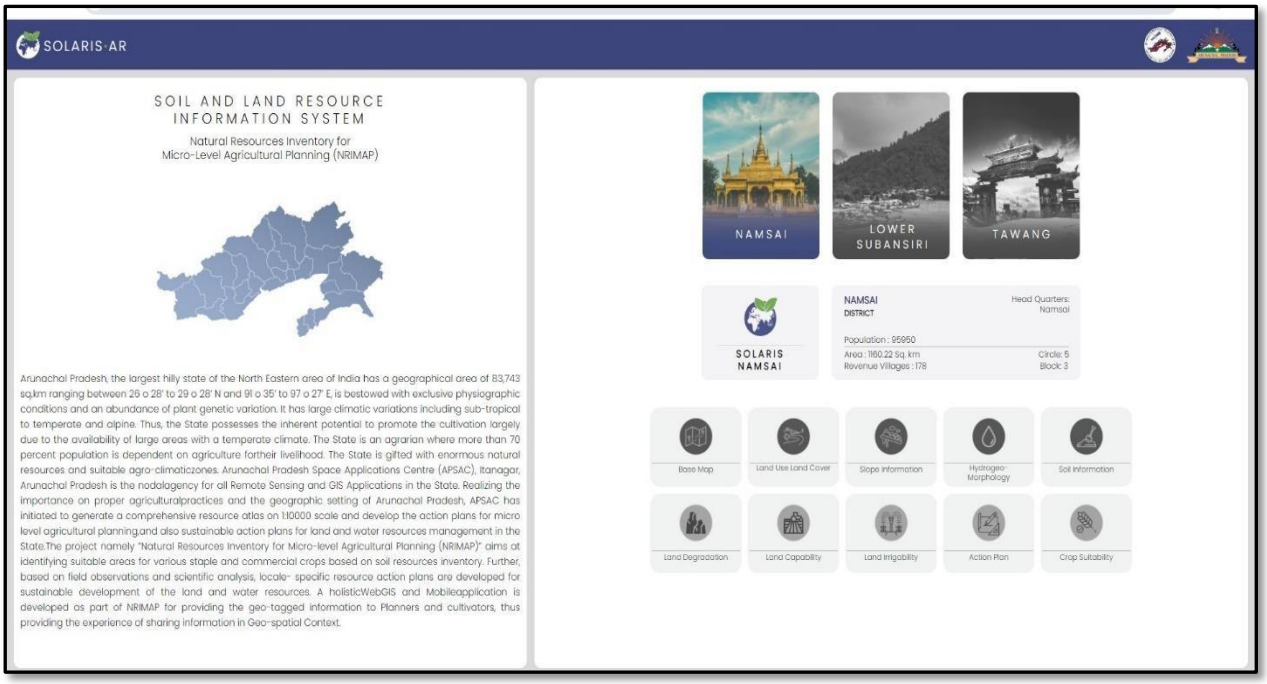
S O L A R I S

Arunachal Pradesh Space Applications Centre (APSAC), in collobaration with Remote Sensing Instruments LLP, Hyderabad, has developed a Remote Sensing based field level **Soil & Land Resource Information System (SOLARIS),** exclusively for the benefit of the farmers of Tawang, Namsai and Lower Subansiri Districts on a Pilot basis, to provide the advisory on Crop Suitability, Site and Crop Specific Nutrient Recommendation and Soil and Water Conservation Measures. This information will be also be useful to the Policy Makers, Planners and Administrators.

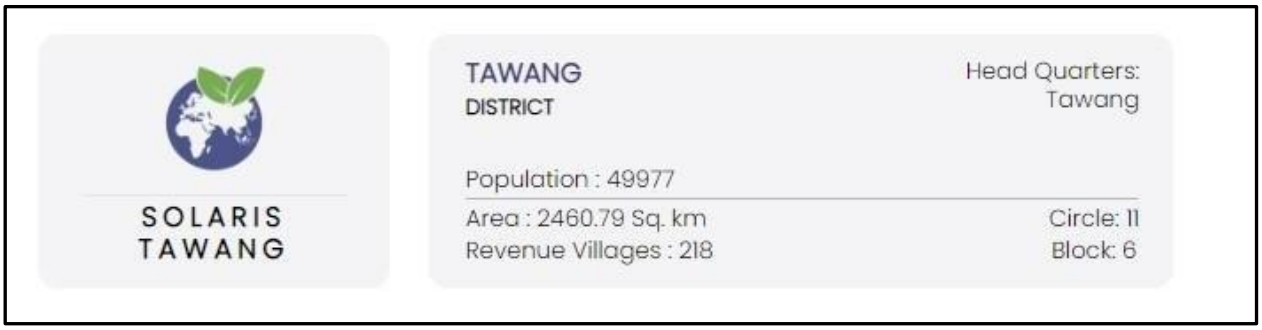
This User guide provides the details on the workflows to enable the user to work on the application to visualise the results online.

HOME PAGE – DASH BOARD

- On Left side on Dashboard user can view information about project.
- Users can view information about NRIMAPs by district on this page.



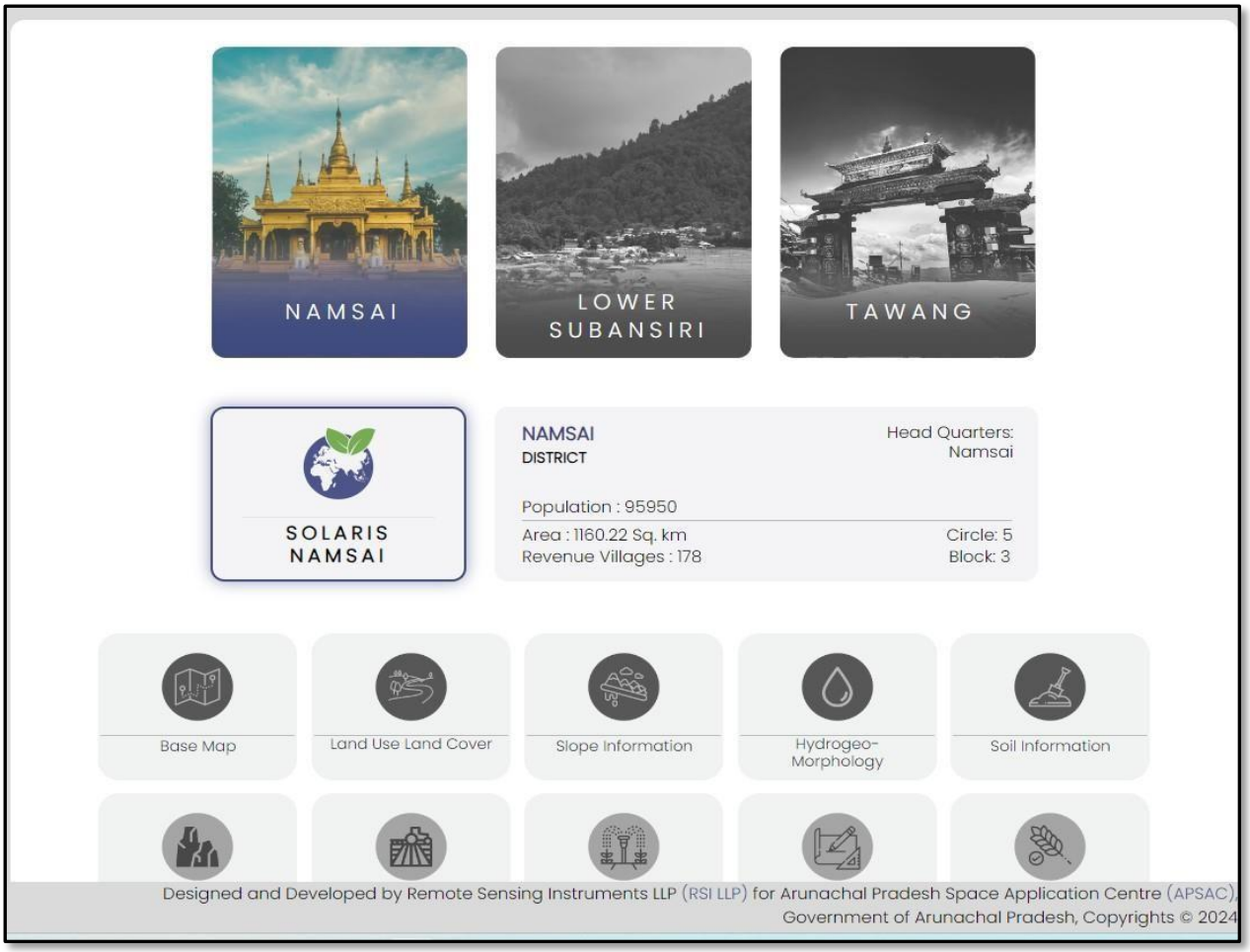
- On Dashboard in between districts and information map buttons there is one table showing the details of selected district.



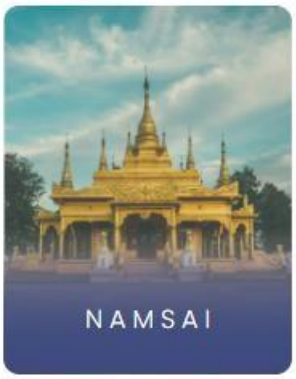
SECTION – 1

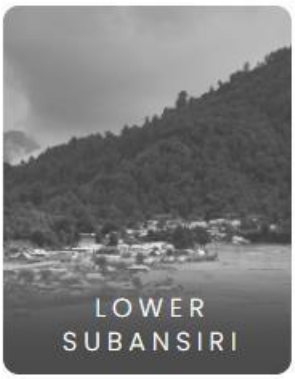
Districts

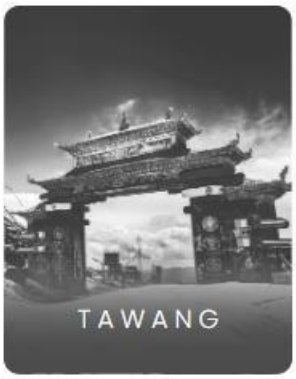
- The user can choose specific district NRIMAPs and district-related maps.
- Example: A user can navigate to the Namsai NRIMAP page by clicking the Namsai button.
- Under District Boxes user find two boxes *on click* first box *navigate* to District integrated Map and other box will show district details.
- Under the district's details box, users can view Namsai district information maps.



- The user can also choose specific information map
- Example A user can *navigate* to Base Map page on clicking on Base Map button







SOLARIS
NAMSAI

NAMSAI
DISTRICT

Head Quarters:
Namsai

Population : 95950

Area : 1160.22 Sq. km
Revenue Villages : 178

Circle: 5
Block: 3

Base Map

Land Use Land Cover

Slope Information

Hydrogeo-Morphology

Soil Information

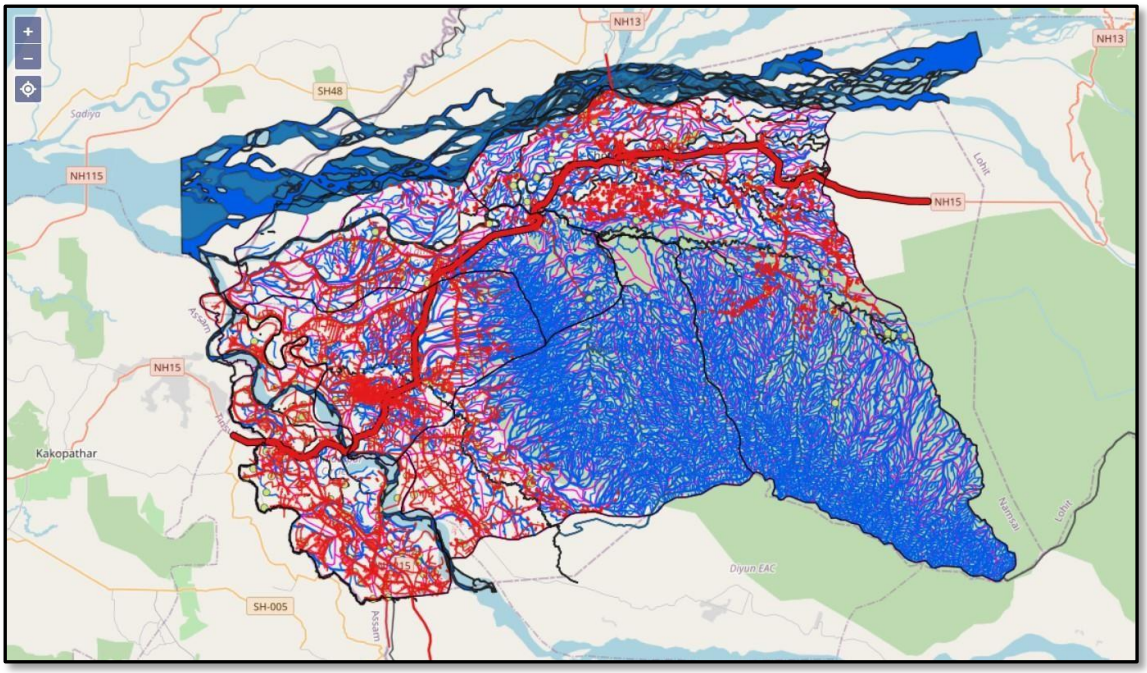
Land Degradation

Land Capability

Land Irrigability

Action Plan

Crop Suitability

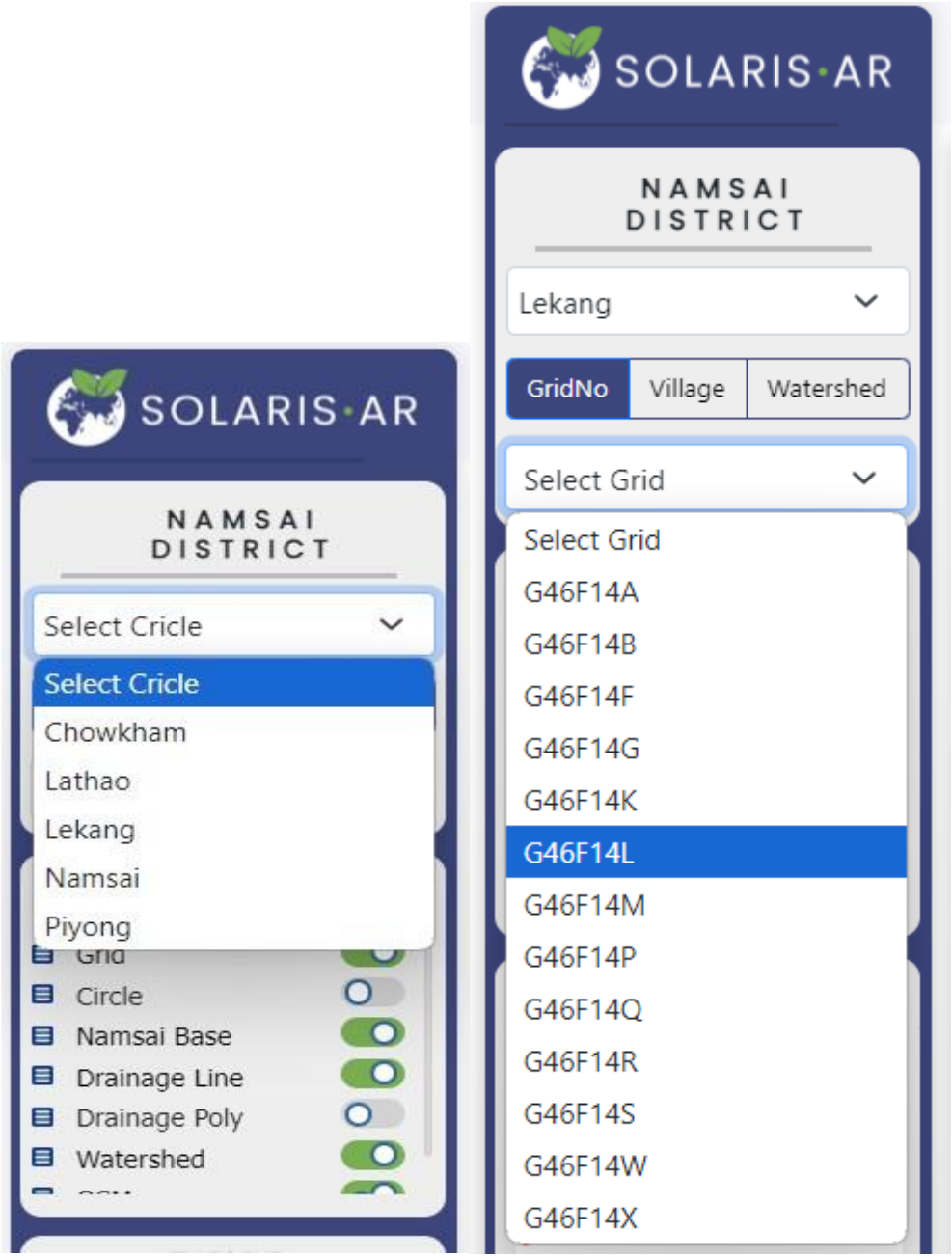


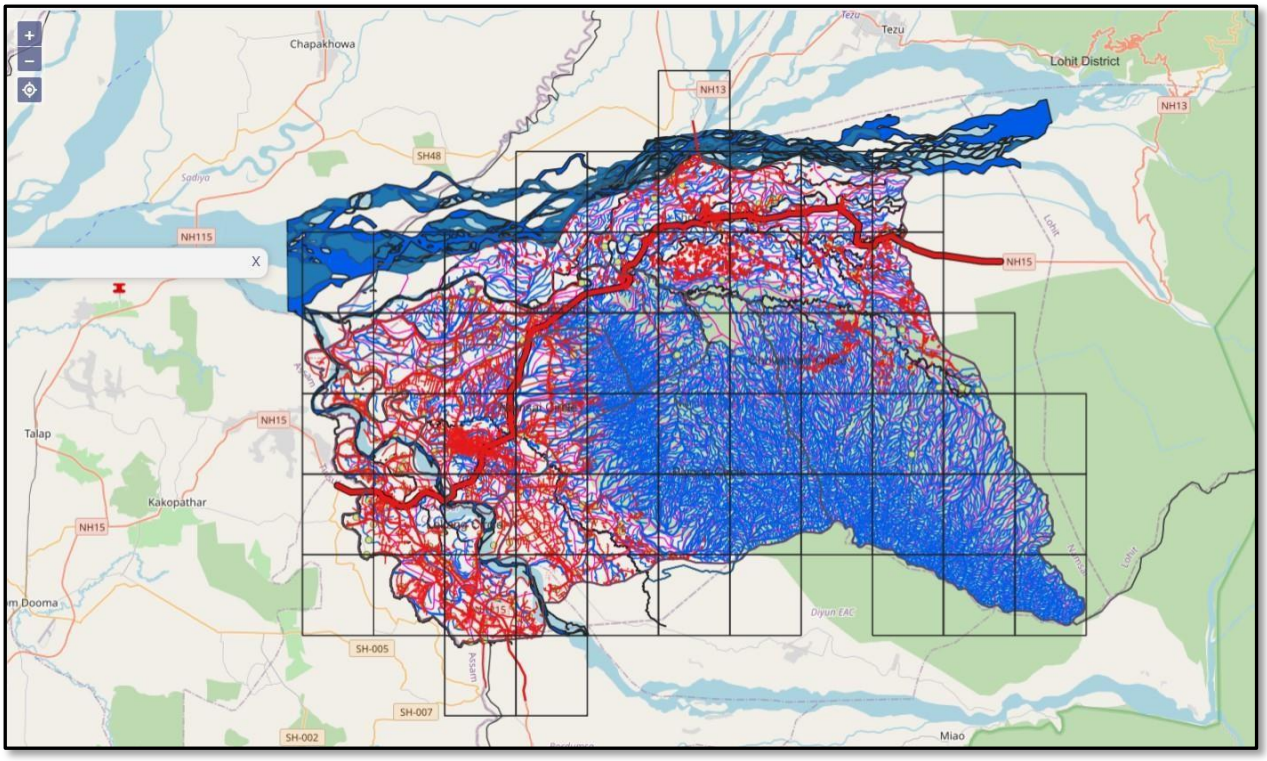
- **Left Sidebar**

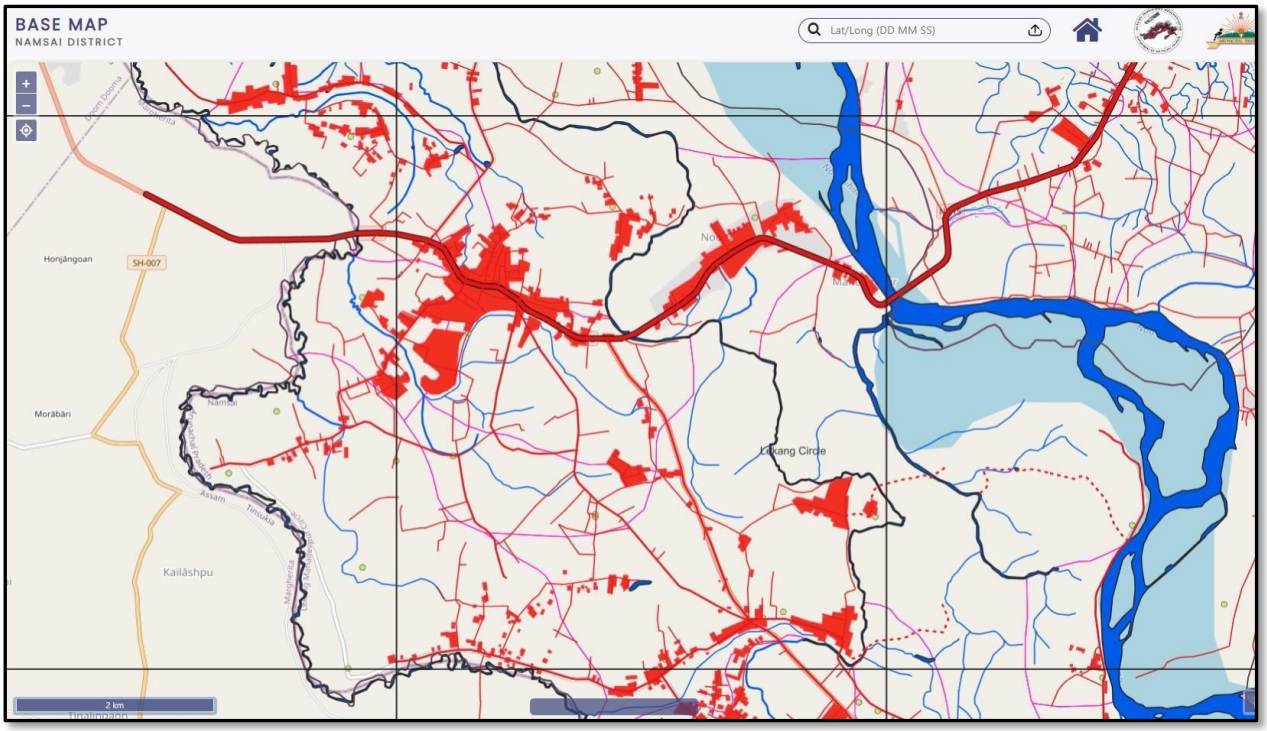
- Circle and Grid Selection Dropdown Menu

- A Circle drop-down menu allows user to select a Circle and its related grids to *Navigate* to the information about the selected area directly.

- **Example:** By selecting Lekang circle and specific grid number in the drop-down menu, the map will automatically zoom into the selected area.





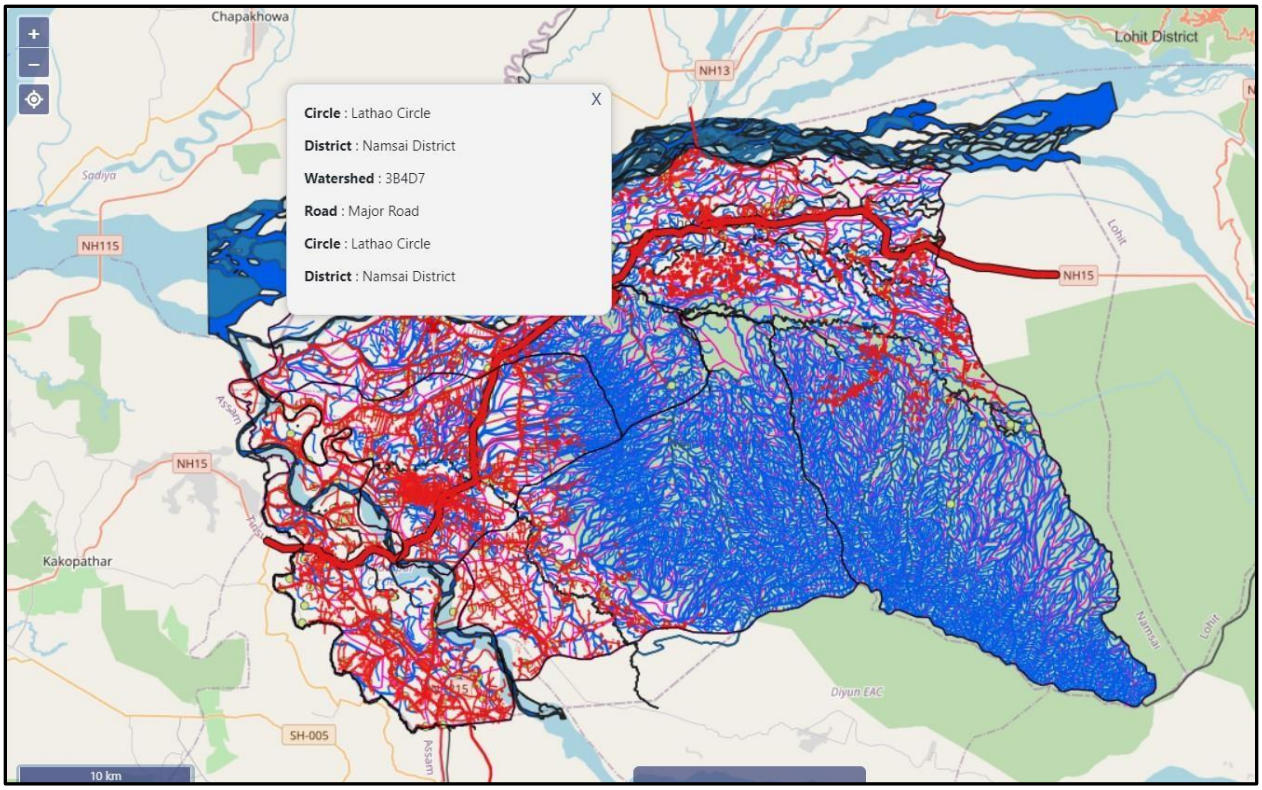


- Layer Control dropdown menu

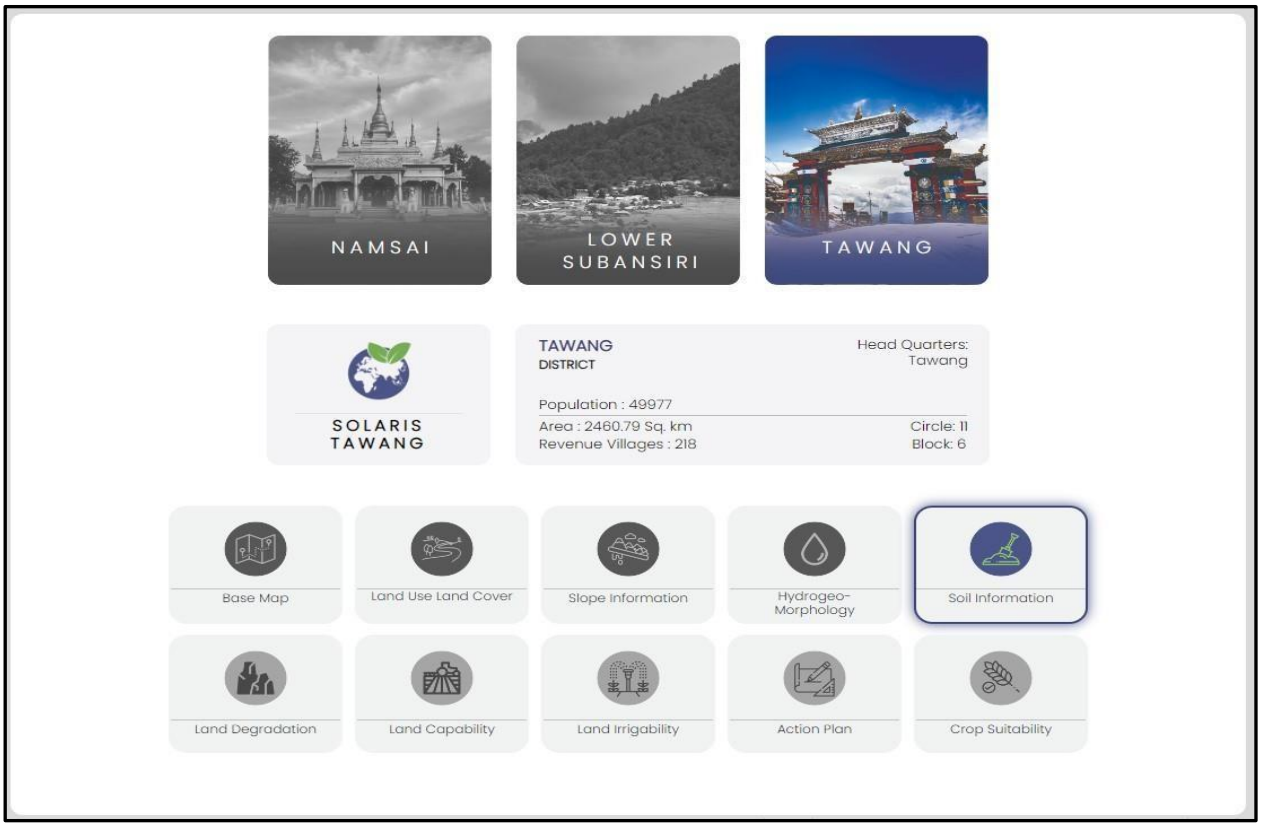
- The Layer Control drop-down menu is useful for selecting specific layers in map. Check boxes can be used to see a specific layers by checking or unchecking them.

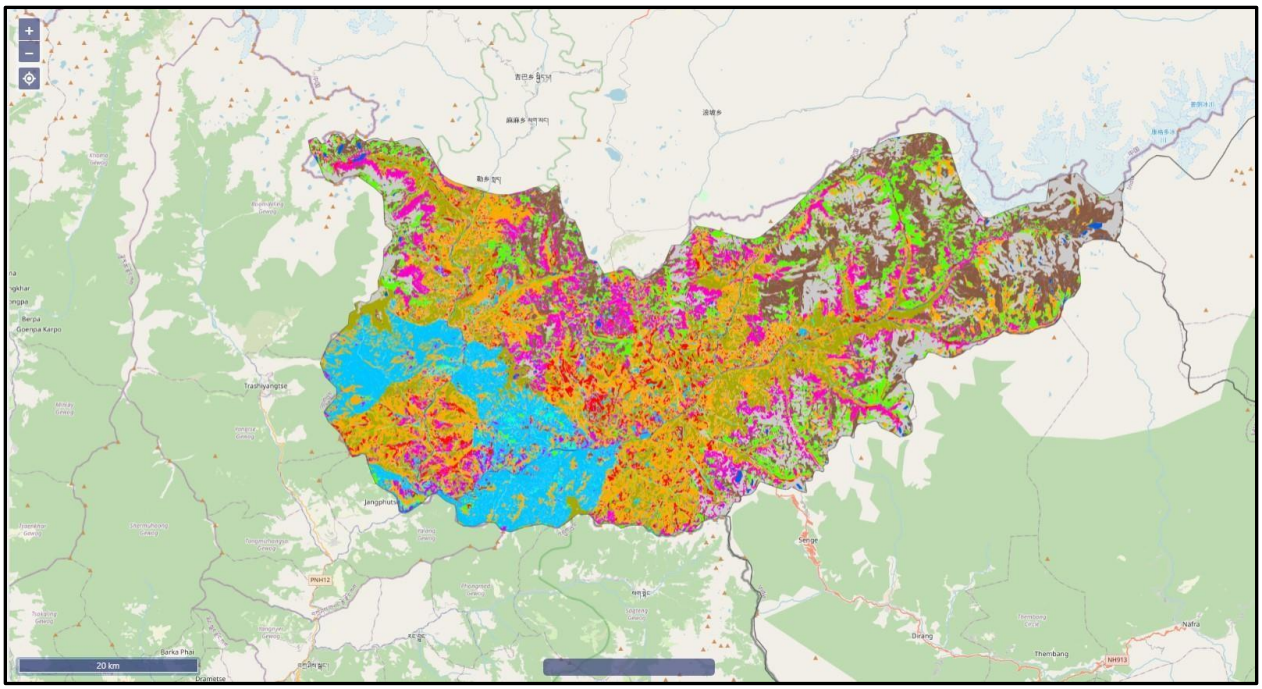
- The Legend button is useful to see the legend of the specific selected map.

- An attribute pop-up window appears when the user clicks on a map.



- To *Navigate* to Tawang District Soil Map
- User after selecting Tawang District button, click on Soil information button


NAMSAI
LOWER SUBANSIRI
TAWANG
SOLARIS TAWANG
TAWANG
DISTRICT
Head Quarters: Tawang
Population : 49977
Area : 2460.79 Sq. km
Revenue Villages : 218
Circle: 11
Block: 6
Base Map
Land Use Land Cover
Slope Information
Hydrogeo-Morphology
Soil Information
Land Degradation
Land Capability
Land Irrigability
Action Plan
Crop Suitability

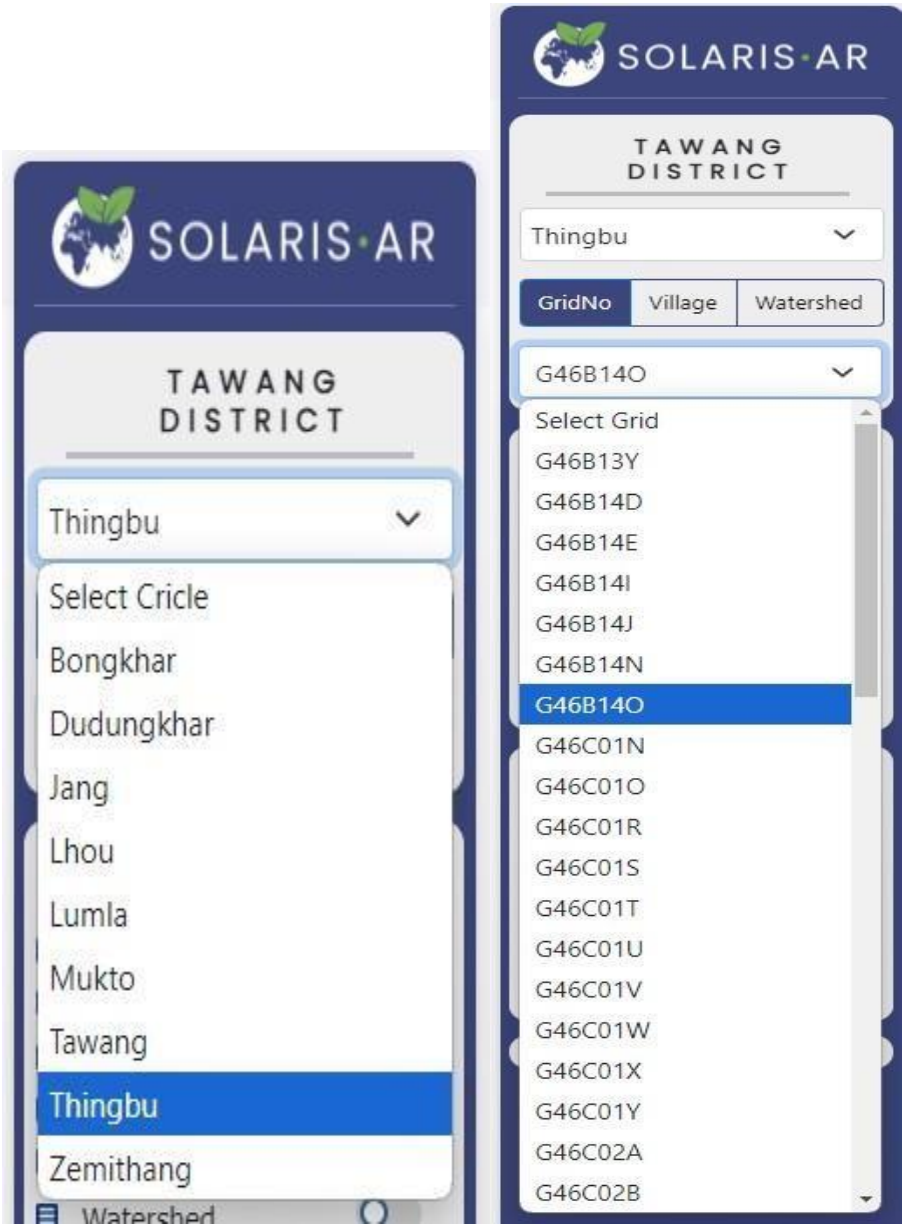

20 km

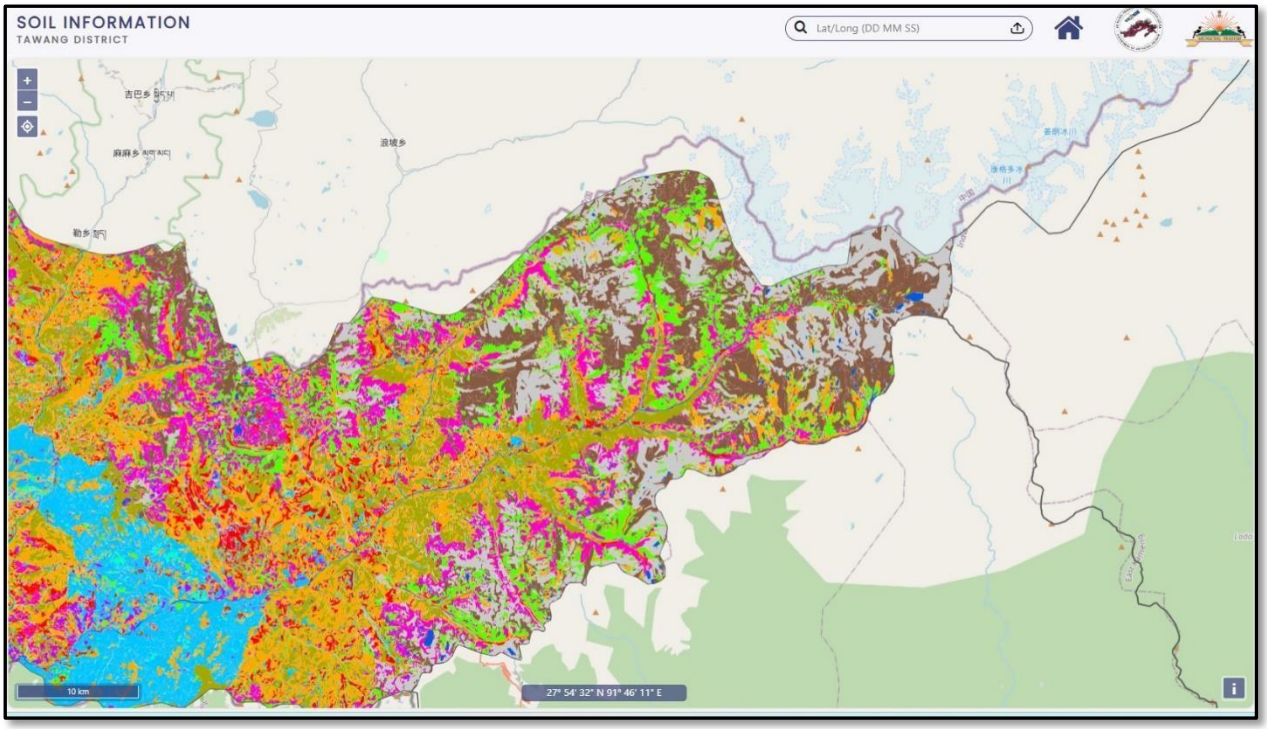
- **Left Sidebar**

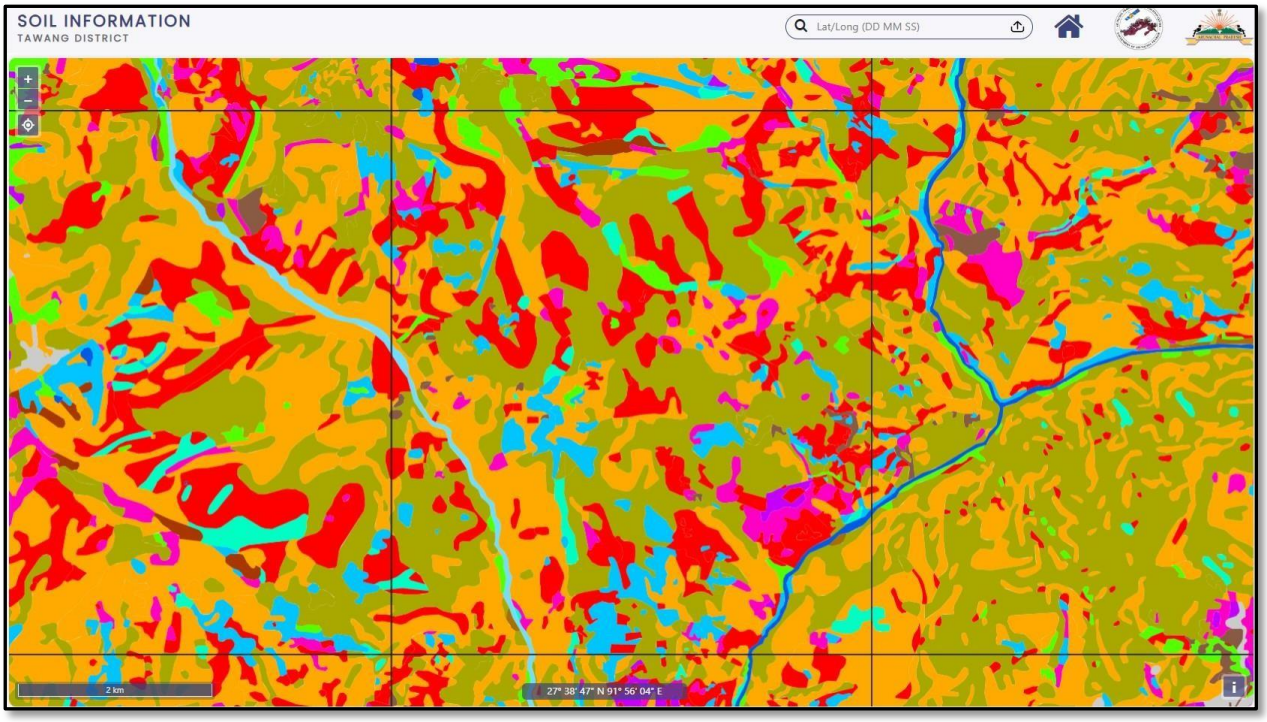
- **Circle and Grid Selection Dropdown Menu**

A Circle drop-down menu allows user to select a Circle and its related grids to *Navigate* to the information about the selected area directly.

Example: By selecting Thingbu circle and specific grid number in the drop-down menu, the map will automatically zoom into the selected area.




SOIL INFORMATION
TAWANG DISTRICT
Lat/Long (DD MM SS)
10 km
27° 54' 32" N 91° 46' 11" E

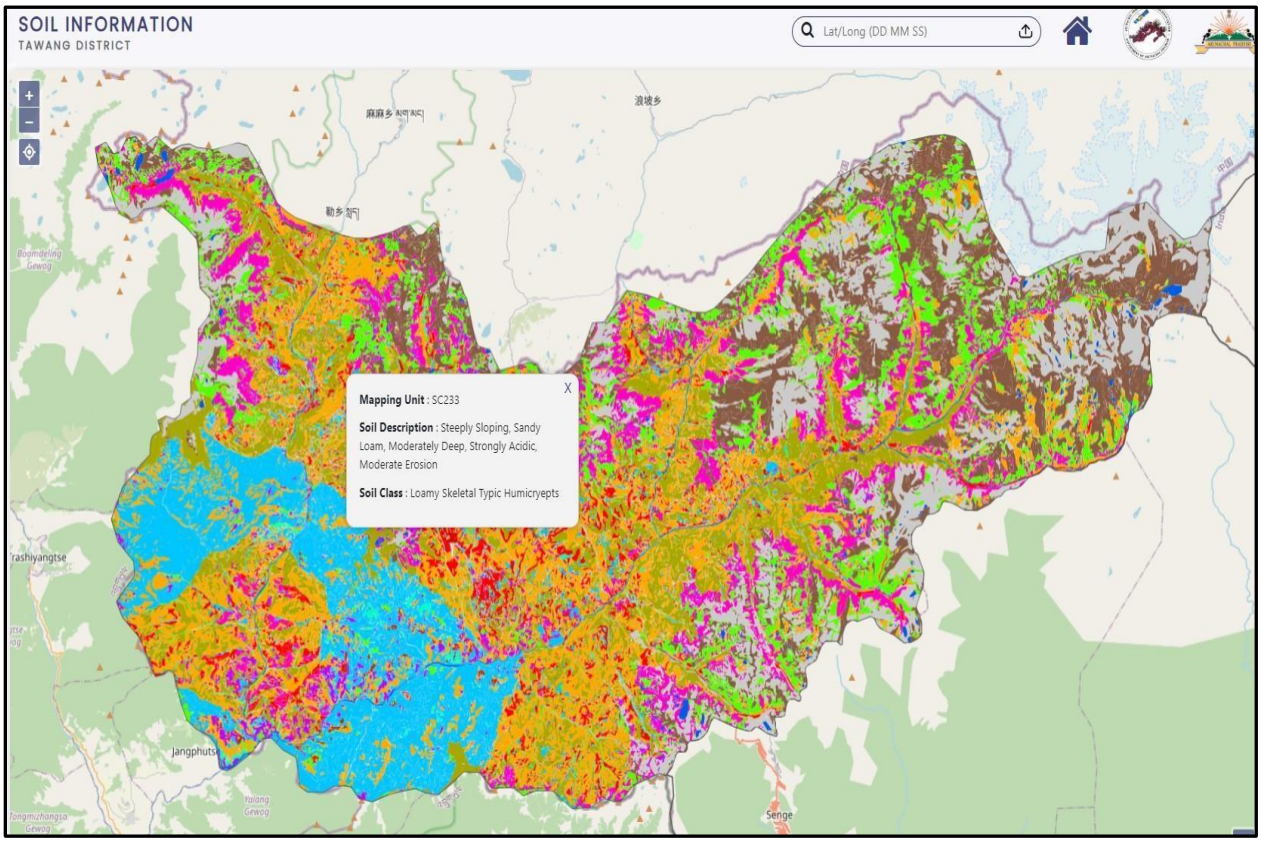

SOIL INFORMATION
TAWANG DISTRICT
Lat/Long (DD MM SS)
2 km
27° 38' 47" N 91° 56' 04" E

Layer Control

The Layer Control drop-down menu is useful for selecting specific layers in map. Check boxes can be used to see a specific layers by checking or unchecking them.

- The Legend button is useful to see the legend of the specific selected map.

- An attribute pop-up window appears when the user clicks on a map.

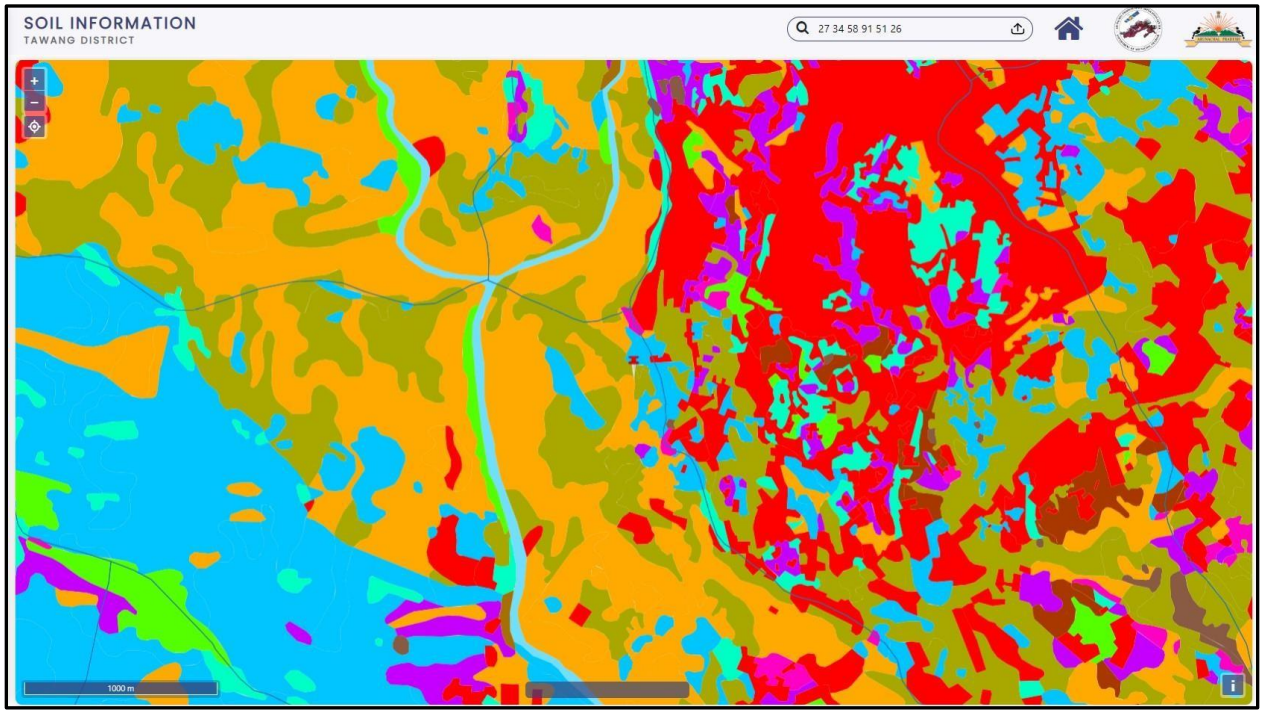


- In the same process user can *Navigate* to other information maps such as

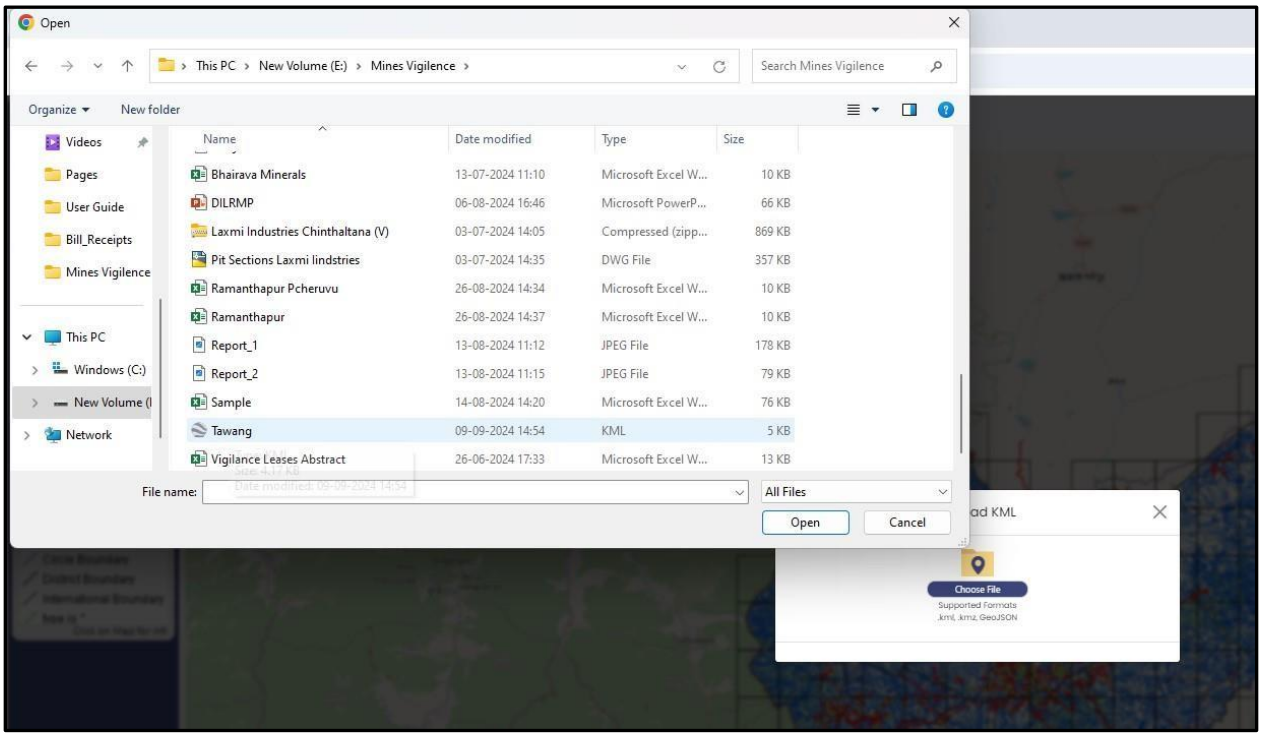
- Slope information
- Landuse and Landcover
- Hydrogeomorphology
- Land Degradation
- Land Capability
- Land Irrigability
- Action Plan
- Crop Suitability

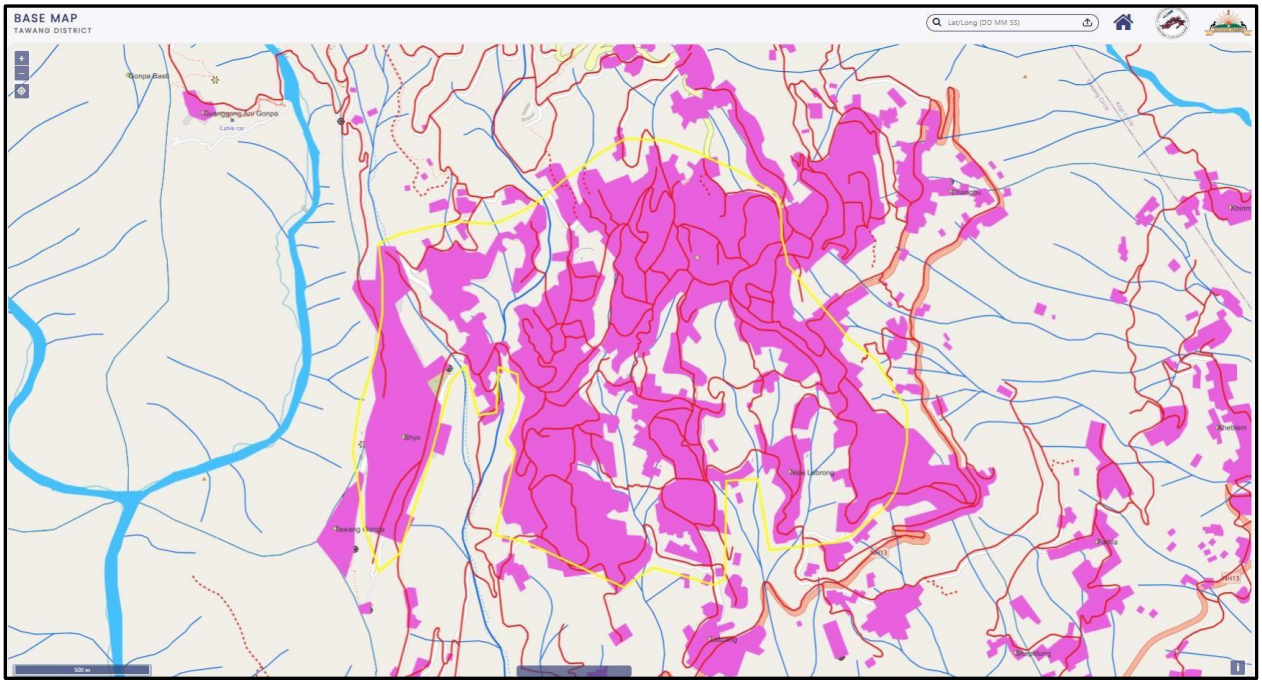
- On every district map on top right side of the screen user finds one box

- User can navigate to particular region by entering Latitude and Longitude values in the box.



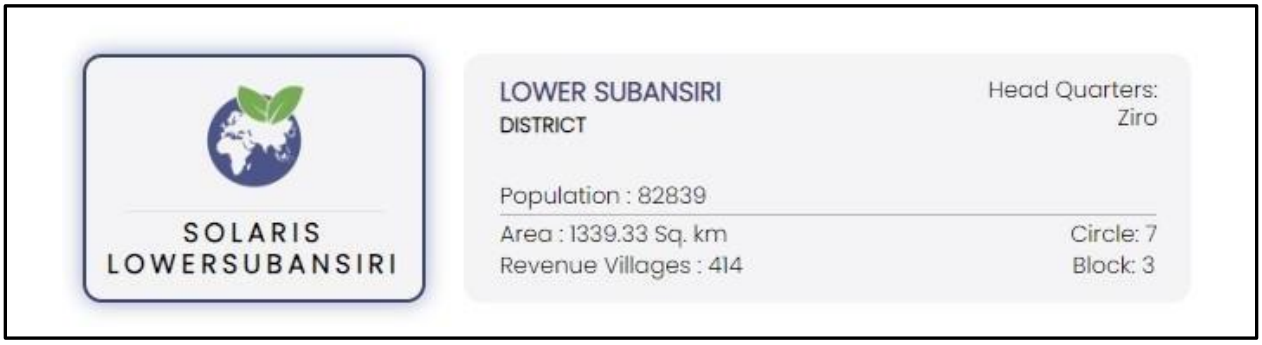
- User can upload Kml by clicking arrow button in Lat/Long window.

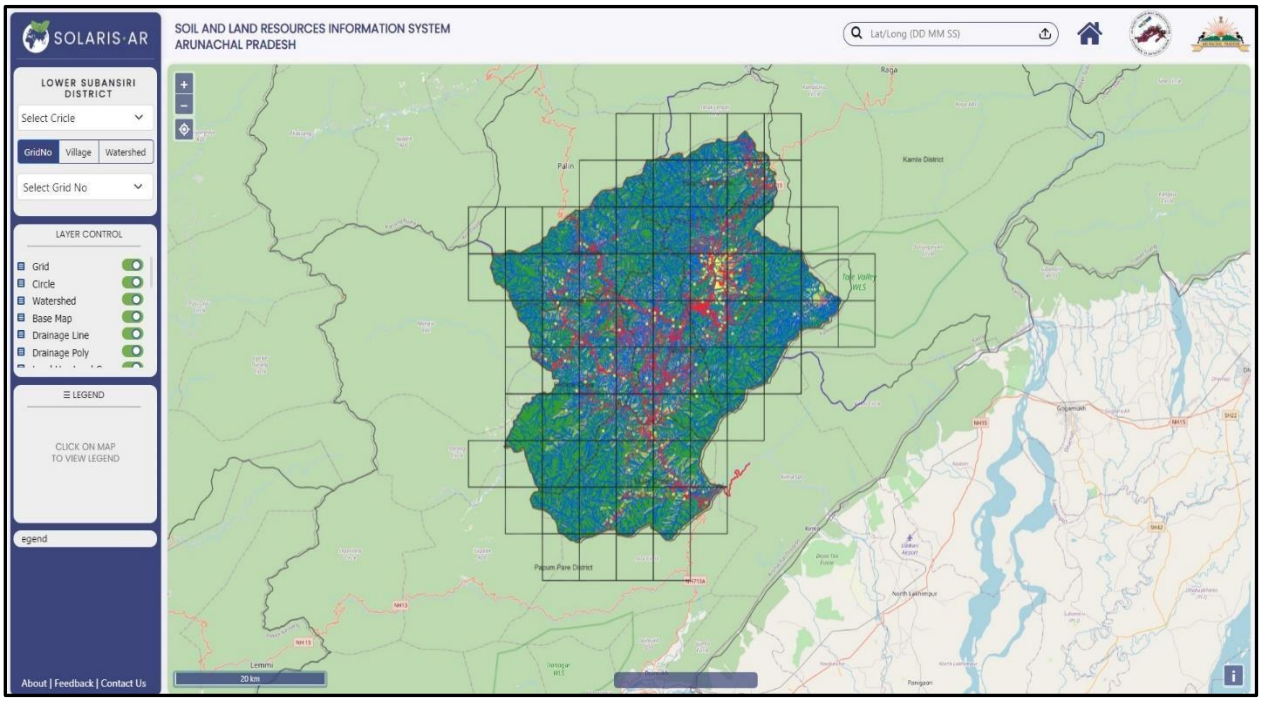

Open
This PC › New Volume (E:) › Mines Vigilence ›
Search Mines Vigilence
Organize
New folder
Videos
Pages
User Guide
Bill_Receipts
Mines Vigilence
This PC
Windows (C:)
New Volume (I
Network
Name
Date modified
Type
Size
Bhairava Minerals 13-07-2024 11:10 Microsoft Excel W... 10 KB
DILRMP 06-08-2024 16:46 Microsoft PowerP... 66 KB
Laxmi Industries Chinthaltana (V) 03-07-2024 14:05 Compressed (zipp... 869 KB
Pit Sections Laxmi lindstries 03-07-2024 14:35 DWG File 357 KB
Ramanthapur Pcheruvu 26-08-2024 14:34 Microsoft Excel W... 10 KB
Ramanthapur 26-08-2024 14:37 Microsoft Excel W... 10 KB
Report_1 13-08-2024 11:12 JPEG File 178 KB
Report_2 13-08-2024 11:15 JPEG File 79 KB
Sample 14-08-2024 14:20 Microsoft Excel W... 76 KB
Tawang 09-09-2024 14:54 KML 5 KB
Vigilance Leases Abstract 26-06-2024 17:33 Microsoft Excel W... 13 KB
File name:
All Files
Open
Cancel
ad KML
Choose File
Supported Formats
.kml, .kmz, GeoJSON


BASE MAP
TAWANG DISTRICT

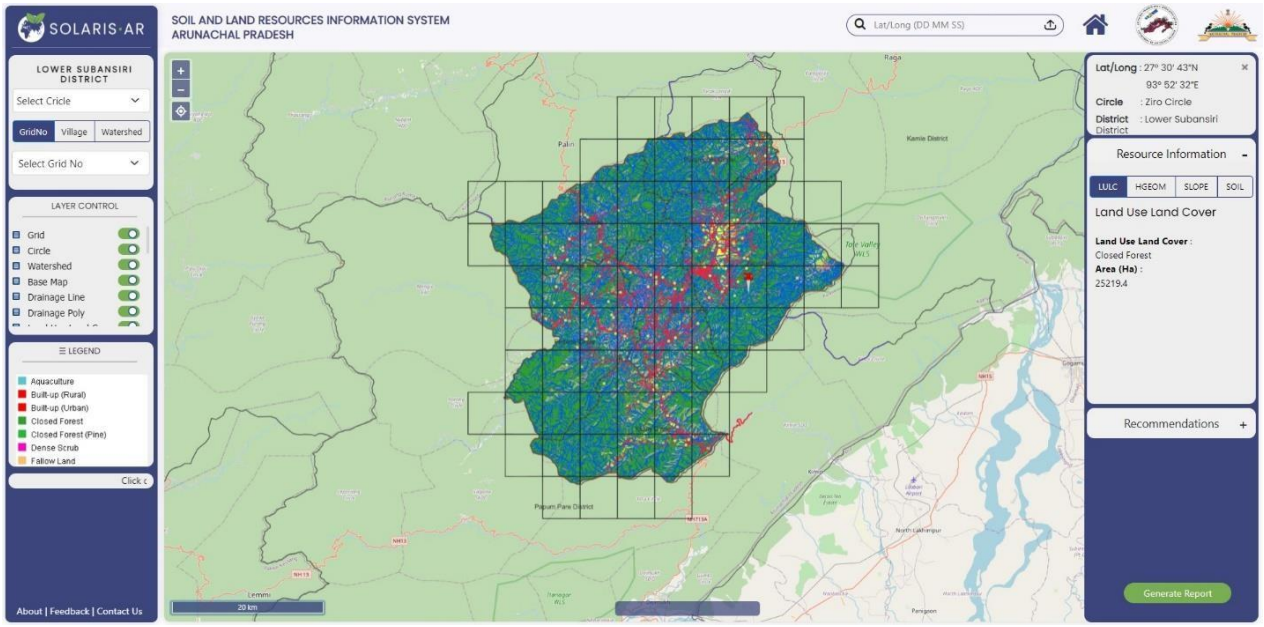
Section -2

- District integrated Maps
- User after selecting district on dashboard
- Below district menu user find button on click it will *navigate* to district integrated map.

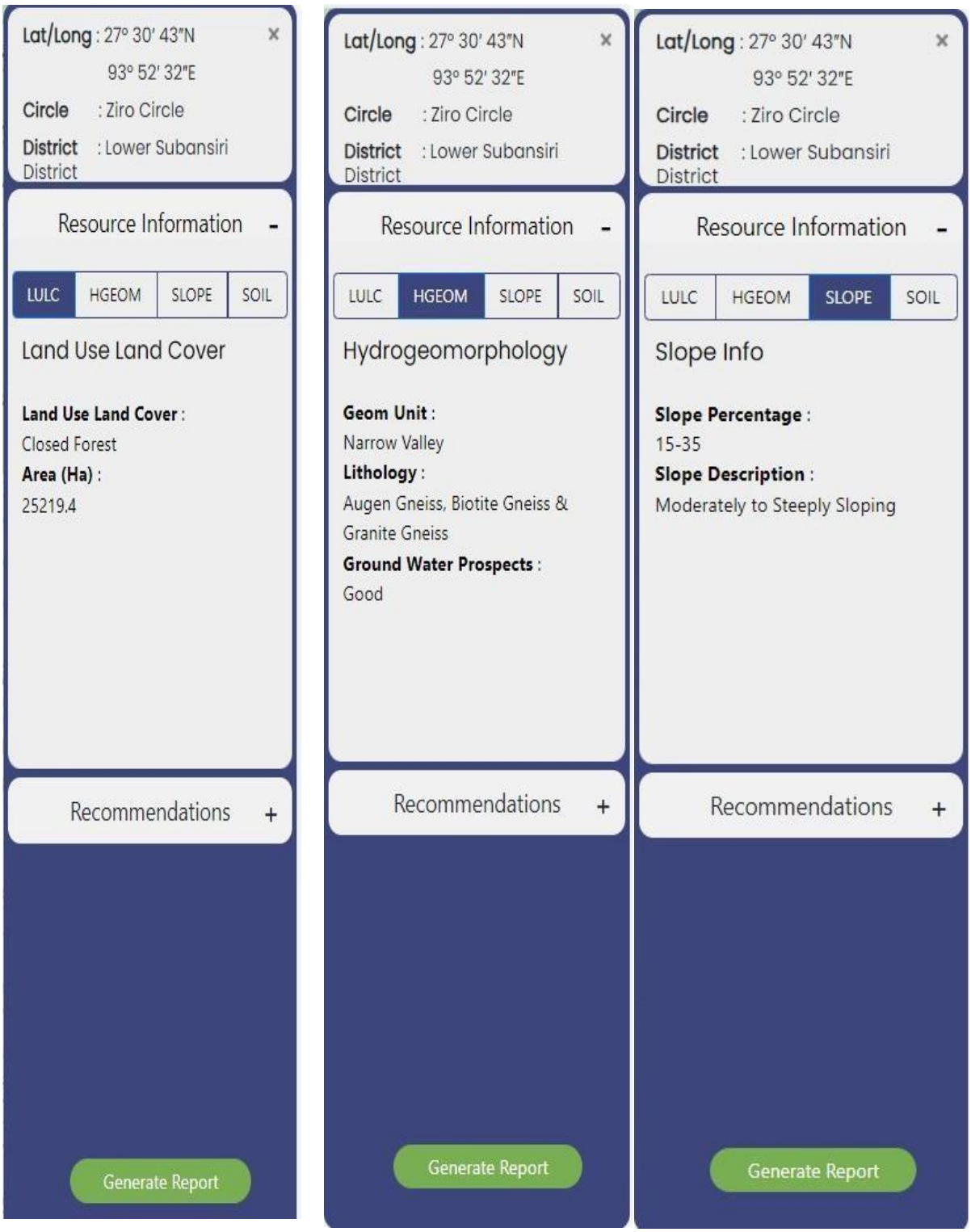


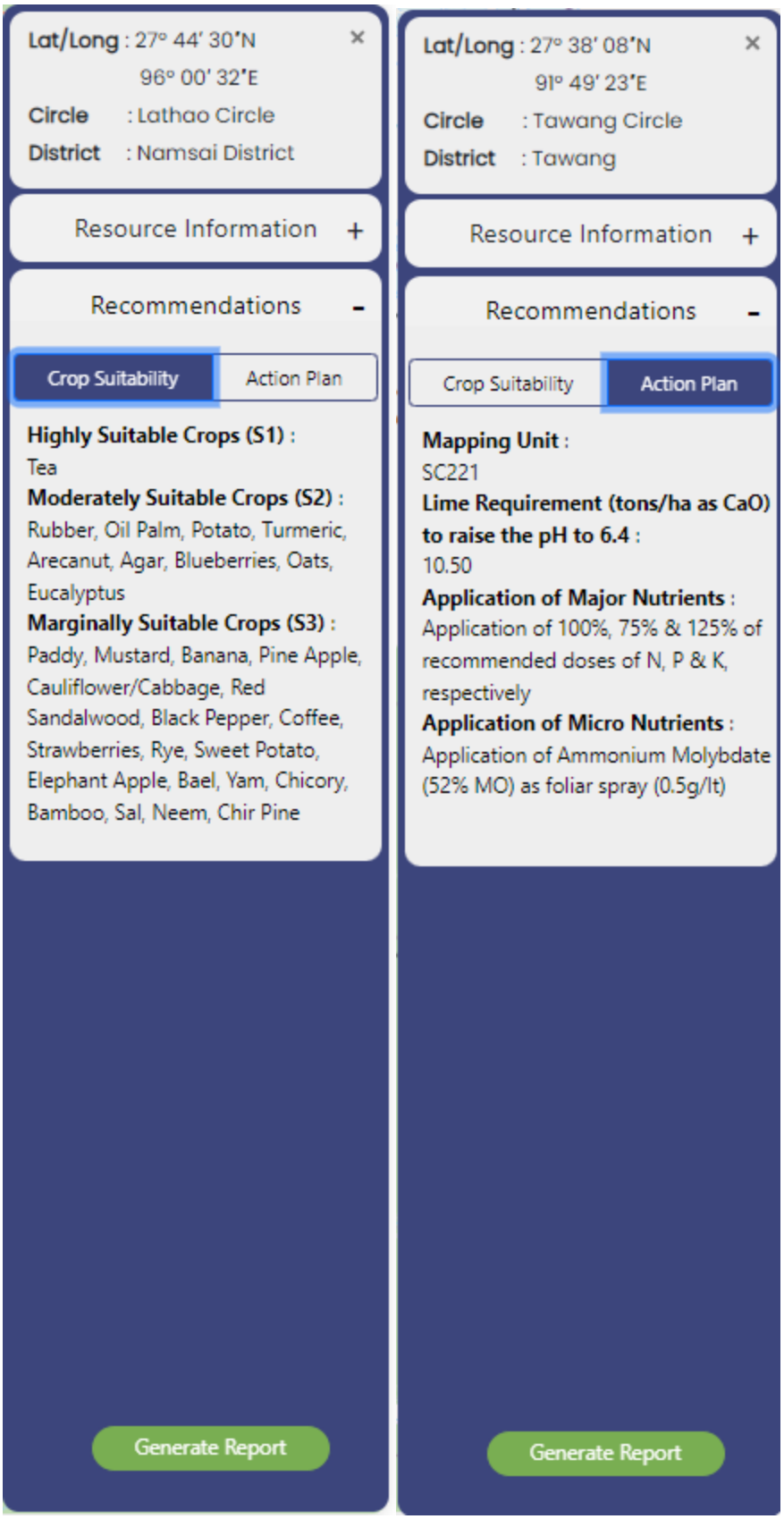


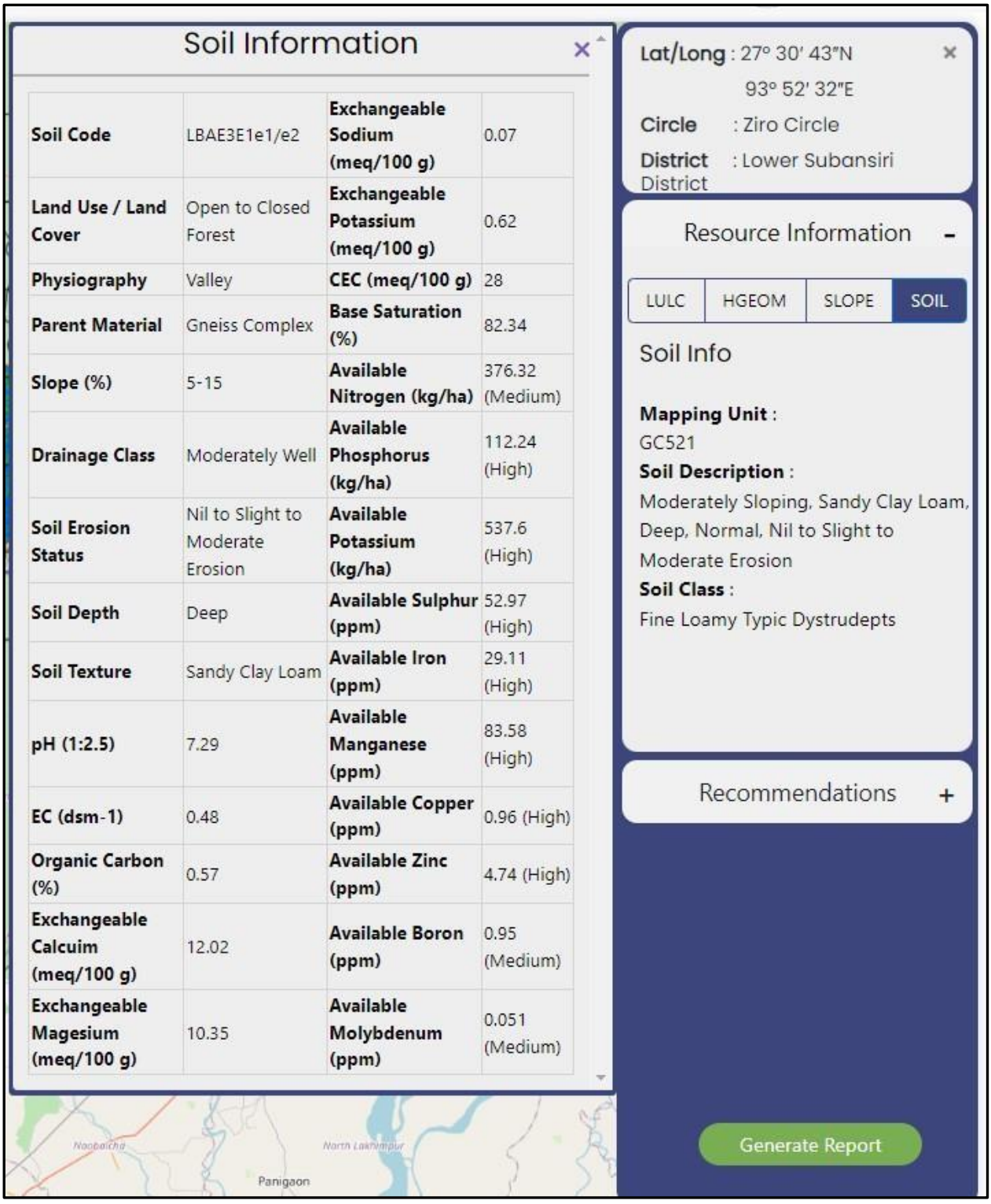
- An attribute pop-up window appears on right side of screen when the user clicks on a map.



- User finds four resource information buttons on right of the screen.
- LULC (Landuse and Landcover)
- HGEOM (Hydrogeomorphology)
- SLOPE
- SOIL
- On click user will find the details of particular resource map information.
- User on clicking soil button an additional table will pop up showing the soil information.
- On left side of screen user find menu bar where circle and grid can be selected. Layer control menu is also found.


Lat/Long : 27° 30' 43"N
93° 52' 32"E
Circle : Ziro Circle
District : Lower Subansiri District
Resource Information -
LULC
HGEOM
SLOPE
SOIL
Land Use Land Cover
Land Use Land Cover :
Closed Forest
Area (Ha) :
25219.4
Recommendations +
Generate Report
Lat/Long : 27° 30' 43"N
93° 52' 32"E
Circle : Ziro Circle
District : Lower Subansiri District
Resource Information -
LULC
HGEOM
SLOPE
SOIL
Hydrogeomorphology
Geom Unit :
Narrow Valley
Lithology :
Augen Gneiss, Biotite Gneiss & Granite Gneiss
Ground Water Prospects :
Good
Recommendations +
Generate Report
Lat/Long : 27° 30' 43"N
93° 52' 32"E
Circle : Ziro Circle
District : Lower Subansiri District
Resource Information -
LULC
HGEOM
SLOPE
SOIL
Slope Info
Slope Percentage :
15-35
Slope Description :
Moderately to Steeply Sloping
Recommendations +
Generate Report


Lat/Long : 27° 44' 30"N
96° 00' 32"E
Circle : Lathao Circle
District : Namsai District
Resource Information +
Recommendations -
Crop Suitability
Action Plan
Highly Suitable Crops (S1) :
Tea
Moderately Suitable Crops (S2) :
Rubber, Oil Palm, Potato, Turmeric, Arecanut, Agar, Blueberries, Oats, Eucalyptus
Marginally Suitable Crops (S3) :
Paddy, Mustard, Banana, Pine Apple, Cauliflower/Cabbage, Red Sandalwood, Black Pepper, Coffee, Strawberries, Rye, Sweet Potato, Elephant Apple, Bael, Yam, Chicory, Bamboo, Sal, Neem, Chir Pine
Generate Report
Lat/Long : 27° 38' 08"N
91° 49' 23"E
Circle : Tawang Circle
District : Tawang
Resource Information +
Recommendations -
Crop Suitability
Action Plan
Mapping Unit :
SC221
Lime Requirement (tons/ha as CaO) to raise the pH to 6.4 :
10.50
Application of Major Nutrients :
Application of 100%, 75% & 125% of recommended doses of N, P & K, respectively
Application of Micro Nutrients :
Application of Ammonium Molybdate (52% MO) as foliar spray (0.5g/lt)
Generate Report


Soil Information
Soil Code
LBAE3E1e1/e2
Land Use / Land Cover
Open to Closed Forest
Physiography
Valley
Parent Material
Gneiss Complex
Slope (%)
5-15
Drainage Class
Moderately Well
Soil Erosion Status
Nil to Slight to Moderate Erosion
Soil Depth
Deep
Soil Texture
Sandy Clay Loam
pH (1:2.5)
7.29
EC (dsm-1)
0.48
Organic Carbon (%)
0.57
Exchangeable Calcuim (meq/100 g)
12.02
Exchangeable Magesium (meq/100 g)
10.35
Exchangeable Sodium (meq/100 g)
0.07
Exchangeable Potassium (meq/100 g)
0.62
CEC (meq/100 g)
28
Base Saturation (%)
82.34
Available Nitrogen (kg/ha)
376.32 (Medium)
Available Phosphorus (kg/ha)
112.24 (High)
Available Potassium (kg/ha)
537.6 (High)
Available Sulphur (ppm)
52.97 (High)
Available Iron (ppm)
29.11 (High)
Available Manganese (ppm)
83.58 (High)
Available Copper (ppm)
0.96 (High)
Available Zinc (ppm)
4.74 (High)
Available Boron (ppm)
0.95 (Medium)
Available Molybdenum (ppm)
0.051 (Medium)
Lat/Long : 27° 30' 43"N
93° 52' 32"E
Circle : Ziro Circle
District : Lower Subansiri District
Resource Information
LULC
HGEOM
SLOPE
SOIL
Soil Info
Mapping Unit :
GC521
Soil Description :
Moderately Sloping, Sandy Clay Loam, Deep, Normal, Nil to Slight to Moderate Erosion
Soil Class :
Fine Loamy Typic Dystrudepts
Recommendations
Generate Report
Naobaicha
North Lakhimpur
Panigaon

- Users can generate a full **report** of the area by clicking the Generate Report button, which is visible inside the right side popup window.

Natural Resources Inventory for Micro Level Agricultural Planning

Arunachal Pradesh Space Application Centre
Government of Arunachal Pradesh

District	Circle	Grid	Graticule
Namsai District	Namsai Circle	G46F14B	27° 42' 29.93519" N 95° 49' 26.57915" E

Soil Information

Soil Code	GSP1A7C4e1	**Exchangeable Sodium (meq/100 g)**	0.07
Soil Taxonomy Classification	Fine Loamy Oxyaquic Dystrudepts	**Exchangeable Potassium (meq/100 g)**	0.12
Land Use / Land Cover	Plantation	**CEC (meq/100 g)**	10.8
Physiography	Older Flood Plain	**Base Saturation (%)**	38.75
Parent Material	Recent Alluvium	**Available Nitrogen (kg/ha)**	263.43 (Low)
Slope (%)	0-1	**Available Phosphorus (kg/ha)**	23.61 (Medium)
Drainage Class	Imperfect	**Available Potassium (kg/ha)**	168.8 (Medium)
Soil Erosion Status	Nil to Slight Erosion	**Available Sulphur (ppm)**	37.35 (High)
Soil Depth	Deep	**Available Iron (ppm)**	208.54 (High)
Soil Texture	Silty Clay Loam	**Available Manganese (ppm)**	13.39 (High)
pH (1:2.5)	4.77	**Available Copper (ppm)**	3.69 (High)
EC (dsm-1)	0.1	**Available Zinc (ppm)**	3.84 (High)
Organic Carbon (%)	0.5	**Available Boron (ppm)**	0.99 (Medium)
Exchangeable Calcuim (meq/100 g)	2.75	**Available Molybdenum (ppm)**	0.05 (Medium)
Exchangeable Magesium (meq/100 g)	1.25		

Crop Suitability

Category	Food Crops	Vegetable Crops	Oil Seeds	Fruit Crops	Spices	Commercial Crops	Highly Tolorent Crops to Acidity	Silvi Culture
Highly Suitable Crops (S1)	-	-	Oil Palm	-	-	Tea	-	-
Moderately Suitable Crops (S2)	Paddy	Potato, Cauliflower, Cabbage	Mustard	Banana, Citrus	Turmeric	Rubber, Arecanut, Agar, Coffee	Blueberries, Oats, Strawberries, Rye, Elephant Apple, Bael, Yam, Chicory	Bamboo, Sal, Eucalyptus
Marginally Suitable Crops (S3)	Millets, Maize	-	Groundnut	Pine Apple	Black Pepper	Red Sandalwood	Goosberry, Plum, Sweet Potato, Watermelon, Chow Chow	Neem, Chir Pine

Action Plan

Activity	Recommendations
Soil & Water Conservation Measures	Gap planting in the plantation
Lime Requirement (tons/ha as $CaCO_3$) to raise the pH to 6.4	Nil
Application of Major Nutrients	Application of 125%,100%&100% of recommended doses of N,P & K, respectively
Application of Micro Nutrients	Nil

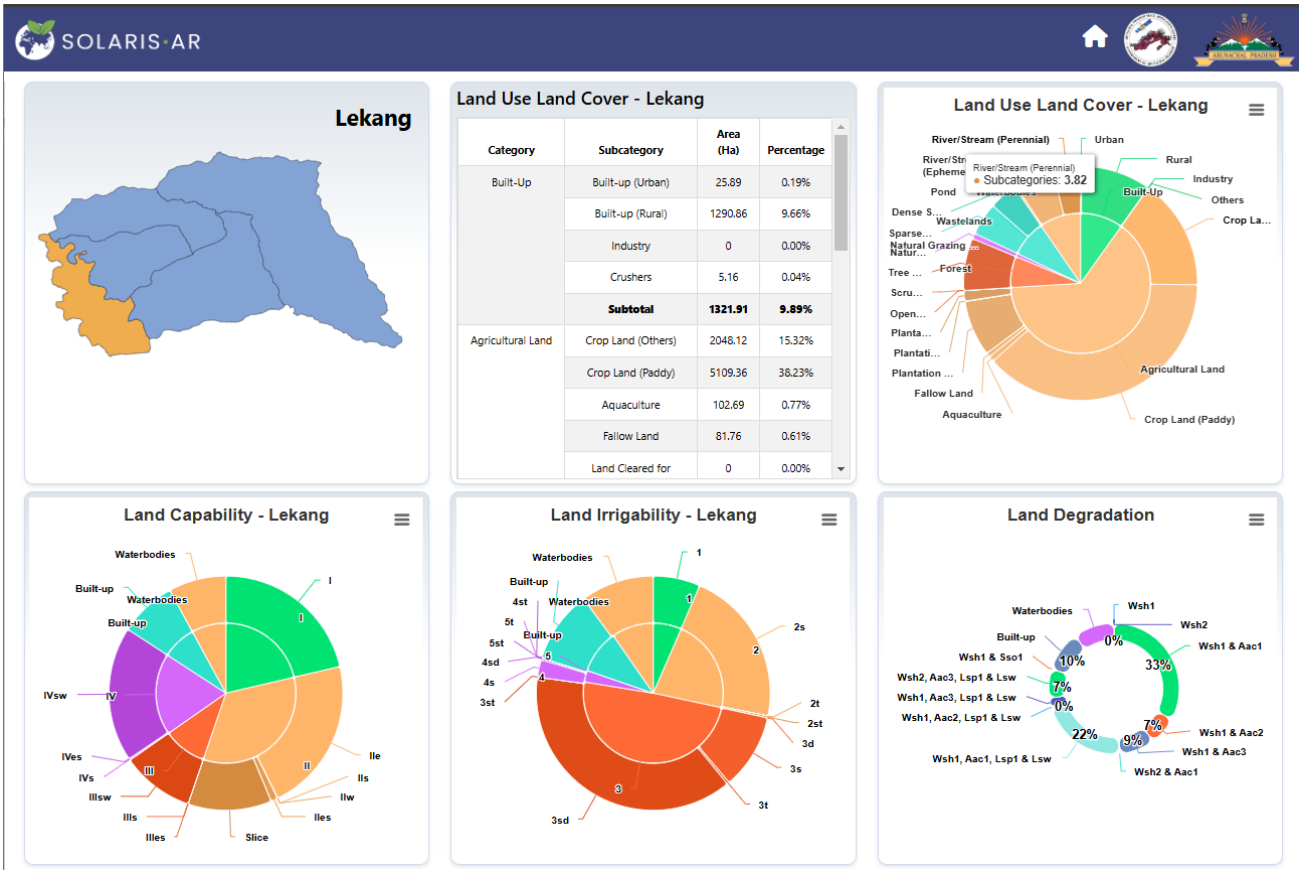
Powered by

Arunachal Pradesh Space Application Centre & Remote Sensing Instruments LLP

Print Back

Section -3

- District integrated Charts.
- User after selecting district on dashboard
- Below district menu user find button on click it will *navigate* to district integrated Charts Dashboard.



- In the above dashboard we can see all kind of stats and actual values.
- If we click on the circle map will get change pie charts and table data.
- Statistics on Land Use Land Cover ,Land Capability ,Land Irritability,Land Degradation base on selected circle for selected district.

Same as for every district.