Charts&lt;br&gt;• Viewing thematic maps&lt;br&gt;• Add/Modify the data from Geoportal&lt;br&gt;• Print &amp; Export</td>
</tr>
<tr>
<td>3</td>
<td>Department User/Internal Users</td>
<td>Viewer</td>
<td>Only Read</td>
<td>These users should have an access for the following features:&lt;br&gt;• Map Navigation&lt;br&gt;• Using Predefined queries&lt;br&gt;• Using Custom reports/Charts</td>
</tr>
<tr>
<td>4</td>
<td>Department User/Citizen/General Public</td>
<td>Citizen User</td>
<td>Only Read</td>
<td>These users should have an access for the following features:&lt;br&gt;• Map Navigation&lt;br&gt;• Using Predefined reports&lt;br&gt;• Viewing thematic maps</td>
</tr>
</tbody>
</table>

Table 1: Type of Users within OSDI Portal
2.1. Logging on to the Application (Admin User)

To logging on to the Portal, follow these steps

1. In the ‘Address bar’, type the URL of the Portal and press ‘Enter’ key

The Portal window appears as shown in Figure 1

2. If you already have user credentials, please enter the following details
3. Under ‘Username’, enter user name
4. Enter password in ‘Password’ box
5. Enter captcha in ‘Enter Captcha’ box
6. Click ‘Login’
The following page is displayed as shown in Figure 2 after clicking the Login button.

**Figure 2: Home Page/Dashboard Page (Admin User)**

The below Table 2 describes the details of each feature that are being displayed on the Dashboard main page.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Dashboard Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Catalogue</td>
<td><strong>Catalogue</strong>: A hierarchical view of folder connections which provide access to GIS data stored on local disks or shared on a network that allows users to manage connections to databases and GIS servers.</td>
</tr>
<tr>
<td>S. No</td>
<td>Dashboard Feature</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>2</td>
<td><strong>Metadata</strong></td>
<td><strong>Metadata</strong>: Information that describes the content, quality, condition, origin, and other characteristics of data or other pieces of information. Metadata for spatial data may describe and document its subject matter; how, when, where, and by whom the data was collected; availability and distribution information; its projection, scale, resolution, and accuracy; and its reliability about some standard. Metadata consists of properties and documentation. Properties are derived from the data source (for example, the coordinate system and projection of the data), while documentation is entered by a person (for example, keywords used to describe the data).</td>
</tr>
<tr>
<td>3</td>
<td><strong>Map Viewer</strong></td>
<td><strong>Map Viewer</strong>: This is an easy way to view and access maps and data for all users (Administrators, Editor, Viewer and Citizen User), where they can access different types of data available within the portal with appropriate access levels.</td>
</tr>
<tr>
<td>4</td>
<td><strong>Charts</strong></td>
<td><strong>Charts</strong>: These are used for visualizing the data on maps. With these charts, georeferenced data tables can be visualized in interactive ways as a heat map, bar graph, text, or pie chart.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Shopping Cart</strong></td>
<td><strong>Shopping Cart</strong>: This section helps Administrators to create new shopping carts, edit/update the existing shopping carts and delete unwanted shopping carts and provide access to the users who request an access for specific shopping carts.</td>
</tr>
<tr>
<td>S. No</td>
<td>Dashboard Feature</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>6</td>
<td><img src="Image" alt="Gallery Icon" /> <strong>Gallery</strong></td>
<td><strong>Gallery:</strong> The users can see the raw images of all the districts data which has been uploaded in the application for quick reference</td>
</tr>
<tr>
<td>7</td>
<td><img src="Image" alt="Citizens Icon" /> <strong>Citizens</strong></td>
<td>This feature helps the Administrator of the application has an overview of number of users that have been registered citizen users and number of visits that are made by those users on the application</td>
</tr>
<tr>
<td>8</td>
<td><img src="Image" alt="Departments Icon" /> <strong>Departments</strong></td>
<td>This feature helps the Administrator of the application has an overview of number of departments that can access the application and number of registered users, number of visits that are made by those users on the application</td>
</tr>
<tr>
<td>9</td>
<td><img src="Image" alt="Service Request Icon" /> <strong>Service Request</strong></td>
<td>This feature helps the Administrator of the application has an overview of number of service requests raised by all the users, with the number of open and closed service requests</td>
</tr>
<tr>
<td>S. No</td>
<td>Dashboard Feature</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>10</td>
<td><img src="image" alt="Layers" /></td>
<td>This feature helps the Administrator of the application has an overview of number of GIS layers and MIS Tables that are in associated with the application</td>
</tr>
<tr>
<td>11</td>
<td><img src="image" alt="User Summary" /></td>
<td>This feature helps the user with the user summary of logged in user details in detailed such as the logged user is from which department, the roles associated with the logged in user and the physical IP Address of the logged in user</td>
</tr>
</tbody>
</table>

*Table 2: List of Dashboard Features*
2.2. Creation of New User within the department

To create a new user in the department, the administrator will create the users upon the approval of higher authorities within the department.

1. Once, the Admin login to the portal, please click on the ‘Configurations’ option as shown below.

   ![Configurations](image)

2. After, that please navigate to the ‘Users’ and click on the button, a slider window appears as shown in the below Figure 3

   ![Users](image)

3. Now, please click on the ‘New’ button, a pop-up window appears on the screen as shown below

   ![New](image)

4. Please enter the required details and password and click on ‘Create’ button to create the user

   ![Create](image)

The below Figure 3 illustrates the flow of creating a new departmental user.
2.3. **Creation of New Citizen User**

First time citizen users should sign up for the portal, which is a free registration, please follow the below steps to create a **Citizen User**.

1. Open the browser and enter the URL as shown, [http://osdi.orsac.gov.in/osdi/](http://osdi.orsac.gov.in/osdi/)
2. Click **LOGIN** button, a small pop-up window is displayed as shown below
3. Please click on the **Citizen Registration**, button as shown below
4. Click on the **CITIZEN REGISTRATION** button.
5. Again, a small pop-up window is displayed, where the user must fill in the required details.

6. Please enter the required details and password and click on ‘Create’ button to create the user.

7. On clicking, the create button, a small pop-up window appears displaying the message as ‘User registered successfully’
2.4. Logging on to the Application (Citizen User)

To logging on to the Portal, follow these steps:

1. Open the browser and enter the URL as shown, [http://osdi.orsac.gov.in/osdi/](http://osdi.orsac.gov.in/osdi/).
2. Click the button, a small pop-up window is displayed as shown below,

![Login Page](image)

Figure 4: Login Page (Citizen User)

3. If you already have user credentials, please enter the following details
4. Under 'Username', enter user name
5. Enter password in 'Password' box
6. Enter captcha in ‘Enter Captcha’ box

7. Click ‘Submit’

The following page is displayed as shown in Figure 5 after clicking the Login button.

![Figure 5: Home Page/Dashboard Page (Citizen User)](image)

1. As per the above Figure 5, we can see that ‘Citizen User’ has an access for few applications such as ‘Map Viewer’, ‘Gallery’ and other features like ‘Service Requests’, ‘Event Logs’ etc.
3. Configurations

This section helps OSDI Administrator/Department Editors to configure their users and roles and can set the access levels. The following Figure 6 shows the main page of ‘Configurations’.

Figure 6: Configurations Main Page

1. Please click on the ‘Configurations’, option as shown in the above figure, a drop-down window is displayed which shows different options such as ‘Users, Roles, Department, and Designation’.
3.1. User/Users Configuration

This sub-section within configuration deals with the creation of new users of different department wise/citizen user and can also edit/update the existing user details; Administrator/Department Editor can set the access levels to specific users.

The following Figure 7 displays the main page of ‘Users’ sub-section.

![Figure 7: User Main Page]

3.1.1. Creation of New User

This feature is explained in 2.4 Logging on to the Application (Citizen User).

To logging on to the Portal, follow these steps:

8. Open the browser and enter the URL as shown, http://osdi.orsac.gov.in/osdi/
9. Click **LOGIN** button, a small pop-up window is displayed as shown below,
10. If you already have user credentials, please enter the following details
11. Under ‘Username’, enter user name
12. Enter password in ‘Password’ box
13. Enter captcha in ‘Enter Captcha’ box

14. Click ‘Submit’

The following page is displayed as shown in Figure 5 after clicking the Login button.

![Home Page/Dashboard Page (Citizen User)](image)

**Figure 5: Home Page/Dashboard Page (Citizen User)**

2. As per the above Figure 5, we can see that ‘Citizen User’ has an access for few applications such as ‘Map Viewer’, ‘Gallery’ and other features like ‘Service Requests’, ‘Event Logs’ etc.
3.1.2. Editing the existing user

The Administrator can edit/update any user with irrespective of the department and designation, whereas Department Editor can edit/update the user’s specific to their departments. The following Figure 8 displays the page of existing user.

**Figure 8: User Edit Page**

1. Please follow the path Configurations→Users, please select the record you want to edit/update as shown below.

2. Click on ‘Edit’ button, a pop-up window is displayed as shown in the above figure, after editing/ updating it, click on the ‘Update’ as shown below.
3.2. Roles Configuration

This sub-section within configuration deals with the setting up the roles for different department wise users and can also edit/update the existing role details; Administrator/Department Editor can set the roles to specific users.

The following Figure 9 displays the main page of ‘Roles’ sub-section.

Role Summary

<table>
<thead>
<tr>
<th>Role Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizen User</td>
<td>Active</td>
</tr>
<tr>
<td>Administrator</td>
<td>Active</td>
</tr>
<tr>
<td>Viewer</td>
<td>Active</td>
</tr>
<tr>
<td>TestEngineer</td>
<td>Active</td>
</tr>
<tr>
<td>TestEngineer</td>
<td>Active</td>
</tr>
<tr>
<td>DepartmentUser</td>
<td>Active</td>
</tr>
<tr>
<td>Director</td>
<td>Active</td>
</tr>
<tr>
<td>TestEngineer</td>
<td>Active</td>
</tr>
<tr>
<td>Editor</td>
<td>Active</td>
</tr>
<tr>
<td>TEST</td>
<td>Active</td>
</tr>
</tbody>
</table>

Figure 9: Roles Main Page

1. Please follow the path Configurations→Roles, please click on the Roles, a window is displayed as shown below.
3.2.1. Creation of New Role

This feature helps Administrator/Department Editor to set up a new role for specific department/user.

The following Figure 10 shows the process of creating a new role to specific user.

1. Please follow the path Configurations→Roles, please click on the ‘New’, button
2. A pop-up window is displayed, where you need to fill in the required details as shown in the above figure
3. Click on ‘Create’, button, a message will be displayed as ‘Role created successfully’, in a small pop-up window as shown below.
3.2.2. Editing of Existing Role

This feature helps Administrator/Department Editor to edit/Update the existing role. The following Figure 11 shows the process of editing/updating the existing role.

Figure 11: Editing the existing Role

1. Please follow the path Configurations→Roles, please click on the ‘Edit’ button
2. A pop-up window is displayed, where you need to update the details, you want to update as shown in the above figure
3. Click on ‘Update’, button, a message will be displayed as ‘Role updated successfully’, in a small pop-up window
3.3. Department Configuration

This sub-section within configuration deals with the creating the departments within OSDI portal, we can also edit/update the existing department details; Administrator can create the department and can assign a Department Editor for creating/updating new users/roles/designations.

The following Figure 12 displays the main page of ‘Department’ sub-section.

Figure 12: Department Main Page

1. Please follow the path Configurations→Department, please click on the Department, a window is displayed, where the existing data of the current departments are displayed as shown in the above figure.
3.3.1. Creation of New Department

This feature helps Administrator to create a new department within OSDI. The following Figure 13 shows the process of creating a new department within OSDI.

Figure 13: Creation of New Department

1. Please follow the path Configurations→Department, please click on the ‘New’, button
2. A pop-up window is displayed, where you need to fill in the required details as shown in the above figure
3. Click on ‘Create’, button, a message will be displayed as ‘Department created successfully’, in a small pop-up window
3.3.2. Editing of Existing Department

This feature helps Administrator to edit/update the existing department details within OSDI portal. The following Figure 14 shows the process of editing/updating the existing department.

1. Please follow the path Configurations→Department, please click on the ‘Edit’, button
2. A pop-up window is displayed, where you need to update the details, you want to update as shown in the above figure
3. Click on ‘Update’, button, a message will be displayed as ‘Department Updated successfully’, in a small pop-up window
Edit Department

Department Updated Successfully

Ok
3.4. Designation Configuration

This sub-section within configuration deals with the creating the designations within the respective departments, we can also edit/update the existing designations within the departments; Administrator can create the department and can assign a Department Editor for updating/editing existing designations.

The following **Figure 15** displays the main page of ‘Designation’, sub-section.

---

**Figure 15: Designation Main Page**

1. Please follow the path Configurations→Designation, please click on the Designation, a window is displayed, where the existing data of the current departments are displayed as shown in the above figure.
3.4.1. Creation of New Designation

This feature helps Administrator to create a new designation within specific department. The following Figure 16 shows the process of creating a new designation within the specific department.

![Figure 16: Creation of New Designation](image)

1. Please follow the path Configurations → Designation, please click on the ‘New’ button

2. A pop-up window is displayed, where you need to fill in the required details as shown in the above figure
3. Click on ‘Create’ button, a message will be displayed as ‘Designation Added successfully’, in a small pop-up window.
3.4.2. Editing of Existing Designation

This feature helps Administrator to edit/update the existing designation within the department. The following Figure 17 shows the process of editing/updating the existing department.

![Image of ODISHA GEOPORTAL](image)

**Figure 17: Editing of existing designation**

1. Please follow the path Configurations→Designation, please click on the ‘Edit’ button
2. A pop-up window is displayed, where you need to update the details, you want to update as shown in the above figure
3. Click on ‘Update’, button, a message will be displayed as ‘Updated successfully’, in a small pop-up window.
4. Service Request

This section helps to raise service request by internal users across different departments of OSDI, where Administrator/Department Editors can resolve the issues, when such request is placed by their internal users.

The following Figure 18 shows the main page of ‘Service Request’.

![Service Request Main Page](image)

**Figure 18: Service Request Main Page**

1. The above figure displays the data of ‘Sinu’, which consists of the existing service requests with their details such as title of the employee, description of the issue/problem faced, date requested, closed date, response from Administrator/Department Editor, Name of the user who raised the request, service type (e.g. New Enhancement, Application Issue etc.), Service status (e.g. Open, Close, In progress etc.), and the issue last updated date.
4.1. Creation of New Service Request

If internal user is facing some sort of problem in accessing the portal, he/she has an option to raise a service request in the form of ‘Application issue’, ‘Data Issues’, ‘New Enhancement’, and ‘Application Support’ which will be triggered to Department Editor/Administrator to resolve the issue.

The following Figure 19 shows the process of raising a service request within the specific department.

1. Please follow the path Service Request→New, please click on the ‘New’ button
2. A pop-up window is displayed, where you need to key in the details such as Title, Description, User Name is auto populated, Service Type, and Service Status is auto populated, as shown in the above figure
3. Click on ‘Create’, button, a message will be displayed as ‘Service request added successfully’, in a small pop-up window
4.2. Editing of Existing Service Request

This feature helps Administrator/Department Editor can edit/update the service request raised by internal users within the specific department.

The following Figure 20 shows the process of editing/updating the existing service request from Administrator/Department Administrator user ‘admin’ perspective.

![Figure 20: Admin User Editing](image)

1. Login as ‘admin’, Please follow the path Service Request→Edit, please click on the ‘Edit’ button
2. A pop-up window is displayed, where you need to update the details such as, Response and Service Status (can be changed to different options), as shown in the above figure
3. Click on ‘Update’ button, a message will be displayed as ‘Service Request Updated successfully’, in a small pop-up window
This section helps Administrators to create new shopping carts, edit/update the existing shopping carts and delete unwanted shopping carts and provide access to the users who request an access for specific shopping carts.

The following Figure 21 Figure 6 shows the main page of 'Shopping Catalogue', in Administrator perspective.

![Shopping Catalogue Main Page (Administrator)](image)

**Figure 21: Shopping Catalogue Main Page (Administrator)**

1. The above figure displays the data of 'admin', which consists of the existing shopping carts with their details such as layer name, department name, and cost, contact person of the department, service tax, delivery charges, and status.
5.1. Creation of New Shopping Catalogue

The Administrator is the only user can create Shopping Catalogue and provide access to different users upon placing a service request. He/she can provide access to specific shopping carts that are requested by department editors.

The following Figure 22 shows the process of creating a new shopping Catalogue.

**Figure 22: Creation of New Shopping Cart**

1. Please follow the path Shopping Cart → New, please click on the ‘New’ button
2. A pop-up window is displayed, where you need to key in the details such as layer name, department name, and cost, contact person of the department, service tax, delivery charges, and status, as shown in the above figure
3. Click on ‘Create’, button, a message will be displayed as ‘Created Successfully’, in a small pop-up window
5.2. Editing of Existing Shopping Cart

This feature helps Administrator to edit/update the existing Shopping Cart. The following Figure 23 shows the process of editing/updating the existing Shopping Cart from ‘Administrator’ perspective.

Figure 23: Editing of Shopping Cart

1. Login as ‘admin’, Please follow the path Shopping Cart→Edit, please click on the ‘Edit’, button
2. A pop-up window is displayed, where you need to update the details such as layer name, department name, and cost, contact person of the department, service tax, delivery charges, and status as shown in the above figure
3. Click on ‘Update’, button, a message will be displayed as ‘Updated successfully’, in a small pop-up window
5.3. Deletion of Existing Shopping Cart

This feature helps Administrator to deletion of the existing Shopping Cart. The following Figure 24 shows the process of deletion of the existing Shopping Cart from ‘Administrator’ perspective.

1. Login as ‘admin’, Please follow the path Shopping Cart→Delete, please click on the ‘Delete’, button
2. A pop-up window is displayed, where you need to click on ‘Yes’, button to delete the selected record as shown in the above figure
3. After clicking a message will be displayed as ‘Deleted successfully’, in a small pop-up window
6. MAP VIEWER

Map Viewer is an easy way to view and access maps and data for all users (Administrators, Editor, Viewer and Citizen User), where they can access different types of data available within the portal with appropriate access levels.

Please click on ‘Map Viewer icon/Map Viewer’, option from the home page to enter Map Viewer main page.

The following Figure 25 displays the selection page of OSDI Map Viewer for ‘Administrator’, user perspective.

![Map Viewer Selection Page]

**Figure 25: Map Viewer Selection Page**
The following **Figure 26** displays the main page of OSDI Map Viewer for ‘Administrator’, user perspective.

**Figure 26: Map Viewer Main Page**

1. Login as ‘Admin’, and click on Map Viewer, it redirects to next page as shown in the above Figure 26
6.1. **Zoom in option of Map Viewer**

This feature enables the user to zoom in to see the map in more detail. When the user clicks on the icon, the scale increases to double.

The following **Figure 27** illustrates the ‘Zoom In’, option of Map Viewer.

![Figure 27: Zoom In](image)

1. Please click on the highlighted option for zooming in the picture of the map as shown in the above figure.
6.2. Zoom Out option of Map Viewer

This feature enables the user to zoom out to see the map in more extent. When the user clicks on the zoom out icon, the scale decreases by about half.

The following Figure 28 illustrates the ‘Zoom Out’, option of Map Viewer.

**Figure 28: Zoom Out**

1. Please click on the highlighted option for zooming out the picture of the map as shown in the above figure.
6.3. Zoom Rectangle of Map Viewer

This feature helps the user to draw a rectangle shape on the map to define the desired view extent. Here, zooming can also be achieved by a mouse scroll or by using the slider to the left. The following Figure 29 illustrates the ‘Zoom Rectangle’, option of Map Viewer.
6.4. Zoom Extent of Map Viewer

This feature helps the user to zoom back to full map extent. The following Figure 30 illustrates the ‘Zoom Extent’, option of Map Viewer.

Figure 30: Zoom Extent
6.5. Zoom to Previous of Map Viewer

This feature helps the user to zooms to previous viewed extent. The following **Figure 31** illustrates the ‘Zoom to Previous’, option of Map Viewer.

![Figure 31: Zoom to Previous](image-url)
6.6. **Zoom to Next of Map Viewer**

This feature helps the user to zooms to next viewed extent. The following *Figure 32* illustrates the ‘Zoom to Next’, option of Map Viewer.

*Figure 32: Zoom to Next*
6.7. Layers of Map Viewer

This feature helps the user to display the layers that are currently available in the map window. To change the order of the layers on the map, use drag and drop to change the order of the corresponding elements in the Layers tab. The user can control the display of a layer with a check box next to the layer name.

The following Figure 33 illustrates the ‘Layers’, option of Map Viewer.

Figure 33: Layers Main Page

1. Please follow the path Map Viewer→Show Layer List, please click on the option, it displays a pop-up window as shown in the above figure
2. The user has to select the options from the pop-up window as shown in the Figure 34
3. On selecting/checking the options in pop-up window the figure displays the selected option categories as shown in the below figure
Figure 34: Layers Selection Page
6.8. Get Information of Map Viewer

This feature helps the user to identify an element on the map and shows its attribute information.

The following Figure 35 illustrates the ‘Get Information’, option of Map Viewer.

**Figure 35: Get Information Main Page**

1. Please follow the path Map Viewer → Get Information of features, please click on this option, it displays a ‘+’, icon as shown in the above figure
2. The user must click on the map he/she wants to desire the information wants, which is shown in Figure 36.

3. 

4. *Figure 36*

5. Upon clicking on the map, the selected area is highlighted in green color as shown in the below figure, and it displays a pop-up window, which consists the detailed of the selected area.
Figure 36: Get Information Selection Page
6.9. Get Attribute Information of Layers

This feature helps the user with display of table consisting all attribute records and fields of the selected dataset, layer.

The following Figure 37 illustrates the ‘Get Attribute Information’, option of Map Viewer.

1. Please follow the path Map Viewer → Get Attribute Information of the Layers, please click on this option, it displays a pop-window as shown in the Figure 38, where the user need to select the options by checking the check box and click on the ‘Add’, button
2. Now, on the right-hand of the table, it displays the list of the selected value
3. In the selected table, we have three sub-options such as Properties, Add to Clipboard, and Zoom
4. If the user clicks on the ‘Properties’, option, it displays a pop-up window with the detailed view of the selected object as shown in the Figure 39
5. If the user clicks on the ‘Add to Clipboard’, option, it displays a table as shown in the Figure 40
6. If the user clicks on the ‘Zoom’, option, it displays the exact location of the area as shown in the Figure 41
Figure 38: Get Attribute Information of the Layers Selection Page
Figure 39: Get Attribute Information (Properties)
Figure 40: Get Attribute Information (Add to Clipboard)
Figure 41: Get Attribute Information (Zoom)
6.10. Measure Area/Length

This tool helps the user to display interactive distances and properties on the map. The following Figure 42 illustrates the ‘Measure Area/Length’, option of Map Viewer.

1. Please follow the path Map Viewer→Measure Area/Length, please click on the first option ‘Measure Point’, it displays a pointer to select an area on the map as shown in the Figure 43.
6.10.1. Measure Point

The following Figure 43 illustrates the first option of Measure Area/Length and displays the selected point on the map.

Figure 43: Measure Point

Result Page:
6.10.2. Measure Length

The following *Figure 44* illustrates the second option of Measure Area/Length, ‘Measure Length’, and enables the user to measure the distance between two or more points on the map.

1. Please follow the path Map Viewer→Measure Area/Length, please click on the second option, it displays a pointer as shown in the *Figure 45*, where the user has to select the points/draw the points in order to calculate the distance between the selected points.
Figure 45: Selection of Measure Length
6.10.3. Measure Area

The following Figure 46 illustrates the third option of Measure Area/Length, ‘Measure Area’, and enables the user to measure the polygon area & perimeter on the map.

**Figure 46: Measure Area Main Page**

1. Please follow the path Map Viewer→Measure Area/Length, please click on the third option, it displays a pointer as shown in the Figure 47, where the user has to select the points/draw the points in order to calculate the distance between the selected points.
6.10.4. Measure the properties of selected features

The following Figure 48 illustrates the fourth option of Measure Area/Length, ‘Measure the properties of selected features’, and enables the user to measure the selected area by using either one of the below options such as ‘Select features by Point’, ‘Select features by Polyline’, ‘select features by Polygon’, ‘Select features by Bbox’.

1. Please follow the path Map Viewer → Measure Area/Length, please click on the fourth option, it displays a pointer as shown in the Figure 48.
2. In order, to display the final result of the selected feature, we need to first select a feature on the existing map as shown in the Error! Reference source not found., here the user has selected the feature has ‘Select the features by Bounding Box (Bbox)’.
3. After selecting the feature, pleas draw a rectangle
4. Once the drawing is done, come back to the Measure Area/Length feature and select the fourth option to obtain the result of the selected area
6.10.5. Clear Measurement

The following Figure 49 illustrates the fifth option of Measure Area/Length, 'Clear Measurement', and enables the user to clear all the measurements from the map.

1. Please follow the path Map Viewer→Measure Area/Length, please click on the fifth option, on clicking, it clears all the measurements and the data associated to it as shown in the above figure.
6.10.6. Measurement Hide/Show

The following Figure 50 illustrates the fifth option of Measure Area/Length, ‘Measurement Hide/Show’, and enables the user to show/hide the variety of labels with the values for the measured objects.

Figure 50: Measurement Hide/Show Page
6.11. Selection Tool

This tool helps the user to select the feature from the map. The following Figure 51 illustrates the ‘Selection Tool’, option of Map Viewer.

6.11.1. Select features by Point

This option, selects all locatable objects in a designated point. Please follow the path Map Viewer→Select Tool, please click on the first option ‘Select features by Point’, it selects the area and highlights it in the green color as selected area as shown in Figure 51.
6.11.2. Select features by Polyline

The following Figure 52 illustrates the second option of 'Selection Tool', and selects all the locatable objects that intersect with the drawn parameter.

*Figure 52: Selection Tool (Select features by Polyline)*
6.11.3. Select features by Polygon

The following Figure 53 illustrates the third option of ‘Selection Tool’, and selects all the locatable objects within the drawn geometry and intersecting with it.

Figure 53: Selection Tool (Select features by Polygon)
6.11.4. **Select features by Bounding Box (Bbox)**

The following **Figure 54** illustrates the fourth option of ‘Selection Tool’, and selects all the locatable objects within the drawn rectangular geometry and intersecting with it.

*Figure 54: Selection Tool (Select features by Bounding Box)*
6.11.5. Add to Clipboard

The following Figure 55 illustrates the fifth option of ‘Selection Tool’, and add the selected features to the clipboard.

1. To check the clipboard data, please click on the ‘Show Attributes’ section, a pop-up window is displayed as shown in the Figure 56

2. Please click on the first option of ‘assembly_name/148’ data which displays the feature information of the selected data in a new pop-up window as shown in the Figure 65
Figure 56: Add to Clipboard data

Figure 57: Feature information of selected data
6.11.6. Select Clear

The following Figure 58 illustrates the sixth option of ‘Selection Tool’, and removes all the selections from the map.

Figure 58: Section Tool (Select Clear)
6.12. Buffer Tools

A buffer in GIS is a zone around a map feature measured in units of distance. A buffer is an area defined by the bounding region determined by a set of points at a specified maximum distance from all nodes along segments of an object.

6.12.1. Buffer Point

It helps the user to draw a buffer point and can select the units such as Feet, Meter, Kilometer, and Miles.

The following Figure 59 illustrates the first option of ‘Buffer Tool’.

![Figure 59: Buffer Tools (Buffer Point)](image)

1. Please follow the path Map Viewer → Buffer Tools, please click on the first option, on clicking, a pop-window is displayed, where the user need to select an option from the drop-down box as shown in the above screen

2. After selecting an option, and key in the details for e.g. ‘1500’, now click on the ‘Draw’, button as shown in the Figure 60
3. Now, draw a point/select an area on the map to draw the buffer point as shown in the [Figure 60](#).
4. After drawing/selecting an area a pop-window is displayed showing the Result of the Buffer Point.
6.12.2. Buffer Polyline

1. Please follow the path Map Viewer → Buffer Tools, please click on the second option, on clicking, a pop-window is displayed, where the user need to select an option from the drop-down box as shown in the below Figure 61.
2. After selecting an option, and key in the details for e.g. ‘1500’, now click on the ‘Draw’, button as shown in the Figure 62.
3. Now, draw a point/select an area on the map to draw the buffer polyline as shown in the Figure 62.
4. After drawing/selecting an area a pop-window is displayed showing the Result of the Buffer Polyline.

Figure 61: Buffer Tools (Buffer Polyline)
Buffer line Processing

Figure 62: Buffer Polyline Selection Page
6.12.3. **Buffer Polygon**

1. Please follow the path Map Viewer→Buffer Tools, please click on the third option, on clicking, a pop-window is displayed, where the user need to select an option from the drop down box as shown in the below *Figure 63*

2. After selecting an option, and key in the details for e.g. ‘1500’, now click on the ‘Draw’, button as shown below.

![Figure 63](image)

3. Now, draw a point/select an area on the map to draw the buffer polygon as shown in the *Figure 64*

4. After drawing/selecting an area a pop-window is displayed showing the Result of the Buffer Polygon
Figure 63: Buffer Tools (Buffer Polygon)

Buffer Polygon Processing
Figure 64: Buffer Polygon
6.12.4. Buffer selected point features

This feature helps the user to select the point feature on the map as shown in the below Figure 65.

In the above figure, we selected the feature by Bbox which is explained in 6.11.4 section.

After selecting it, we selected the fourth option of Buffer Tools, ‘Buffer selected point feature’, as shown in the Figure 66.

Now please enter the buffer distance value as ‘10’, and select the units from the drop down as feet, meter, kilometer, miles and click on the ‘draw’ button as shown in the Figure 66.

A result window is displayed with the distance and area calculations with the highlighted vertex area as shown in the Figure 66.
Figure 66: Buffer Point Result Page
6.12.5. **Buffer selected Line Feature**

To select this feature, we need to manually select a vertex point as shown in the below **Figure 67**

![Buffer Tools (Buffer Selected polyline feature – selection of vertex point)](image)

1. In the above figure, we selected feature the feature by Bbox which is explained in 6.11.4 section.
2. After selecting it, we selected the fifth option of Buffer Tools, *‘Buffer Polyline by selected polyline feature’*, as shown in the **Figure 68**
3. Now please enter the buffer distance value as ‘10’, and select the units from the drop down as feet, meter, kilometer, miles and click on the *‘draw’*, button as shown in the A result window is displayed with the distance and area calculations with the highlighted vertex area
Figure 68: Buffer selected Polyline feature

Result Page:
6.12.6. Buffer selected Polygon Feature

This feature helps the user to select the polygon feature on the map as shown in the below Figure 69:

In the above figure, we selected feature the feature by Bbox which is explained in 6.11.4 section.

After selecting it, we selected the sixth option of Buffer Tools, ‘Buffer Polyline by selected polyline feature’, as shown in the Figure 69

Now please enter the buffer distance value as ‘10’, and select the units from the drop down as feet, meter, kilometer, miles and click on the ‘draw’, button as shown in the result window is displayed with the distance and area calculations with the highlighted vertex area
Figure 70: Buffer selected Polygon feature

This feature helps the user to navigate to desired navigation points and here, we have different navigation options.

6.13.1. Go to XY location

This feature helps the user to navigate to the desired location by entering Longitude and Latitude coordinates.

The following *Figure 71* illustrates the first option of ‘Navigation Tool’, ‘Go to XY location’.

1. Please follow the path Map Viewer→Navigation Tools, please click on the first option, on clicking, it displays a pop-up widow, where the user should key in the details of Longitude and Latitude as shown above.
2. After entering the required details, please click on the ‘Zoom’, button, it redirects to the desired location as shown in the *Figure 72*
Figure 72: Result Page of Go to XY location
6.13.2. Feature Navigator

This feature helps the user to navigate to the desired location by selecting the Layer Name and associated field values and respective layers of the fields. The following Figure 73 illustrates the second option of ‘Navigation Tool’, ‘Feature Navigator’.

**Figure 73: Navigation Tools (FNV Main Page)**

1. Please follow the path Map Viewer→Navigation Tools, please click on the second option, on clicking, it displays a pop-up widow, where the user has to select layer name and field name from drop-down boxes
2. After selecting the layer and field name as shown in Figure 74, please click on the ‘Zoom’ button, it displays the selected area on the map based on the details provided above
Figure 74: FNV Selection Page

Zooming to Block Name: The yellow highlighted area is Agalpur
6.13.3. Admin Boundary (AB)

This feature helps the user to navigate to the desired location by selecting the District Name, Block Name and Gram Panchayat Name.

The following Figure 75 illustrates the third option of ‘Navigation Tool’, ‘Admin Boundary’.

Figure 75: Navigation Tools (Admin Boundary)

1. Please follow the path Map Viewer→Navigation Tools, please click on the third option, on clicking, it displays a pop-up widow, where the user has to select district name, block name and gram panchayat name.

2. After entering the required details as shown in Figure 75, it displays the selected area on the map based on the details provided above.
6.13.4. Go to Constituency Boundary

This feature helps the user to navigate to the desired Parliament and associated Assembly constituency location by selecting the Parliament Name, Assembly Name and Panchayat Name. The following Figure 76 illustrates the fourth option of ‘Navigation Tool’, ‘Go to Constituency Boundary’.

Figure 76: Navigation Tools (Go to Constituency Boundary)

1. Please follow the path Map Viewer→Navigation Tools, please click on the fourth option, on clicking, it displays a pop-up widow, where the user should select Parliament Name, Assembly Name and Panchayat Name
2. After entering the required details as shown in Figure 76, it displays the selected area on the map based on the details provided above
6.13.5. Go to CDP Boundary

This feature helps the user to navigate to the desired Parliament and associated Assembly constituency location by selecting the Town Planning/Development, Town Group Name, Authority Name, Village.

The following Figure 77 illustrates the fifth option of ‘Navigation Tool’, ‘Go to Constituency Boundary’.

![Figure 77: Navigation Tools (Go to CDP Boundary)](image)

1. Please follow the path Map Viewer→Navigation Tools, please click on the fifth option, on clicking, it displays a pop-up window, where the user should select Town Planning/Development, Town Group Name, Authority Name, Village.
2. After entering the required details as shown in Figure 77, it displays the selected area on the map based on the details provided above.
Result Page:

![Map Interface]

The image shows a map interface with various data elements and search options. The interface includes a drop-down menu for layer selection and a search bar for geographical data. The map appears to be interactive, allowing users to search for specific locations or data layers.
6.13.6. **Revenue Boundary (RB)**

This feature helps the user to navigate to the desired location by selecting the District Name, Tehsil Name and Village Name.

The following *Figure 78* illustrates the sixth option of ‘Navigation Tool’, ‘Revenue Boundary’.

1. Please follow the path Map Viewer→Navigation Tools, please click on the sixth option, on clicking, it displays a pop-up widow, where the user must select district name, tehsil name and village name as shown in the *Figure 79*

2. After entering the required details as shown in *Figure 79*, it displays the selected area on the map.
Figure 79: Revenue Boundary Result Page
6.13.7. Go to Place Name (P)

This feature helps the user to navigate to the desired location by selecting the Place Name from the drop-down box/type the place to enter the name.

The following Figure 80 illustrates the seventh option of ‘Navigation Tool’, ‘Go to Place Name’.

1. Please follow the path Map Viewer→Navigation Tools, please click on the seventh option, on clicking, it displays a pop-up widow, where the user should select place name, as shown in the Figure 80

2. After entering the required details as shown below,
3. The selected area is displayed on the map as shown in the Figure 81.
6.14. Set Map Scale

This feature helps the user to navigate to set the default map scale for map viewing. The following Figure 82 illustrates ‘Set Map Scale’.

![Figure 82: Set Map Scale Main Page](image)

1. Please follow the path Map Viewer→Set Map Scale as shown in the Figure 82, please click on this option, on clicking, it displays a slider widow, where the user has to enter manually the value of the scale for e.g. ‘10818000’, as shown in the Figure 83.
Figure 83: Set Map Scale Selection Page
6.15. Clear all Graphic

This feature helps the user to clear all the temporary graphics on the map. The following Figure 84 illustrates ‘Clear all Graphics’.

Figure 84: Clear all Graphics

1. Please follow the path Map Viewer→Clear all Graphics as shown in the Figure 84 please click on the option, on clicking, it clears all the graphics which were drawn/present earlier on the map.
6.16. Show/Hide Overview

This feature helps the user to display all attribute records and fields of a selected dataset, layer. The following **Figure 85** illustrates ‘Show/Hide Overview’.

![Figure 85: Show/Hide Overview Main Page](image)

1. Please follow the path Map Viewer → Show/Hide Overview as shown in the **Figure 85**, please click on the option, on clicking, it displays pop-up window, where the user has to select the area he/she desires to zoom in as shown in **Figure 86**.
Figure 86: Overview Selection Page
6.17. Tools

6.17.1. Features Information

This feature helps the user to see attribute information and any related information linked. It displays information for all features on the selected location, where the users must select layers from the drop-down list.

1. Please follow the path Map Viewer→Tools, please click on the first option, on clicking, it displays a pop-up widow, where the user has to click on the ‘Refresh’ button as shown in the Figure 87

2. On clicking the refresh button, the list of layers is displayed as shown in the Figure 88, and select all layers and click on ‘Show Info’, button, a cursor will be displayed on the map, where the user has to select any feature to see the detailed information of the selected object and the selected object will be highlighted in yellow color as shown in the Figure 89
Figure 88: Features Information Selection Page

Figure 89: Features Information Result Page
6.17.2. Crowd Sourcing

This feature helps the public user to raise a crowd sourcing ticket to Admin of the Geoportal, where Geoportal Admin can assign to respective departments who are handling the layer data. The following Figure 90 illustrates main page of Crowd Sourcing.

Figure 90: Tools (Crowd Sourcing)

1. Please follow the path Map Viewer→Tools, please click on the second option, on clicking, it displays a pop-up widow, where the user must click on the ‘Refresh’ button as shown in the diagram.
2. After clicking **Refresh** button, list of available layers is displayed as shown above, now select ‘**State Boundary**’ as shown below.

3. Now, click on the Map, it will open a pop-up window as show below.
4. Now, click on the State Boundary, it will open a pop-up window as show below, please enter 'Title', 'Description' and Category and click on Submit.  
**Note:** An email to the registered user will be sent about the activity performed.
6.17.3. **Legend**

It helps the user to check what kind of legends were used for different types of attributes. The following *Figure 91* illustrates ‘Tool’, ‘Legend’, option.

*Figure 91: Tools (Legend)*

1. Please follow the path Map Viewer→Tools, please click on the third option, on clicking, it displays a pop-up widow, where the user has to select the value of Legend to see the related icons as shown in the *Figure 91*
6.17.4. Metadata

This feature helps the user to see the metadata related detailed data for a selected object. The following Figure 92 illustrates ‘Tool’, ‘Metadata’, option.

1. Please follow the path Map Viewer→Tools, please click on the fourth option, on clicking, it displays a pop-up widow, where the user has to select the value of Metadata to see related data as shown in the Figure 92
6.17.5. Print Map

This feature helps the user to print the Map in different formats such as PDF, PNG, XPS, GIF, JPEG, TIFF, BMP, and selection of the printing template such as Landscape Template, Portrait Template, OSDI Portrait Template, OSDI Landscape Template, user can also select the page size such as A0, A1, A2, A3, A4 and A5, user can also select the scale size such as 1000, 2000, till 2000000 lengths.

The below Figure 93, illustrates the Print Map feature.

Figure 93: Print Map

1. Please follow the path Map Viewer→Tools, please click on the sixth option, on clicking, it displays a pop-up widow, where the user can select various options and select different sub features within the selected field.
6.17.6. Dynamic Label

This feature helps the user to view the selected object on the map. The below Figure 94 illustrates Dynamic Label feature.

![Figure 94: Dynamic Object View](image)

1. Please follow the path Map Viewer → Tools, please click on the seventh option, on clicking, it displays a pop-up widow, where the user can have to select a Feature Class from a drop-down, where it has been mapped with all the relevant fields.

2. After selecting the Feature Class field, now the user must select Tooltip field as shown in the Figure 94.
Selection Page:

Please select as shown below,

```
Dynamic Label
```

Please click/check on the ‘Highlight with style’, a pop-up window is displayed as shown below.
Next, please select **Boundary style** and **Fill Style** respectively as shown below.

**Boundary Style**
Simple Fill Style
6.17.7. Log

This feature helps the user to view the logs of the System notifications. The below Figure 95 illustrates Log feature.

Figure 95: Log

1. Please follow the path Map Viewer → Tools, please click on the eighth option, on clicking, it displays a pop-up widow as shown below, where it consists Errors, Warnings, and Messages

**Errors screenshot:**
Note: We can export all the logs into .csv format by clicking on Export to CSV.
6.17.8. **Webmap Context**

This feature helps the user to save the Map extent into `.xml` file. The following *Figure 96* illustrates the Webmap Context main page.

1. Please follow the path Map Viewer→Tools, please click on the ninth option, on clicking, it displays a pop-up widow as shown below.
2. Enter required details such as 'Title', 'Abstract', and 'Keywords' as shown in the below diagram, and click on 'Save Map Context'.

3. On clicking 'Save Map Context', the file is saved as '.xml' file and can import further or reuse the saved map context.
Importing the .xml file:

1. Click on the Import option on the displayed pop-up window as shown below.

2. Now, click on the ‘Choose File’, a pop-up window is displayed asking the path of the file to be loaded as shown below.
3. Now, select `wmc_context.xml` file and then click on **Load Map Context** to see the desired Webmap Context as shown below.

**Note**: A small pop-up window is displayed as shown below.

4. Result is shown below.
6.17.9. Crowd Sourcing Report

It helps the Geoportal Admin to check the raised crowd souring report generated by public users and as well as to check the progress of assigned crowd souring tickets to assigned departments.

Figure 97: Tools (Crowd Sourcing Report)

1. Please follow the path Map Viewer→Tools, please click on the tenth option, on clicking, it displays a pop-up widow as shown below.
2. Now, select the option and click on the **Show Details** a pop-up window is displayed as shown below, where Geoportal Admin can assign this ticket to concerned department for taking necessary action.

3. Here, in the above screen, we assigned this ticket to Revenue and Disaster Management Department.
6.17.10. Cadastral Information

It helps the user to view the features of cadastral information of that cadastral block. The following **Figure 98** illustrates main page of cadastral information.

**Note:** Please select the layer ‘Dhenkana Cadastral’ layer to process this feature.

![Figure 98: Tools (Cadastral Information)](image)

1. Please follow the path Map Viewer→Tools, please click on the eleventh option, on clicking, it displays a pointer to point it on the map.
### Cadastral Information

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTRICT NAME</td>
<td>Dhenkanal</td>
</tr>
<tr>
<td>DISTRICT CODE</td>
<td>04</td>
</tr>
<tr>
<td>TEHSIL NAME</td>
<td>Kamakhyanagar</td>
</tr>
<tr>
<td>TEHSIL CODE</td>
<td>03</td>
</tr>
<tr>
<td>REVENUE VILLAGE NAME</td>
<td>Srimule</td>
</tr>
<tr>
<td>REVENUE VILLAGE CODE</td>
<td>201</td>
</tr>
<tr>
<td>REVENUE PLOT</td>
<td>643</td>
</tr>
<tr>
<td>THANA NO</td>
<td>184</td>
</tr>
<tr>
<td>KHATA NO</td>
<td>75</td>
</tr>
<tr>
<td>ROR PLOT NO</td>
<td>643</td>
</tr>
<tr>
<td>AREA ACRE</td>
<td>0.120</td>
</tr>
<tr>
<td>AREA HECT</td>
<td>0.000</td>
</tr>
<tr>
<td>LAND TYPE</td>
<td>স্বাধীন অবস্থিতী</td>
</tr>
<tr>
<td>TENANTS</td>
<td>ইত্যাদি দৃষ্টিপ্রাপ্তির, জল বিধানির, কুর্সিক কিভাবে জলনির, কাটি বা হরি প্রদীপ ই নিয়ন্ত্রণ, অঙ্গ পর্যালোচনায় করার বিশেষতা: সেক্ষেত্র</td>
</tr>
</tbody>
</table>
6.17.11. CDP Information

It helps the user to view the features of CDP information of that block. The following Figure 99 illustrates main page of cadastral information.

Note: Please select the layer ‘CDP Layers and CDP Boundary’ layer to process this feature.

Figure 99: Tools (CDP Information)

1. Please follow the path Map Viewer→Tools, please click on the twelfth option, on clicking, it displays a pointer to point it on the map
### CDP Information

<table>
<thead>
<tr>
<th><strong>Field Name</strong></th>
<th><strong>Value</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE NAME</td>
<td>Odisha</td>
</tr>
<tr>
<td>STATE CODE</td>
<td>21</td>
</tr>
<tr>
<td>DISTRICT NAME</td>
<td>Bargarh</td>
</tr>
<tr>
<td>DISTRICT CODE</td>
<td>15</td>
</tr>
<tr>
<td>TOWN PLANNING UNIT</td>
<td>Bargarh</td>
</tr>
<tr>
<td>AUTHORITY TYPE</td>
<td>TPU</td>
</tr>
<tr>
<td>AUTHORITY NAME</td>
<td>Atebire-NAC</td>
</tr>
<tr>
<td>TOWN NAME</td>
<td>Atebire</td>
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<tr>
<td>VILLAGE NAME</td>
<td>Atebira</td>
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<td>VILLAGE CODE</td>
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<td>0254</td>
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<tr>
<td>DESCRIPTION</td>
<td>Reservoir / Dam</td>
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<tr>
<td>IMPORTANT LOCATION</td>
<td></td>
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<tr>
<td>KHATA NO</td>
<td>1596</td>
</tr>
<tr>
<td>RCR PLOT NO</td>
<td>3364</td>
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<tr>
<td>STATUS</td>
<td>NAC</td>
</tr>
<tr>
<td>LAND INFO</td>
<td>POLY_PARCEL</td>
</tr>
</tbody>
</table>

**Close**
6.17.12. Labeling

It helps the user to edit the labels for the places/blocks on the map. The following Figure 100 illustrates main page of cadastral information.

**Figure 100: Tools (Labelling)**
1. Please follow the path Map Viewer→Tools, please click on the thirteenth option, on clicking, a pop-up window is displayed as shown below.

2. Now, you can either select layer type as ‘MIS Layer’ or ‘Layer’, by default it is selected as Layer.
3. Select TOC layer, here we selected ‘District Boundary’
4. Select Field, here we selected as ‘District Name’
5. Select Color, here we selected as ‘Brown’.
6. Once, all required details are selected, please click on Start Labelling.
7. A small pop-up window is displayed as shown in the below diagram.

8. The result is shown below.
6.17.13. **Draw Chart**

It helps the user to draw the charts with selected data on the map. The following **Figure 101** illustrates main page of cadastral information.

![Figure 101: Tools (Draw Charts)](image)
1. Please follow the path Map Viewer → Tools, please click on the fourteenth option, on clicking, a pop-up window is displayed as shown below.

2. Select TOC layer, here we selected ‘District Boundary’
3. Select MIS layer, here we selected as ‘Census District Urban’
4. Select Chart, here we selected as ‘Bar’.

Result Page:
6.18. Data Sources

6.18.1. New Data Source

This feature helps the user to add a new data source from system defined data. The following Figure 102 illustrates the creation of ‘New Data Source’ to the application.

1. Please follow the path Map Viewer → Data Sources, please click on the second option, on clicking, it displays a pop-up widow, where the user has to select from the list displayed on the left side of the window, sown in the Figure 102
2. After selecting the option, please click on the register button to add that option to the existing Data Sources as shown below.

Figure 102: Creation of New Data Source
6.18.2. Data Sources

This feature displays all the existing data sources of the application. The following Figure 103 illustrates the display of all available ‘Data Sources’ of the application.

**Figure 103: Displaying existing Data Sources**

1. Please follow the path Map Viewer⇒Data Sources, please click on the first option, on clicking, it displays a pop-up widow, where it displays the list of all existing Data Sources within the application as shown in the Figure 103
6.18.3. Search Catalog

This feature helps the user to search the features of Map Catalog with different variables such as District, Block, Tehsil etc. The following Figure 104 illustrates Search Catalog feature.

**Figure 104: Search Catalog Main Page**

1. Please follow the path Map Viewer → Search Catalog, please click on the third option, on clicking, it displays a pop-up widow, where the user should enter the keyword name and select the Type of the Catalog.
2. After keying the data, in the below window, which is the Result Window, the data is displayed as shown in the Figure 104.
6.18.4. Browse Catalog

This feature helps the user to browse the existing features of Map Catalog within the different options such as Services and Coverage Catalog, which indeed has different sub-options to browse the catalog.

The following Figure 105 illustrates Browse Catalog feature.

1. Please follow the path Map Viewer→Browse Catalog, please click on the fourth option, on clicking, it displays a pop-up widow, where the user has to select the option from different options
2. After selecting the options, in the below window, which is the Result Window, the data is displayed as shown in the Figure 105
6.18.5. Display Maps

This feature helps the user to display the Map in the desired format such as ‘Open Street Map’, ‘OSDI_WMPS’ and ‘OSDI Raster’. The following Figure 106 illustrates Display Map feature.

1. Please follow the path Map Viewer→Display Maps, please click on the fifth option, on clicking, it displays a pop-up widow, where the user has to select the option from different options

2. After selecting an option, the Map is being displayed in the specified option, Here, the user has selected ‘Open Street Map’, so the result is being displayed in the background as Open Street view as shown in the Figure 106
6.18.6. Display Feature Classes

This feature helps the user to select the feature classes from the list of different maps such as as ‘Open Street Map’, ‘OSDI_WMPS’ and ‘OSDI Raster’.

Here in the below Figure 107, we selected/checked the option as ‘Open Street Map’

1. Please follow the path Map Viewer→Display Feature Classes, please click on the sixth option, on clicking, it displays a pop-up widow, where the user must select the option from different options

2. After selecting the option, Here, the user has selected ‘Open Street Map’, now click on the ‘Display’, button, the result automatically displays in the background as Open Street view
6.19. Analyses

6.19.1. Search

This feature helps the user to search the location on the map or map extent.

Here in the below Figure 108 illustrates Search Main Page.

![Figure 108: Analyses (Search)](image-url)
1. Please follow the path Map Viewer → Analyses → Search, please click on the first option, on clicking, it displays a pop-up widow as shown below.

2. Now, user must enter the location he/she desires to find in the ‘Name’ field as shown below and click on Search
6.19.2. Query Builder

This feature helps the user to query the location features with respect to base map. The below Figure 108 illustrates Search Main Page.

**Figure 108: Search Main Page**

**Figure 109: Analyses (Query Builder)**
1. Please follow the path Map Viewer → Analyses → Query Builder, please click on the second option, on clicking, it displays a pop-up widow as shown below.

2. Now, user can create his/her own query based on the options selected as shown below.

3. Here, we selected 'osdi_gis.block_boundary', next we need to build a query using different options as shown below.
4. Here, we checked the option for ‘Where filter’, and selected further as ‘block_name’, ‘=’, and ‘Angul’.
5. After selecting all required values, click on Execute.

Result Page:
6.19.3. Buffer Analysis

This feature helps the user to analyze the buffer based on the drawing. The below Figure 110 illustrates Buffer Analysis Main Page.

*Figure 110: Analyses (Buffer Analysis)*
1. Please follow the path Map Viewer → Analyses → Buffer Analysis, please click on the third option, on clicking, it displays a pop-up widow as shown below.

2. Next, select Block Boundary as shown above, enter the Buffer, select the Type and select With field value from drop-down list as shown below.

3. Now, select the drawing tool from the options shown below and start drawing it on the map.
4. Draw it as shown below and click on **Execute**.

**Result Page:**

- Buffer Analysis
- Table showing field names and values:
  - **BLOCK NAME**: Bolagad
  - **BLOCK CODE**: 170005
  - **SUB DIVISION NAME**: Khordha
  - **SUB DIVISION CODE**: 36
  - **DISTRICT NAME**: Khordha
  - **DISTRICT CODE**: 17
  - **STATE NAME**: Odisha
  - **STATE CODE**: 21
6.19.4. **Clip-Zip-Ship**

This feature helps the user to add a new vector map from the existing OSDI Map and displays the desired vector map area.

The below *Figure 111* illustrates Clip-Zip-Ship Selection Page.

*Figure 111: Analyses (Clip-Zip-Ship)*
1. Please follow the path Map Viewer→Analyses→Clip-Zip-Ship, please click on the fifth option, on clicking, it displays a pop-up widows as shown below.
2. Next, select the image from the second pop-up window, then it opens the first pop-up window with the selected image in it.

3. Now, you can further send out the result image by entering **email address** and click on **Submit**.
6.19.5. Show Route

This feature helps the user to select the route map from one location to other location. The following Figure 112 illustrates, ‘Show Route’, option.

Figure 112: Analyses (Show Route)

1. Please follow the path Map Viewer→Analyses→Show Route, please click on the fourth option, on clicking, it displays a pop-up widow, where the user has to select the value of from Location and to Location from drop down boxes to fetch the route map as shown in the Figure 112
6.19.6. Cadastral Analysis

This feature helps the user to analyze the cadastral based on the drawing. The below Figure 113 illustrates Cadastral Analysis Main Page.

Please follow the path Map Viewer → Analyses → Cadastral Analysis, please click on the seventh option, on clicking, it displays a pop-up widow as shown below.
2. Next, Enter **Buffer Distance** and select **With** field value from drop-down list as shown below.

3. Now, select the **drawing tool** from the options shown below and start drawing it on the map.

4. Draw it as shown below and click on **Execute**.
6.20. Edit

6.20.1. Insert

This feature helps the user to insert a line, polygon, point feature to the existing map area.

The below Figure 114 illustrates Insert Main Page.

![Figure 114: Edit (Insert Selection Page)](image)

1. Please follow the path Map Viewer→Edit→Insert, please click on the first option, on clicking, it displays a pop-up widow as shown below.
2. Next, click on the drop-down and select the Redlining feature as ‘block_boundary’ as shown below.

3. Next, select the polygon as an option for drawing it on the map as shown below.
4. Now, after drawing the map as shown above, a small pop-up window is displayed as shown below, where the user should enter the details and click on **Insert**.
6.20.2. Modify

This feature helps the user to modify the selected feature on the existing map area. The below Figure 115 illustrates Modify Main Page.

![Figure 115: Edit (Modify Main Page)](image)

1. Please follow the path Map Viewer→Edit→Modify, click on the second option and select the feature to modify as shown below.
2. Now, Drag the selected feature as shown below.
6.20.3. Continue

This feature helps the user to continue editing the selected feature on the existing map area.

The below Figure 116 illustrates Continue Main Page.

1. Please follow the path Map Viewer→Edit→Continue, click on the third option and select the feature to continue as shown below.
2. After selecting, click on the Continue, a small pop-up window is displayed, where the user must select an option from the drop-down list and select the option for drawing the geometry.
3. Start Drawing as shown below.
6.20.4. **Move**

This feature helps the user to move the geometry of the selected feature on the existing map area.

The below *Figure 117* illustrates Continue Main Page.

1. Please follow the path Map Viewer → Edit → Move, click on the fourth option and select the feature to move as shown below.

*Figure 117: Edit (Move Main Page)*
6.20.5. Remove

This feature helps the user to removing the partial part of the geometry of the selected feature on the existing map area.

The following Figure 118 illustrates ‘Remove’, feature.

Figure 118: Edit (Remove Main Page)

1. Please follow the path Map Viewer→Edit→Remove, click on the fifth option and select the feature to remove as shown below.
2. Now, click on part you wish to remove as shown below.
6.20.6. Break

This feature helps the user to break the selected polyline into two polylines of the ‘railway line’ layer of OSDI. The following Figure 119 illustrates ‘Break’, feature.

![Figure 119: Edit (Break Main Page)](image)

1. Please follow the path Map Viewer→Edit→Break, click on the seventh option and select the feature to break as shown below.
2. When the feature is selected, a small pop-up window is displayed as shown below.

3. Next, the user must select Edit Layer and Select feature from the drop-down list as shown below.
4. Now, select the polyline as shown below.
6.20.7. **Join**

This feature helps the user to join two polylines into a single polyline of the 'railway line' layer of OSDI.

The following **Figure 120** illustrates ‘Join’, feature.

![Figure 120: Edit (Join Main Page)](image)

1. Please follow the path Map Viewer→Edit→Join, click on the sixth option and select the features to join as shown below.
2. When the feature is selected, a small pop-up window is displayed as shown below.

![Join Linear features window](image)

3. Next, select the above field values from drop-down lists as shown below.

![Join Linear features window](image)
6.20.8. **Split**

This feature helps the user to split a polygon of the ‘block boundary’ layer of OSDI on the existing map area.

The following Figure 121 illustrates ‘Split’, feature.

![Figure 121: Edit (Split Main Page)](image)

1. Please follow the path Map Viewer→Edit→Split, click on the eighth option and select the polygon to split as shown below.
2. Next, draw a polyline on the selected polygon, a small pop-up window is displayed as shown below.

4. Next, select the above field values from drop-down lists as shown below.
6.20.9. **Merge**

This feature helps the user to merge two polygons into single polygon of the ‘block boundary’ layer of OSDI on the existing map area.

The following **Figure 122** illustrates ‘Merge’, feature.

![Figure 122: Edit (Merge Main Page)](image)

1. Please follow the path Map Viewer→Edit→Merge, click on the ninth option and select two polygons as shown below.
2. When the feature is selected, a small pop-up window is displayed as shown below.
6.21. Settings

6.21.1. Map

This feature provides the user with settings for displaying the map. The following Figure 123 illustrates the settings main page.

Figure 123: Settings Main Page

1. Please follow the path Map Viewer→Settings→Map, please click on the first option, on clicking, it displays a pop-up widow, where the user can select the coordinate system for displaying the Map
2. After selecting the first option from the drop-down list as shown in the Figure 124
Figure 124: Coordinate System Selection
6.21.2. Scale Bands

This feature helps the user to adjust/change the scale bands of particular layer/map services. The following Figure 125 illustrates the Scale Bands main page.

Figure 125: Scale Bands Main Page

1. Please follow the path Map Viewer→Settings→Scale Bands Configurations, please click on the third option, on clicking, it displays a pop-up widow, where the user can check/uncheck desired options for changing the display of the map services/map layers as shown in the Figure 125
7. Charts

A chart is a visual representation of data, in which the data are represented by symbols such as bars in a bar chart or lines in a line chart. A chart can represent tabular numeric data, functions or some kinds of qualitative structures.

![Figure 126: Charts Selection Page](image)

1. Please follow the path Home page→ Charts, on clicking it redirects to a new window as shown below, where the user must give Inputs in terms of Select Layer and fields for Analysis, Select Area of Interest.
Result Page by **Select Layer and fields for Analysis**:

**Input**
- Select Layer and fields for Analysis
  - Assembly Constituency
  - Assembly Name
  - Arugul
  - Select group by field

**Select Area of interest**
- Select District
- Select Block
- Select Panchayat
- Bar Chart

**Charts and Reports**

**Assembly Constituency**
- Area (km²) distribution of: Assembly Constituency
- By field: assembly_name
- By field value: Arugul
- Group By: not Selected

**Chart Legend**
1. Arugul

**Note:**
Place the cursor over the Bar Chart to see the area/length. For Pie Chart, see Value.
8. **Gallery**

This feature helps the user to fetch the static images of predefined maps on data such as Odisha River water bodies, Odisha Forest cover, Odisha Roads and Railway maps.

![Figure 127: Gallery Selection Page](image)

1. Please follow the path Home page → Gallery, on clicking it redirects to a new window as shown below, where the user can click on the standard map templates to view static images.
9. **CROWD SOURCING**

This feature helps the user to see an overall dashboard on raised vs closed crowdsourcing requests in two ways ‘crowd sourcing inputs by categories’ and ‘crowd sourcing inputs by periods’.

![Dashboard Image](image)

*Figure 128: Crowd Sourcing Selection Page*

1. Please follow the path Home page→ Crowd Sourcing, on clicking it redirects to a new window as shown below, where the user can see two diagrams in a bar chart for ‘crowd sourcing inputs by categories’ and ‘crowd sourcing inputs by periods’.