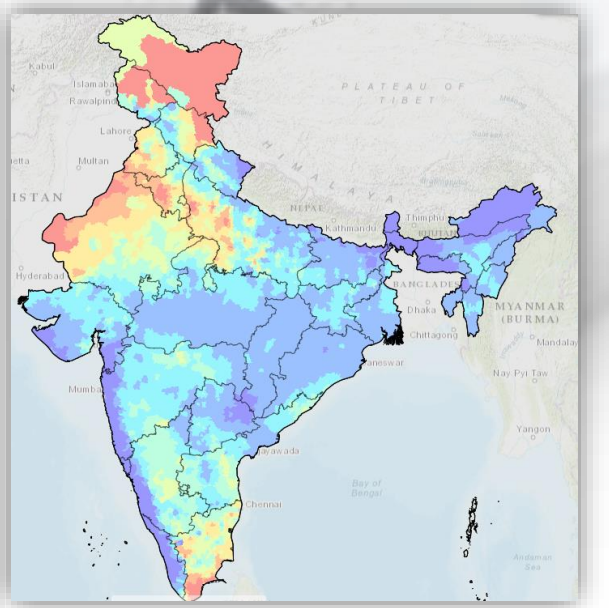
सत्यमेव जयते

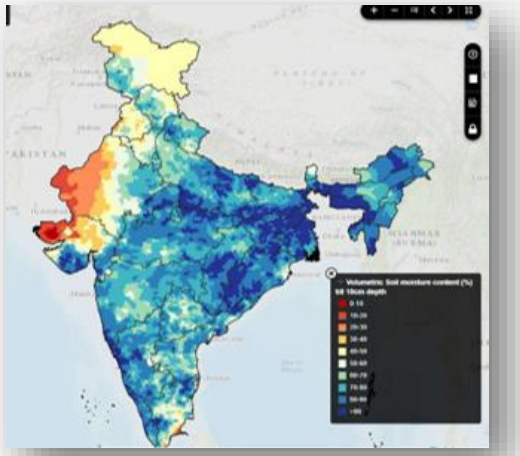
India – WRIS
India
Water
Resources
Information
System



India – WRIS : India Water Resources Information

CONCEPTUALIZATION

A 'Single Window Solution'
for comprehensive, authoritative and consistent data & information of India's water resources in a standardized national GIS framework for planning, development and management of water resources in the country.



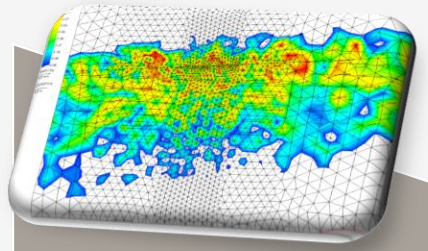
*Empowering citizens with **accurate, adequate and contemporary information** on the state of water resources of the country and enlightened public involvement in **water management decisions**.*

OBJECTIVE

To collect available data from varied sources, generate new database , organize in standardized GIS format and provide scalable web-enabled information system.

To provide tools to create value added maps by way of multi-layer stacking of GIS database so as to provide integrated view to the water resources scenarios.

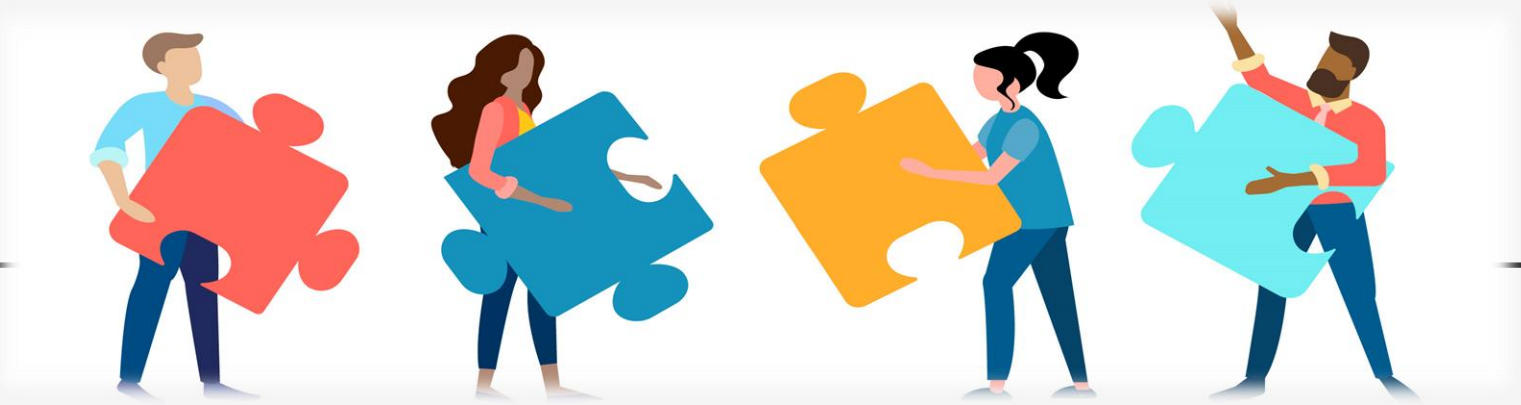
To provide easier, faster access, sharing of nationally consistent and authentic water resources data through a centralized database and application server to all water resources departments / organizations.



To provide foundation for advanced modeling and Spatial Decision Support Systems (SDSS) including automated data collection system.

ORGANISATION

- *NWIC is a Subordinate Office created on 28th March 2018 under DoWR, RD & GR*
- ***Mandate**: National custodian of water resources data.*
- *Headed by a Joint Secretary level officer.*
- ***NWIC's roles**:*
  - *Collecting water resources data from varied sources, generate database and organize in standardized GIS format*
  - *Maintaining, updating, collating water resources data and information on GIS Platform*
  - *Sharing and disseminating hydro-meteorological data amongst central and state government organizations, research institutes, planners, general public etc.*
  - *Development of tools for report preparation, inputs for planning and decision support systems*



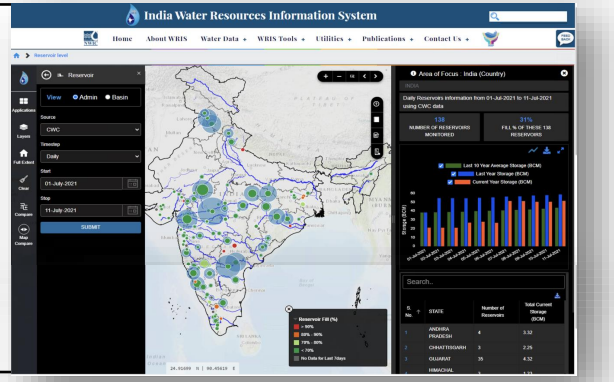
Two Platforms: India-WRIS & WIMS

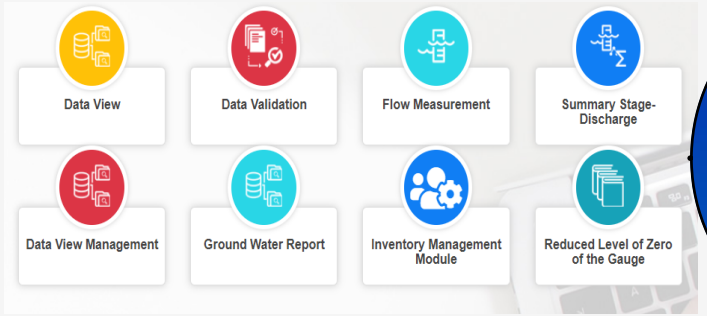
India-WRIS

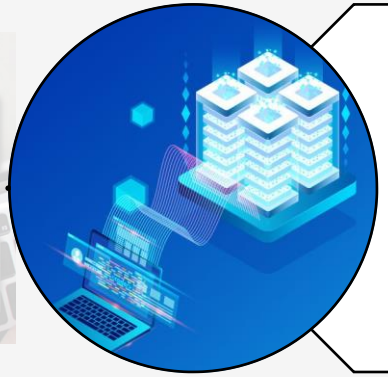
-- Data dissemination platform on GIS framework for all water resources and allied themes data.

-- Dynamic time series data is displayed through dashboard

-- Other Water resources and allied theme data of semi dynamic and static nature & utilities displayed through modules developed in-house







WIMS

-- Time series data entry and collection platform developed (india-water.gov.in)

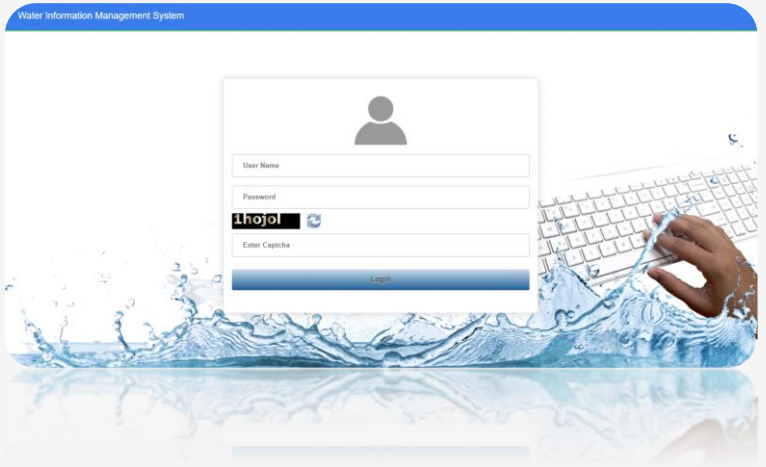
-- WIMS has provisions for manual data entry through PC, also integration from INSAT & GPRS for real time telemetry data for stations commissioned under NHP

	WRIS	WIMS
Nature	GIS based Data Dissemination Platform	Data Collection Platform
Data	All spatial, dynamic time series, Semi-dynamic & Static data	Only Time Series Data
Modules	34 Modules, 2 Tools & 8 Utilities for Surface, Ground Water & Allied Themes	12 Real Time/ Near Real Time Modules for Surface & Ground Water
Users	Open for General Public	Authorized User Access for data generating agency (Centre/State)
Servers	6VMS (Development) & 8 VMs (Production)	6VMs (Development) & 6VMs (Production)
Hosting (Production)	NIC Cloud	Tata Cloud
Hosting (Development)	NWIC, Delhi	NWIC, Delhi

APIs for Time Series Data Sharing

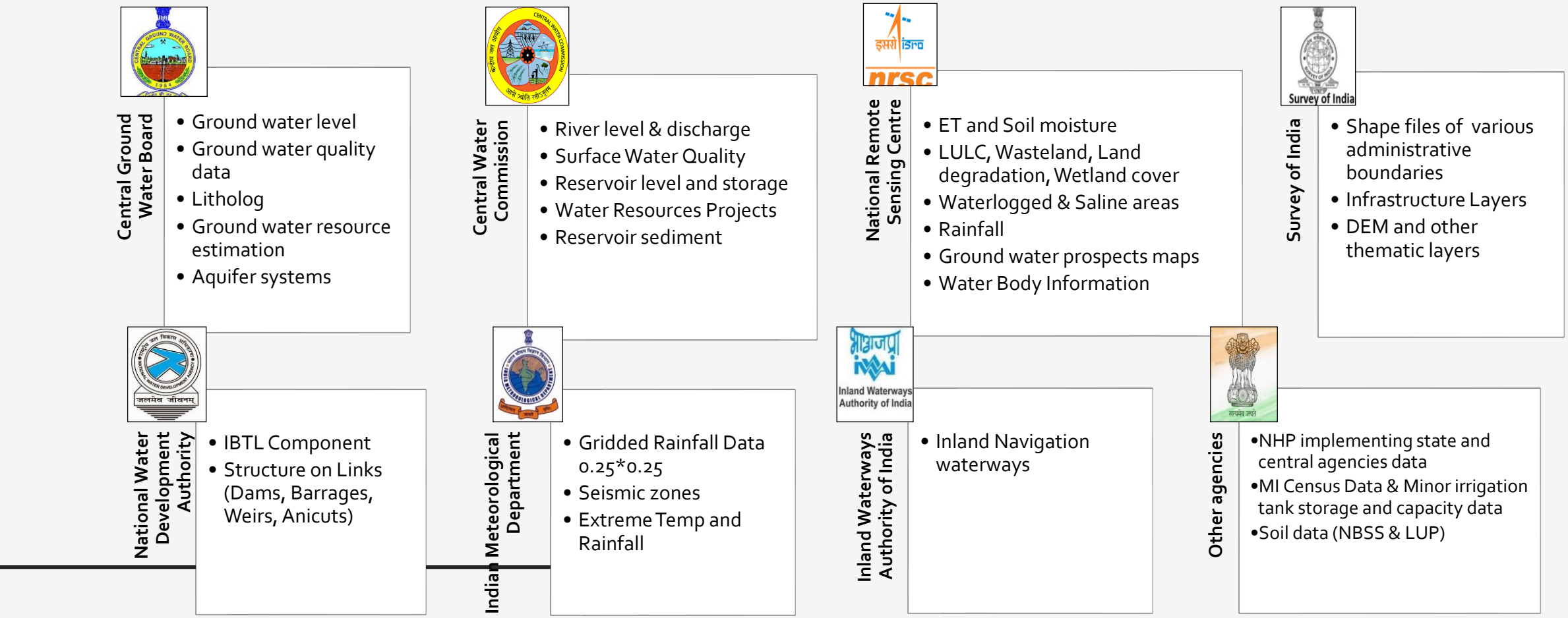
WIMS
IMPORTANT PARAMETERS

S. No.	Water Data Component
1	Reservoir Water level
2	River Water level
3	River Discharge
4	Ground water level
5	Surface Water Quality
6	Ground water Quality
7	Rainfall
8	Sediment
9	Other Meteorological Parameters



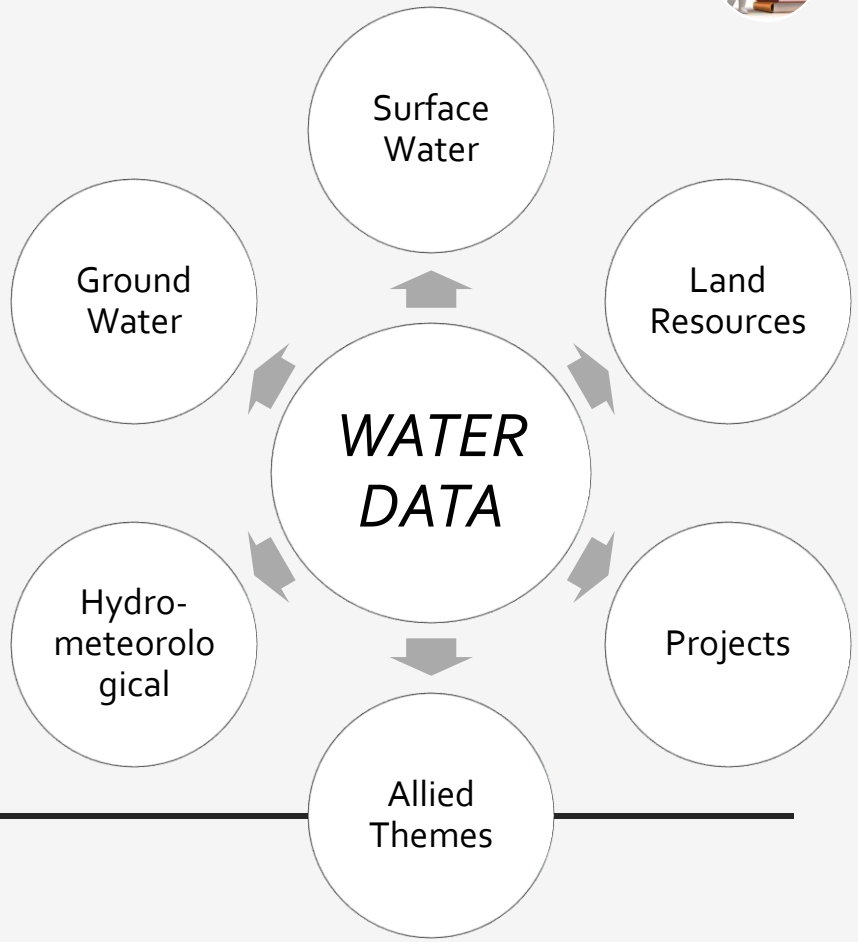
India-WRIS

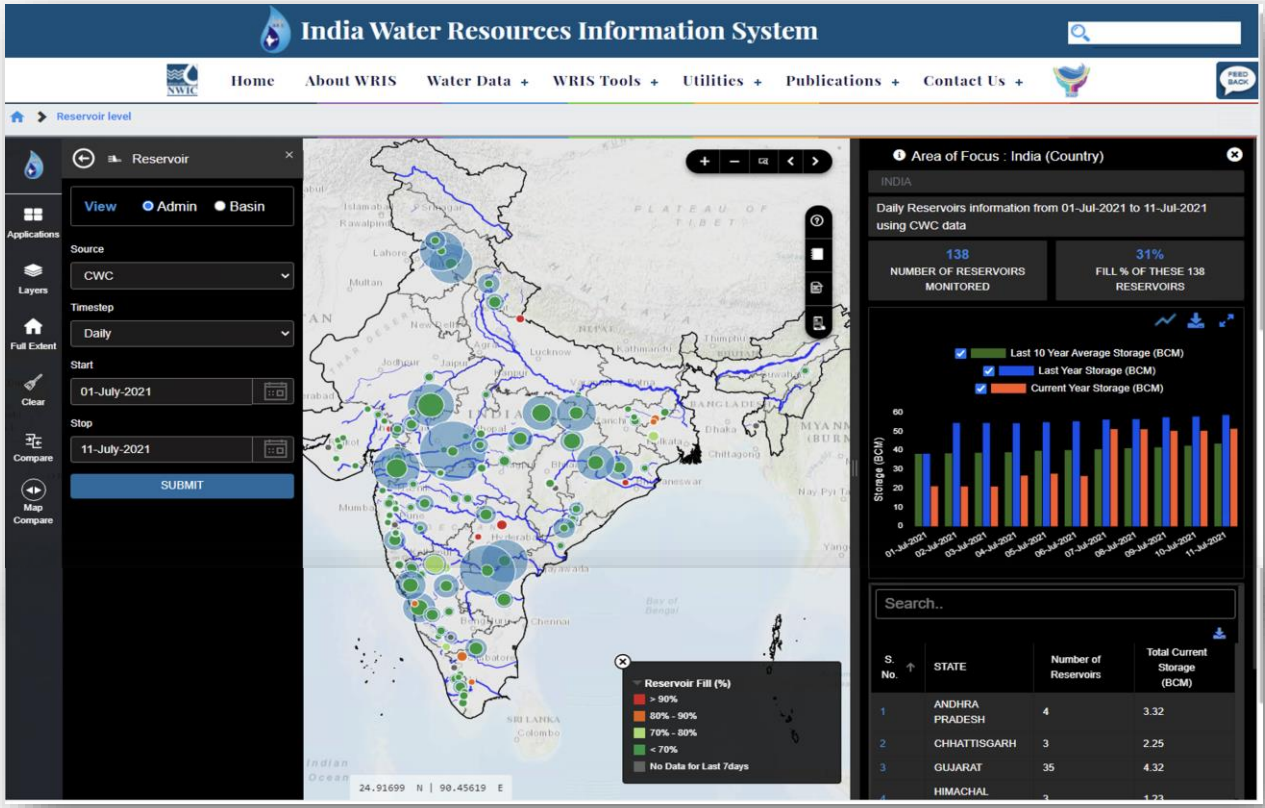
- WIMS – core data e.g. water level, water quality etc.
- Allied theme data from various central and state departments



India-WRIS

https://indiawris.gov.in





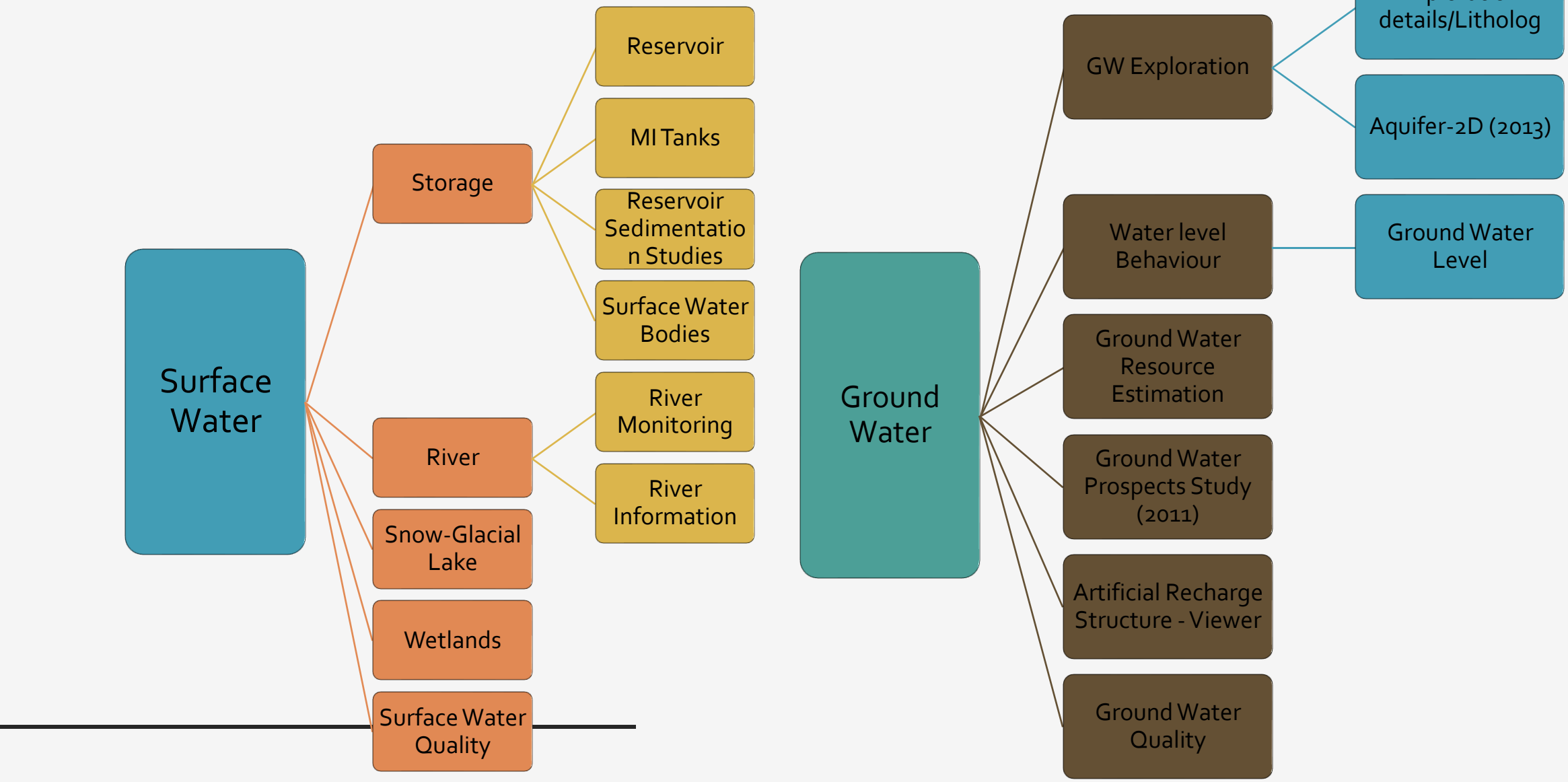
WRIS Tools

- Online Web Editor
- Artificial Recharge Structure-Data Entry

Utilities

- WRIS Wiki
- Surface Water Audit
- PMP Atlas
- Meta Data
- Geo-Viewer
- District At A Glance
- Data Availability
- Data/Report Download

Water data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MI Tanks
Reservoir Sedimentation Studies
Surface Water Bodies
River
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Water level Behaviour
Ground Water Level
Ground Water Resource Estimation
Ground Water Prospects Study (2011)
Artificial Recharge Structure - Viewer
Ground Water Quality

Water data

Land Resources

- Land Use – Land Cover
- Soil Type
- Land Degradation (2005-06)
- Water Logging/Soil Salinity (2003-05)
- Wasteland Study (1986-2006)

Hydro-meteorological

- Rainfall
- Evapo-transpiration
- Soil Moisture
- Agro-Climatic/Ecological Region

Allied Themes

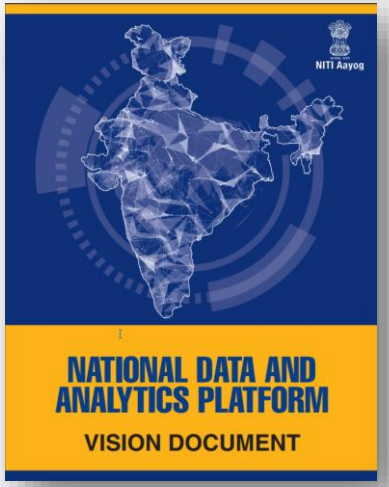
- Inland Navigation Waterways
- Storm Surge Study (2011)
- Socio-Economic Census (2011)
- Flood Inundation (2008-2010)
- Drought Affected Areas (2002)
- Reported Extreme Temperature, Rainfall & Earthquake Events

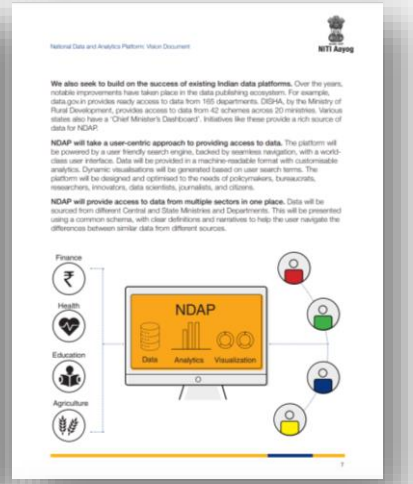
Projects

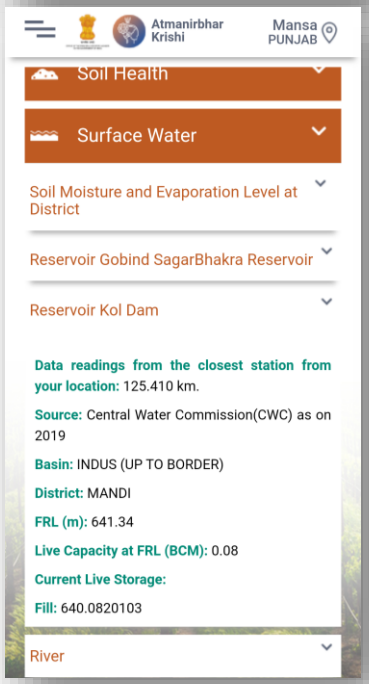
- Water Resources Projects
- Inter-Basin Transfer Links
- Minor Irrigation Census

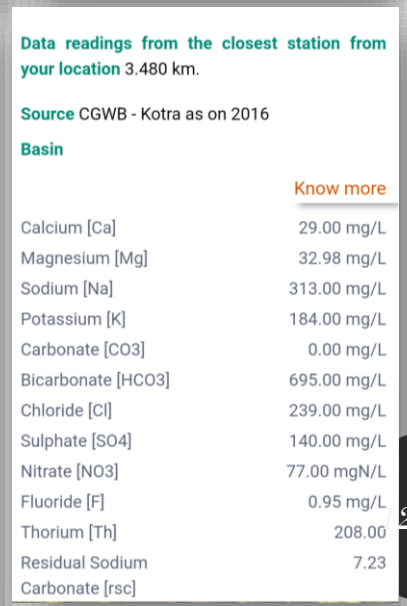
Data Dissemination through API

NITI AAYOG	Ground water level Ground Water Quality Surface Water Quality	National Data Analytics Plan
Office of PSA	Reservoir Ground water level Ground Water Quality Surface Water Quality Rainfall Soil Moisture Evapotranspiration	**Kisan Mitr Project**
National Institute of Hydrology	Reservoir Soil Moisture Evapotranspiration	**Development of web enabled Rainfall-Run off Model**
CGWB	**Live Ground Water Level**	**India Groundwater Resource Estimation System (IN-GRES)**









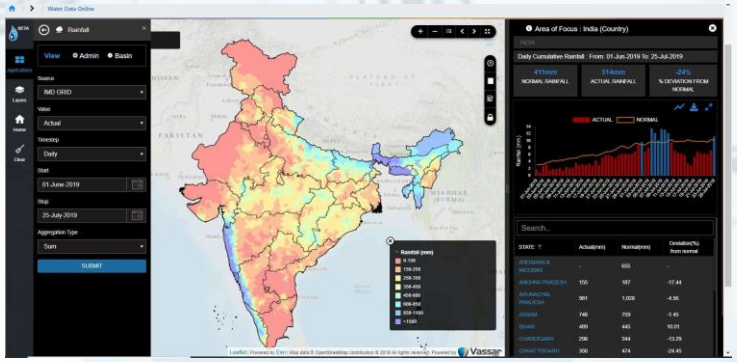
SYSTEM OVERVIEW

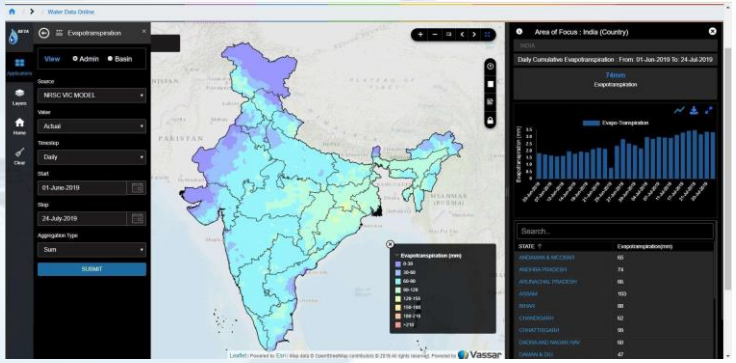
India – Water Resources Information System

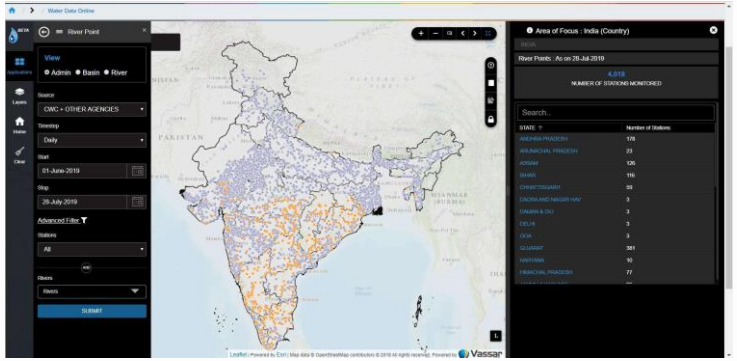
India-WRIS

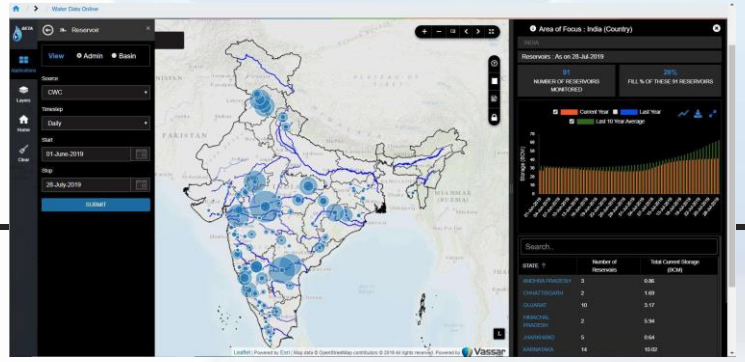
Water Data – Dynamic Data Modules

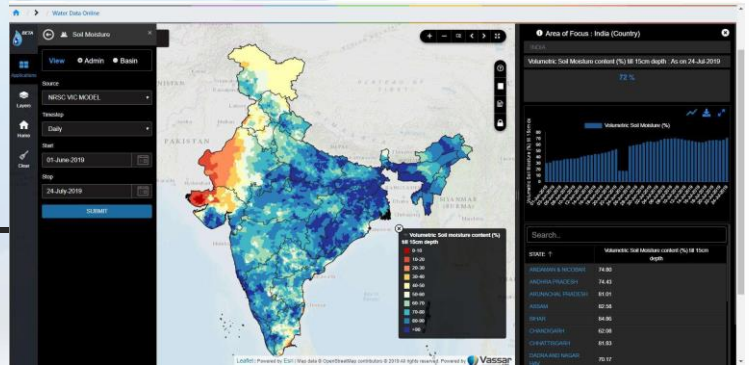
- Historical and real-time data of Rainfall, Reservoir, River Point, Evapo-transpiration, Soil Moisture, surface water quality, Ground water and Groundwater quality.
- Powerful visualizations like heat maps, tables, charts to view and analyze the data at different administrative and hydrological hierarchies

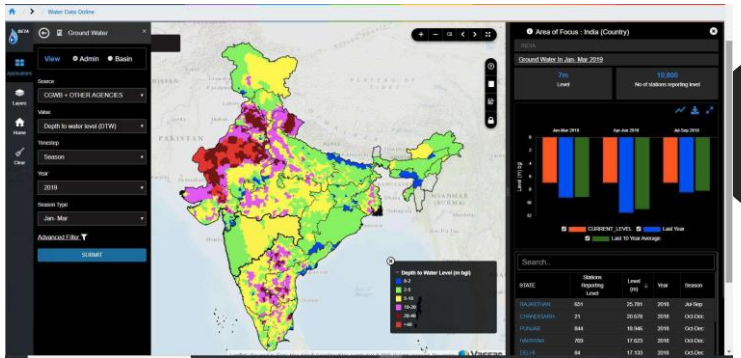










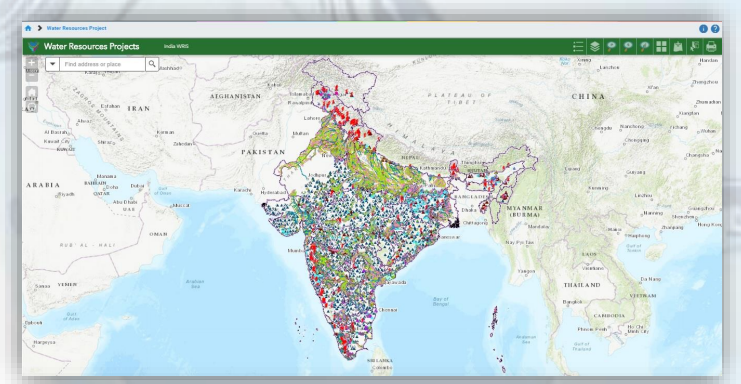


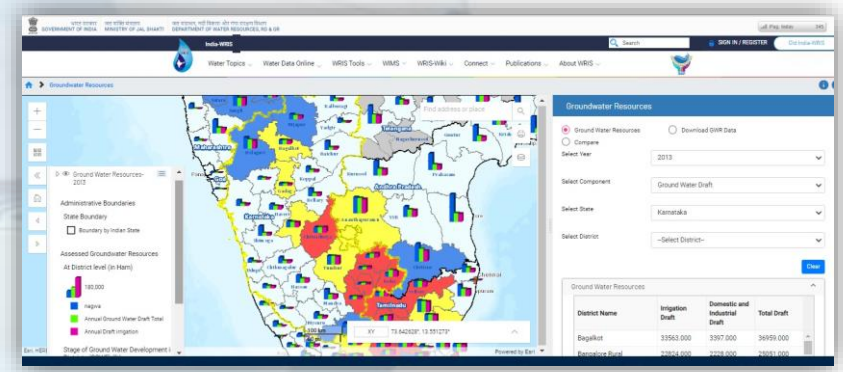
India – Water Resources Information System

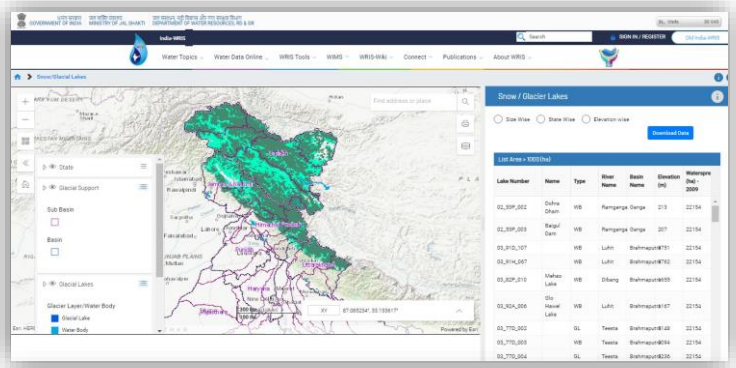
India-WRIS

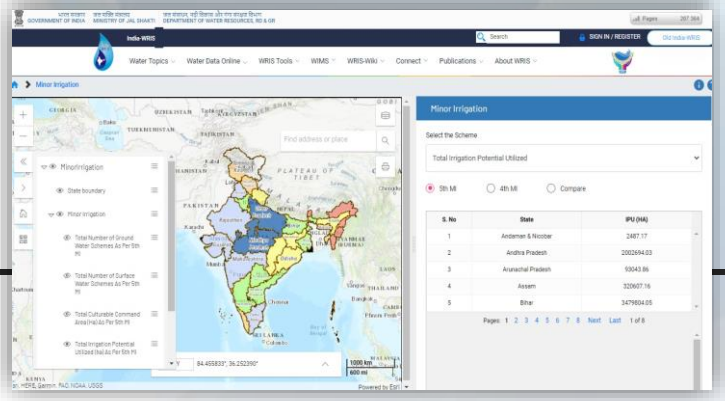
Water Data – Semidynamic & Static Modules

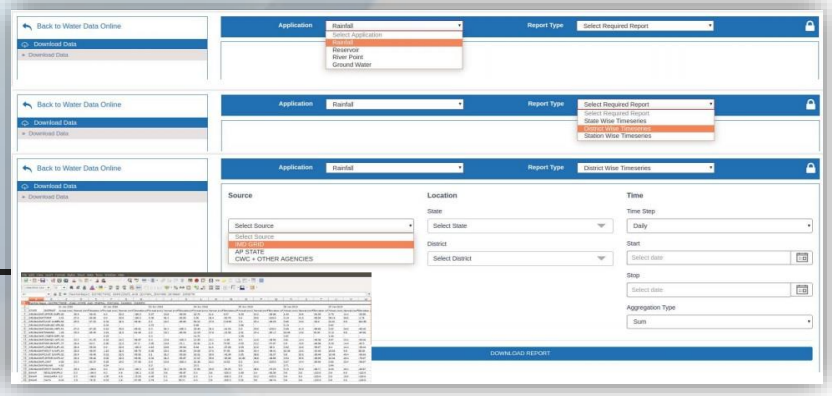
- **Semi-dynamic / static data of Ground Water Resources, MI Census, Litholog, Snow-Glacial lakes, Water Resources Projects etc.**

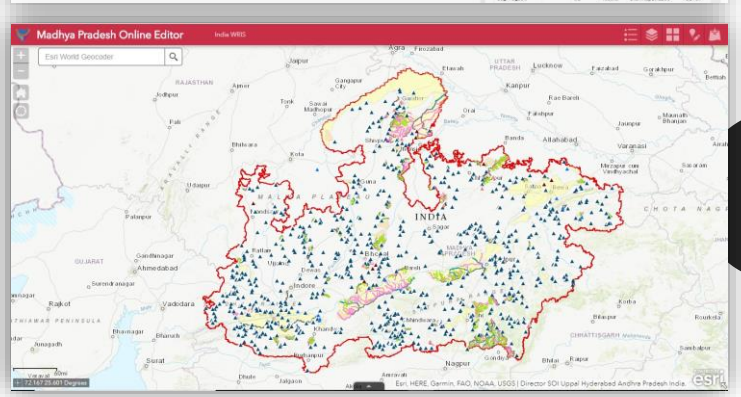




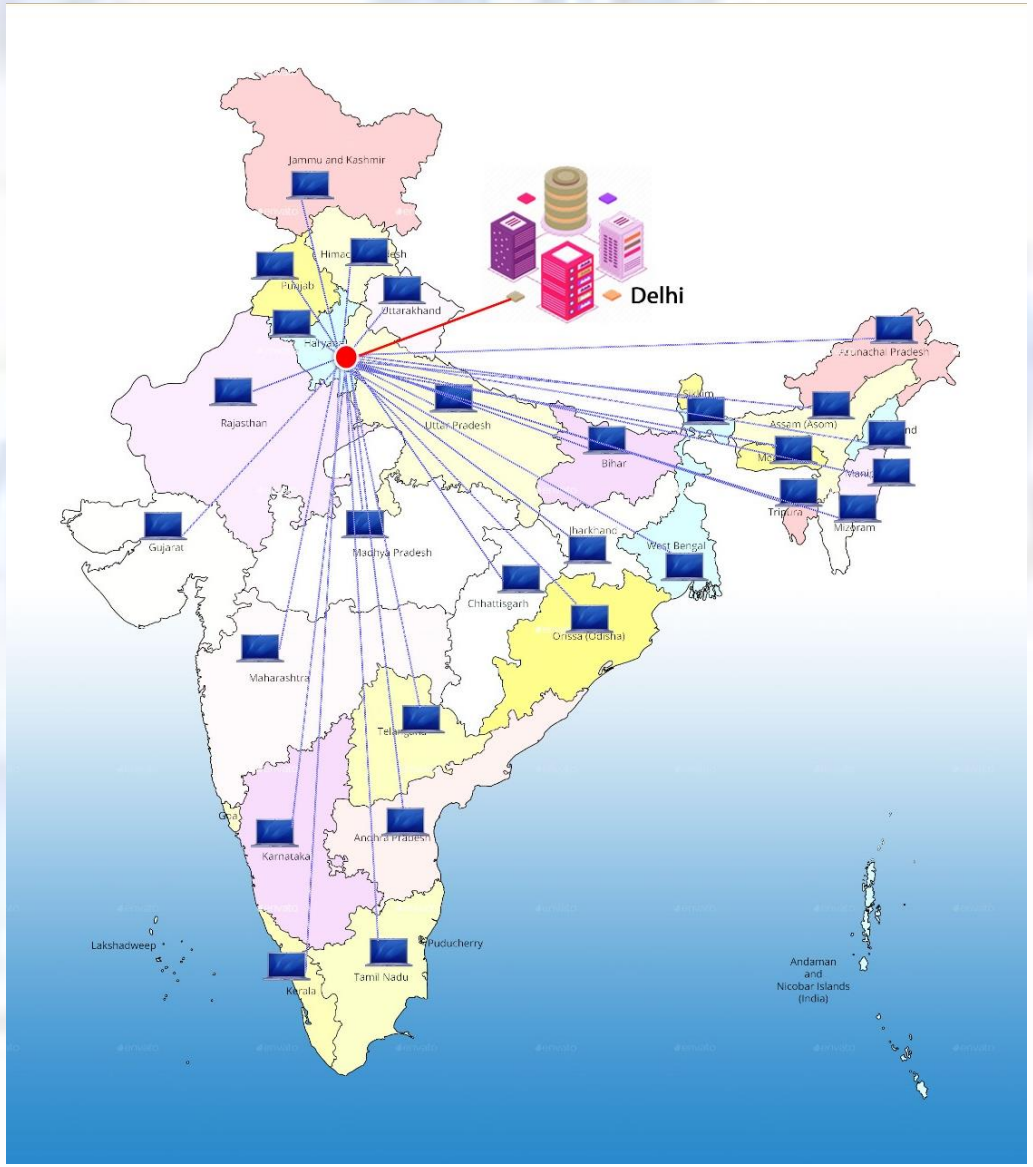








DATA AGENCIES



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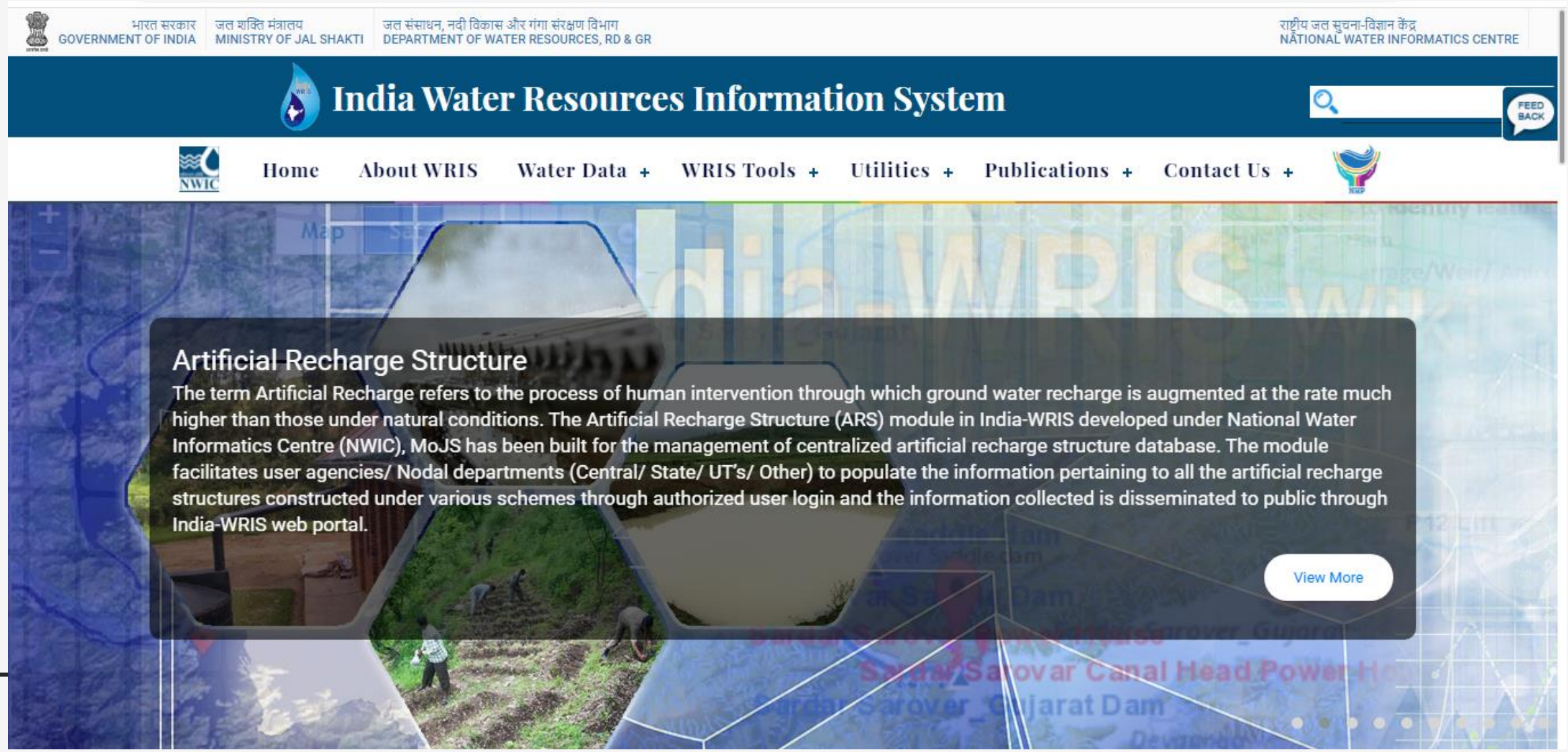
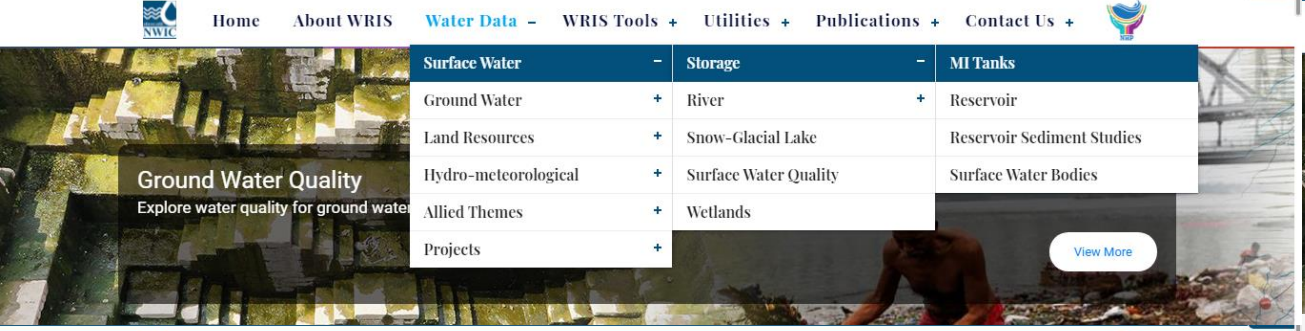


INDIA-WRIS MODULES : A WALK THROUGH
34 MODULES, TOOLS (2) & UTILITIES (8)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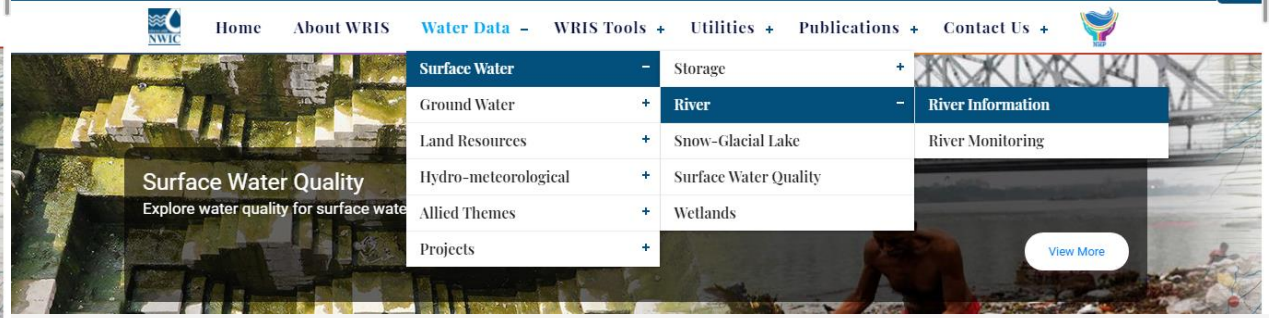
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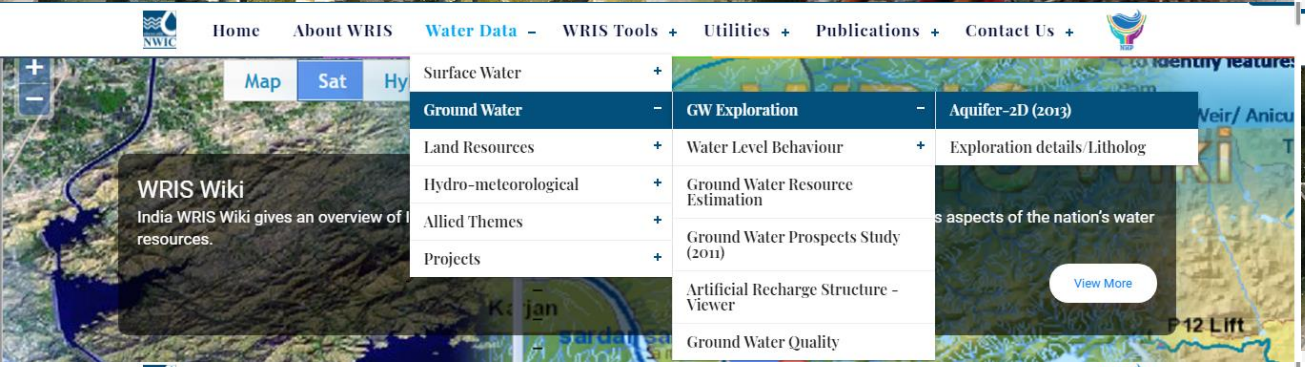
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Exploration details/Litholog
WRIS Wiki
India WRIS Wiki gives an overview of
resources.
s aspects of the nation's water
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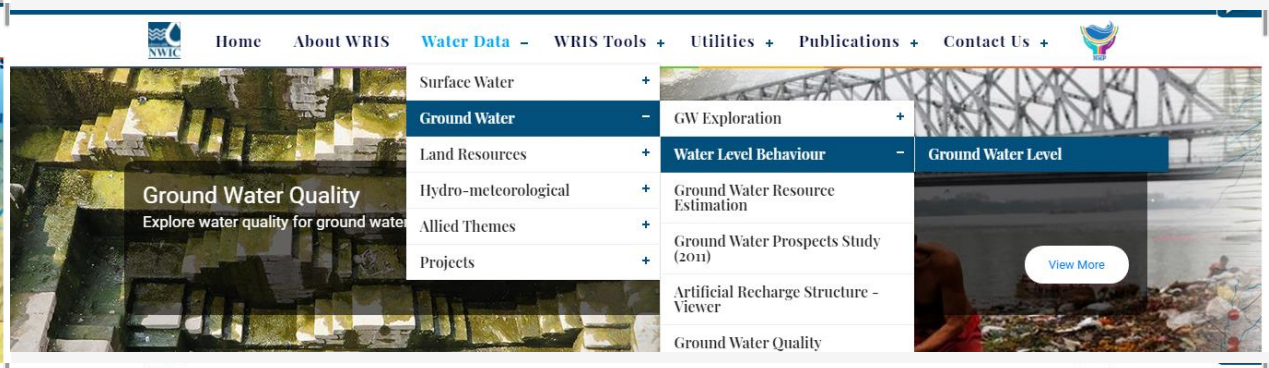
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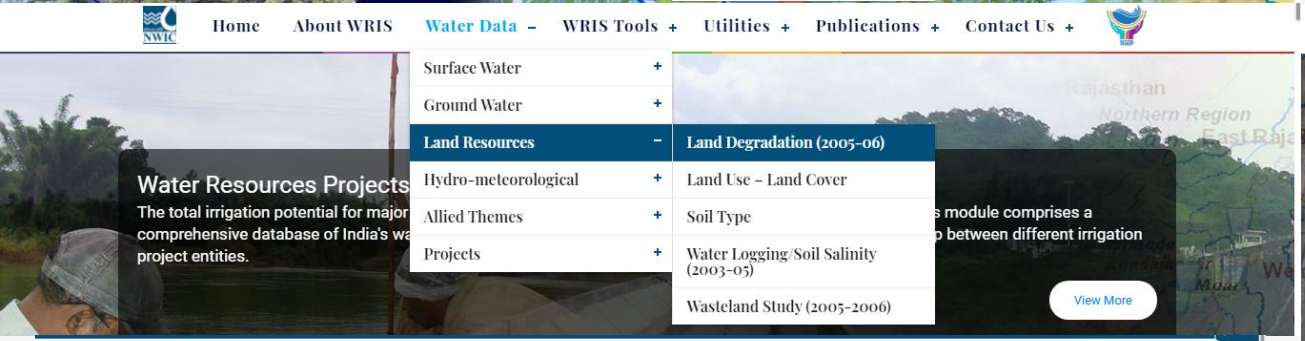
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Water Resources Projects
The total irrigation potential for major
comprehensive database of India's wa
project entities.
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between different irrigation
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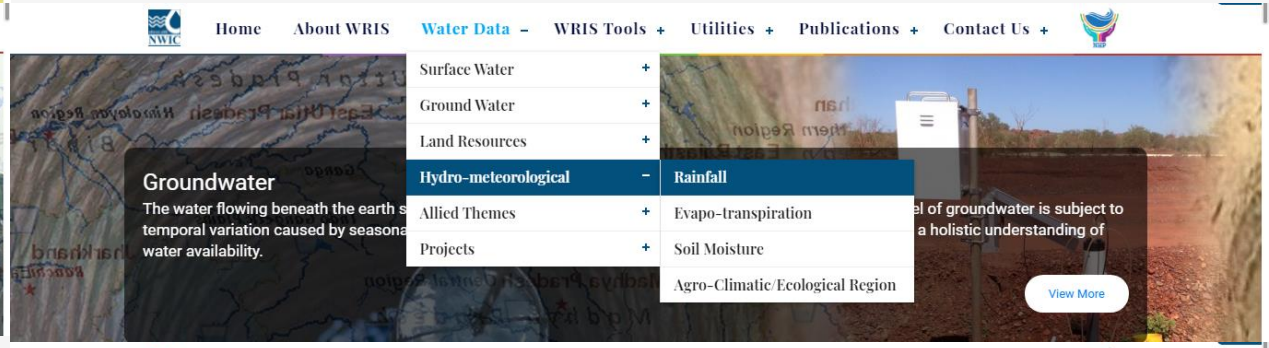
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The water flowing beneath the earth s
temporal variation caused by seasona
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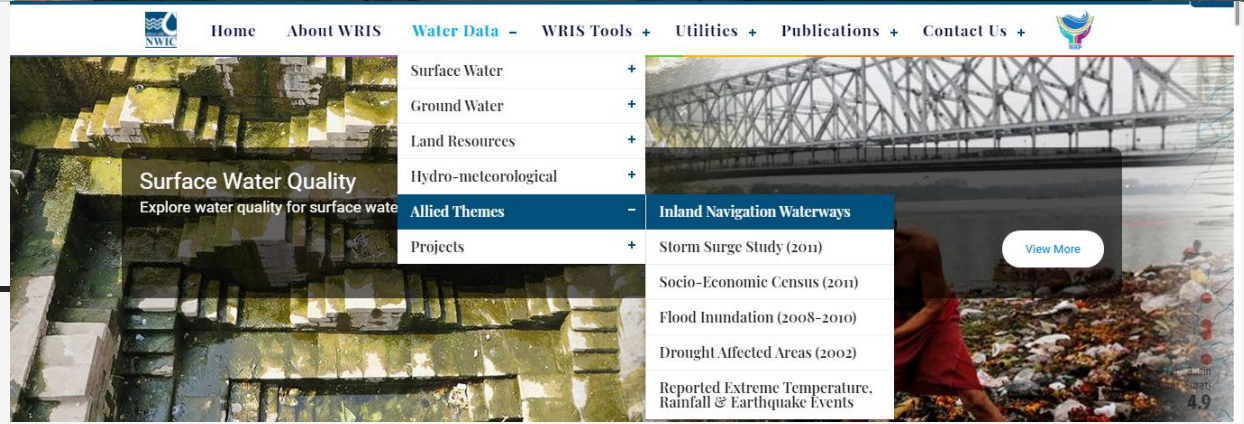
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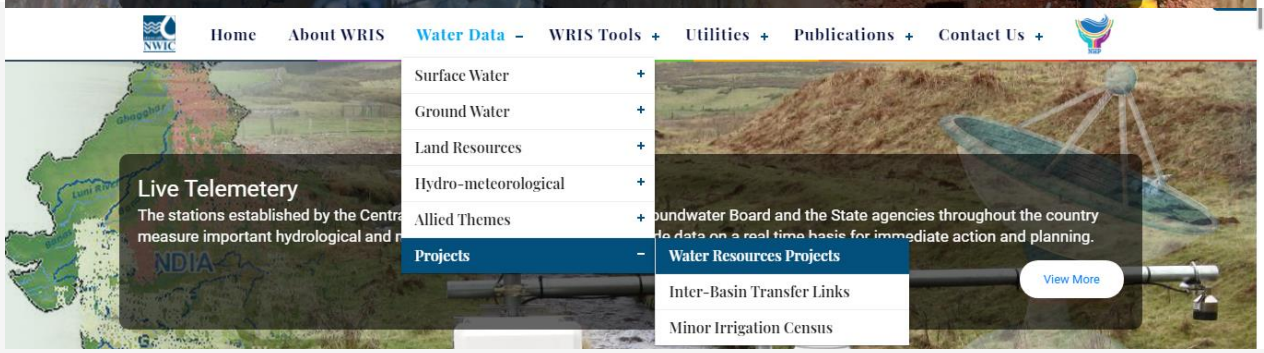
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The stations established by the Centra
measure important hydrological and
oundwater Board and the State agencies throughout the country
de data on a real time basis for immediate action and planning.
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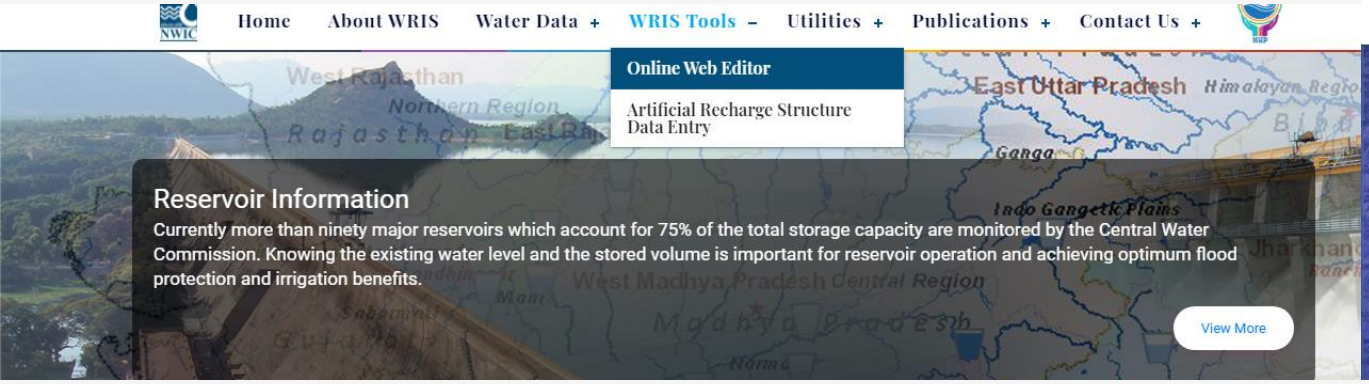
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Reservoir Information
Currently more than ninety major reservoirs which account for 75% of the total storage capacity are monitored by the Central Water Commission. Knowing the existing water level and the stored volume is important for reservoir operation and achieving optimum flood protection and irrigation benefits.
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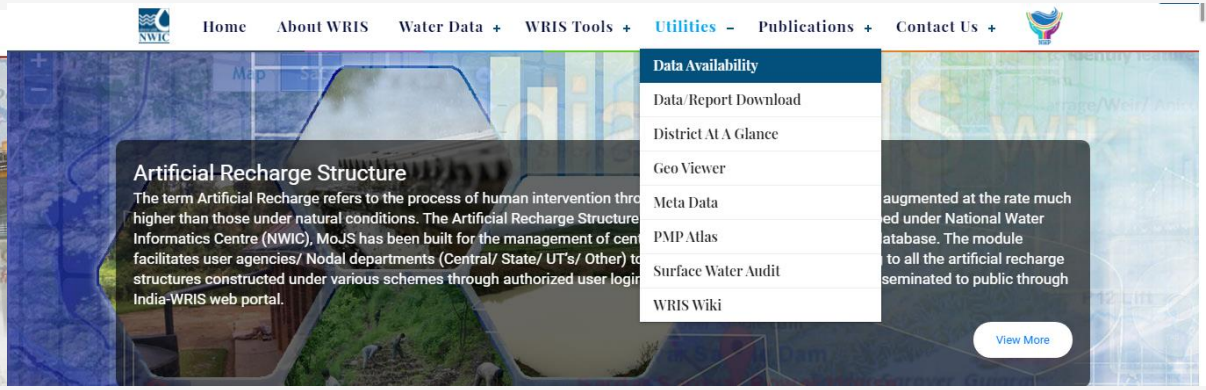
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Artificial Recharge Structure
The term Artificial Recharge refers to the process of human intervention thro
higher than those under natural conditions. The Artificial Recharge Structure
Informatics Centre (NWIC), MoJS has been built for the management of cent
facilitates user agencies/ Nodal departments (Central/ State/ UT's/ Other) to
structures constructed under various schemes through authorized user logir
India-WRIS web portal.
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seminated to public through
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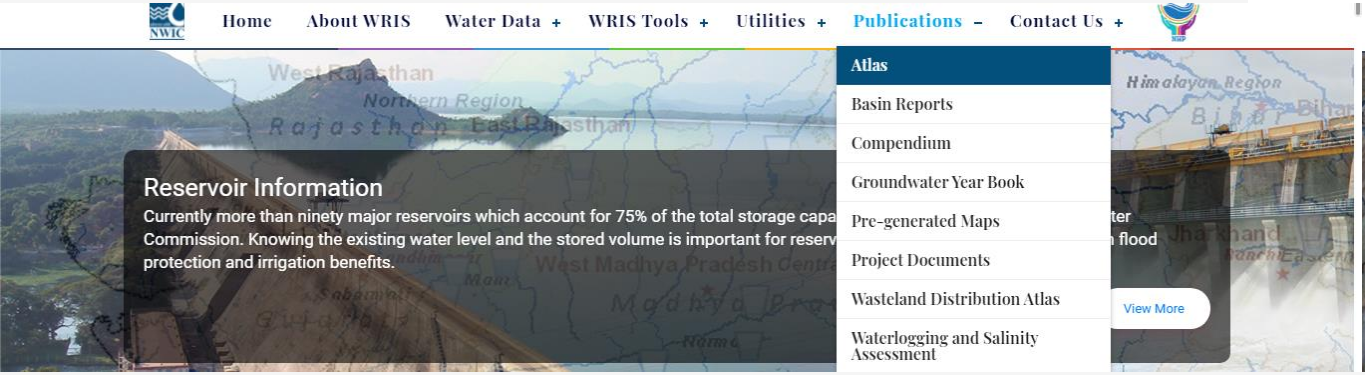
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Compendium
Groundwater Year Book
Pre-generated Maps
Project Documents
Wasteland Distribution Atlas
Waterlogging and Salinity Assessment
Reservoir Information
Currently more than ninety major reservoirs which account for 75% of the total storage capa
Commission. Knowing the existing water level and the stored volume is important for reserv
protection and irrigation benefits.
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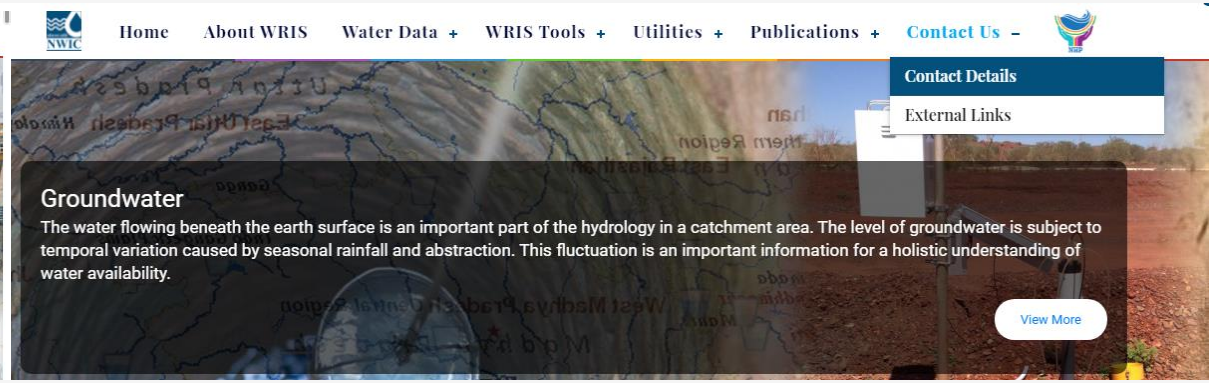
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Groundwater
The water flowing beneath the earth surface is an important part of the hydrology in a catchment area. The level of groundwater is subject to temporal variation caused by seasonal rainfall and abstraction. This fluctuation is an important information for a holistic understanding of water availability.
View More

CLASSIFICATION OF MODULES

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Dynamic Modules

- Rainfall (mm)
- Reservoir (Level)
- River Monitoring (Level & Discharge)
- Ground Water Level (BGL Meter)
- Water Quality – Groundwater
- Water Quality – Surface water
- Evapotranspiration (mm)
- Soil Moisture (%)
- Minor Irrigation Tanks

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- Reservoir- Sedimentation studies
- Water Resources Project
- Minor Irrigation Census
- LULC
- Wasteland
- Land Degradation
- Extreme Events – Flood Inundation/Drought Prone Area Program/Earthquake-Rainfall-Temperature
- Artificial Recharge Structure Viewer

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- Socio Economic Census
- Groundwater Prospects
- Region-Agro-Climatic / Agro Ecological
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- Inter-Basin Transfer Links
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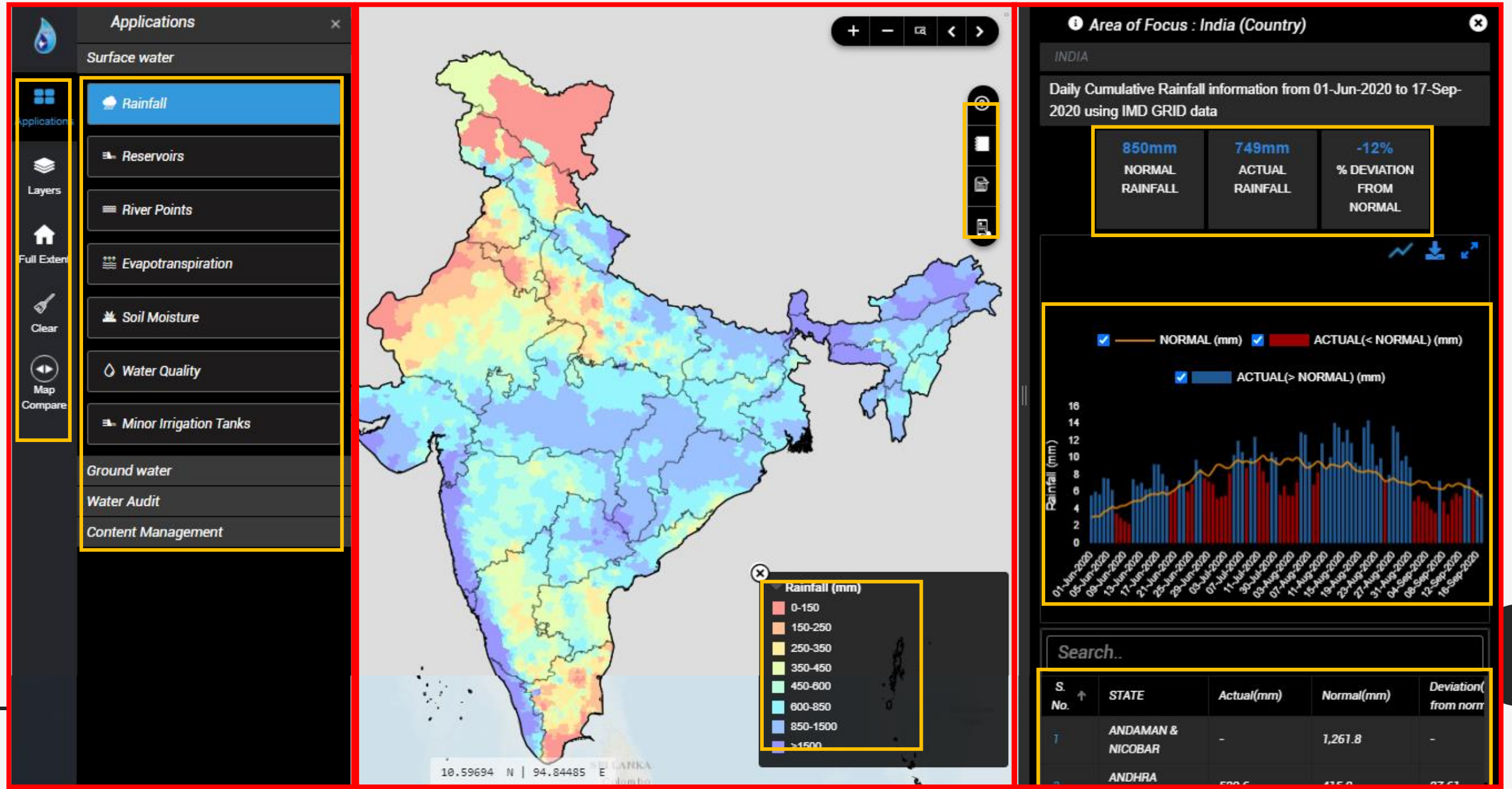
Tools + Utilities

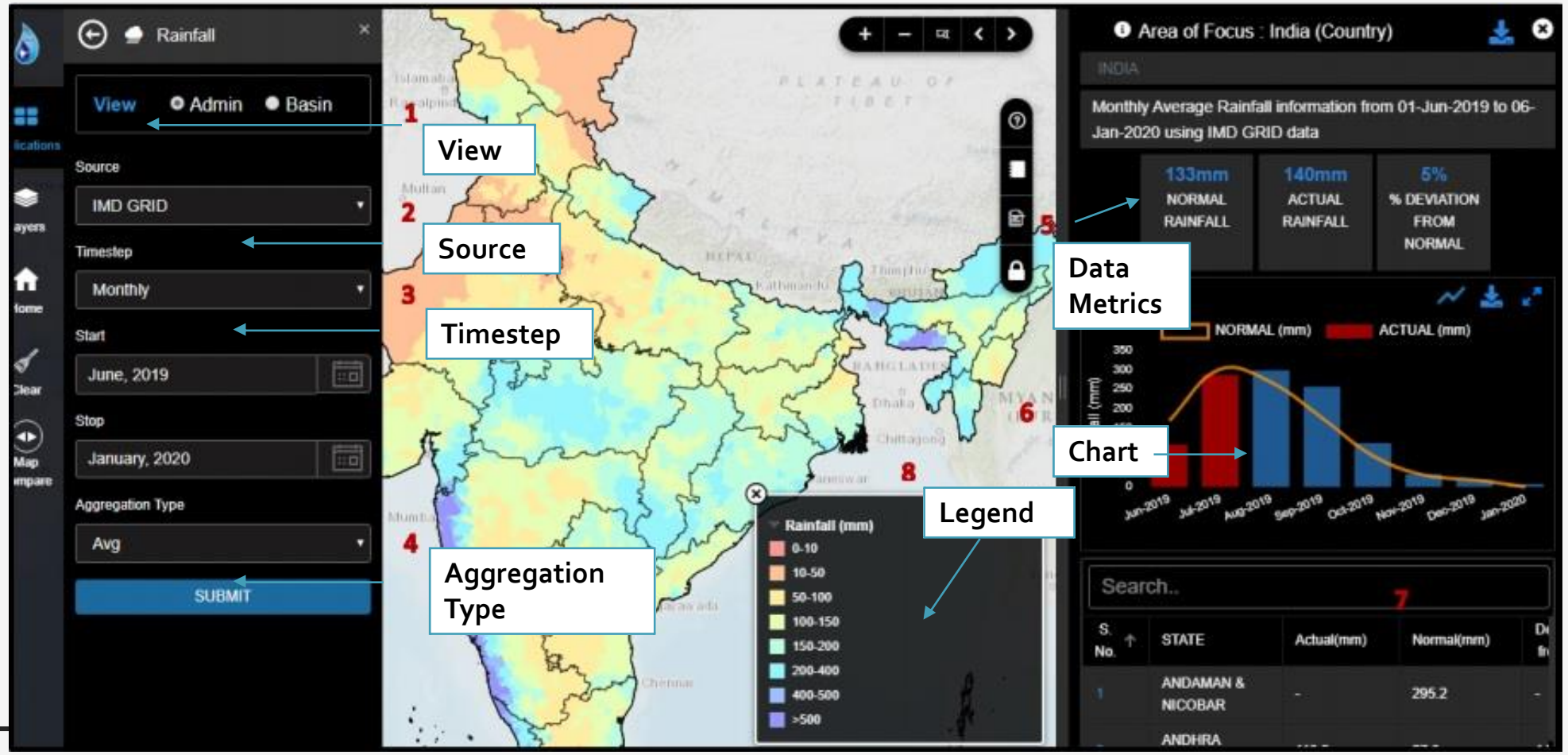
- Online Web Editor
- Artificial Recharge Structure Data Entry
- Data / Report Download Tabular)
- Data Availability
- Geo Viewer
- WRIS WIKI
- Metadata
- District at a glance
- Probable Maximum Precipitation Atlas
- Surface Water Audit

1. Dynamic Modules



1.1 Rainfall

- Normal, Actual rainfall and subsequent deviation of rainfall for different parts in India with different permutations and combinations of source, view, frequency and aggregation types.

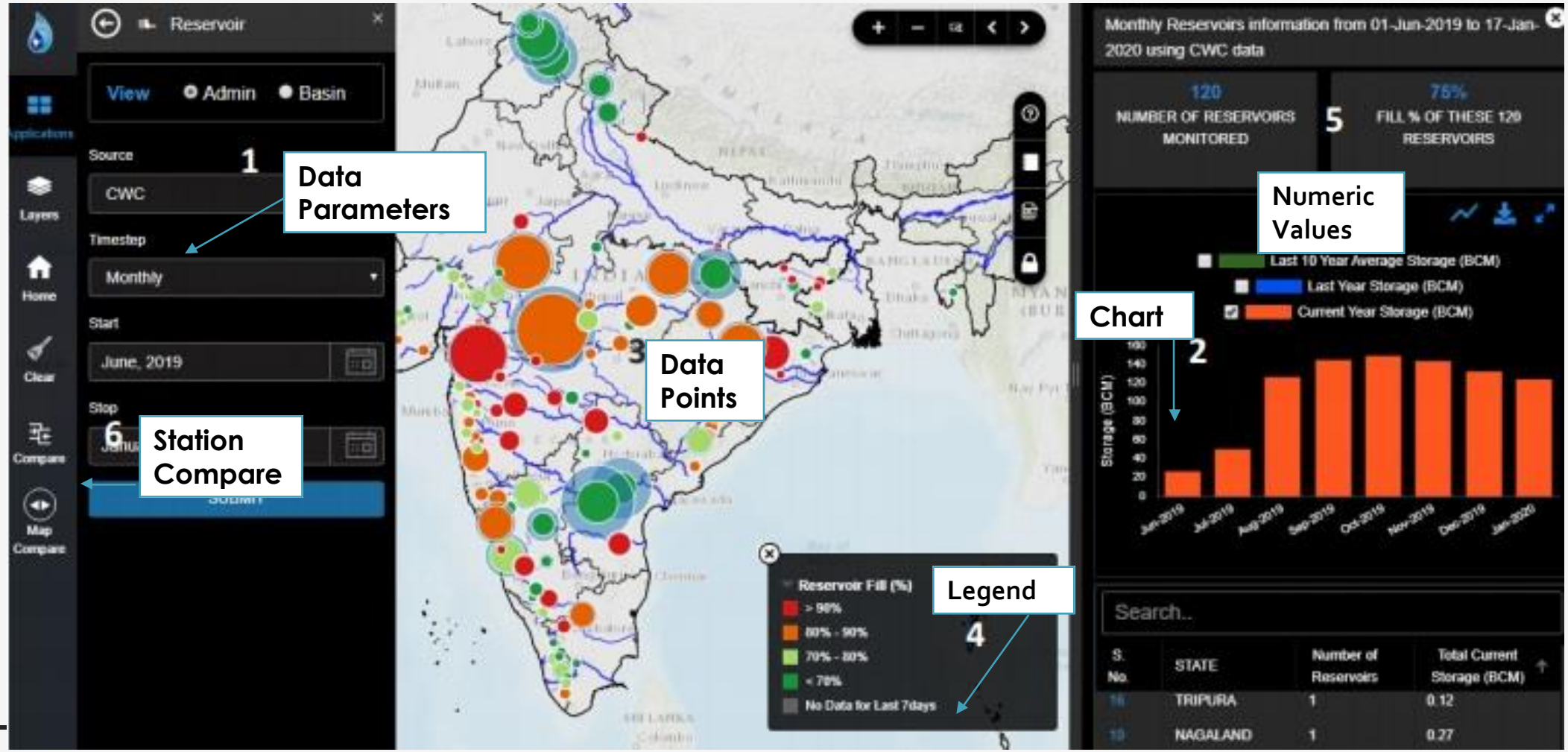


IMD Gridded/Central and State Agency Data

Data Visualization – Heat maps/Charts/Stats/Admin view/Basin view

1.2 Reservoir

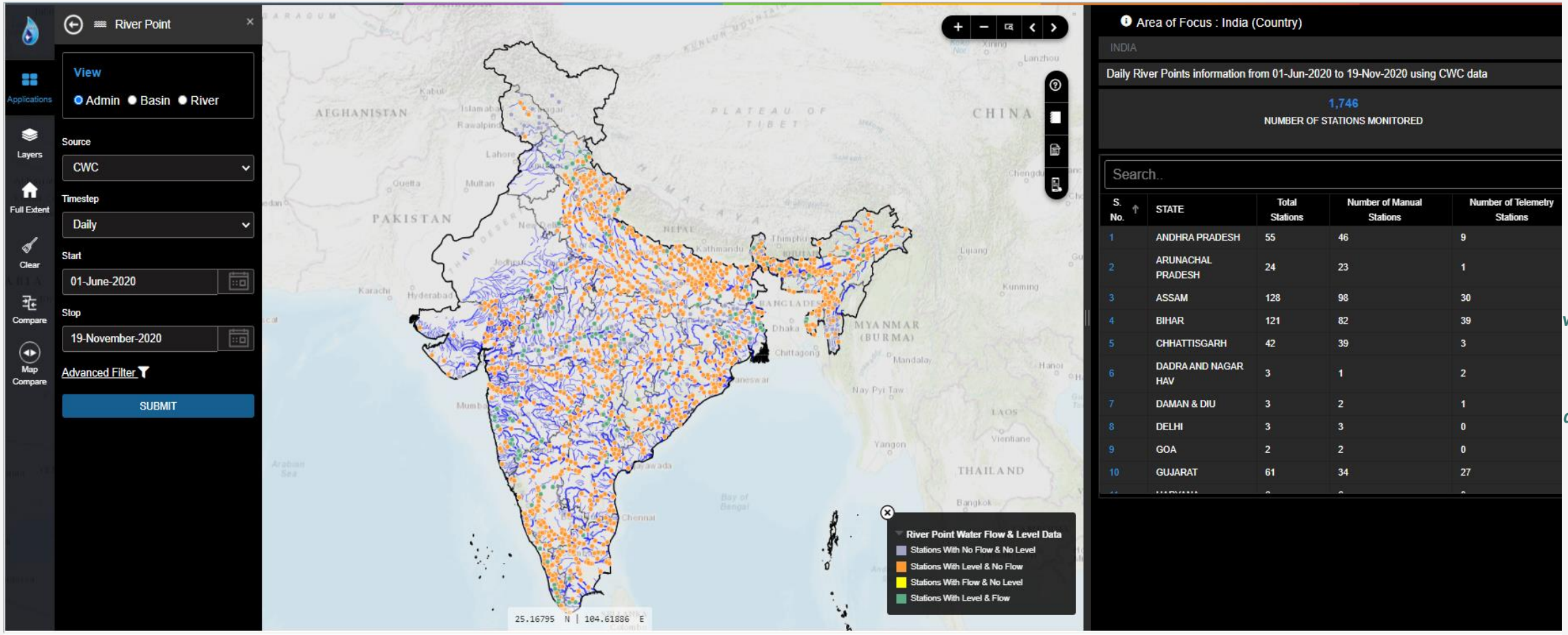
- *Volume of water (in billion cubic meters) stored in reservoirs across the country.*



Monitoring Reservoirs recent water level and storage data

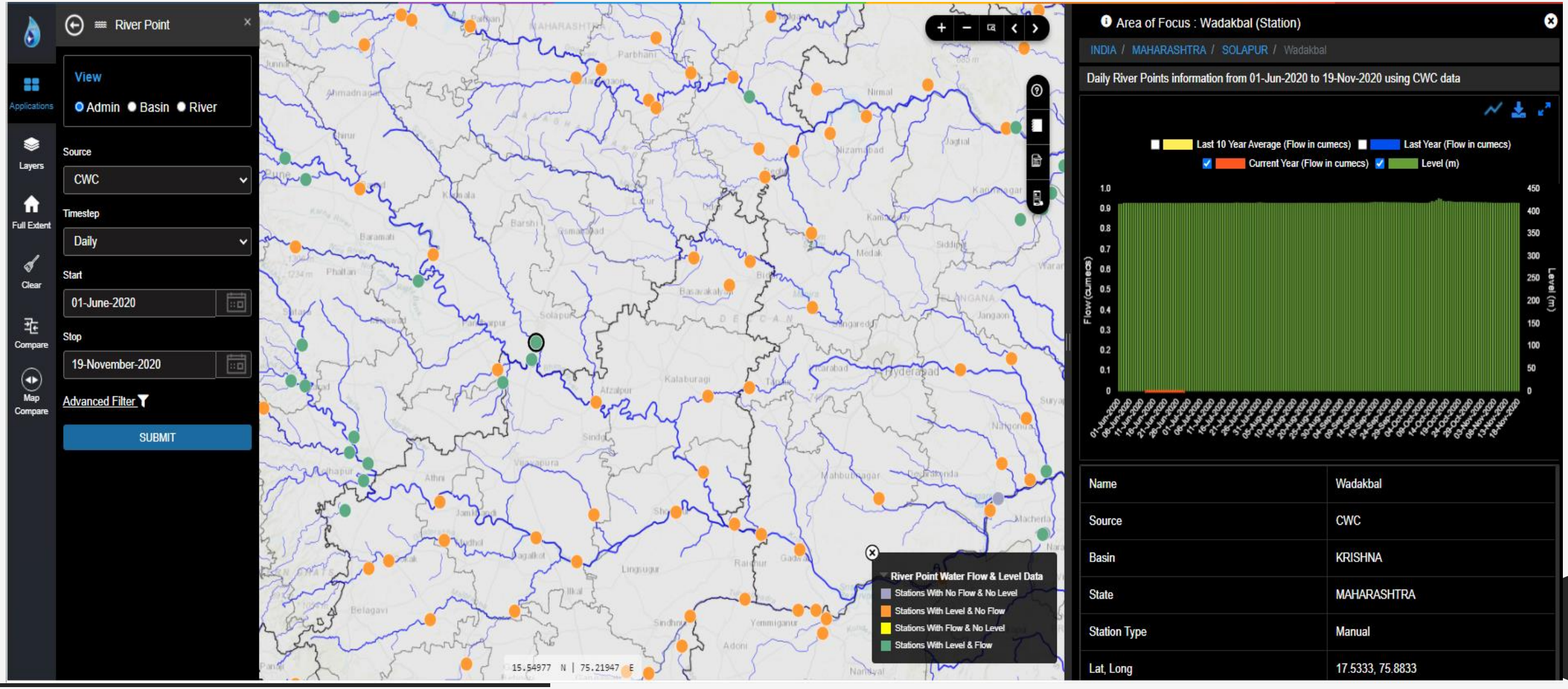
1.3 River Monitoring

- Station wise flow and level data of each river points monitored on each river.



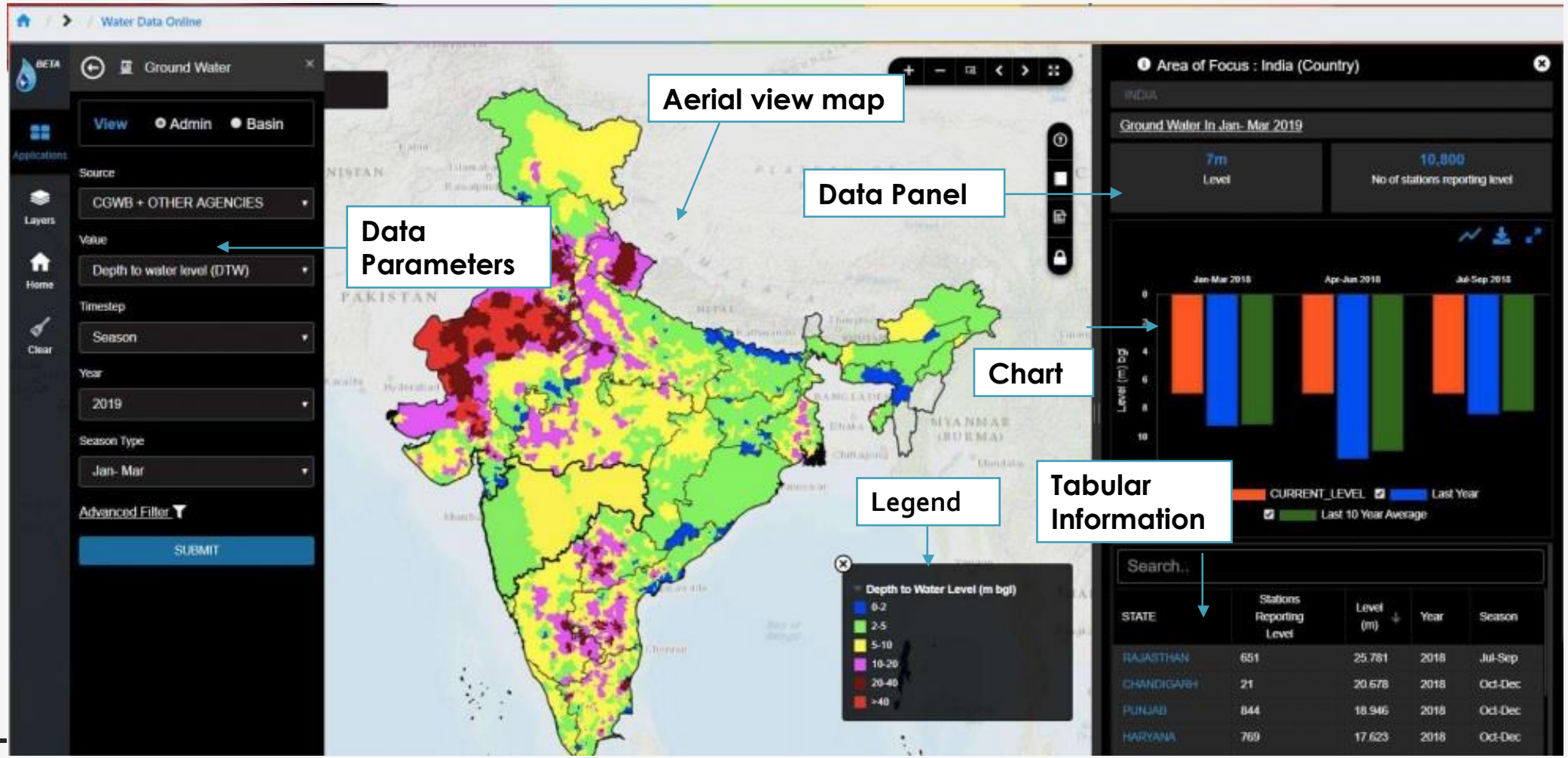
Agency wise – Stations with water level and flow data Within range most recent data color code depiction

River Points – Stations data view – Level and Discharge



1.4 Groundwater Level

-Station wise depth to water level of monitoring wells for a given time period or season
- visualization of depth to water level contour maps

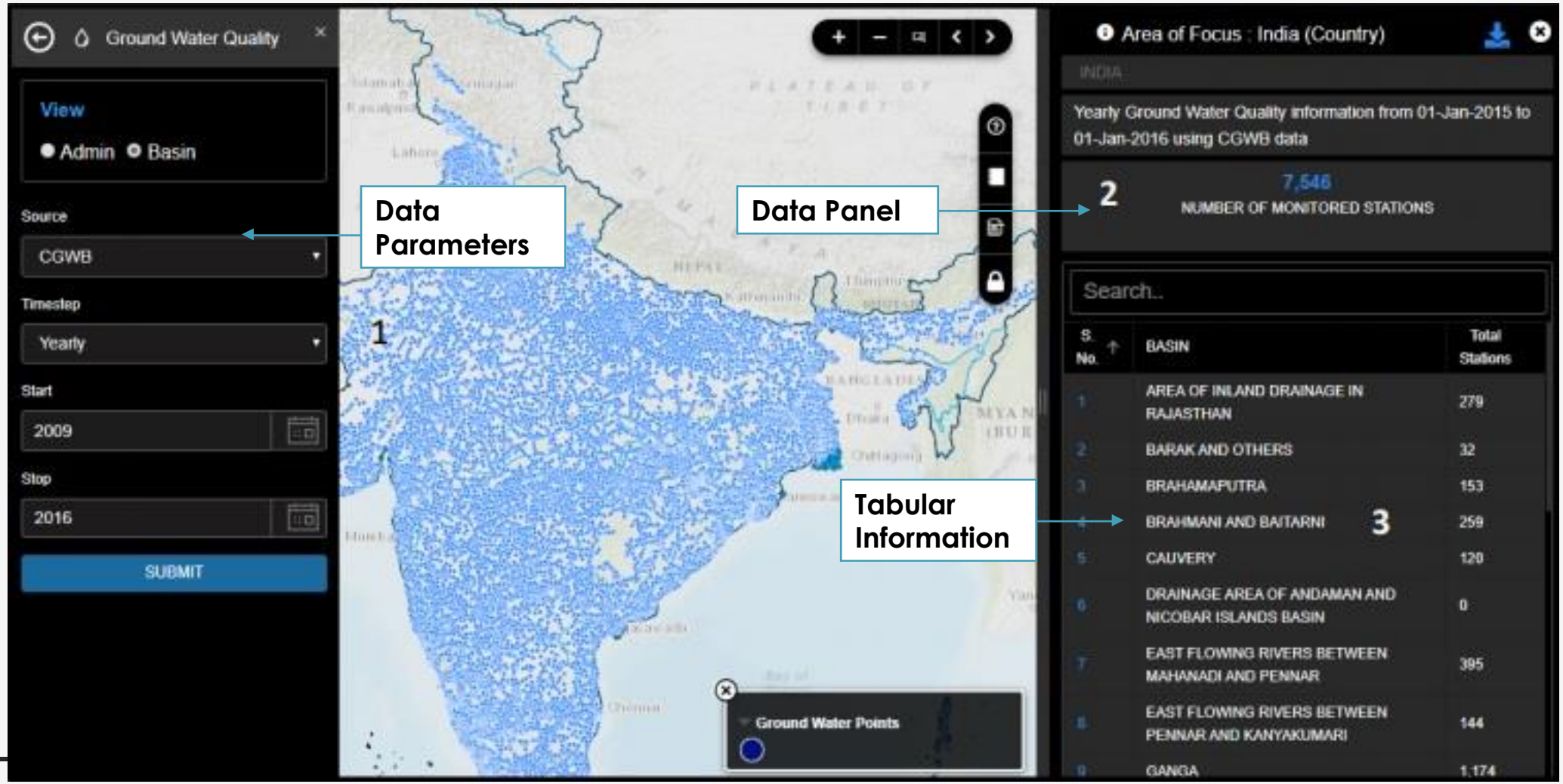


CGWB and State data

Data Visualization – Heatmaps/Charts/Stats/Admin view/Basin view

1.5 Water Quality – Groundwater

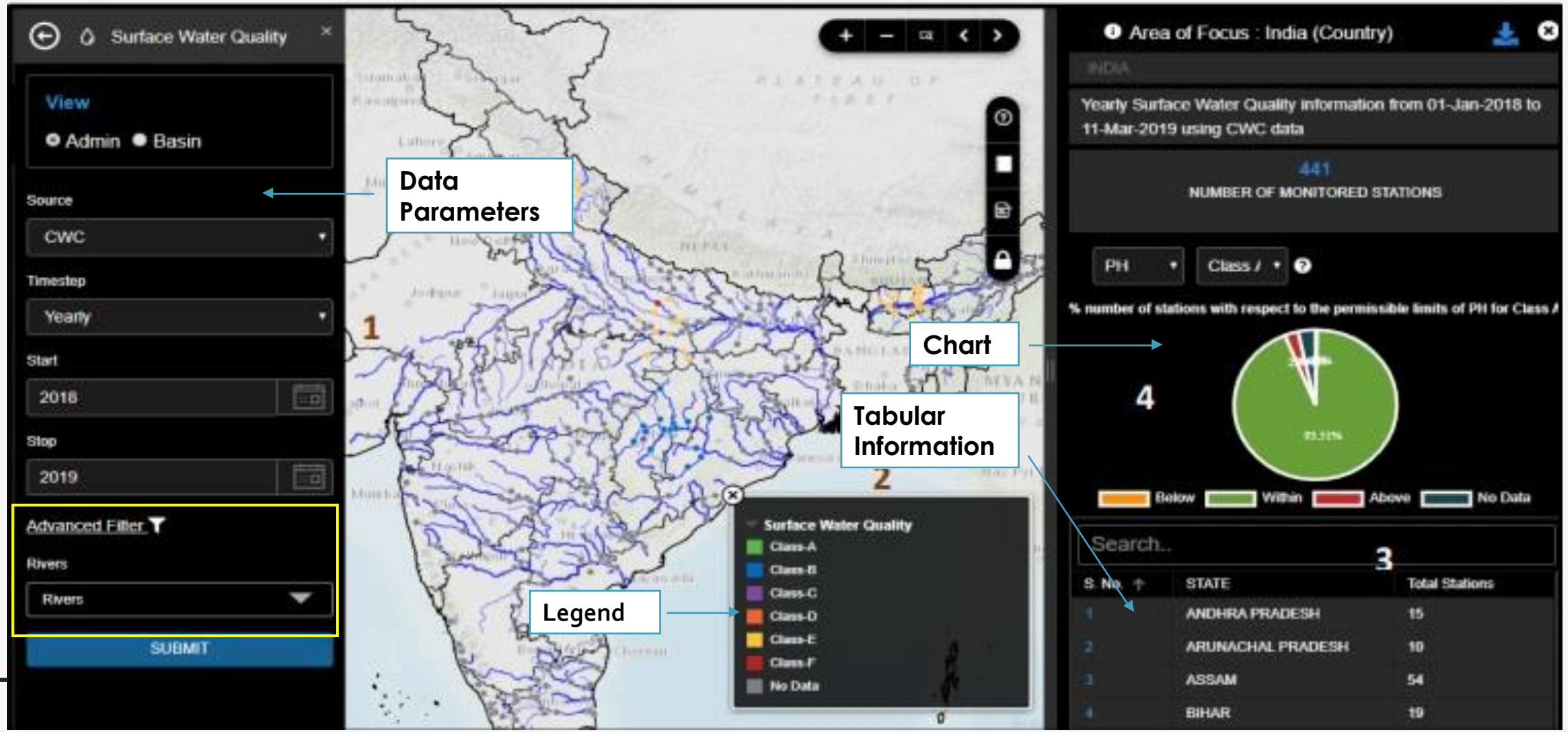
- *Station wise ground water quality information for a given time period*



1.6 Water Quality – Surface Water

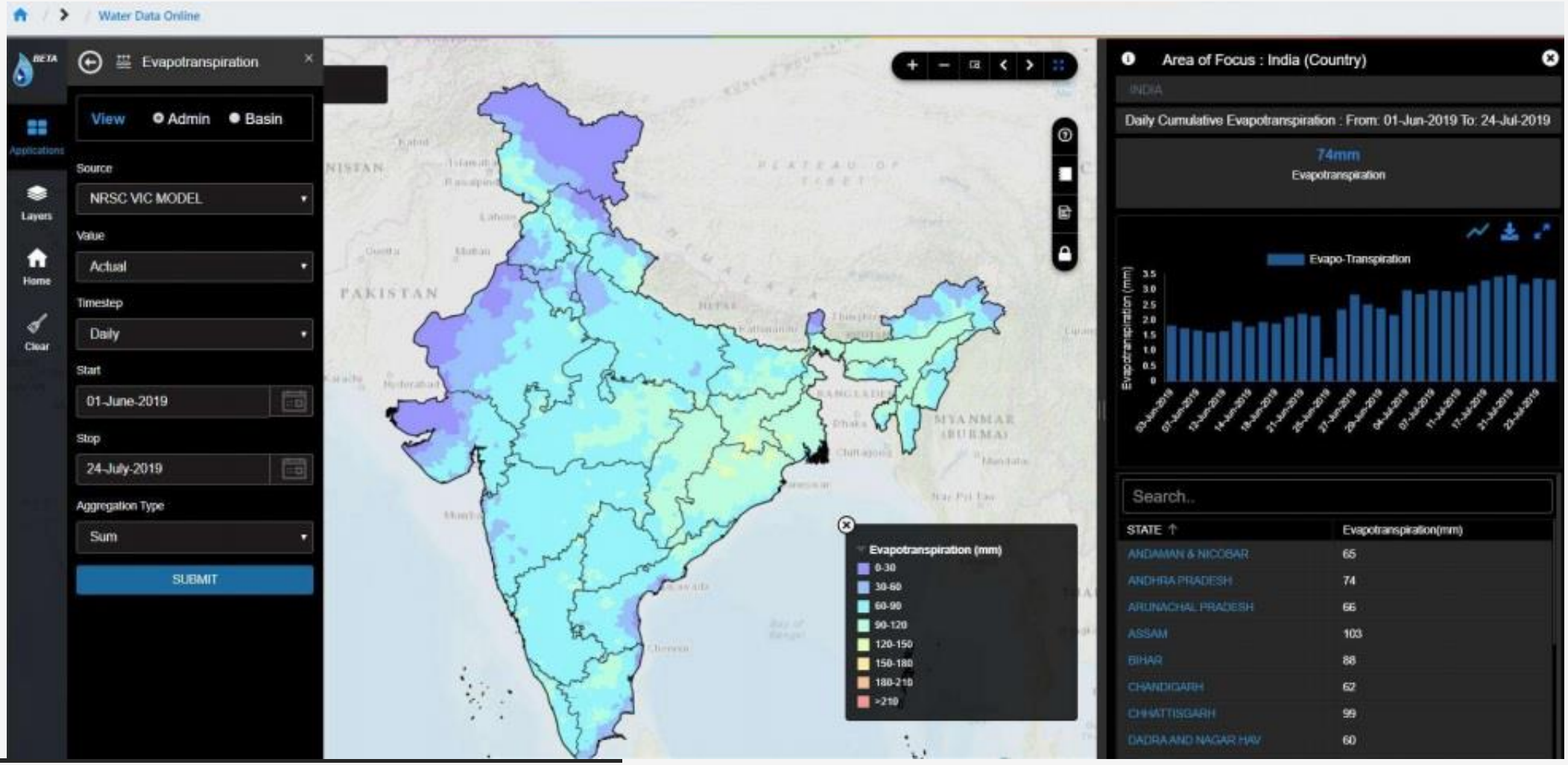
-Station wise surface (river) water quality information

-percentage of water stations falling within or above permissible limits for each class



1.7 Evapotranspiration

- VIC model based evapo-transpiration data for different states and basin (grid wise)

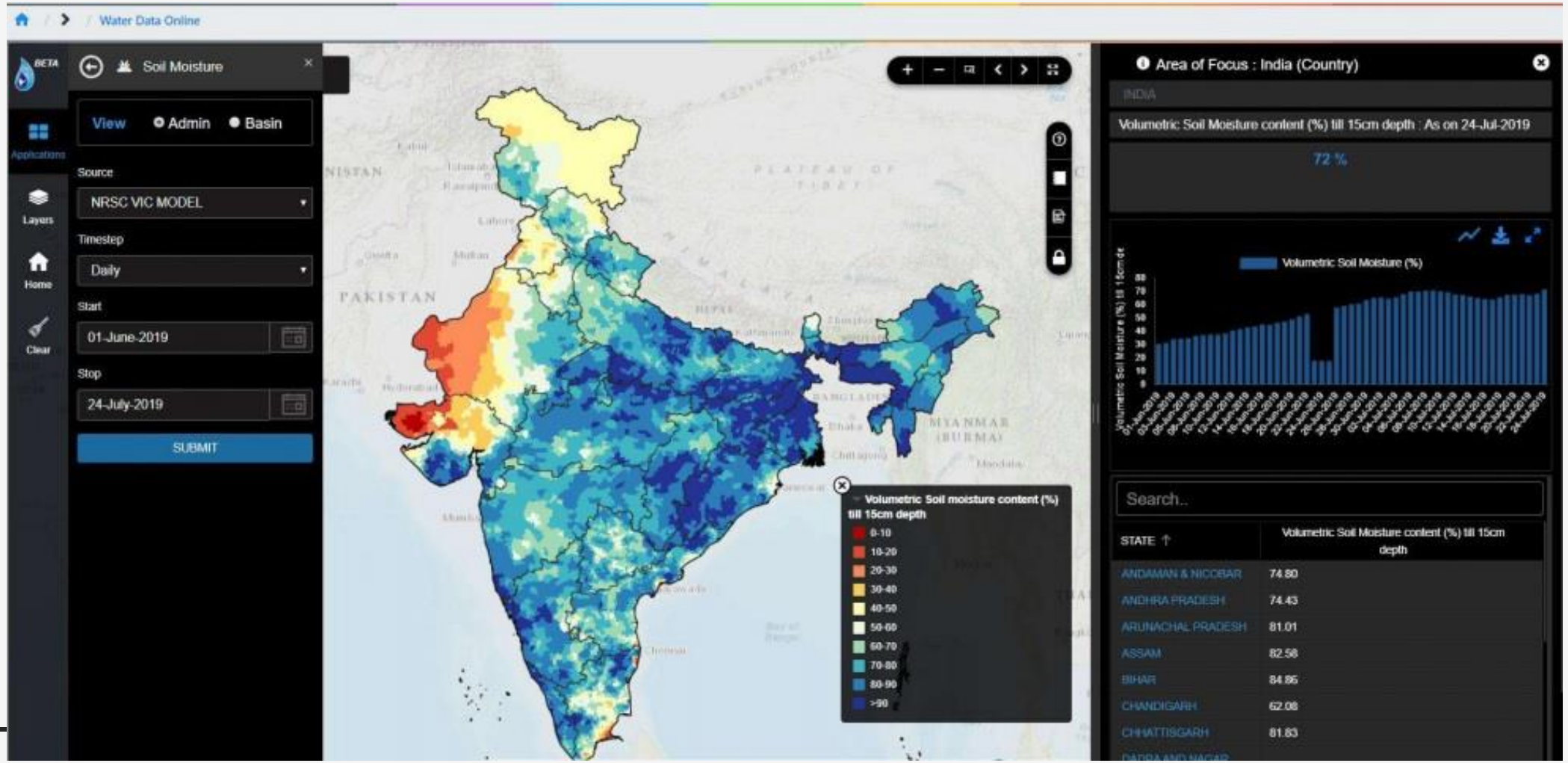


NRSC VIC Model Gridded data

Data Visualization – Heatmaps/Charts/Stats/ Admin view/Basin view

1.8 Soil Moisture

- Volume of soil moisture content in terms of percentage (up to 15 cm depth)

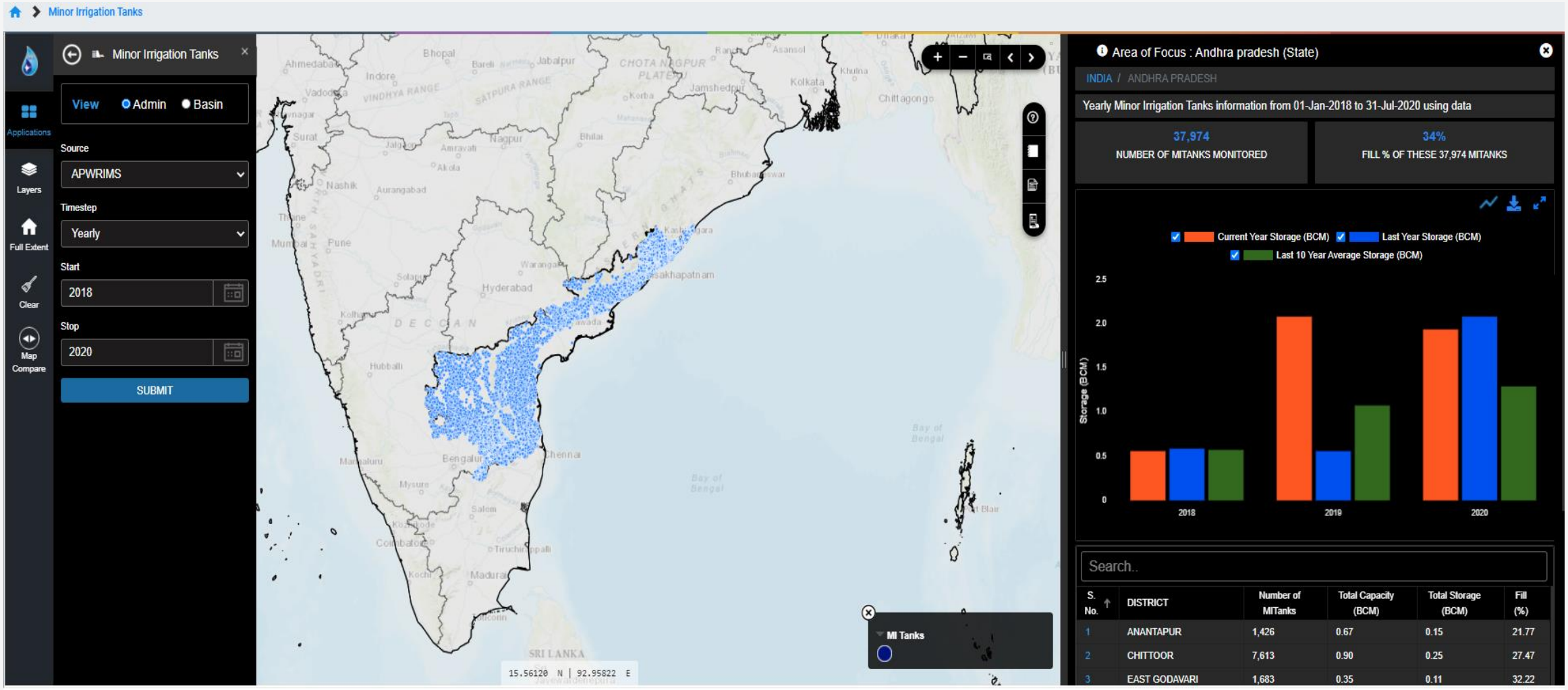


NRSC VIC Model Gridded data

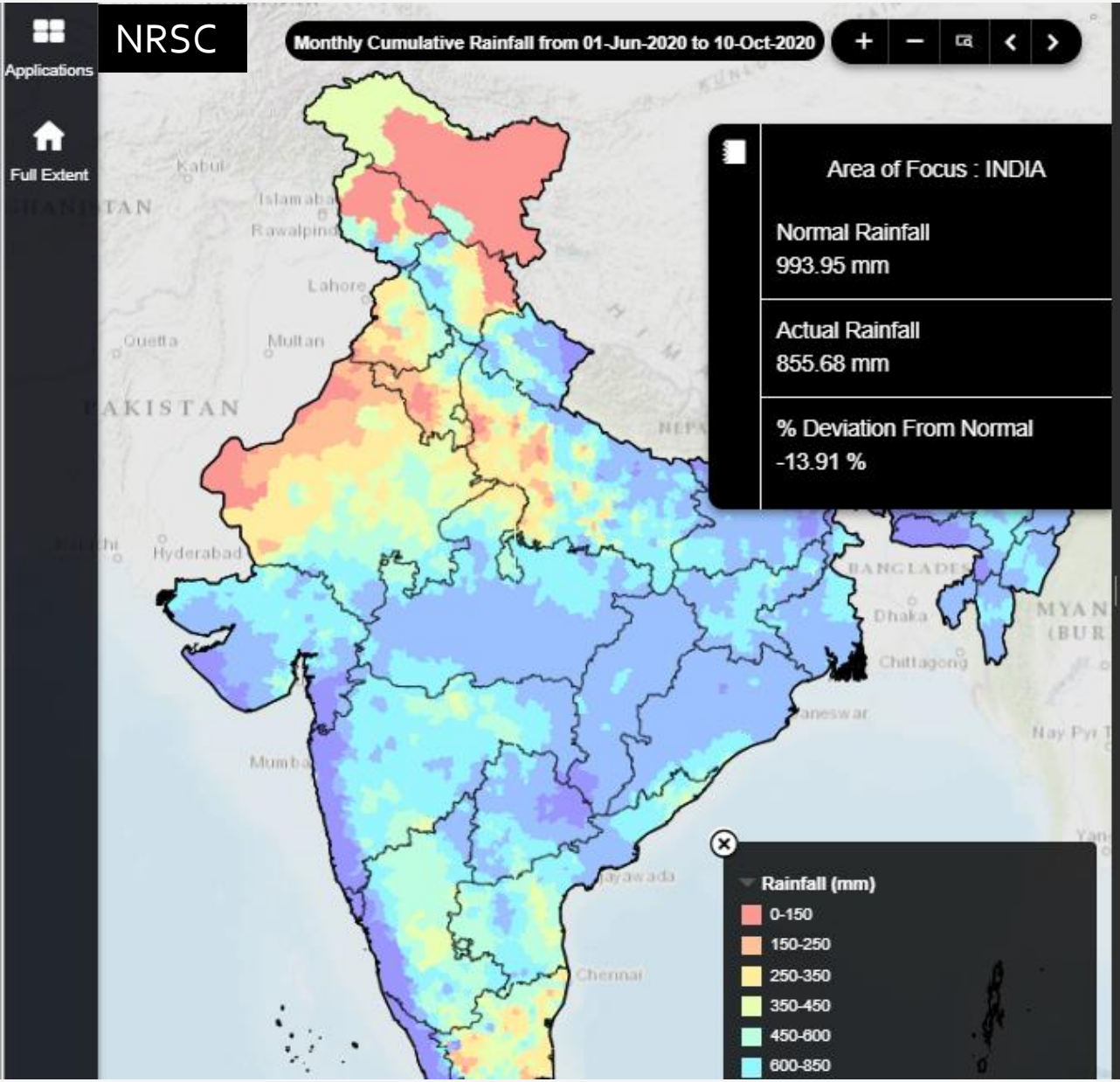
Data Visualization – Heatmaps/Charts/Stats/ Admin view/Basin view

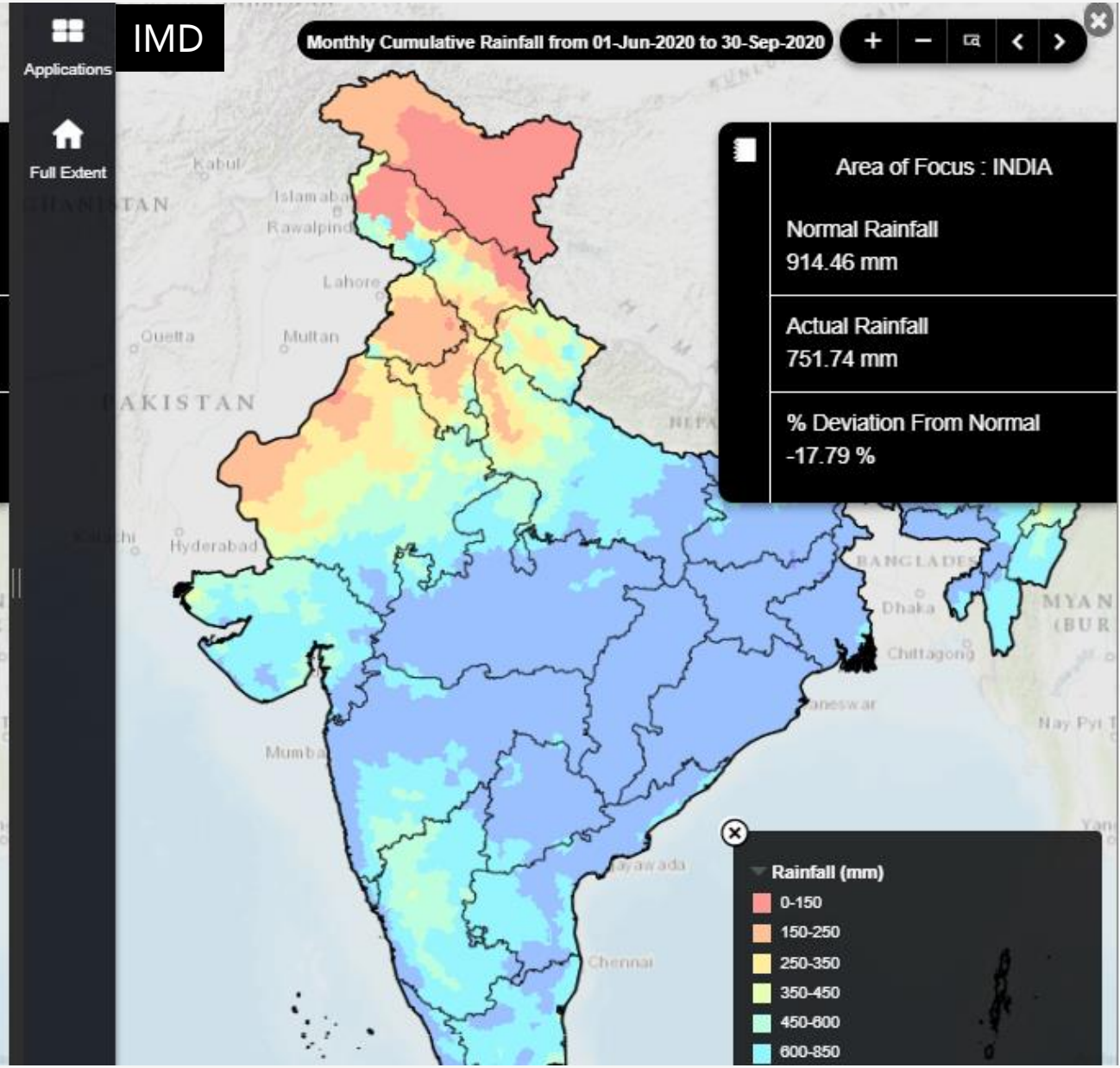
1.9 Minor Irrigation Tanks

- Minor or small reservoir (irrigation tanks) water capacity.

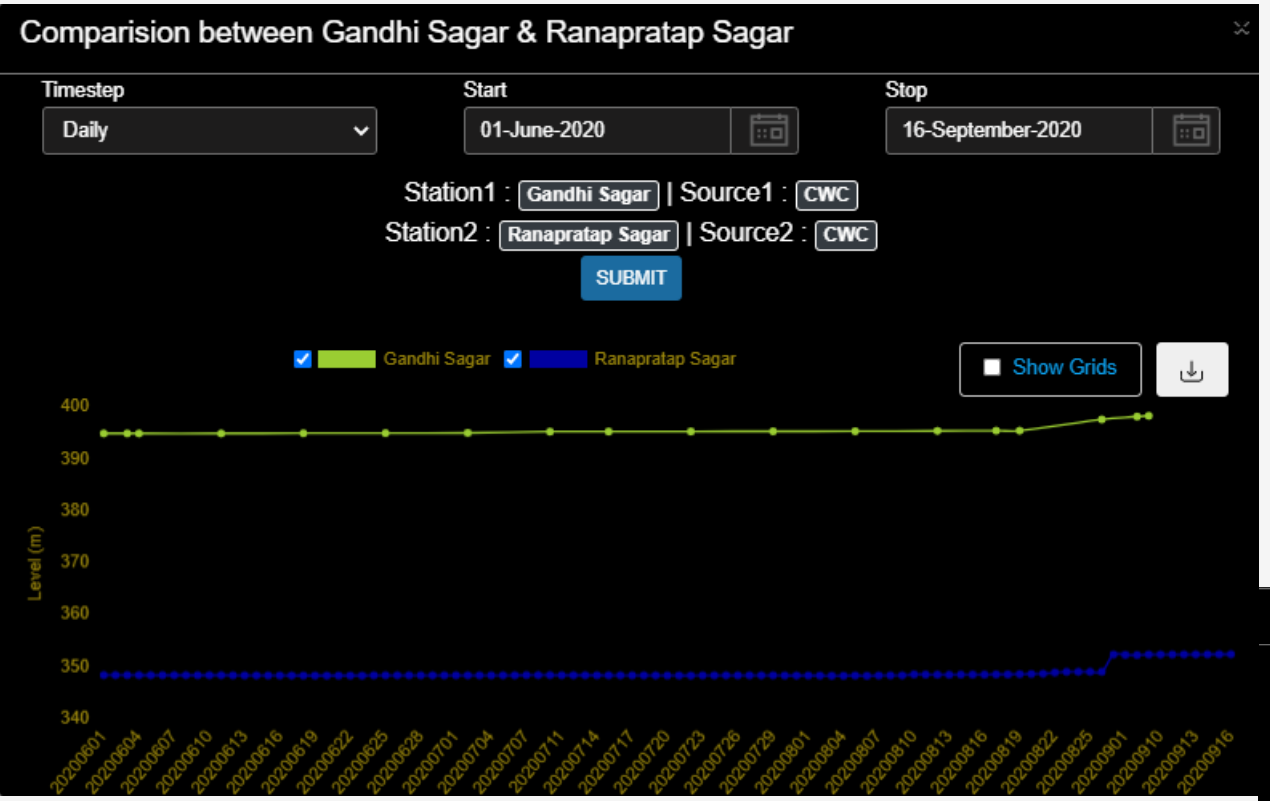


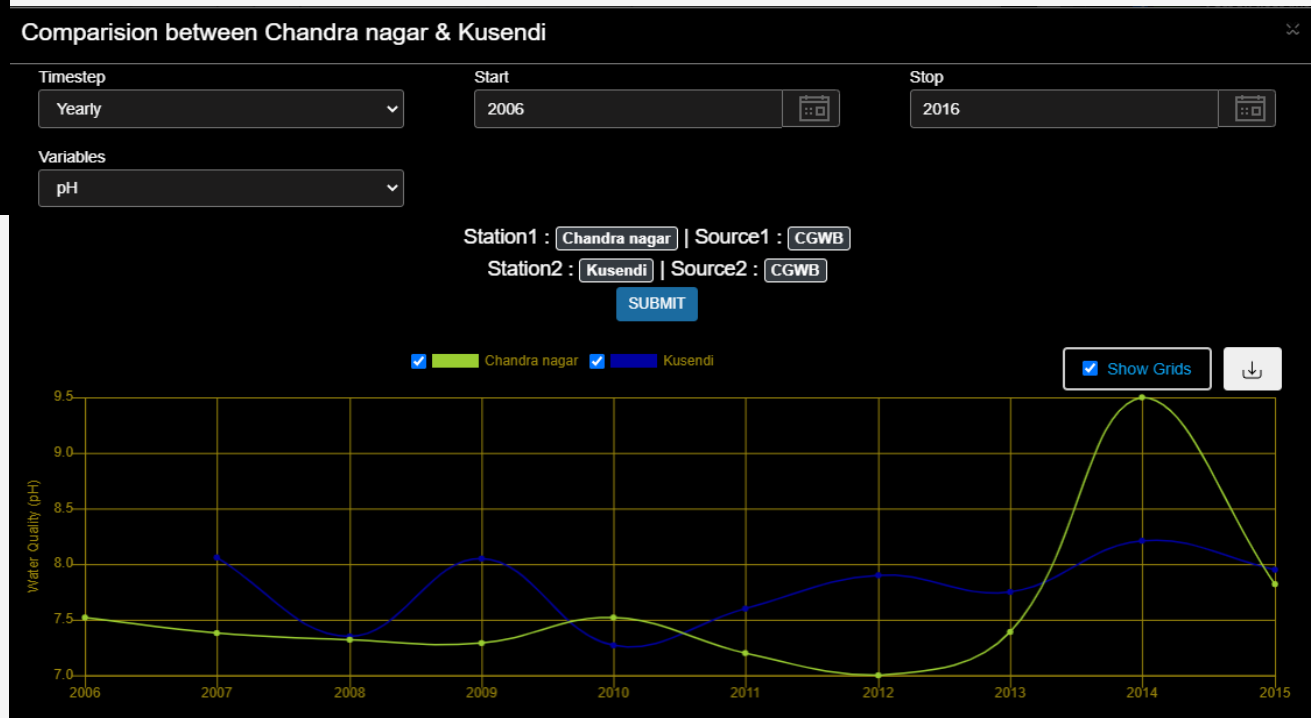
Map Compare Tool





Data Comparison Tool

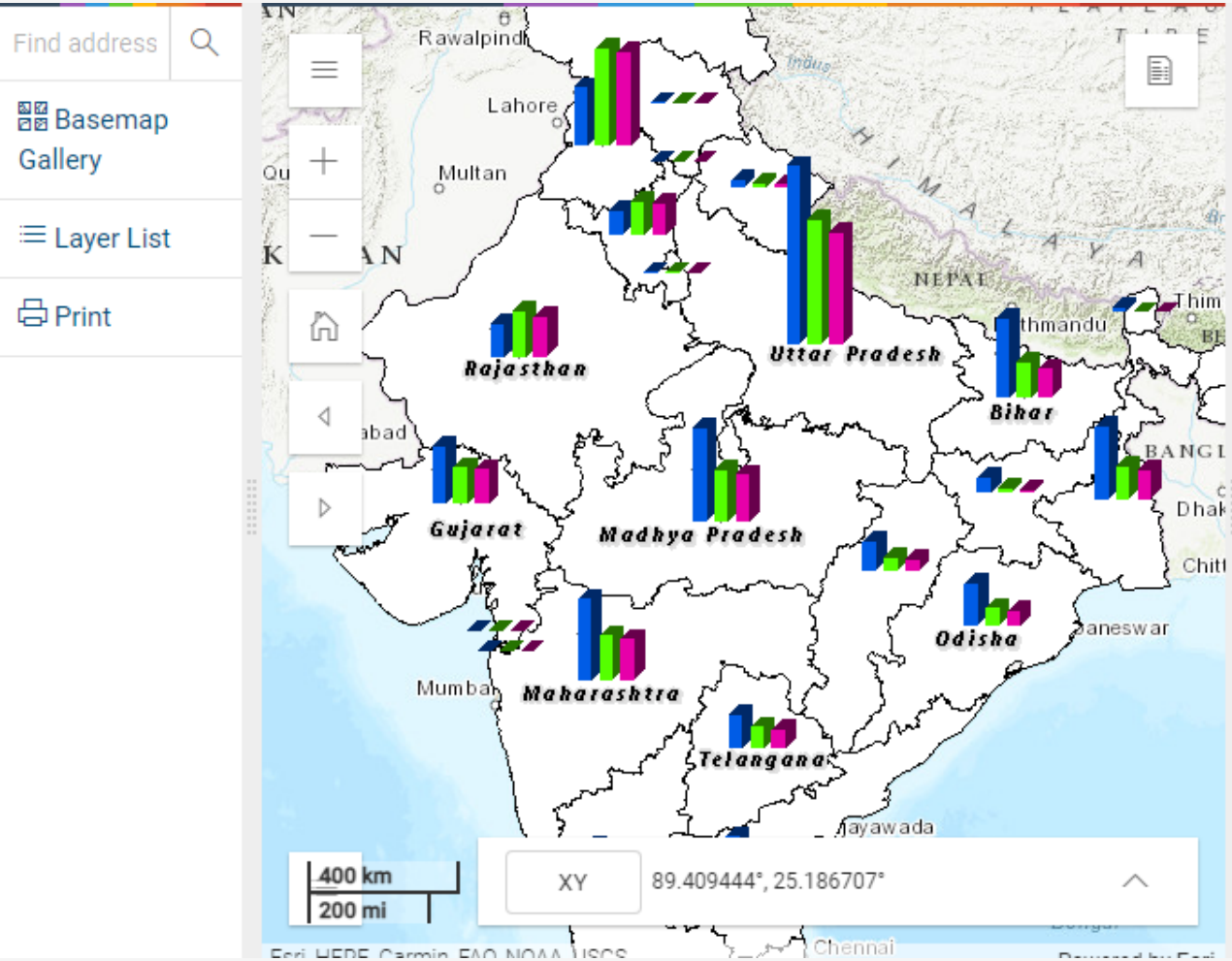


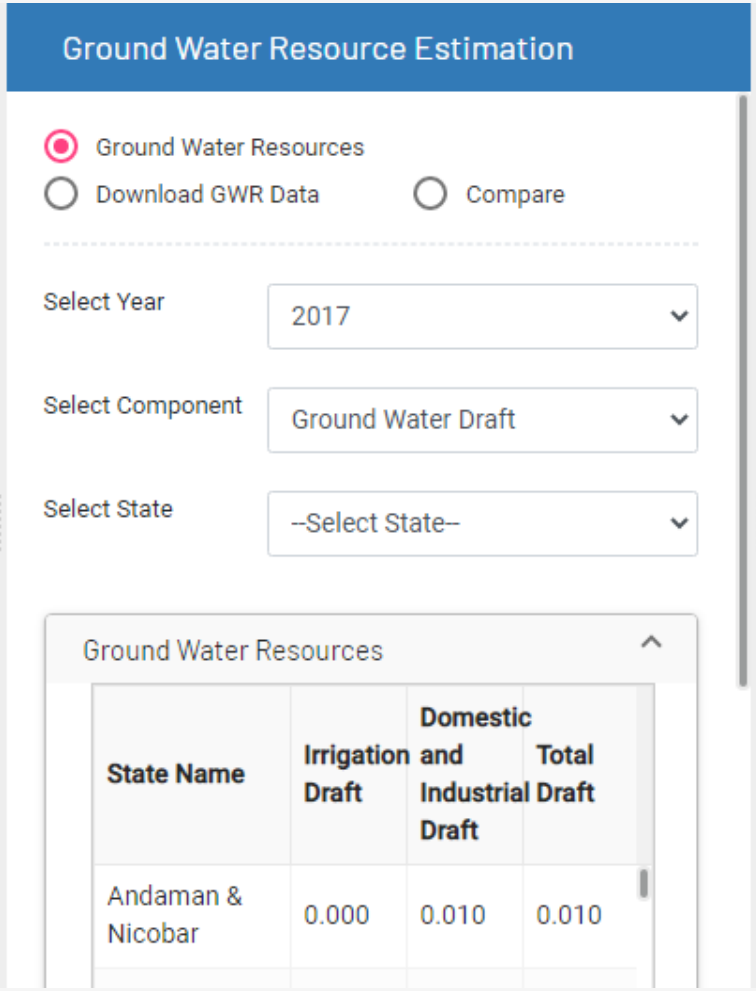


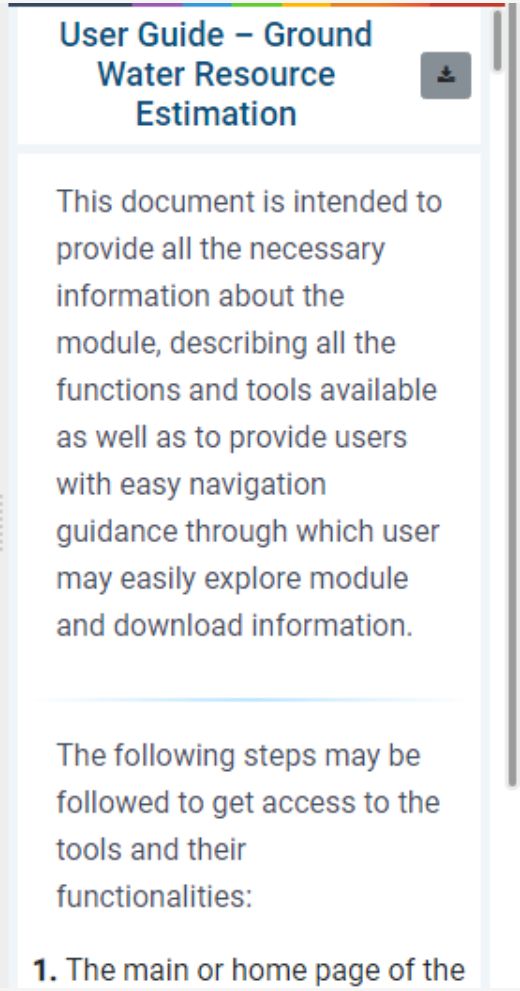
2. Semi Dynamic Modules

2.1 Groundwater Resources Estimation

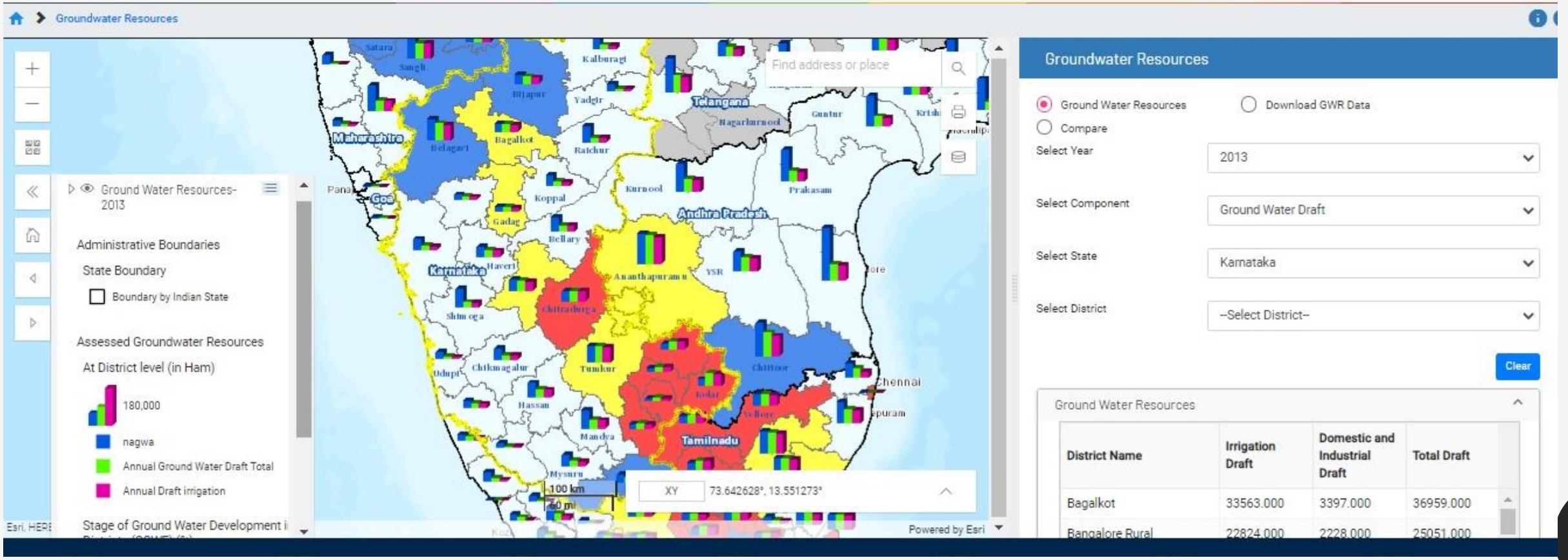
-Ground water resources assessment carried out jointly by Central Ground Water Board and State Ground Water Departments for year 2009, 2011, 2013 AND 2017.





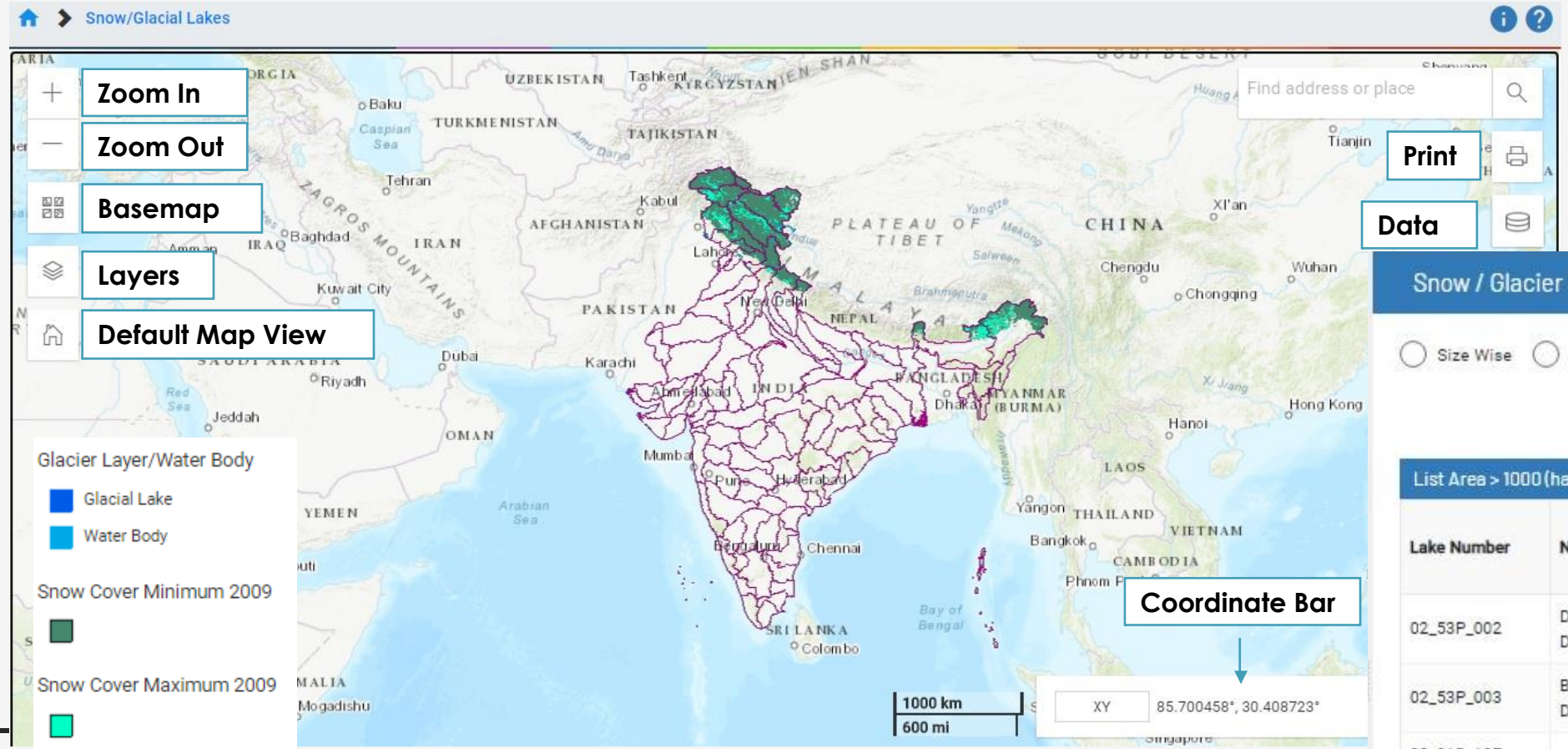


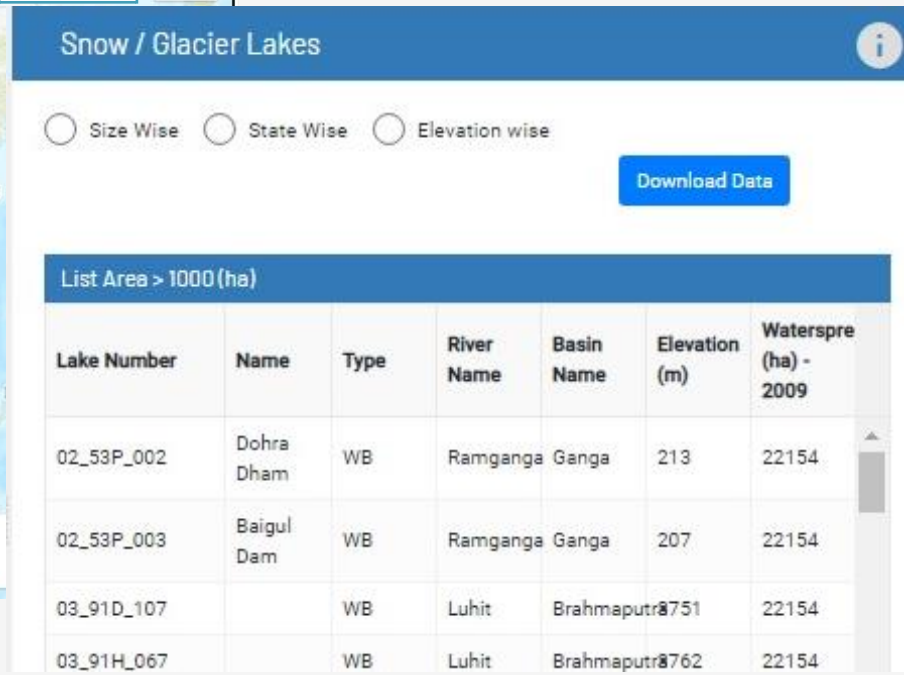
Information in terms of groundwater drafts, net ground water availability and stage of groundwater development



2.2 Snow-Glacial Lake

-Snow cover extent, glacial lakes & water bodies of the Indian Himalayan regions - satellite derived product - available for the years 2011-2020 covering the major river basins namely, Indus, Ganga and Brahmaputra.

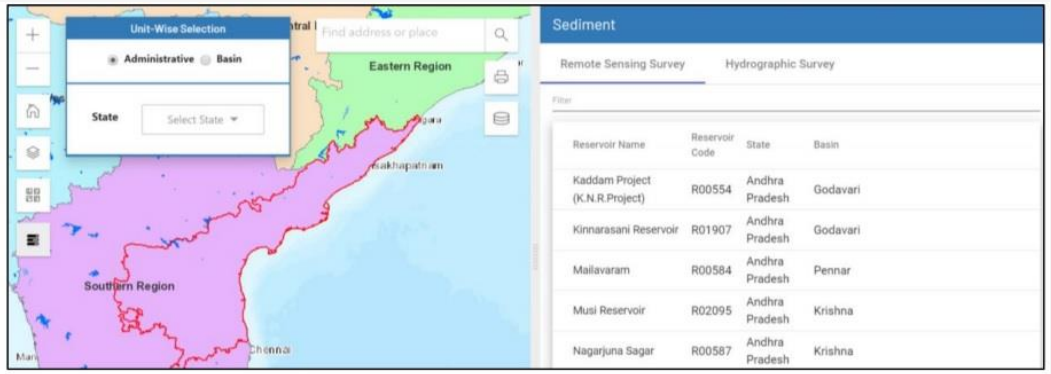


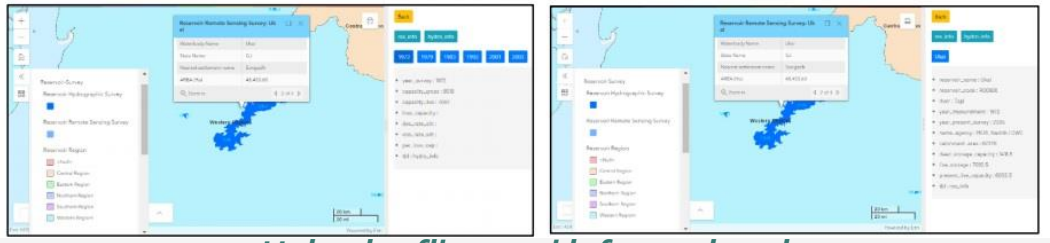


2.3 Reservoir Sedimentation studies

- displays the result of sediment study done using remote sensing method and hydrographic survey in different reservoirs spread across India.

Reservoir Sediment Study





Unit wise filter and information view

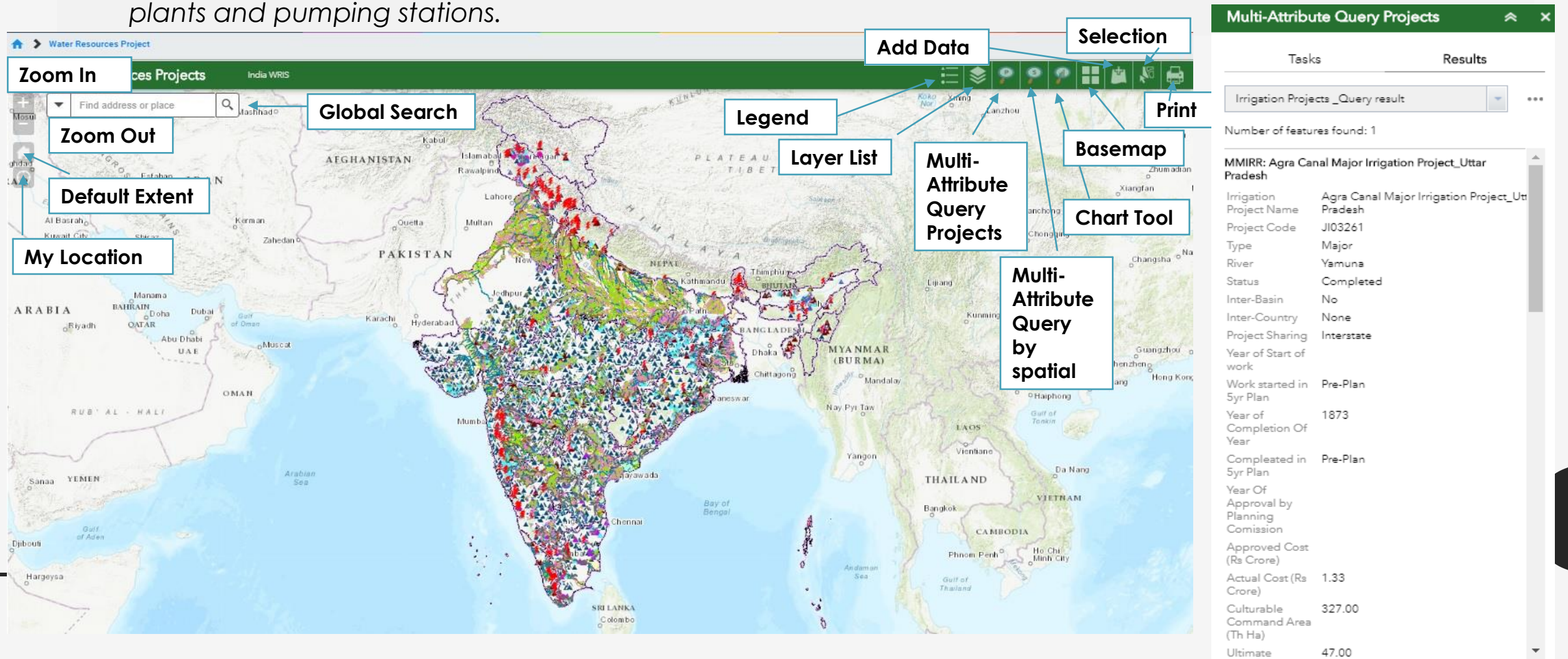
2.4 Water Resources Projects

-Information on irrigation, hydro-power and multi-purpose projects

- It provides a spatial inventory of:

-connected water resources structures,

-mapping the location of dams, barrages, weirs, anicuts, reservoirs, canals, command areas, hydropower plants and pumping stations.



2.5 Minor Irrigation Census

- 4th & 5th Minor irrigation census.

- Six layers at district level :

1. ground water schemes

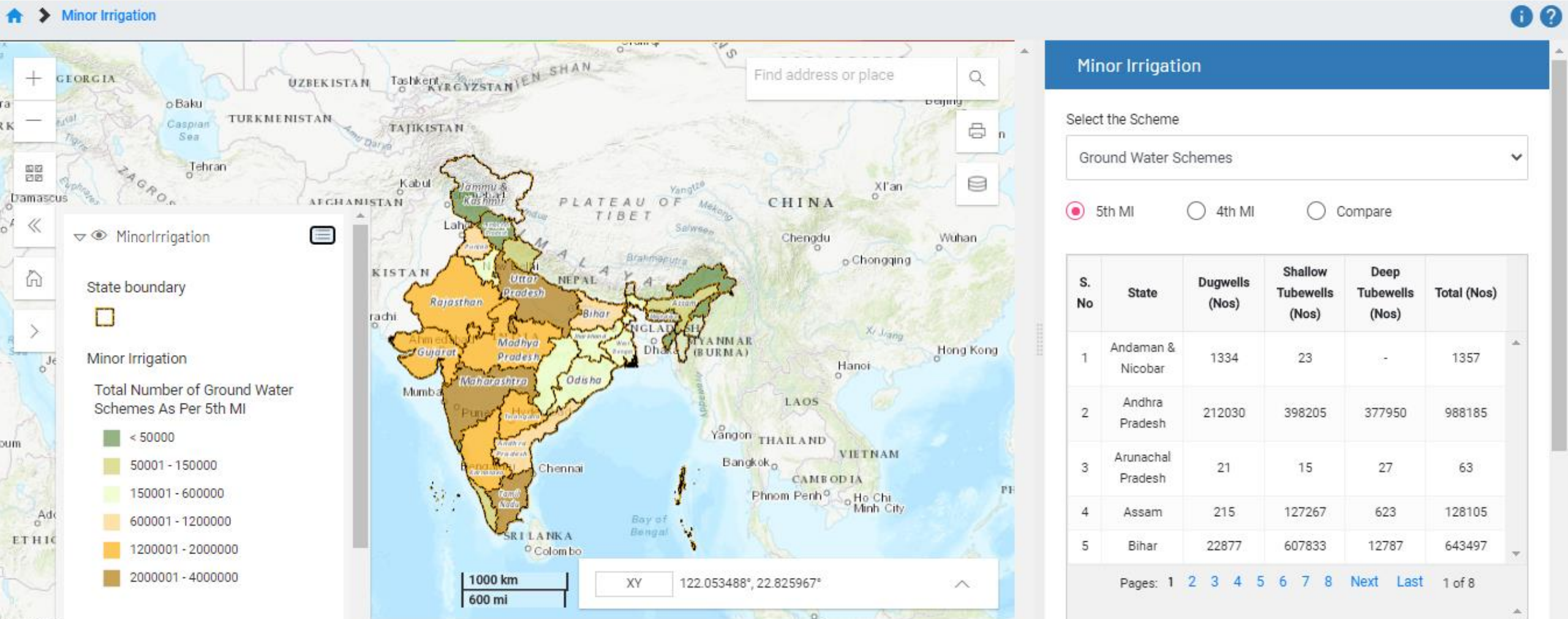
2.surface water schemes

3.Water Distribution devices

4.Total Irrigation potential created

5.Total Irrigation potential utilized

6.Culturable command area

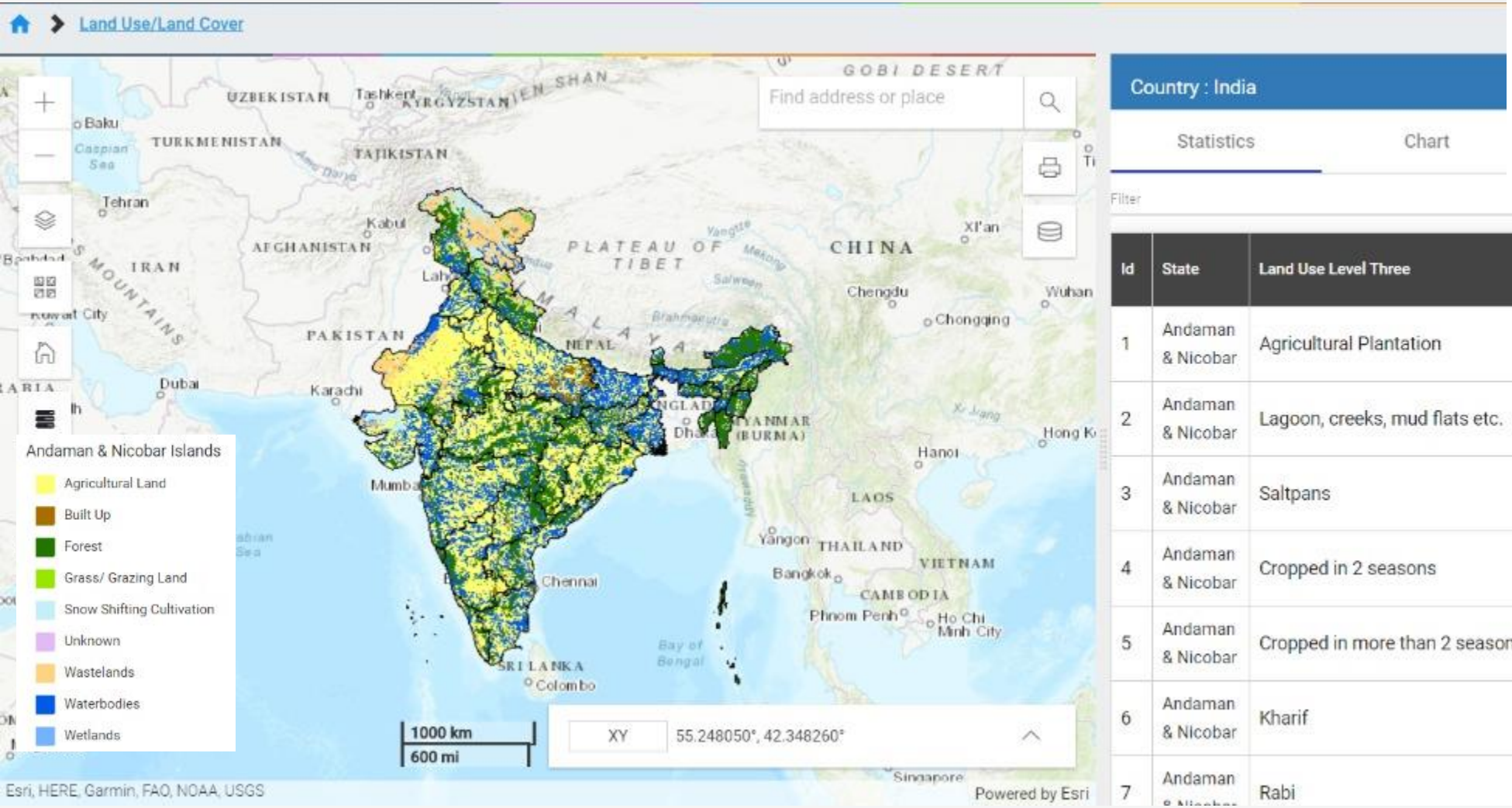


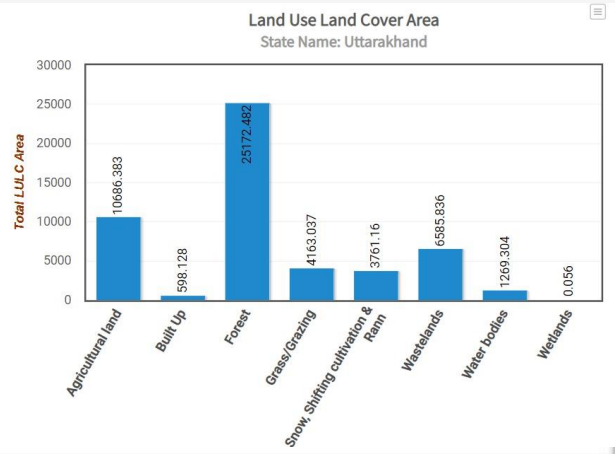
S. No	State	Dugwells (Nos)	Shallow Tubewells (Nos)	Deep Tubewells (Nos)	Total (Nos)
1	Andaman & Nicobar	1334	23	-	1357
2	Andhra Pradesh	212030	398205	377950	988185
3	Arunachal Pradesh	21	15	27	63
4	Assam	215	127267	623	128105
5	Bihar	22877	607833	12787	643497

Pages: 1 2 3 4 5 6 7 8 Next Last 1 of 8

2.6 LULC

Land use/land cover maps (1:250,000 scale) for 2005-2018 (yearly) by National Remote Sensing Centre (NRSC).





Country : India

Statistics | Chart

Filter

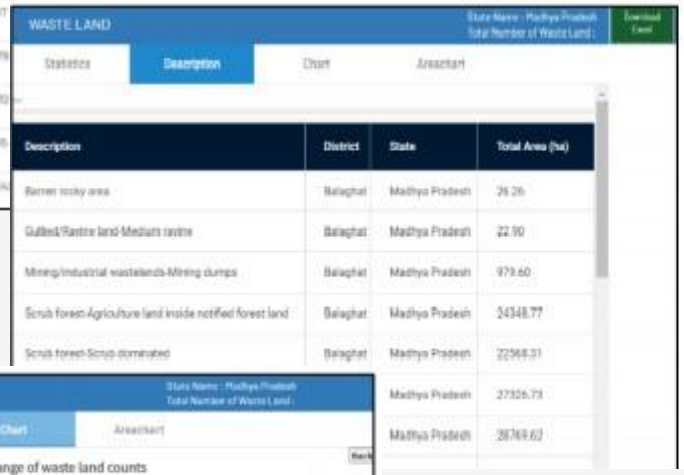
Id	State	Land Use Level Three	Land Use Main Class	Land Use Level Two	Area Sqkm
1	Andaman & Nicobar	Agricultural Plantation	Agricultural Plantation	Agricultural Land	57.40
2	Andaman & Nicobar	Lagoon, creeks, mud flats etc.	Coastal	Wetlands	91.15
3	Andaman & Nicobar	Saltpans	Coastal	Wetlands	0.91
4	Andaman & Nicobar	Cropped in 2 seasons	Cropland	Agricultural Land	2.73
5	Andaman & Nicobar	Cropped in more than 2 seasons	Cropland	Agricultural Land	0.06
6	Andaman & Nicobar	Kharif	Cropland	Agricultural Land	216.62
7	Andaman & Nicobar	Rabi	Cropland	Agricultural Land	70.16

2.7 Wasteland

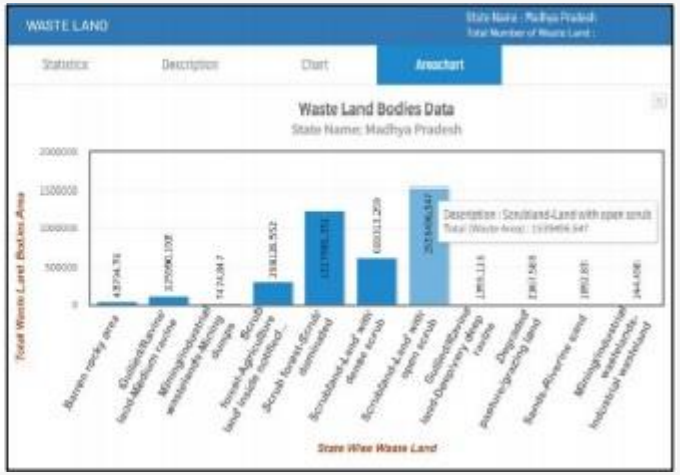
- Distribution and the spatial extent of the wasteland

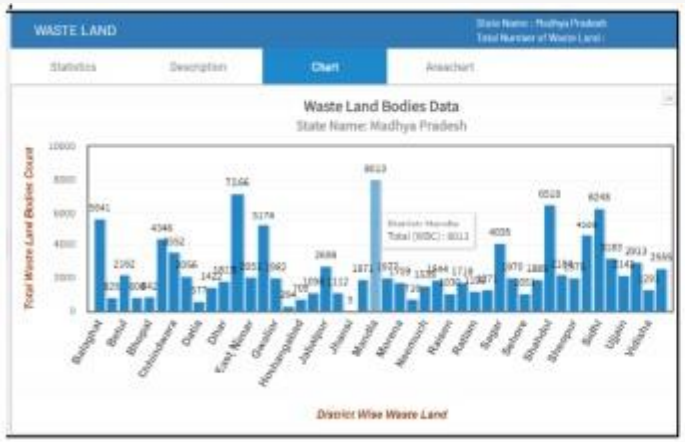
- based on 2005-06 satellite data (prepared by NRSC in collaboration with various partner institutions

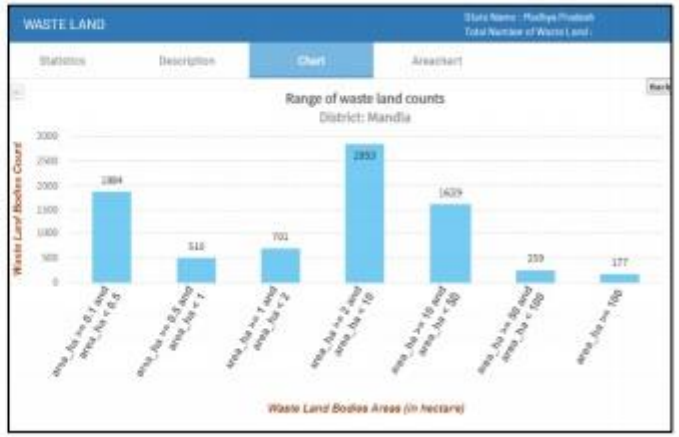
Unit-wise selection and statistics



Classes under wasteland statistics and charts



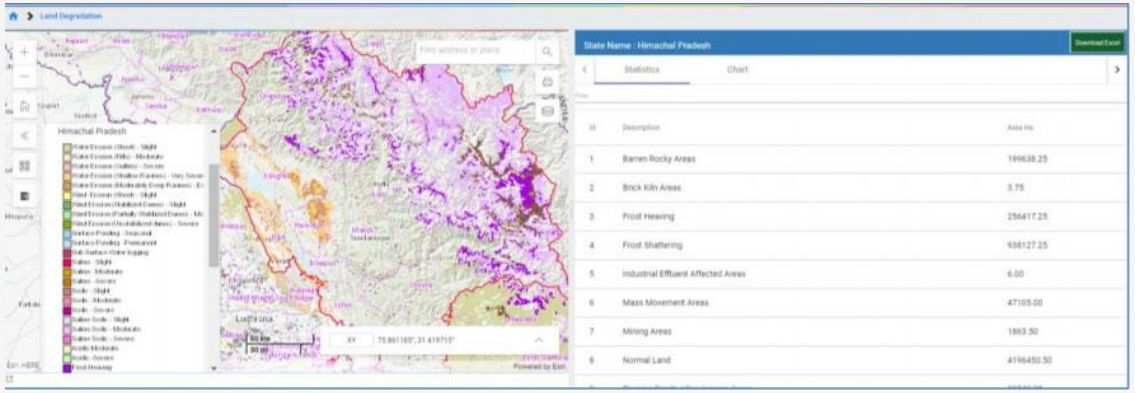




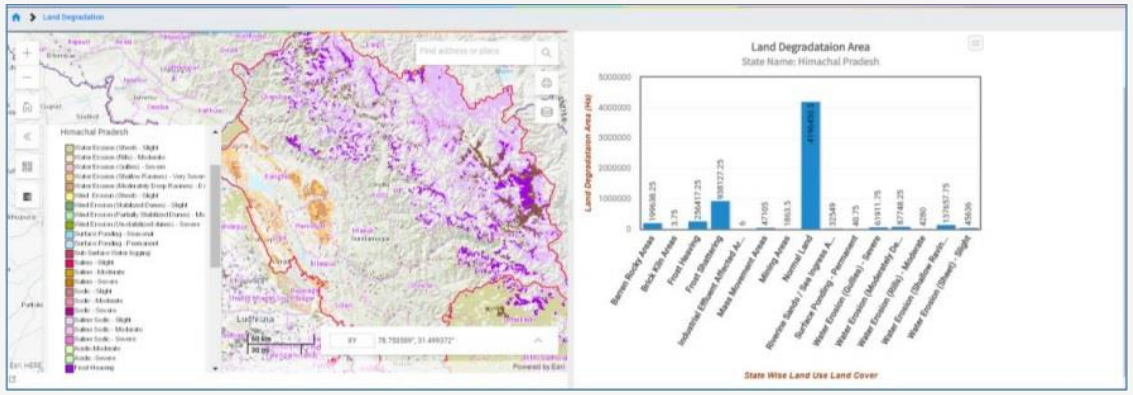
Number of wastelands in unit selected with area class wise distribution chart

2.8 Land Degradation

-Spatial distribution, extent and the area under land degradation (available for 8 states only)
- It represents areas under various forms of land degradation processes, its type and severity level.



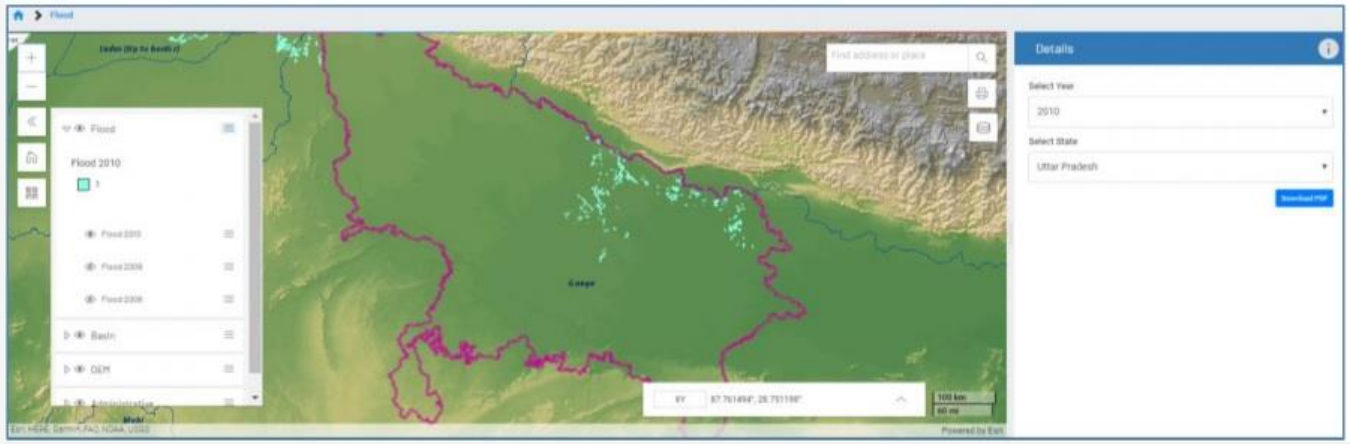
State Selection and Statistics



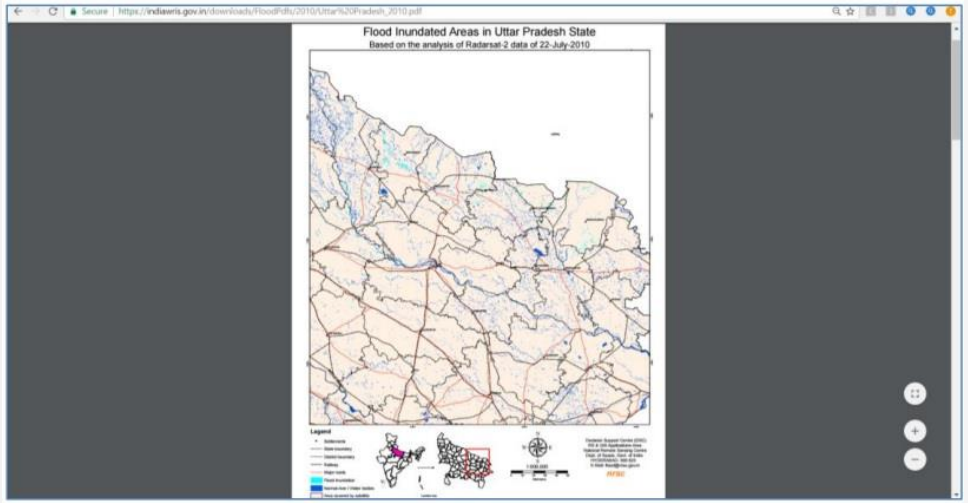
State selection and Chart

2.9 Hydro-met Extremes

- Flood inundated area based on satellite derived images for three years viz., 2008, 2009 and 2010

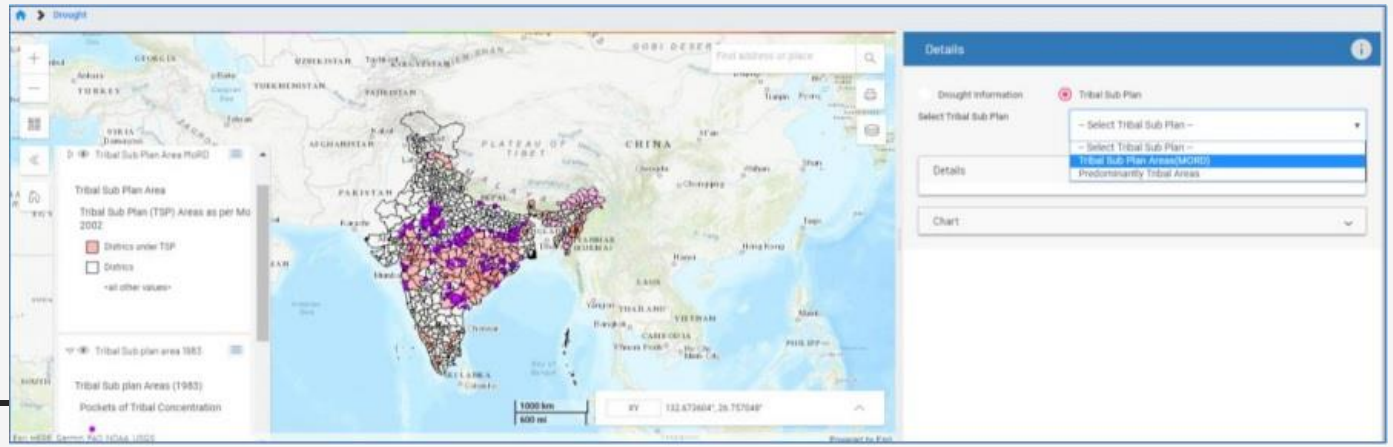


Flood - State selection and pdf downloads

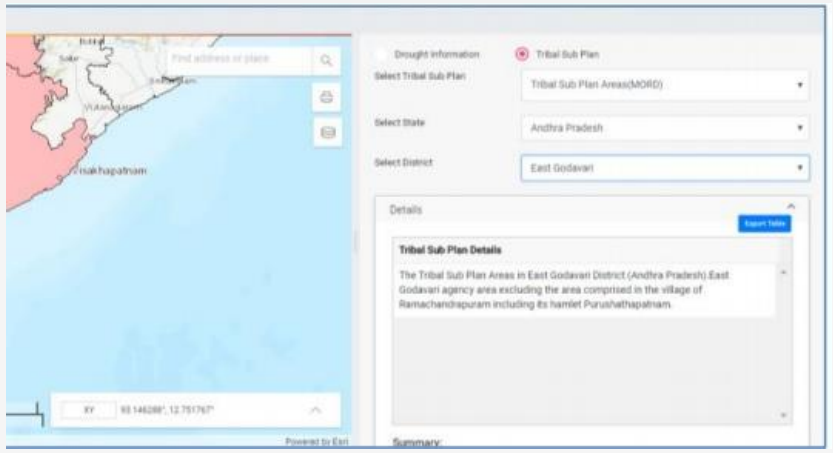


Flood pdfs

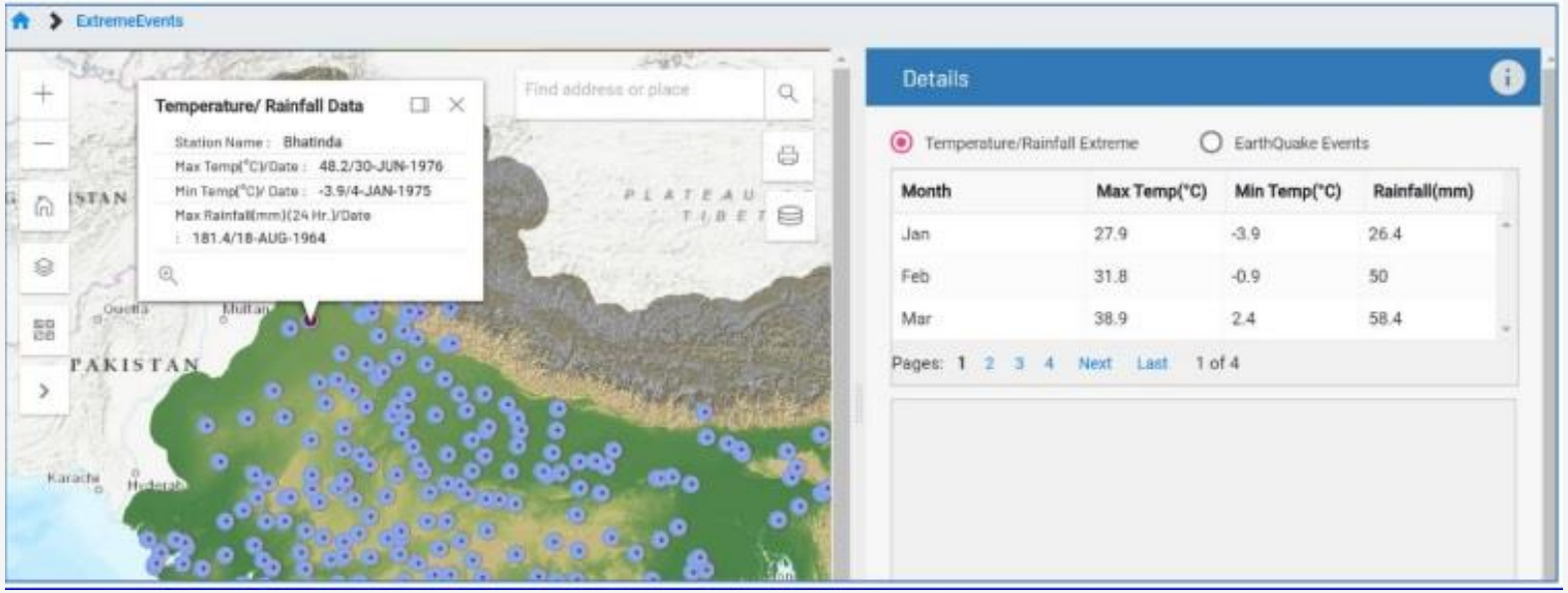
- Drought Prone Area based on the information generated under two main themes i.e. Areas under Drought Prone Development and Desertification Development & Tribal Sub-Plan Areas in the Country



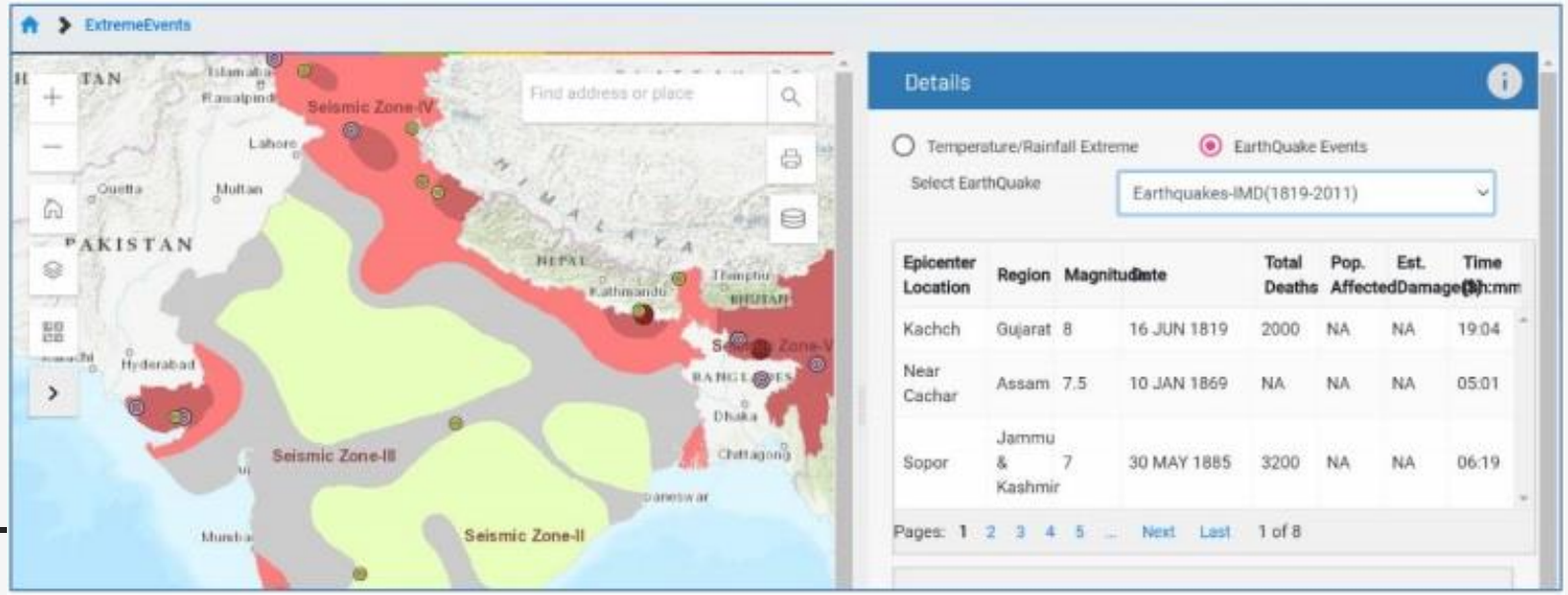
Drought – Tribal sub plan



Drought – District selection and statistics



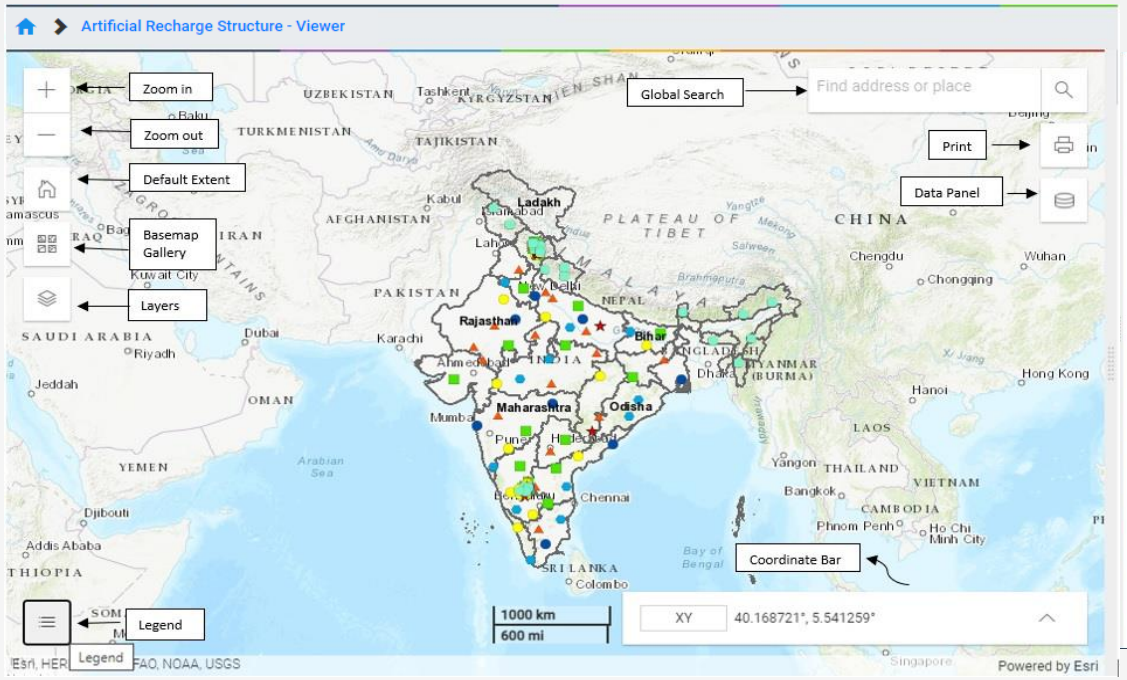
Temperature / Rainfall Extremes

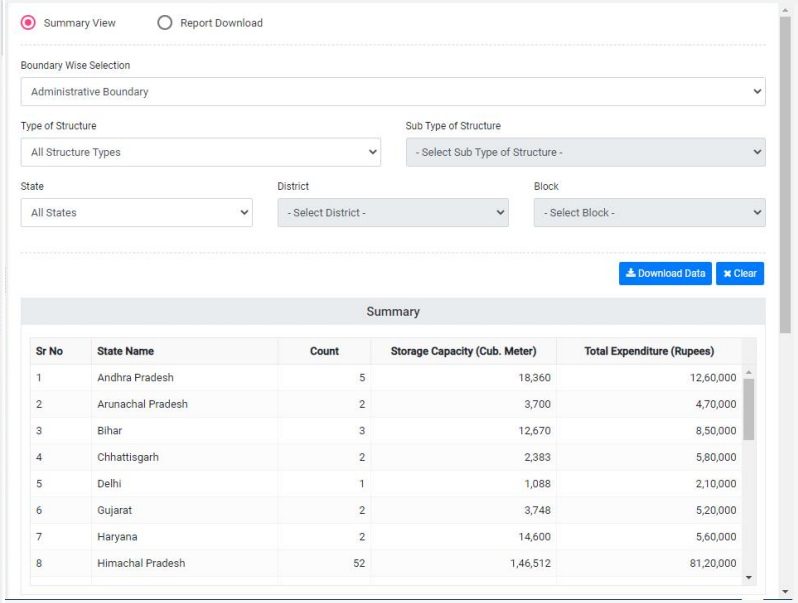


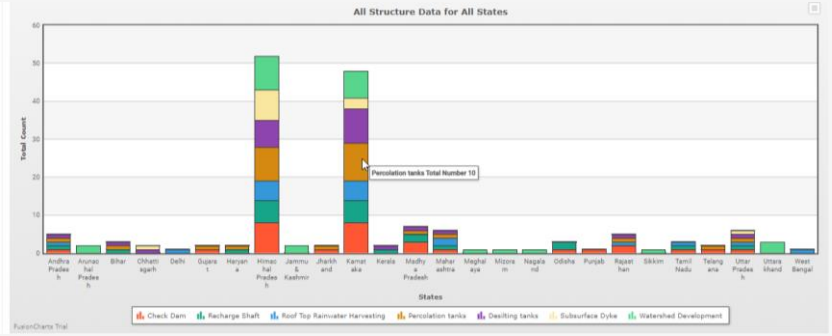
Earthquake

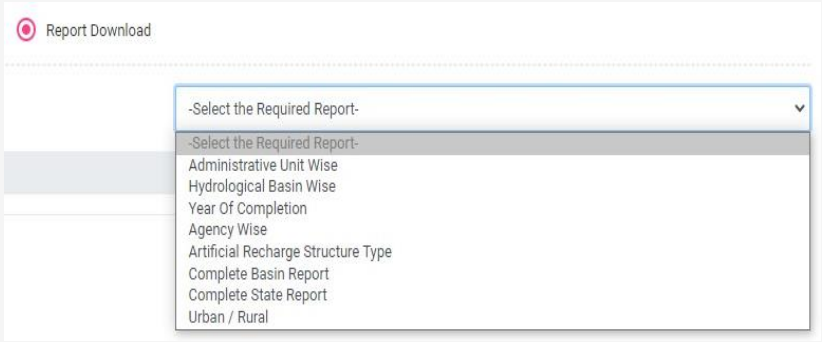
2.10 Artificial Recharge Structure - Viewer

- *Provides holistic picture of the existing artificial recharge structures in a structured manner.*
- *User can view/download the data through map or in the form of tables.*
- *Pre-generated Reports are available for easy and quick access of the information*
- *9 types of reports*





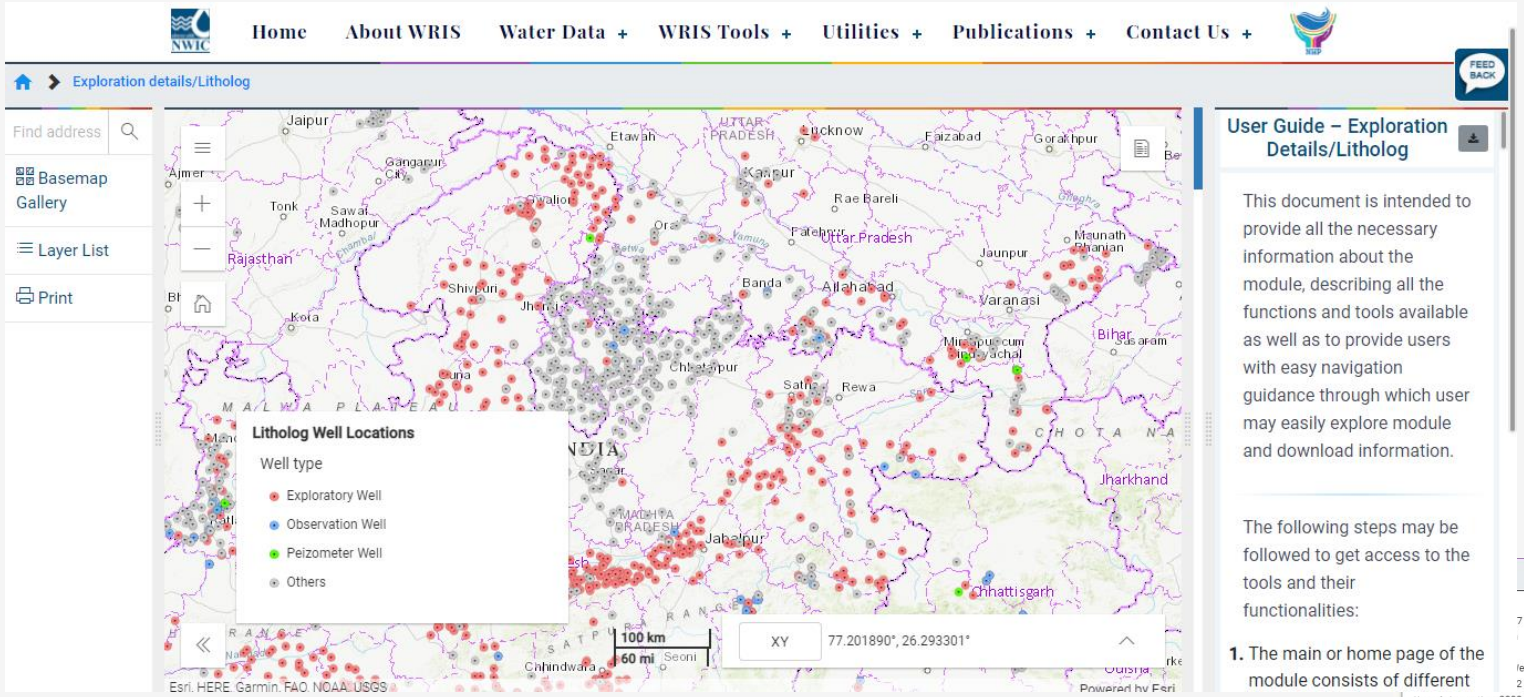




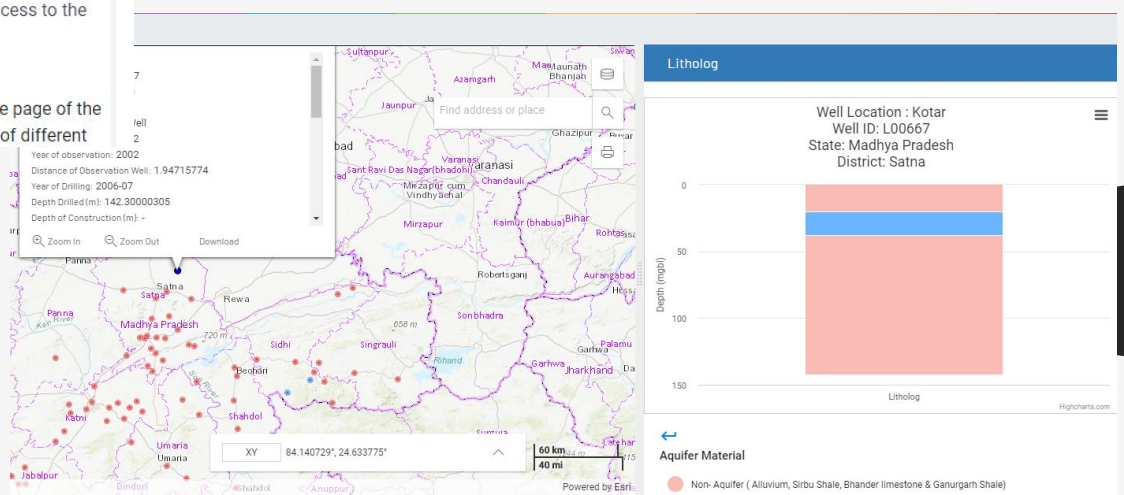
3. Static Modules

3.1 Exploration details/Litholog

- *Provides the litholog of boreholes*
- *Information provided in terms of major lithology & aquifer zones (encountered / tapped)*
- *Individual bore logs with static parameters have been represented graphically.*



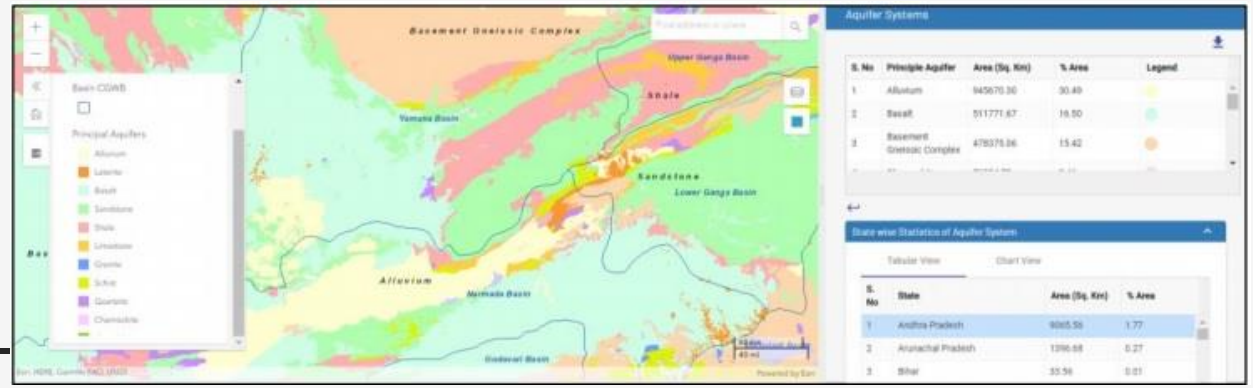
Individual Bore details



3.2 Aquifer-2D

- 14 Principal Aquifer Systems &
- 42 Major Aquifers.
- In addition, Aquifer thickness, depth of first aquifer and aquifer material
- Map is available for view for the states having lithology data.

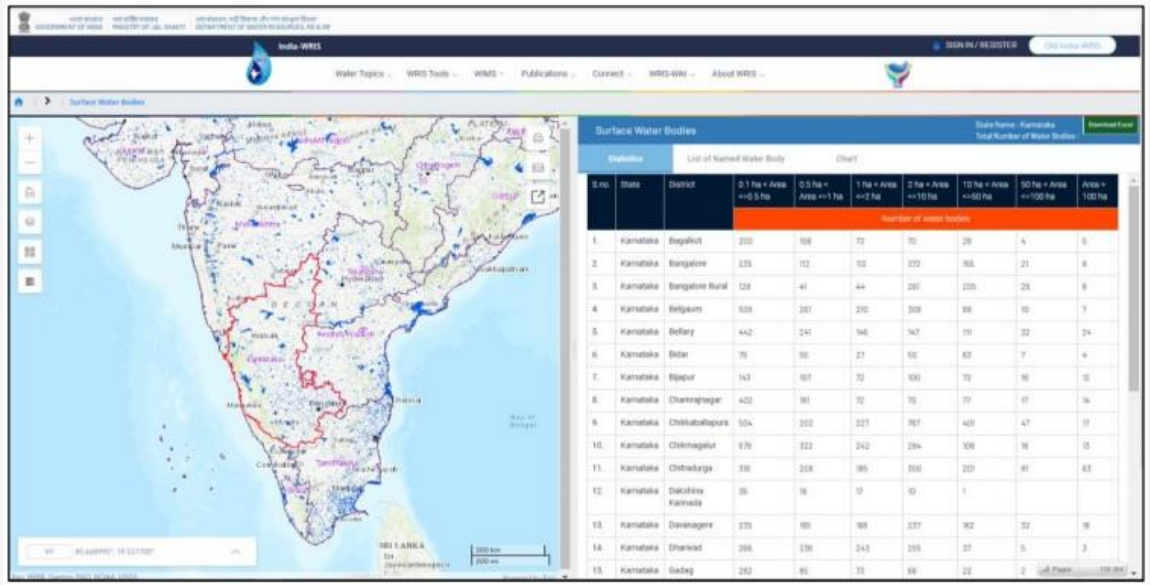
Aquifer Systems



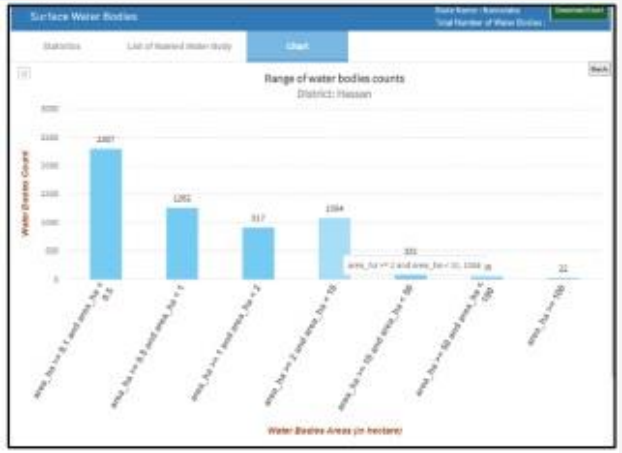
Aquifers statistics state level

3.3 Surface Water Bodies

-Spatial distribution, extent and no. of surface Water Bodies mapped across nation.
- waterbodies under different area classes.



Surface Water Bodies – Unit Selection - Statistics



Drill down charts

3.4 River Information

- Provides various hydrological boundaries (basin, sub-basin and water shed along with river layer) by different agencies

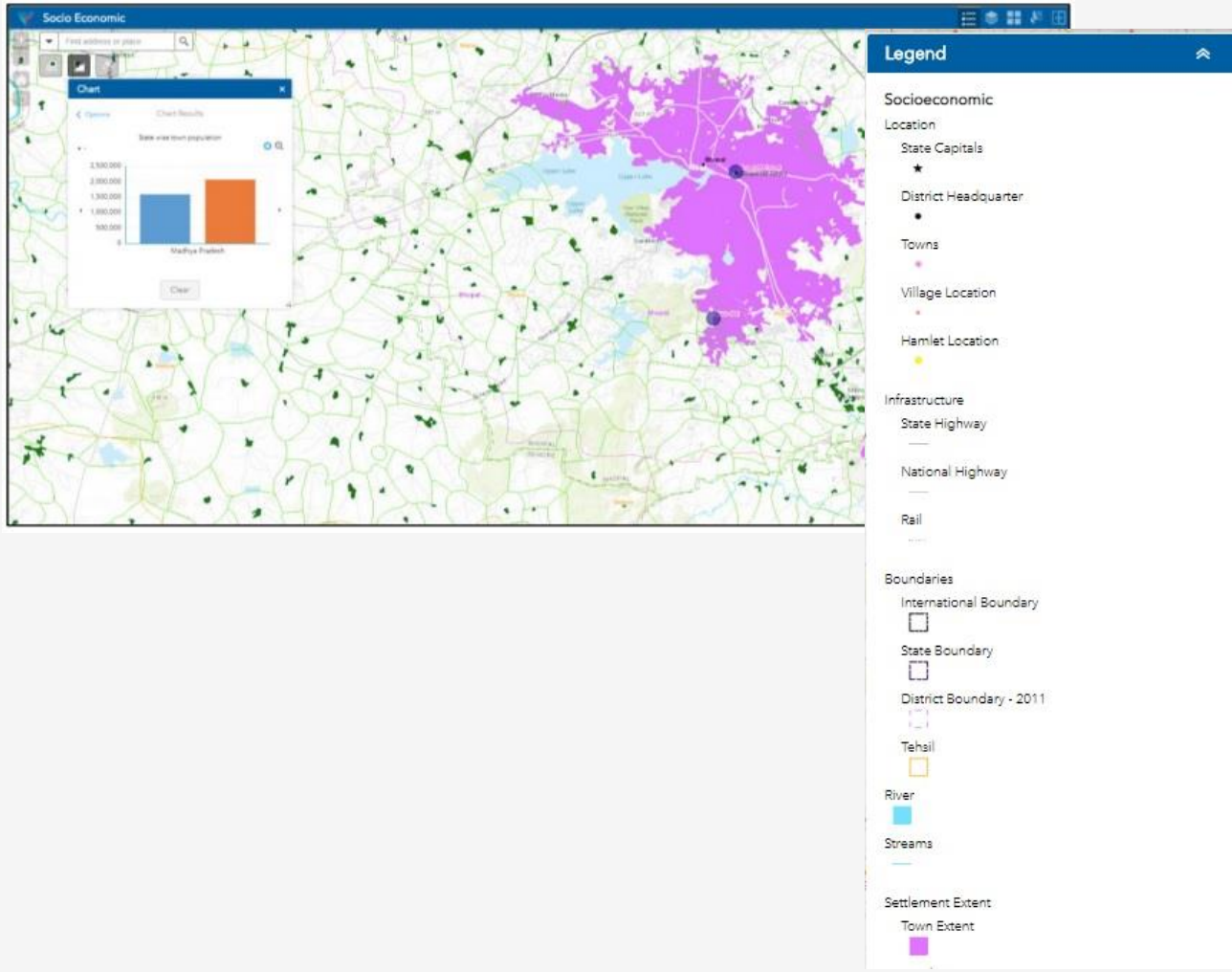
Global search

Zoom to feature

3.5 Socio Economic Census

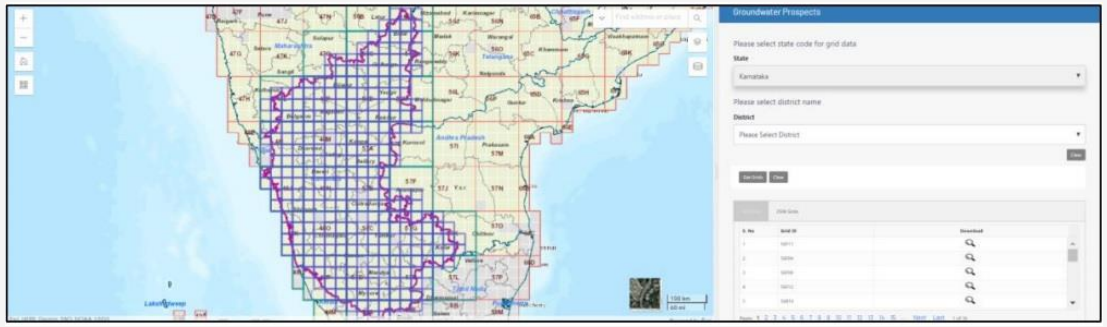
-Information regarding hierarchy of Administrative boundaries, settlement information for urban and rural sets

- Village boundary layer (declared by SOI) also provided

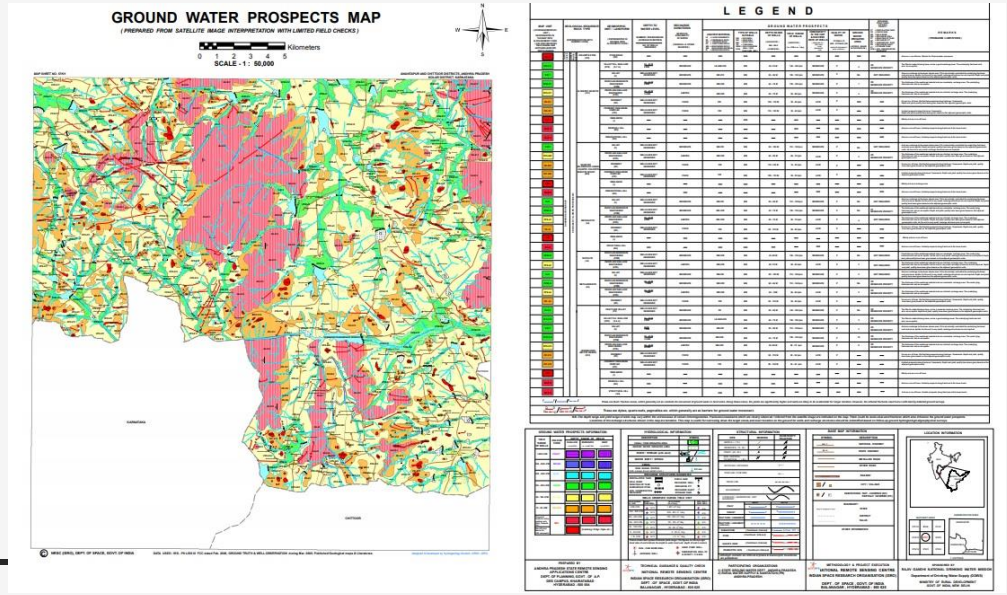


3.6 Groundwater Prospects

- Provides information regarding potential areas in terms of ground water availability (both quantity and quality).
- Maps are provided on 1:50,000 scale.



Groundwater Prospects Grid in selected state

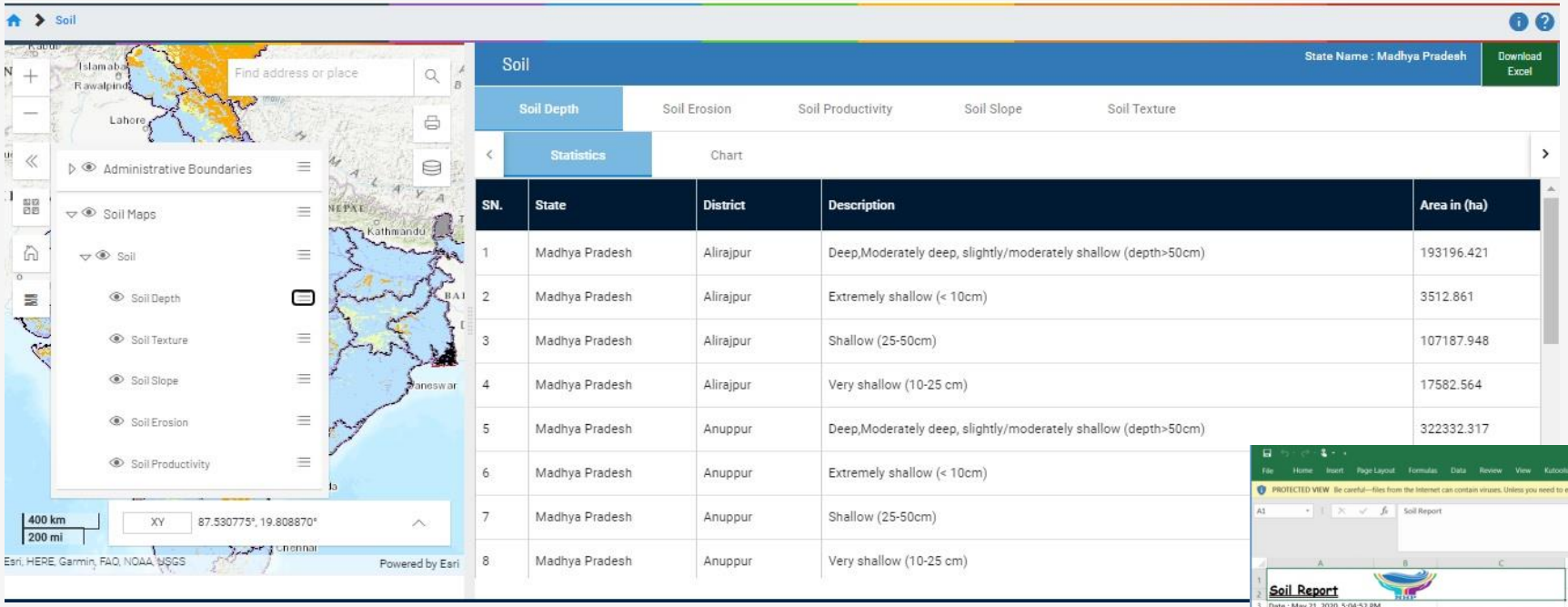


Downloads – View of the map with legend

3.8 Soil

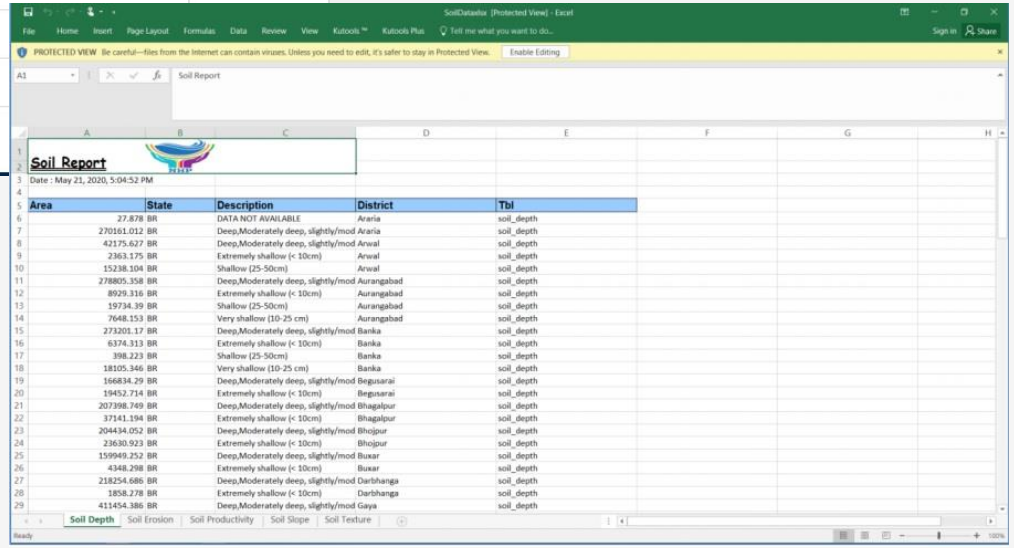
- Distribution of soil layer for entire country

- represents variation of soils in terms of texture, depth, slope, erosion and productivity.



SN.	State	District	Description	Area in (ha)
1	Madhya Pradesh	Alirajpur	Deep,Moderately deep, slightly/moderately shallow (depth>50cm)	193196.421
2	Madhya Pradesh	Alirajpur	Extremely shallow (< 10cm)	3512.861
3	Madhya Pradesh	Alirajpur	Shallow (25-50cm)	107187.948
4	Madhya Pradesh	Alirajpur	Very shallow (10-25 cm)	17582.564
5	Madhya Pradesh	Anuppur	Deep,Moderately deep, slightly/moderately shallow (depth>50cm)	322332.317
6	Madhya Pradesh	Anuppur	Extremely shallow (< 10cm)	
7	Madhya Pradesh	Anuppur	Shallow (25-50cm)	
8	Madhya Pradesh	Anuppur	Very shallow (10-25 cm)	

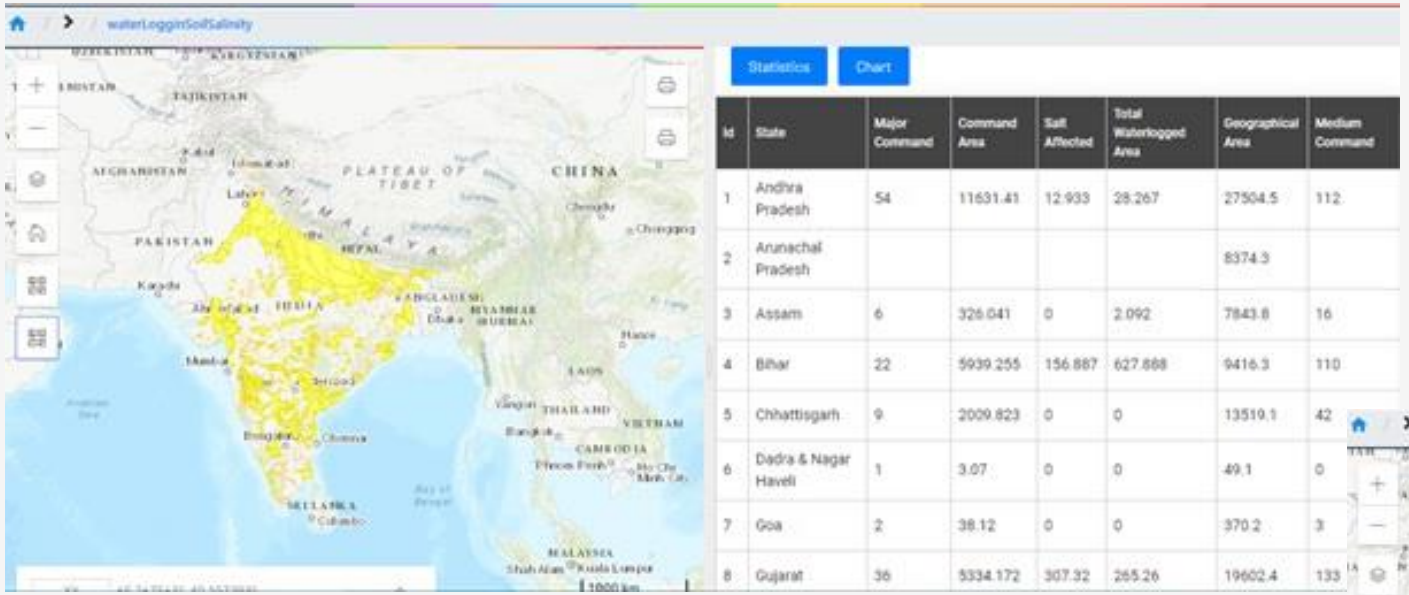
State Selection and Statistics



Data in Excel format

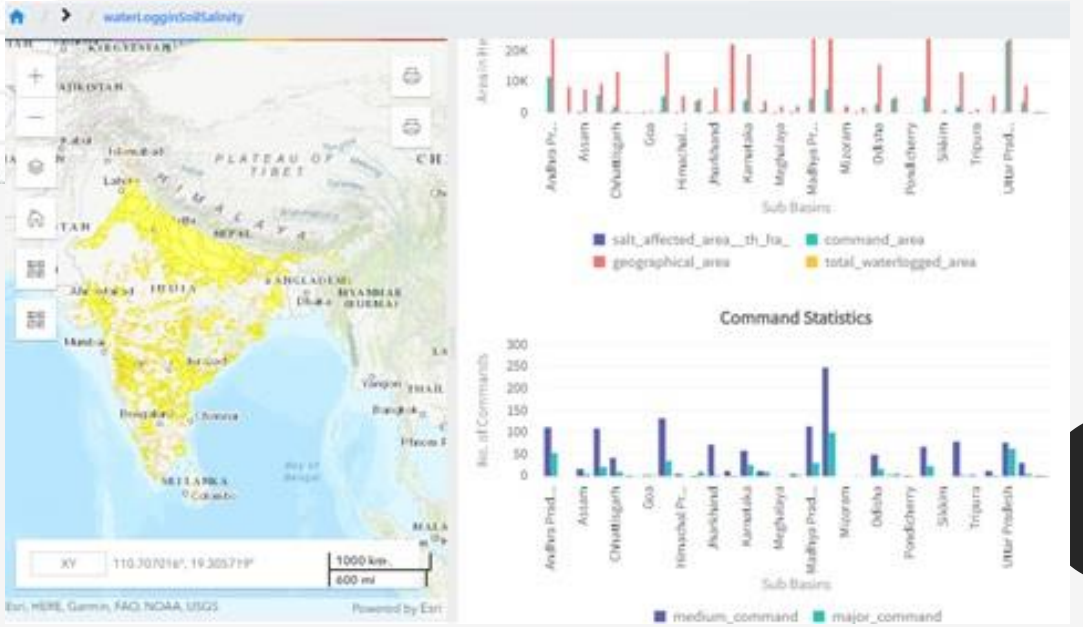
3.9 Water logging & Soil salinity

- Provides statistical analysis of water-logging area and soil salinity under major and medium commands in different State along with chart view.



Id	State	Major Command	Command Area	Salt Affected	Total Waterlogged Area	Geographical Area	Medium Command
1	Andhra Pradesh	54	11631.41	12.933	28.267	27504.5	112
2	Arunachal Pradesh					8374.3	
3	Assam	6	326.041	0	2.092	7843.8	16
4	Bihar	22	5939.255	156.887	627.868	9416.3	110
5	Chhattisgarh	9	2009.823	0	0	13519.1	42
6	Dadra & Nagar Haveli	1	3.07	0	0	49.1	0
7	Goa	2	38.12	0	0	370.2	3
8	Gujarat	36	5334.172	307.32	265.26	19602.4	133

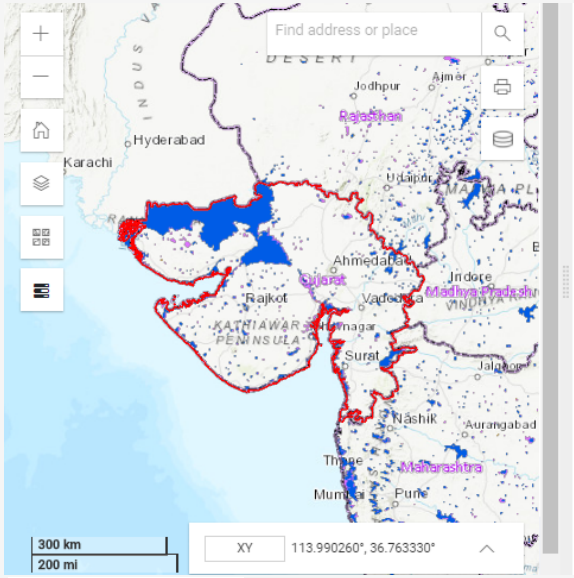
Water Logging and Soil Salinity Module



Statistics and Charts

3.10 Wet Lands

-Spatial distribution and extent of wetlands for the year 1994 & 2005 (pre and post monsoon)
- Satellite based product



State Name : Gujarat

List of Wetlands | Statistics | Chart

Download Excel

SN.	State	District	Location of Wetland	Nature of Wetland	Basin	Sub Basin	Type of Wetland	Wet Name	Wet Time	Area
1	Gujarat	Ahmadabad	Inland	Natural	Sabarmati	Sabarmati Lower	Ox-bow lakes/cut off meanders		WetLandsPostMonsoon1994	58.3
2	Gujarat	Ahmadabad	Inland	Natural	Sabarmati	Sabarmati Lower	Lake/ponds		WetLandsPostMonsoon1994	1596
3	Gujarat	Ahmadabad	Inland	Natural	Sabarmati	Sabarmati Lower	Lake/ponds		WetLandsPostMonsoon1994	7940
4	Gujarat	Ahmadabad	Inland	Man-made	Sabarmati	Sabarmati Lower	Reservoirs		WetLandsPostMonsoon1994	141.(
5	Gujarat	Ahmadabad	Coastal	Natural	Sabarmati	Sabarmati Lower	Sand/beach/spit/bar		WetLandsPostMonsoon1994	81.3
6	Gujarat	Ahmadabad	Coastal	Natural	Sabarmati	Sabarmati				

Wetland

- WetLandsPostMonsoon2005
- WetLandsPreMonsoon2005
- WetLandsPostMonsoon1994
- WetLandsPreMonsoon1994

State Name : Gujarat

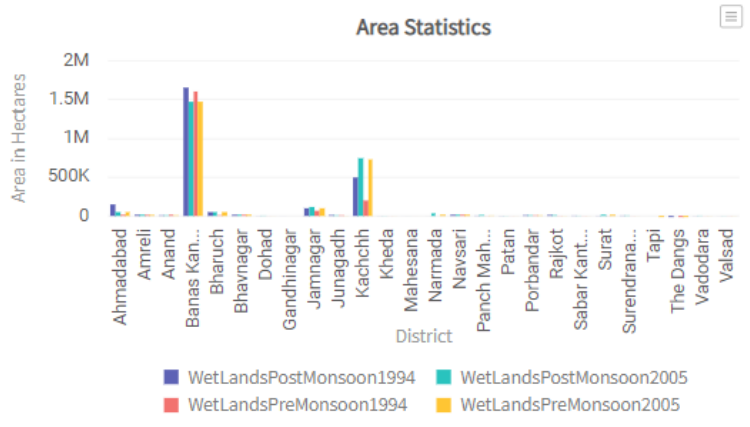
List of Wetlands | Statistics | Chart

Download Excel

SN.	District	WetLands Post Monsoon 1994 (Area (Ha))	WetLands Post Monsoon 2005 (Area (Ha))	WetLands Pre Monsoon 1994 (Area (Ha))	WetLands Pre Monsoon 2005 (Area (Ha))
1	Ahmadabad	164343.409	56361.360	22562.365	50663.856
2	Amreli	19665.688	18458.501	14537.872	13911.876
3	Anand	9362.729	9660.722	17612.530	9793.457
4	Banas Kantha	1656868.764	1485024.998	1619283.244	1480469.808
5	Bharuch	53121.648	52327.808	10696.383	51730.916
6	Bhavnagar	27311.142	30875.074	15610.027	25066.474
7	Dohad	2700.005	5694.024	1110.373	1226.156
8	Gandhinagar	459.647	84.101	149.130	59.738

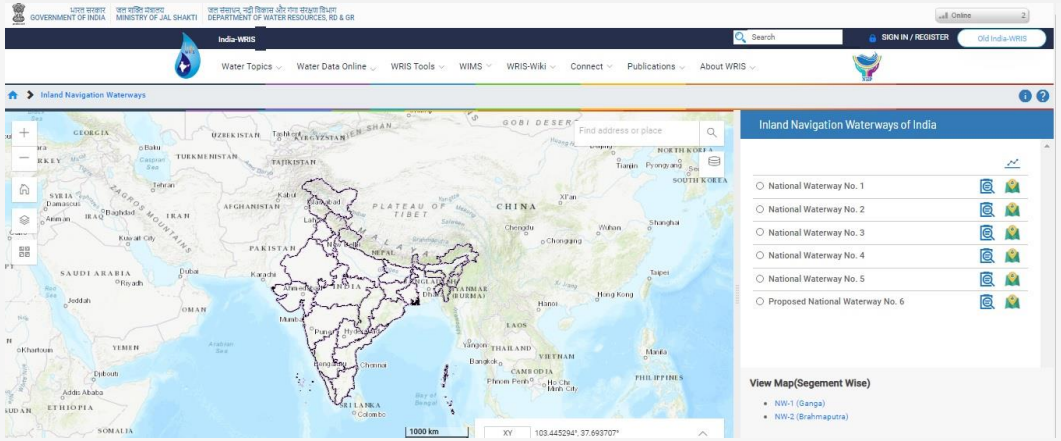
State Name : Gujarat

List of Wetlands | Statistics | Chart



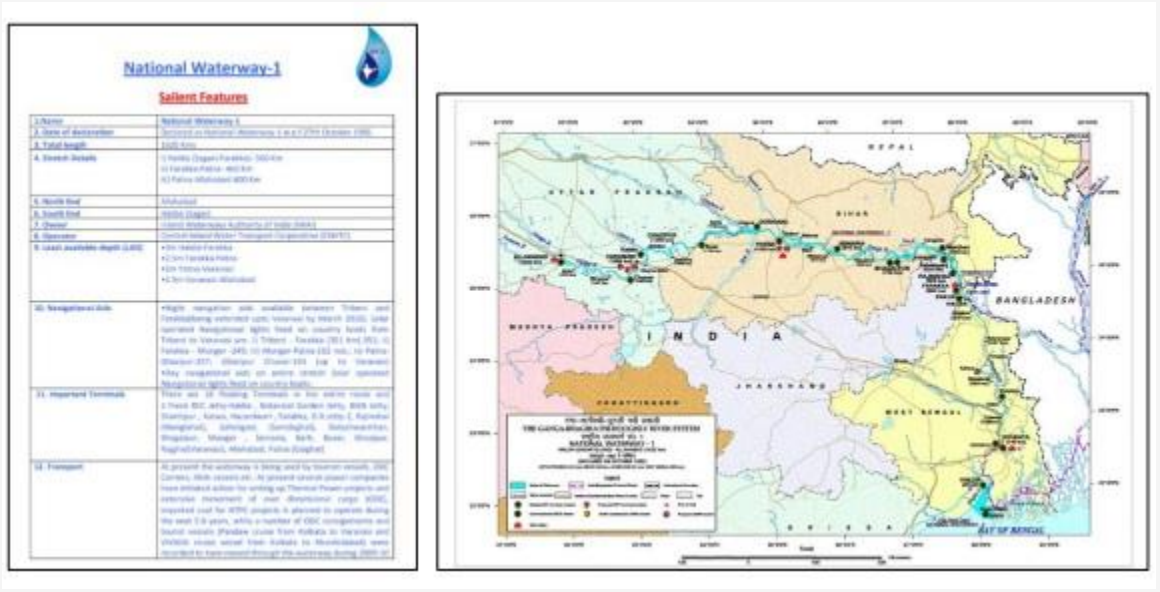
3.11 Inland Navigation Waterways

- Brief summary of all inland waterways along with the maps as well as all relevant information.
- 5 Navigation Waterways namely,
(a) the Ganga (NW-1), (b) the Brahmaputra (NW-2), (c)the West Coast Canal (NW-3),
(d) Kakinada-Puducherry Canals system along with Godavari and Krishna rivers (NW-4) and
(e) East Coast Canal with Brahman River and Mahanadi delta (NW-5).
- Sixth proposed navigation waterway (The Barak – NW-6).



Inland Navigation Waterways

Overview of Waterway



Downloads – Salient features and Map

3.12 Interbasin Transfer Links

- *Information and maps of the various components of the Inter Basin Transfer Links.*
- *Detailed structures and water bodies associated for Peninsular component*
- *Published maps of NWDA in .pdf format are available for Himalayan component.*

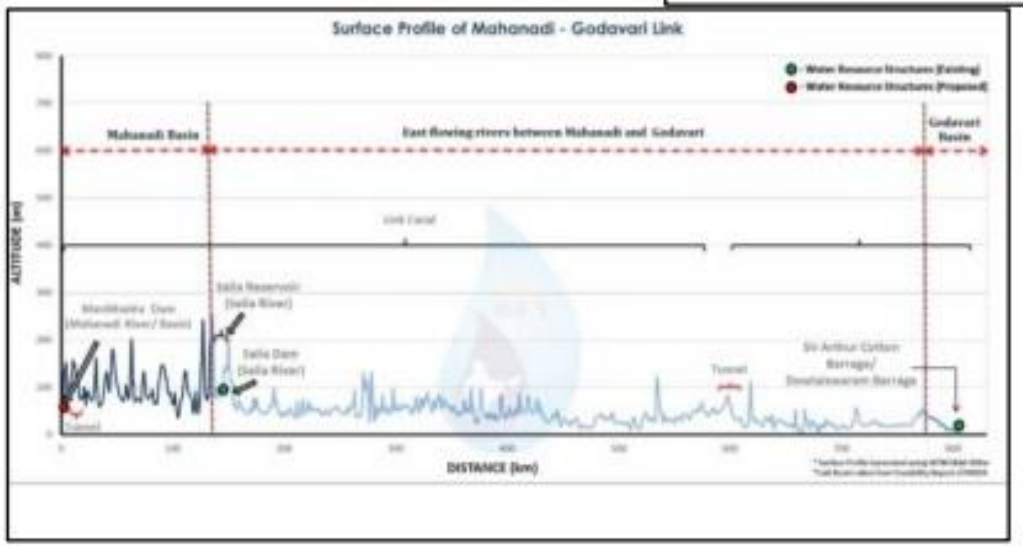
Himalaya Inter Basin Transfer Link

Zoom to link on click

Downloads – Map view of links

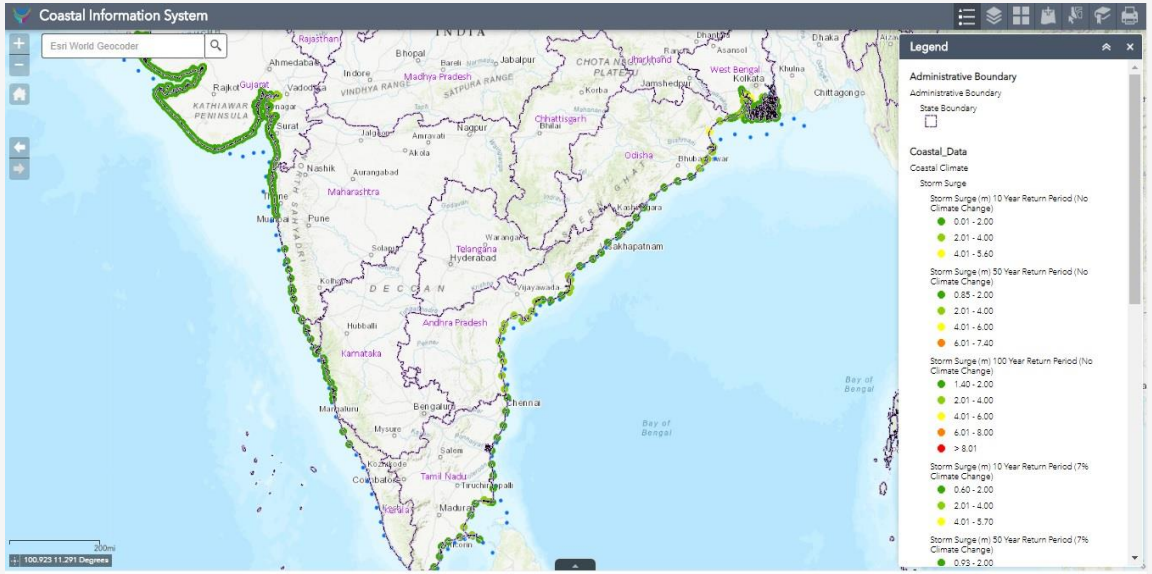
Salient Features of Mahanadi - Godavari Link Project

1.	Name of the project	Mahanadi (Manibhadra) – Godavari (Dowlaiswaram) Link Project
2.	Purpose	Diversion of 12165 Mm^3 of Mahanadi waters to meet en route irrigation, domestic and industrial needs in Orissa and Andhra Pradesh States and to deliver a quantum of 6500 Mm^3 at upstream, of the Dowlaiswaram barrage on the Godavari river to meet part requirement of Godavari delta.
3.	Quantum of water diversion (Mm^3)	12165
4.	En route Irrigation/Utilisation	
a)	In Orissa State	
	i) C.C.A (ha)	256770
	ii) Annual Irrigation (ha)	351786
	iii) Annual Utilisation (Mm^3)	3184
b)	In Andhra Pradesh State	
	i) C.C.A (ha)	107189
	ii) Annual Irrigation (ha)	91110
	iii) Annual Utilisation (Mm^3)	606
c)	Total	
	i) C.C.A (ha)	363959
	ii) Annual Irrigation (ha)	442896
	iii) Annual Utilisation (Mm^3)	3790



3.13 Storm Surge Study

-Storm Surge are provided at a distance of 10 km for Gujarat, Maharashtra, and West Bengal and rest of the coast line at 50 km interval.

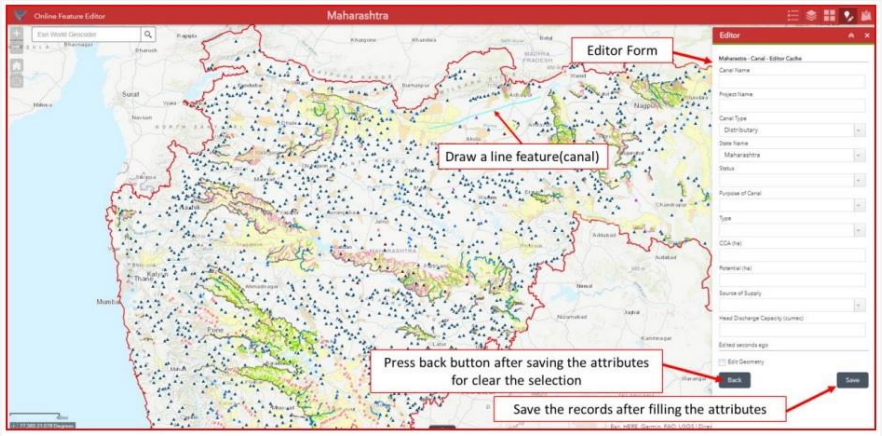


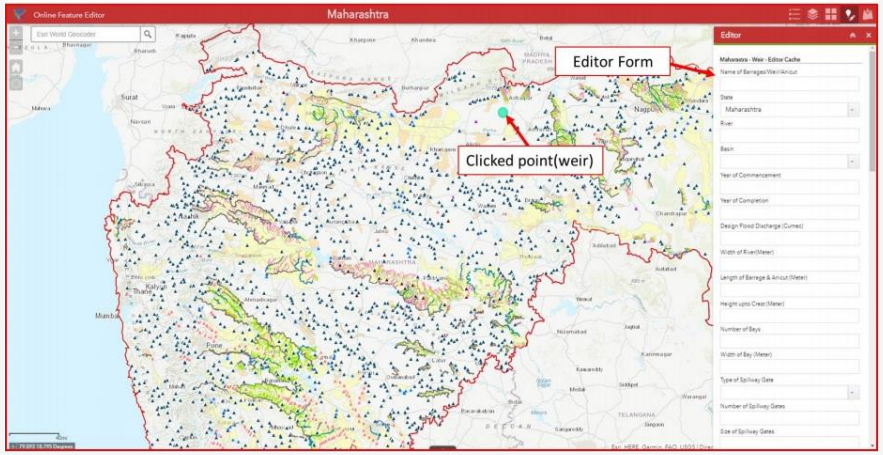
Coastal Information System

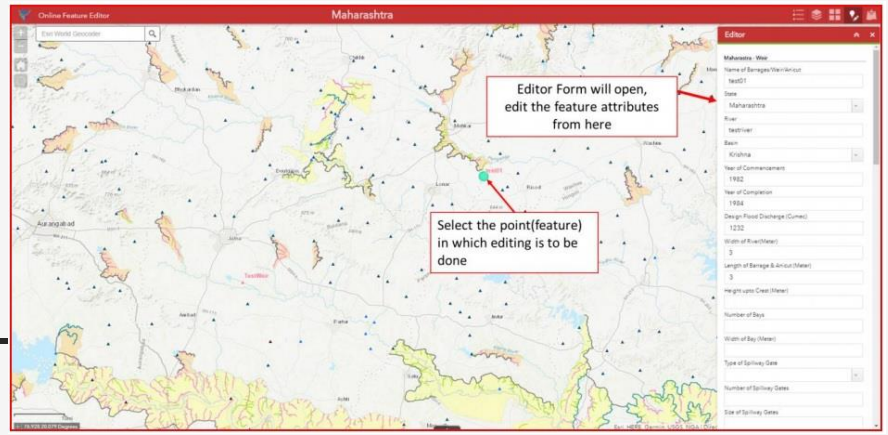
4. Tools

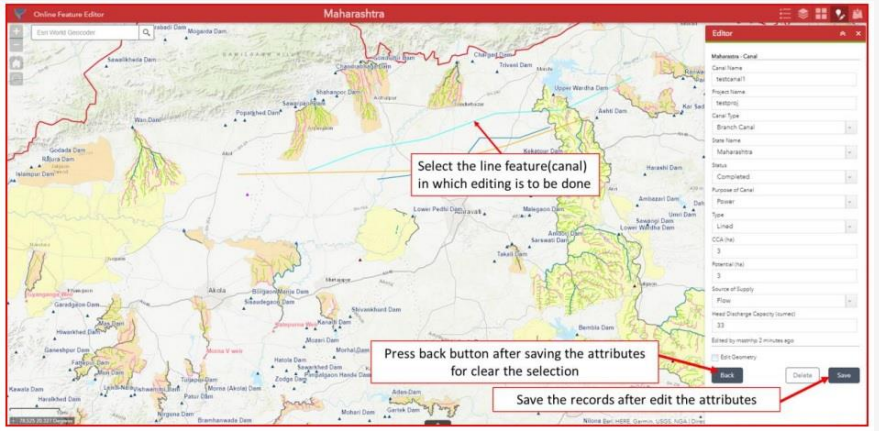
4.1 Online Web Editor

- To provide a platform for the state agencies to upload the water resources information
- Add/edit/delete the features and attributes online for six themes namely, dam, barrage, weir, anicut, lift and canal for further dissemination at India-WRIS platform.
- State users can update Irrigation Projects with authorized access.









4.2 ARS – Data Entry

- Data Entry Platform to ingest the attribute data directly into the India WRIS database.

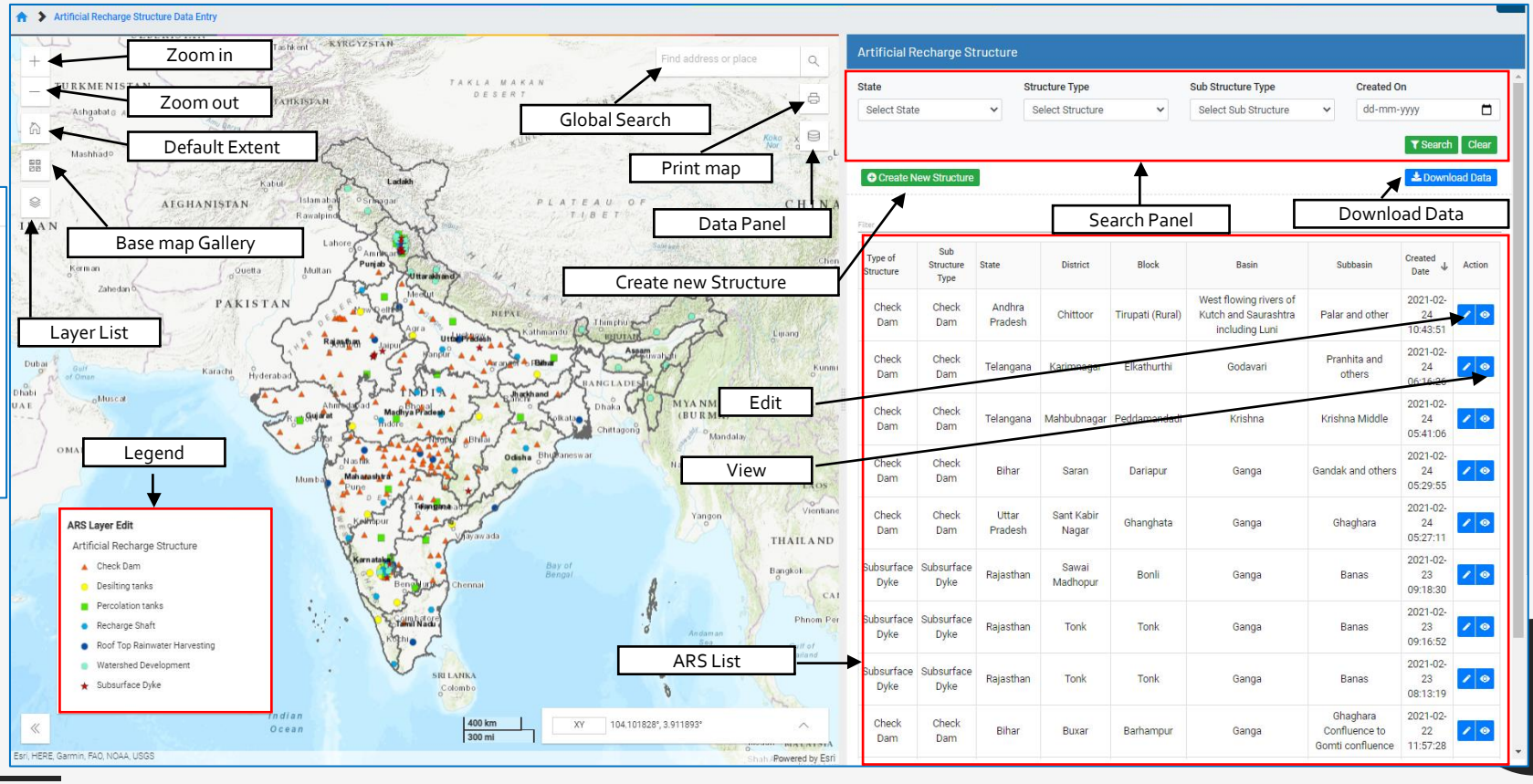
- *Create features such as*
- *Edit Existing features*
- *Download Data*

2 sections in Data Entry Form:

Part A: Primary Field Related To 'Location Details'

Part B: Secondary field are for 'structure details' such as like width, height, storage capacity etc.

Login Based



ARS – Data Entry

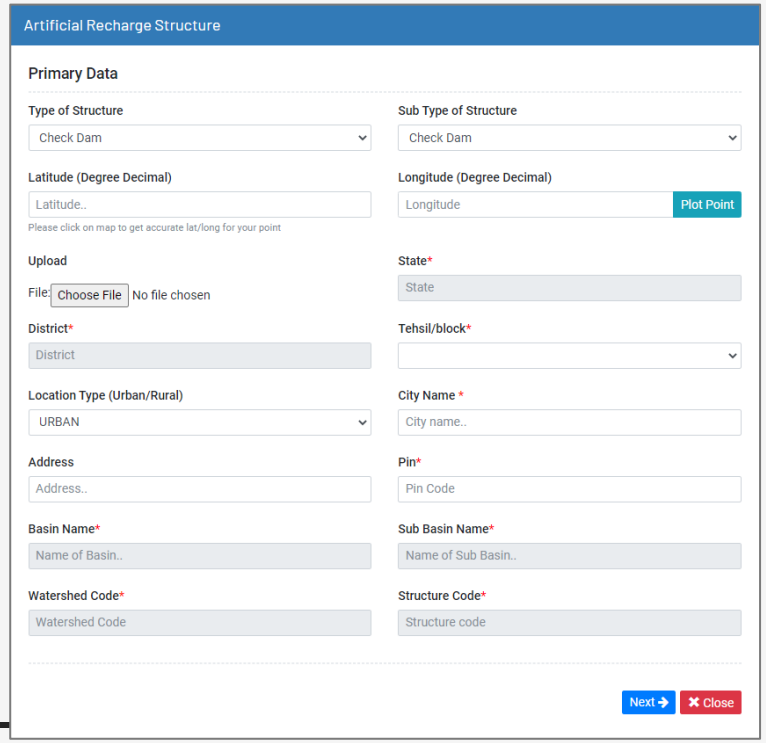
Create new feature–

- Primary and Secondary data form
- Select Structure type & Subtype
- Plot point – Latitude/Longitude
- Autofill of details (grey fields) based on location
- Upload image facility
- Add details for the fields
- Save

2 sections in Data Entry Form:

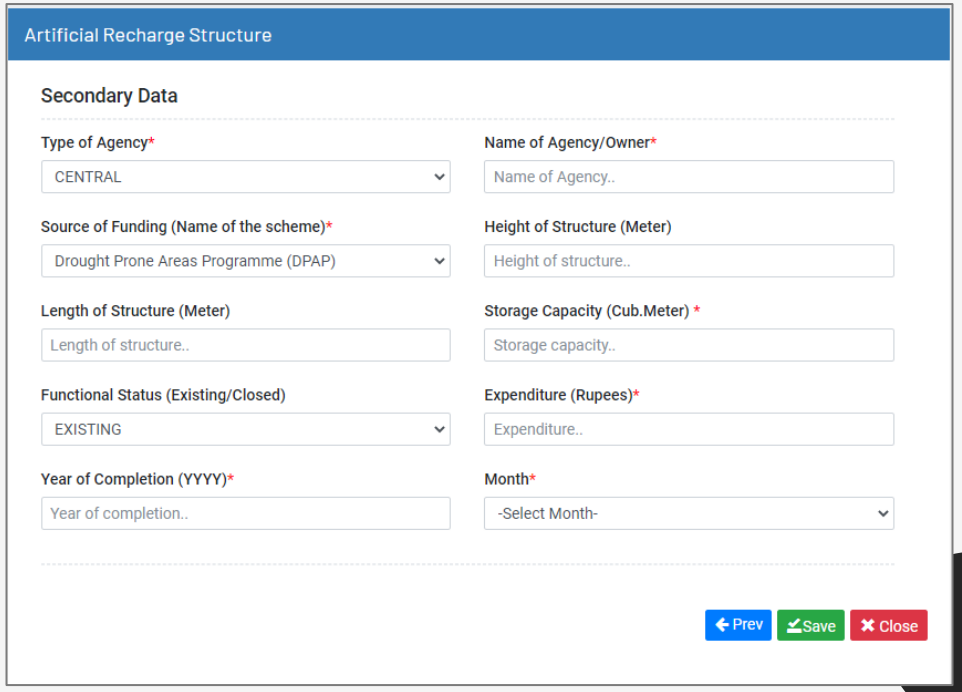
---Part A

Primary Field Related To 'Location Details'



---Part B

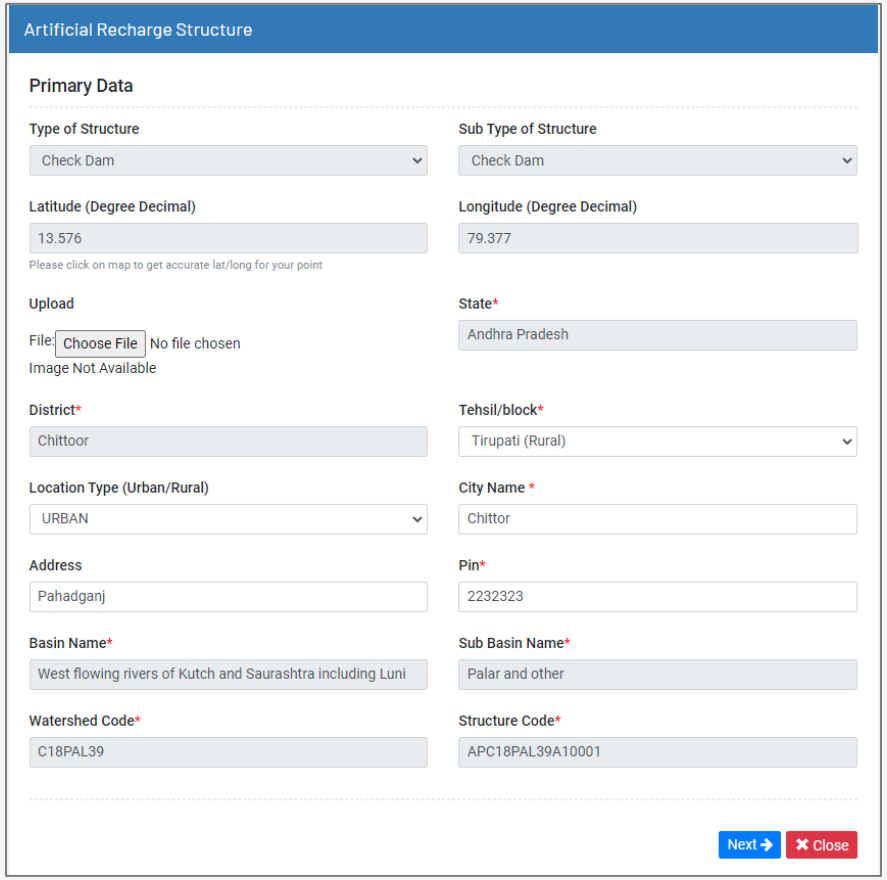
Secondary field are for 'structure details' such as like width, height, storage capacity etc. D:\data collection sheet.xlsx

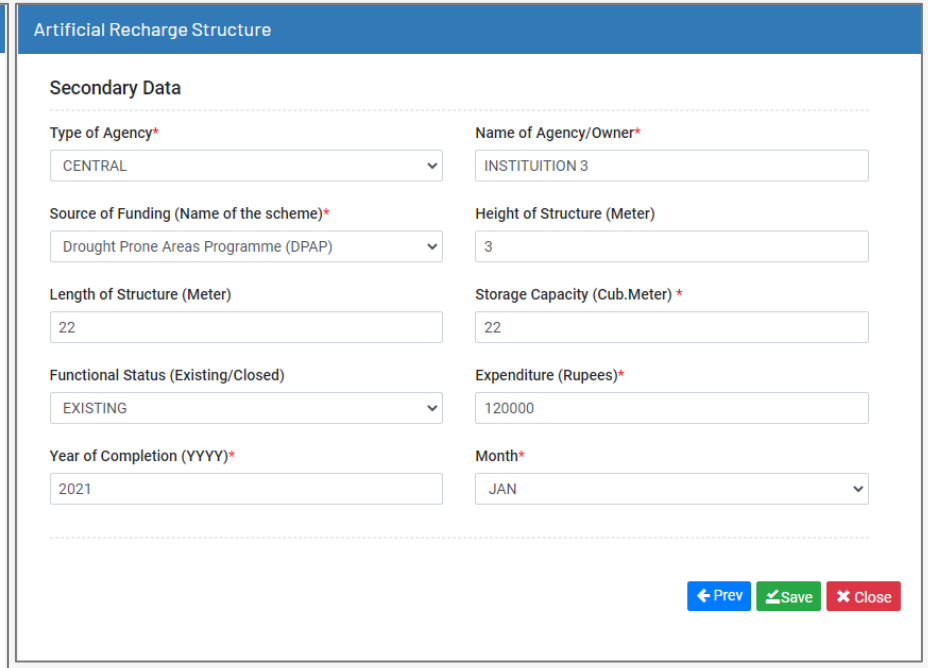


ARS – Data Entry

Edit existing feature–

- Select Structure to edit
- Add/update details for the fields in primary & secondary form
- Upload image facility
- Save

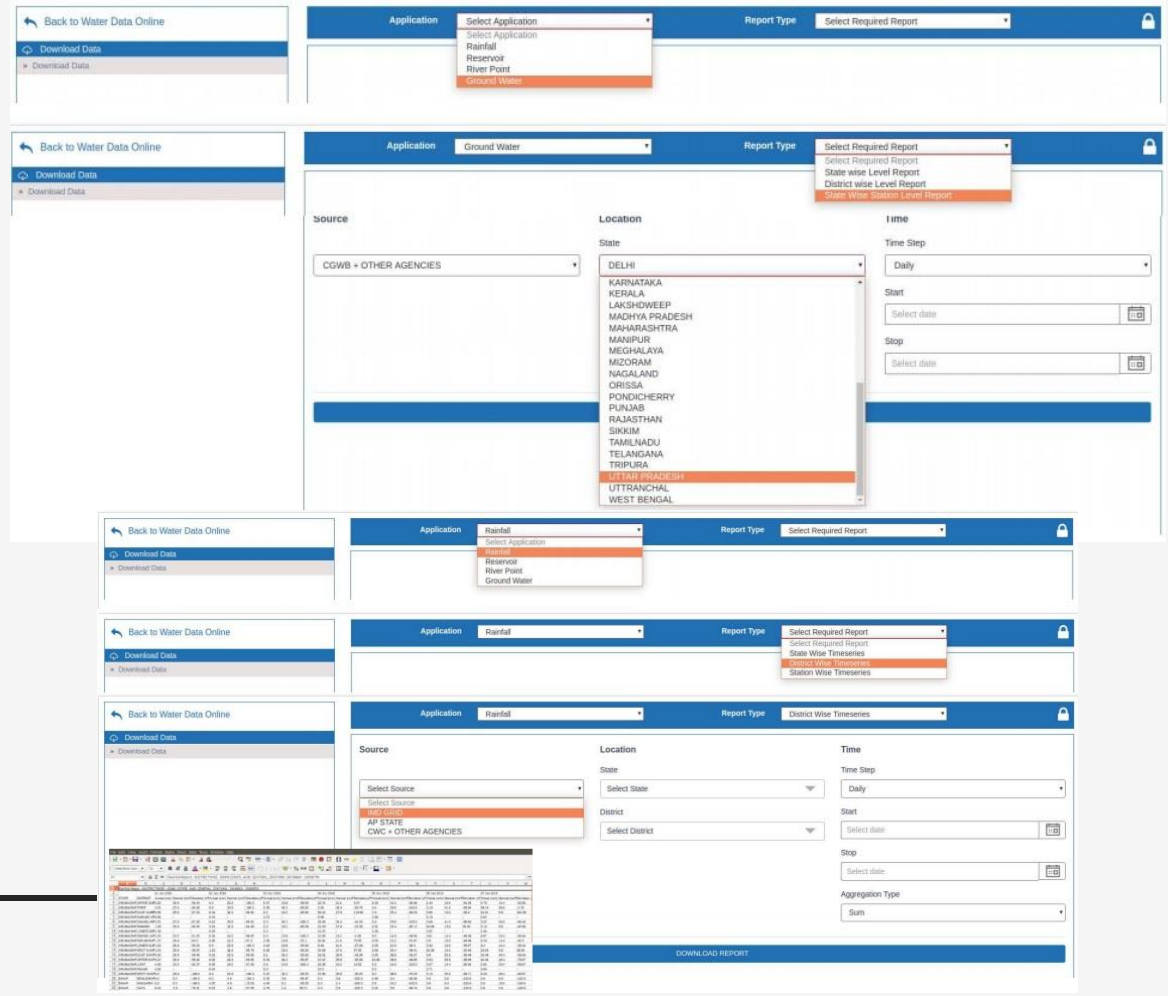


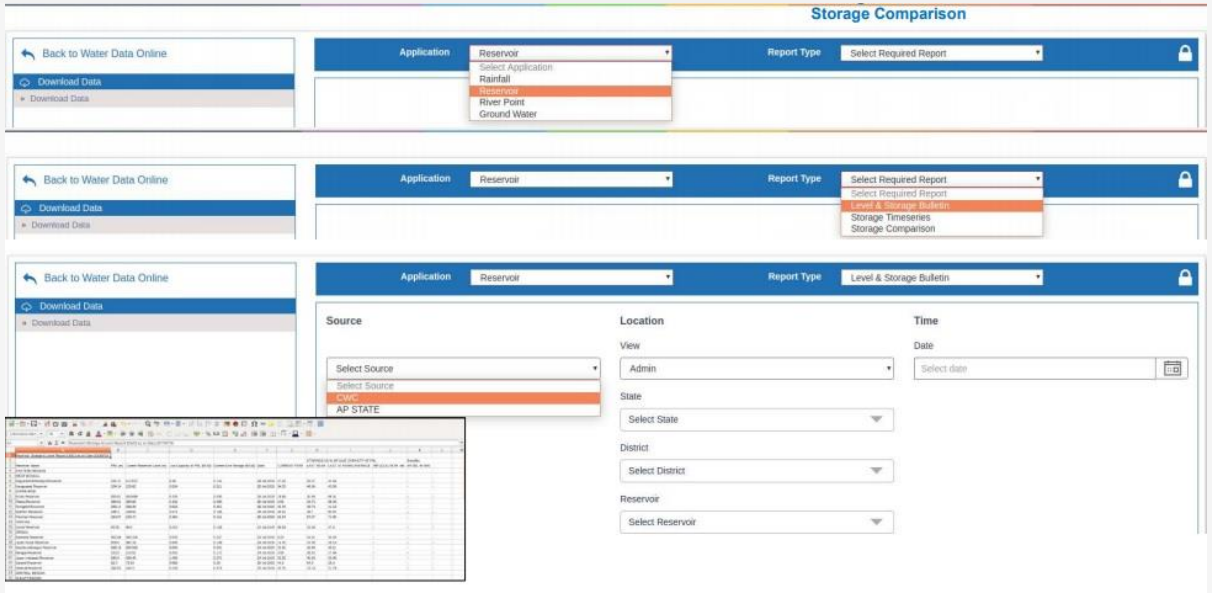


5. Utilities

5.1 Data/Report Download (Tabular)

- *Offers download of time series data*
- *Various types of reports already generated, for ease of data assessment and usage.*
- *Also has a comparison dashboard for comparing the reservoirs and river points data.*

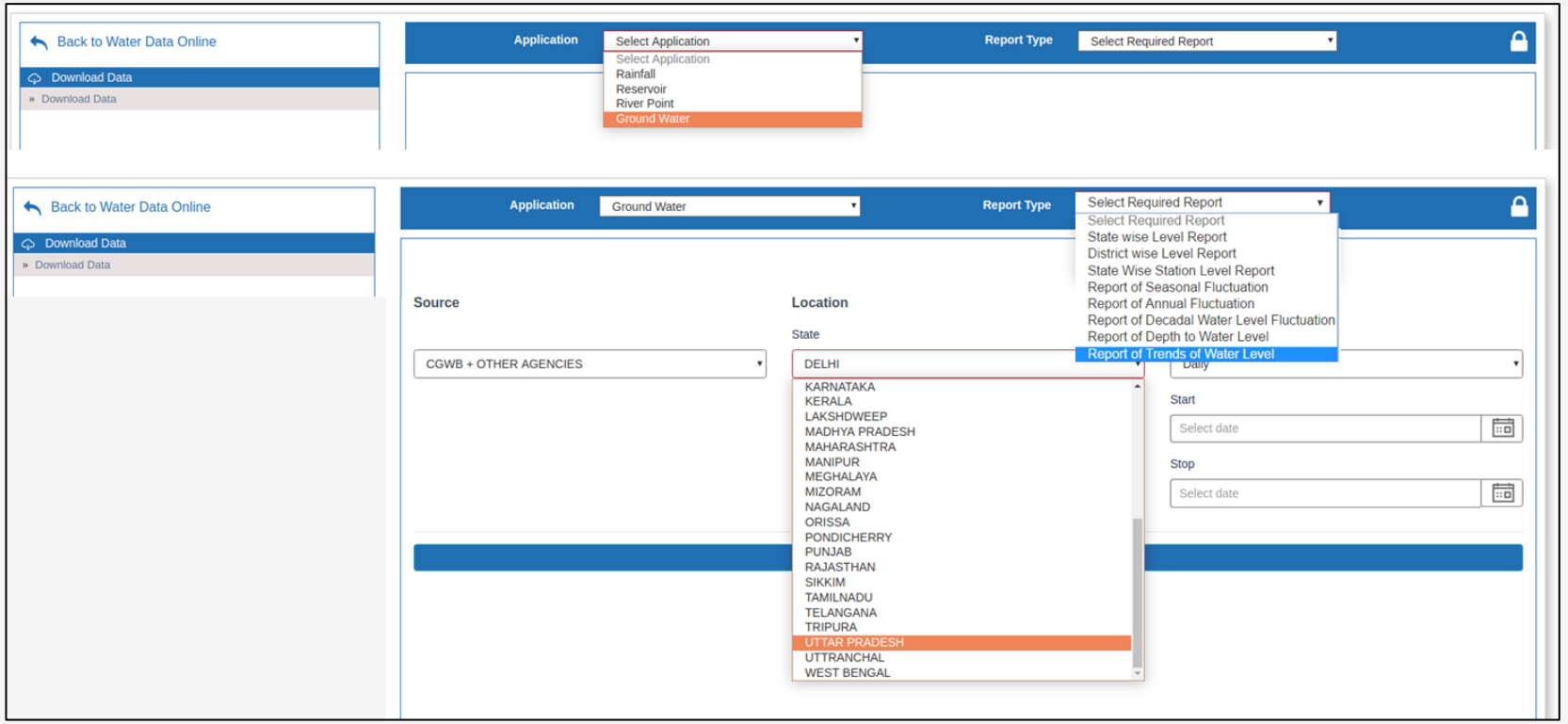




Utilities

Groundwater data download

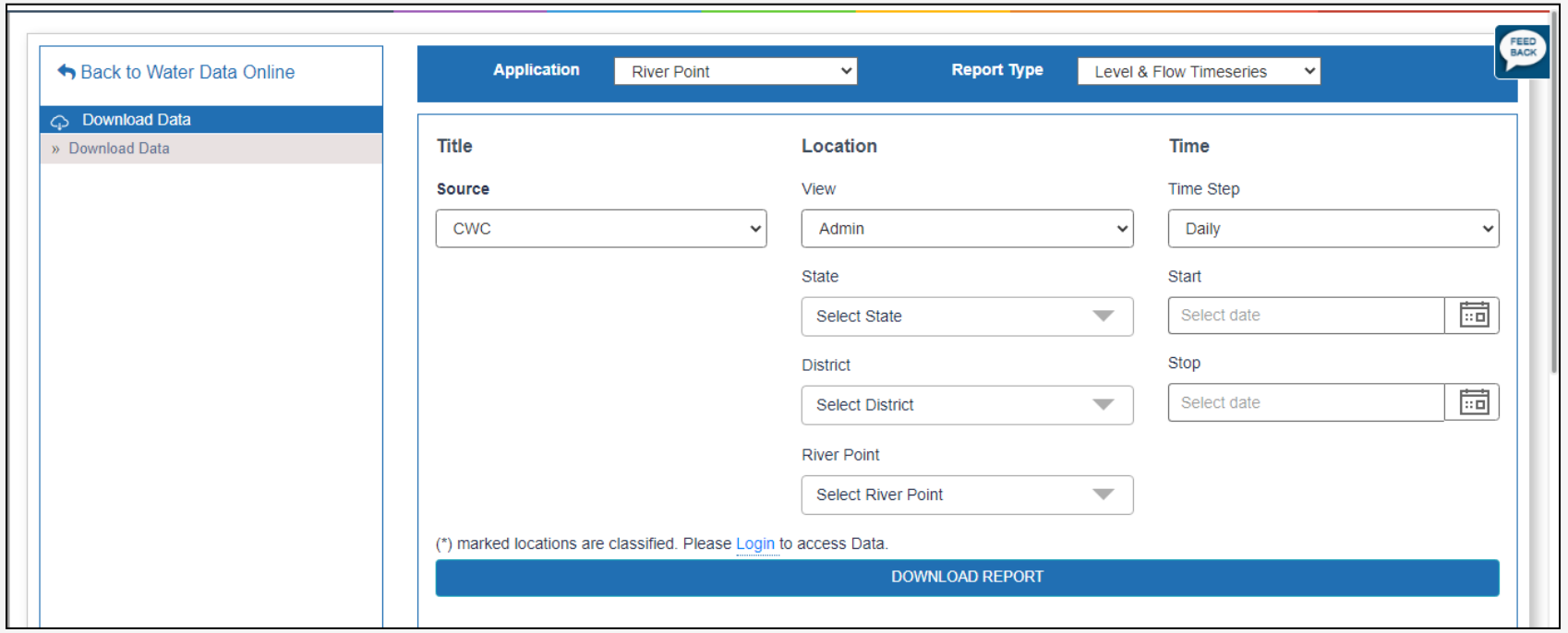
-Groundwater Level - State-wise | District wise | Station wise | Report of Seasonal Fluctuation | Report of Annual Fluctuation | Report of Decadal Water Level Fluctuation | Report of Depth to Water Level | Report of Trends of Water Level



Utilities

River Monitoring stations data download

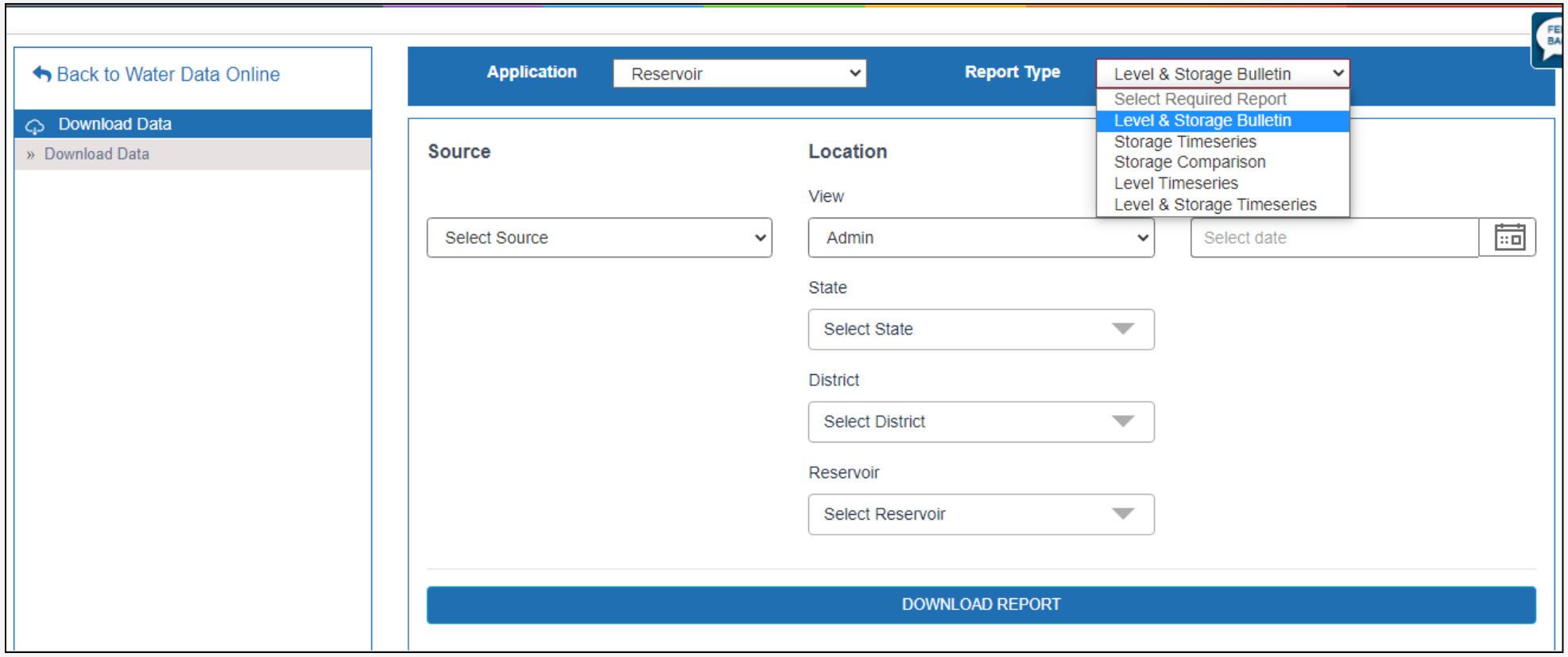
Level and flow



Utilities

Reservoir data download

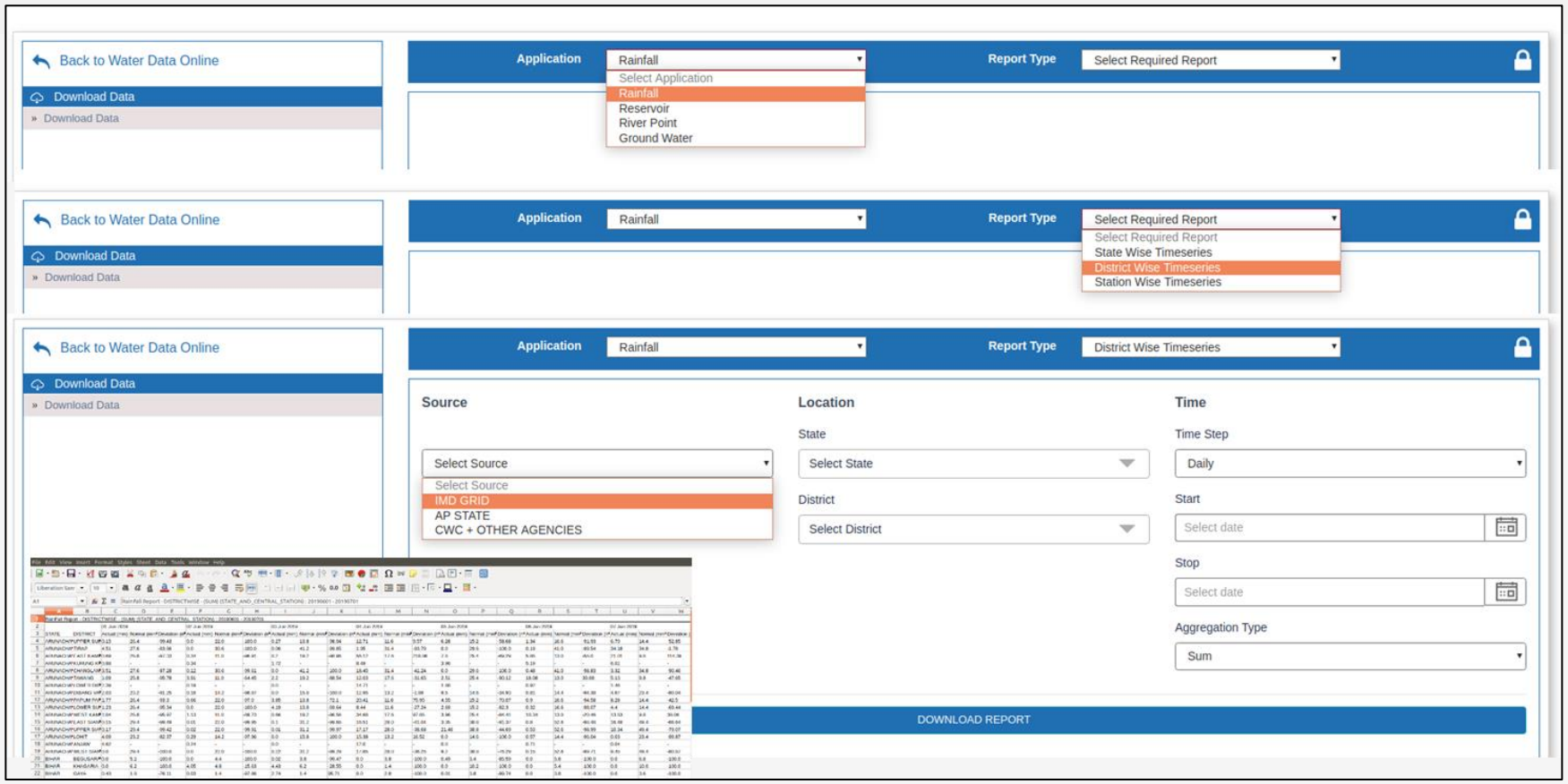
- Level & Storage Bulletin | Storage & Level Time-series | Storage Comparison | Level Timeseries | Storage Timeseries



Utilities

Rainfall data download

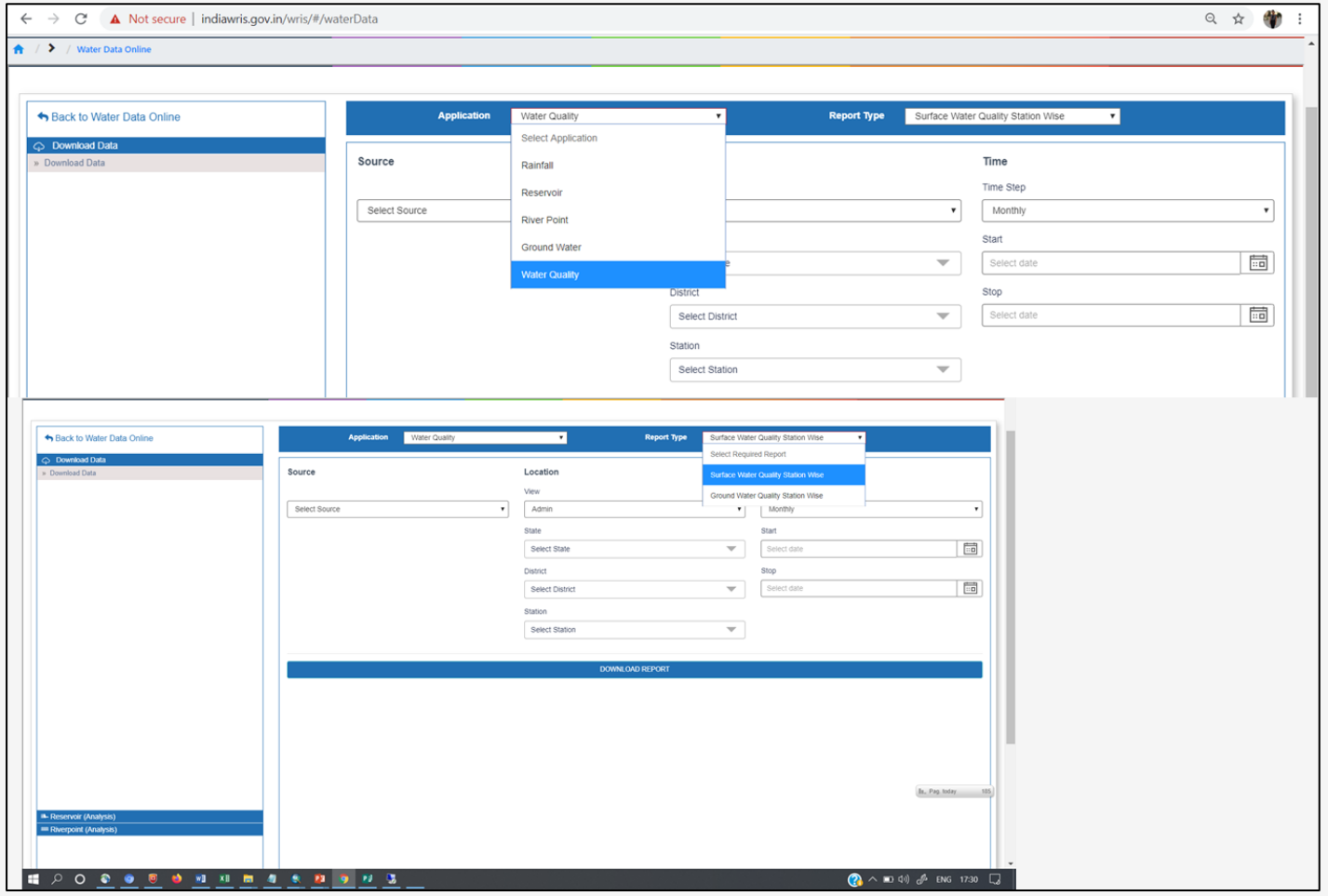
- Rainfall - State wise | District wise | Station-wise | Basin-wise



Utilities

Water Quality data download

- Groundwater Sites | Surface Water Sites



5.2 Data Availability

-Availability of time series data of telemetry and manual stations as per State/Agency/Basin wise.
-Color code is provided to display the recent data availability and availability report download for selected unit is also provided through this module.

5.3 Geoviewer

- Tool to visualize all the different sets of data on a single application for a comparative and interlinked view to derive a holistic picture with overlay.

5.4 WRIS Wiki

- Comprehensive information for the water resources assets and projects of the country is made available through WRIS Wiki application.

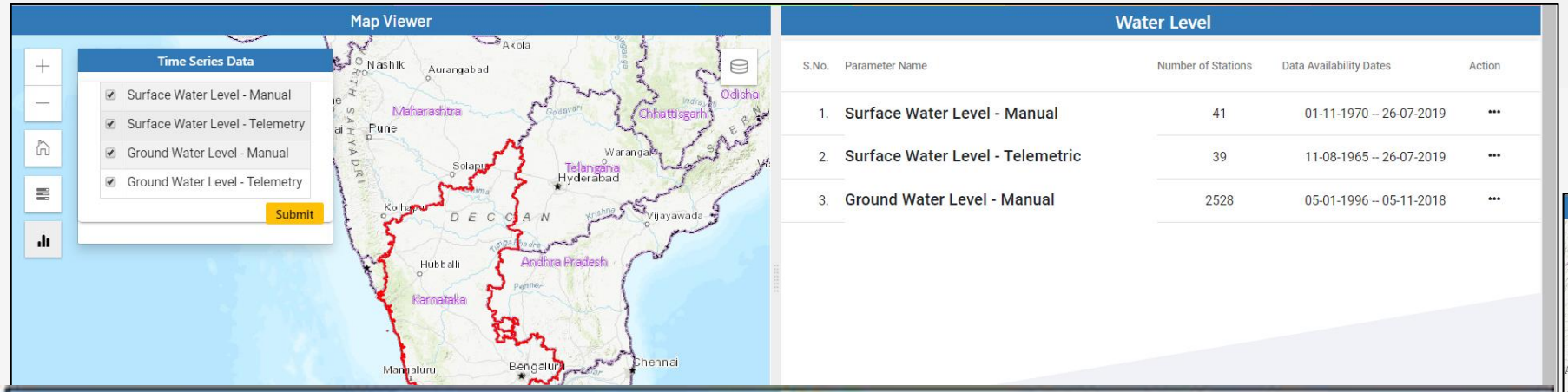
5.5 Metadata

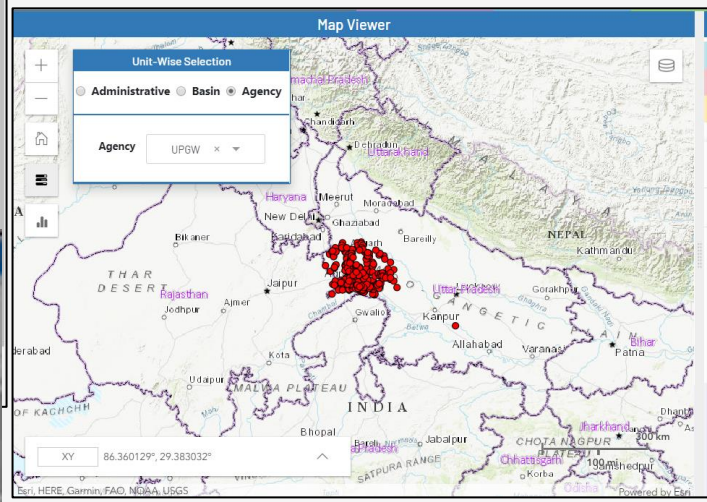
- Metadata module offers the information about the different GIS layers, its source, Citation and other details.

Utilities

5.2 Data Availability

-Availability of time series data of telemetry and manual stations as per State/Agency/Basin wise.
-Color code is provided to display the recent data availability and availability report download for selected unit is also provided through this module.

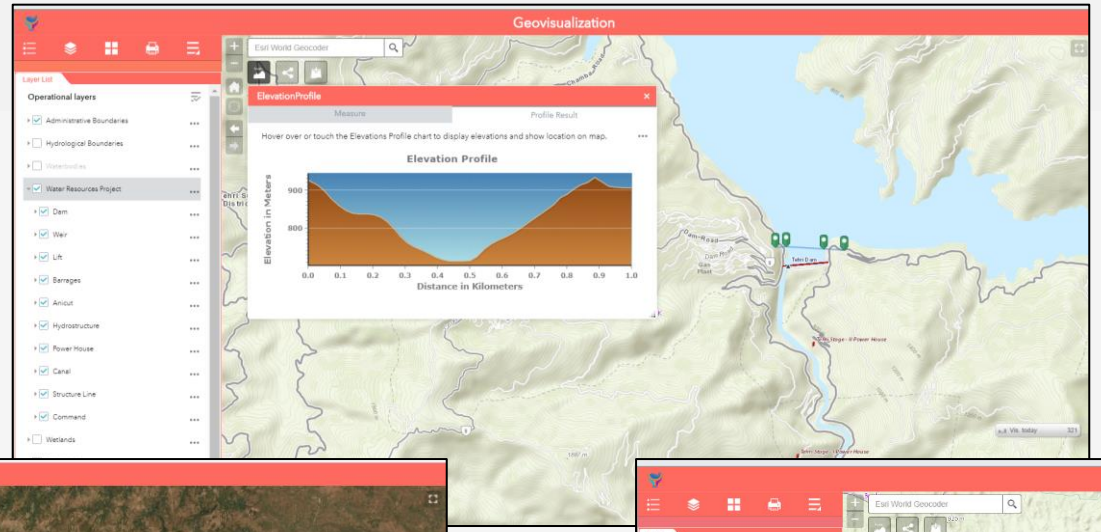


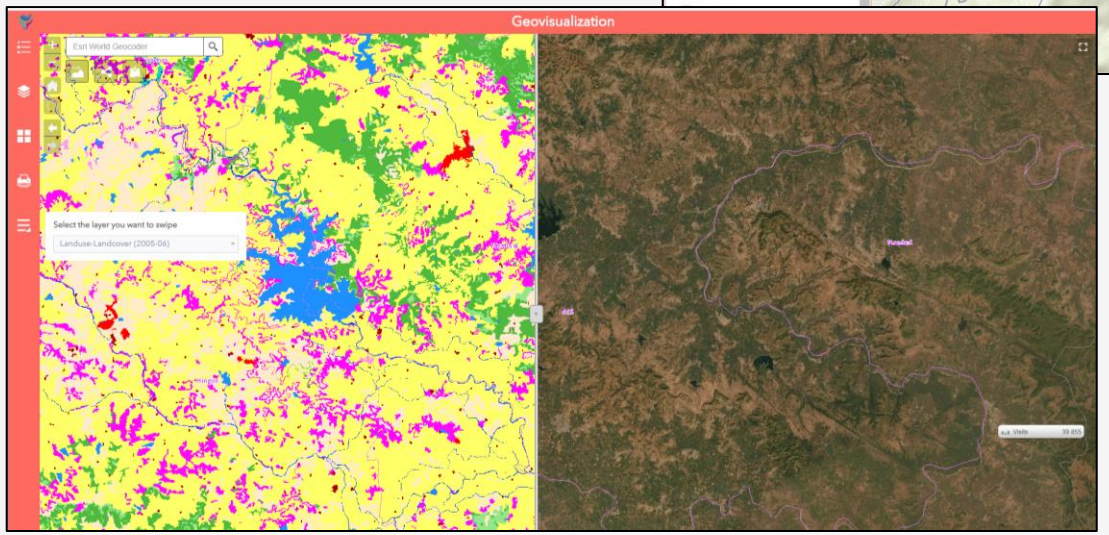


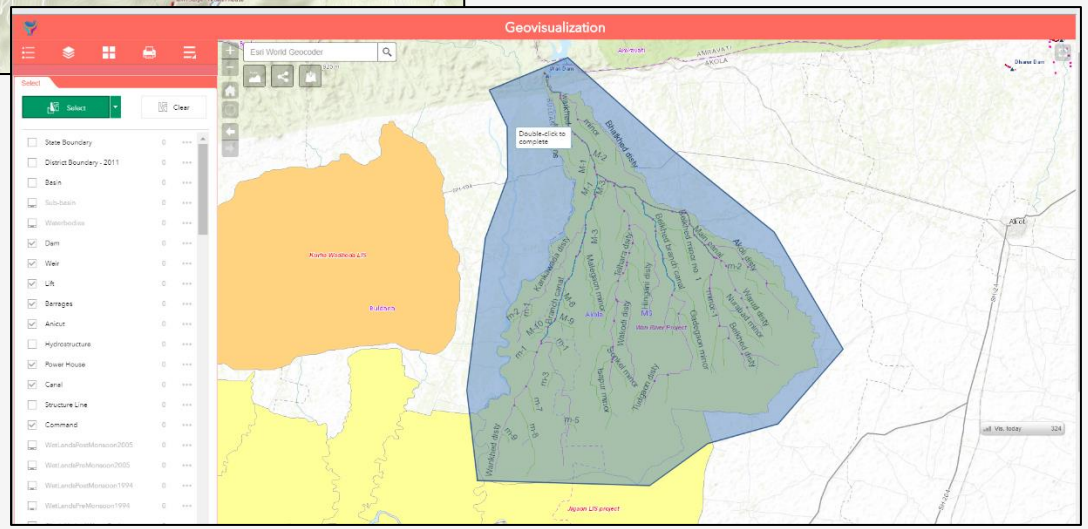
Utilities

5.3 Geoviewer

- Tool to visualize all the different sets of data on a single application for a comparative and interlinked view to derive a holistic picture with overlay.





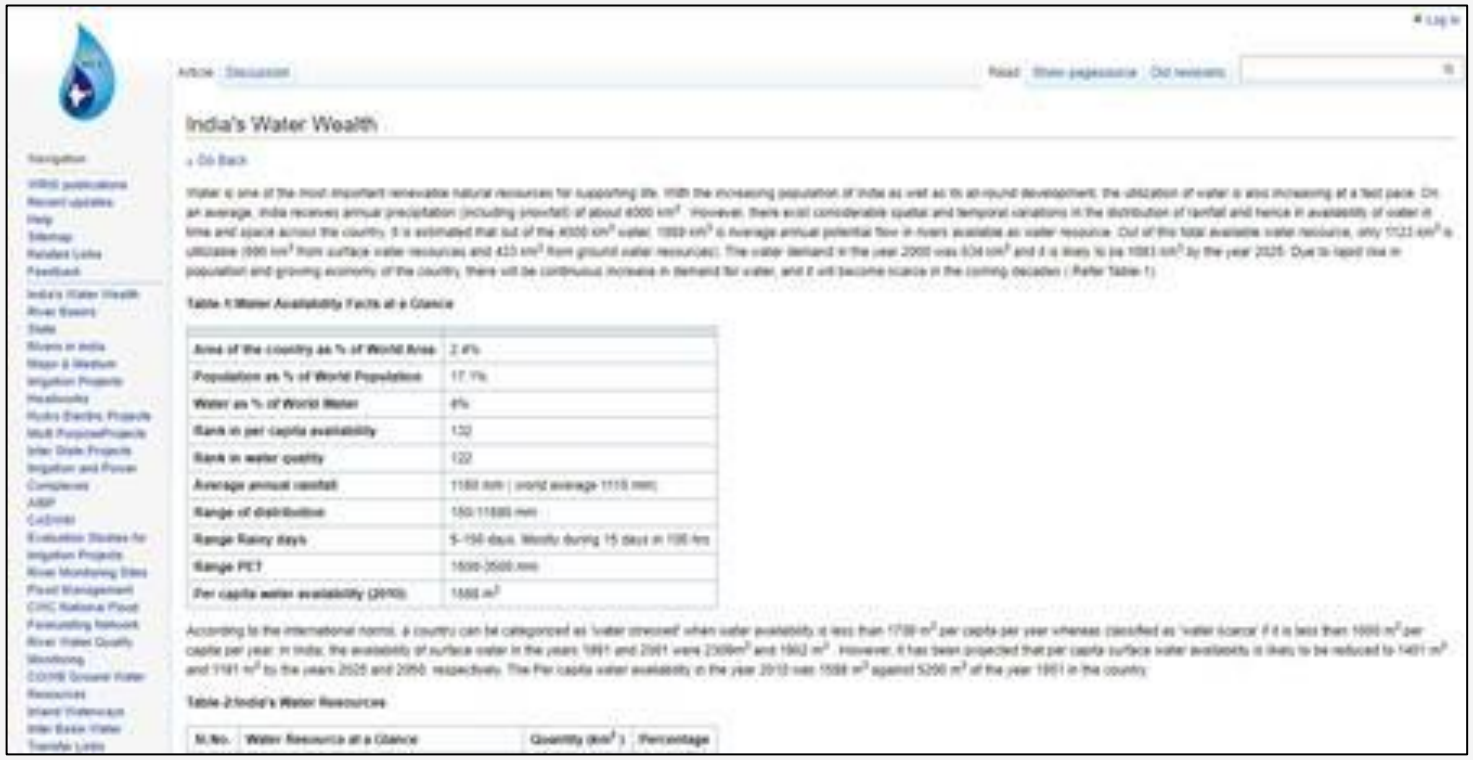


Utilities

5.4 WRIS Wiki

- *Comprehensive information for the water resources assets and projects of the country is made available through WRIS Wiki application.*
- *Available information has been organized under following heads:*

- *Water Resources of India - An overview*
- *Rivers of India*
- *River Basins – Facts at a glance*
- *Major & medium irrigation projects*
- *Inland Navigation Waterways*
- *Inter-Basin Water Transfer Links*
- *Ground Water Resources*
- *Hydro-Meteorological sites*
- *State wise Information*
- *Legal Instruments on Rivers in India*
- *Inter State Water Dispute*



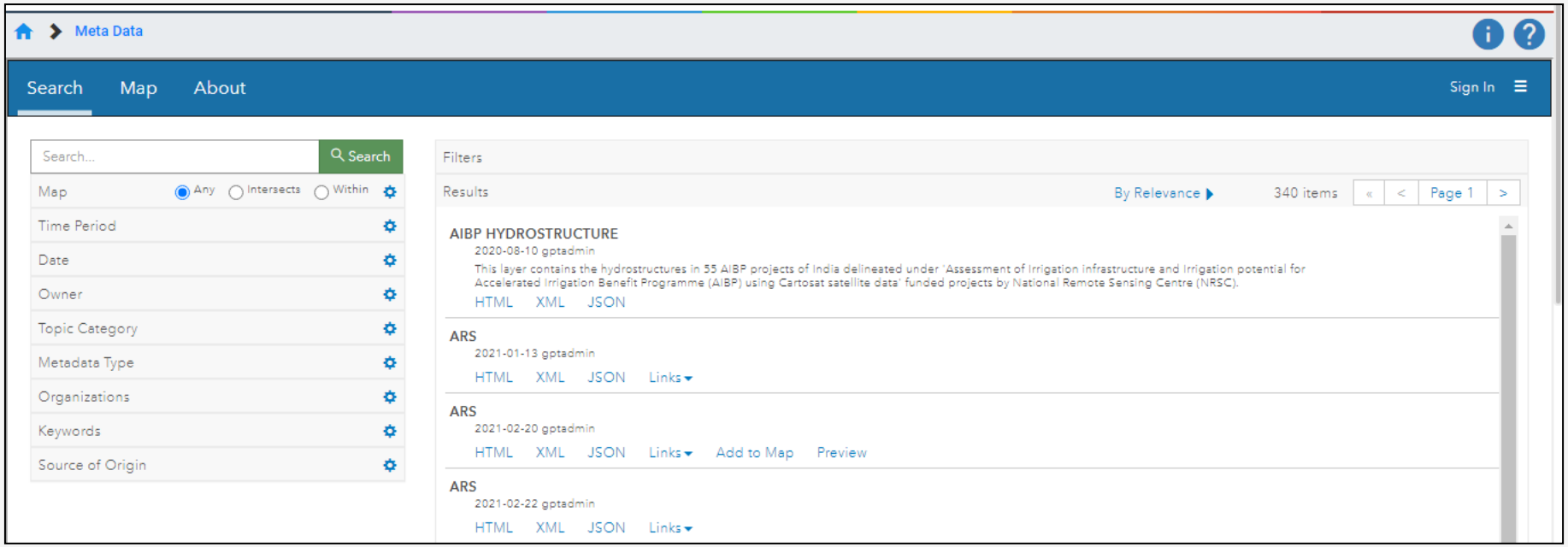
Utilities

5.5 Metadata

- Metadata module offers the information about the different GIS layers, its source, Citation and other details.

The metadata can be viewed in three formats –

- HTML
- XML
- JSON



5.6 District at a glance

- *acts as a tool to provide first level of information of at a glance.*
- *Overview of the national level scenario of water resources at a district level scale.*

District Name: South West Delhi

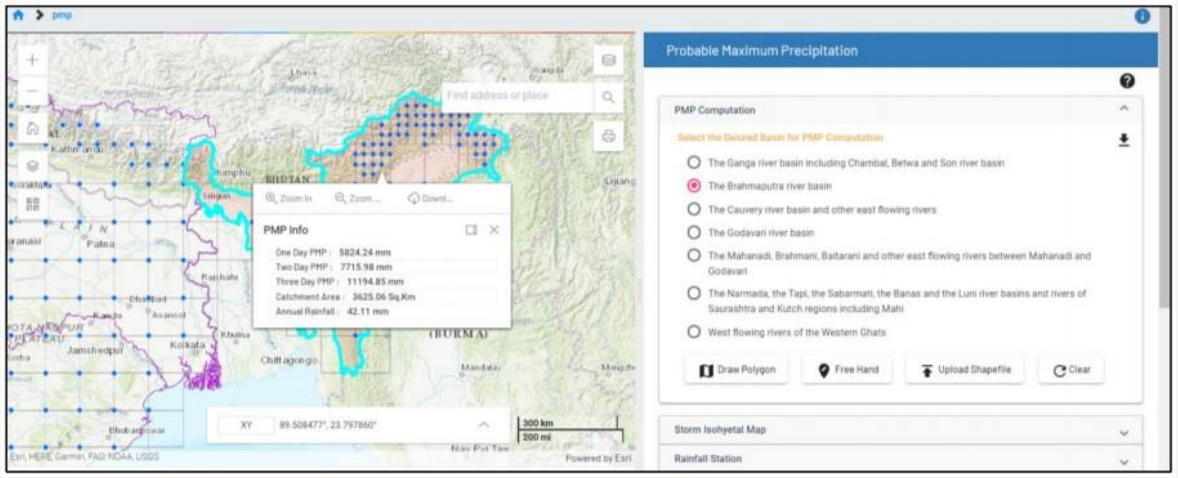
Export Clear

Sr No	Name	Description
1	District	South West Delhi
2	State	DL
3	Area in SqKms	395
4	Population	2292958
5	Growth Rate	30.65
6	Sex Ratio	840
7	Literacy	88.28
8	Density	5445
9	Seismic Zone	Seismic Zone-IV
10	Water Resources	
10.1	Dams (in Nos)	null
10.2	Barrage (in Nos)	null
10.3	Lift (in Nos)	null
10.4	Power House (in Nos)	null
10.5	Water Bodies (in Nos)	4
11	Minor Irrigation(5th Census)	
11.1	Ground Water Schemes	3458
1	Dugwells (in Nos)	0
2	Shallow Tubewells (in Nos)	144
3	Deep Tubewells (in Nos)	3314
11.2	Surface Water Schemes	0
1	Surface Flow (in Nos)	0
2	Surface Lift (in Nos)	0
11.3	Water Distribution Devices	3457
1	Open Water Channel (in Nos)	3449
2	Underground Pipe (in Nos)	4
3	Surface Pipe (in Nos)	4
4	Drip (in Nos)	0
5	Sprinkler (in Nos)	0
6	Others (in Nos)	0
11.4	Culturable Command Area(in ha)	7245.23
11.5	Irrigation Potential Created(in ha)	13531.02
11.6	Irrigation Potential Utilized(in ha)	11490.94

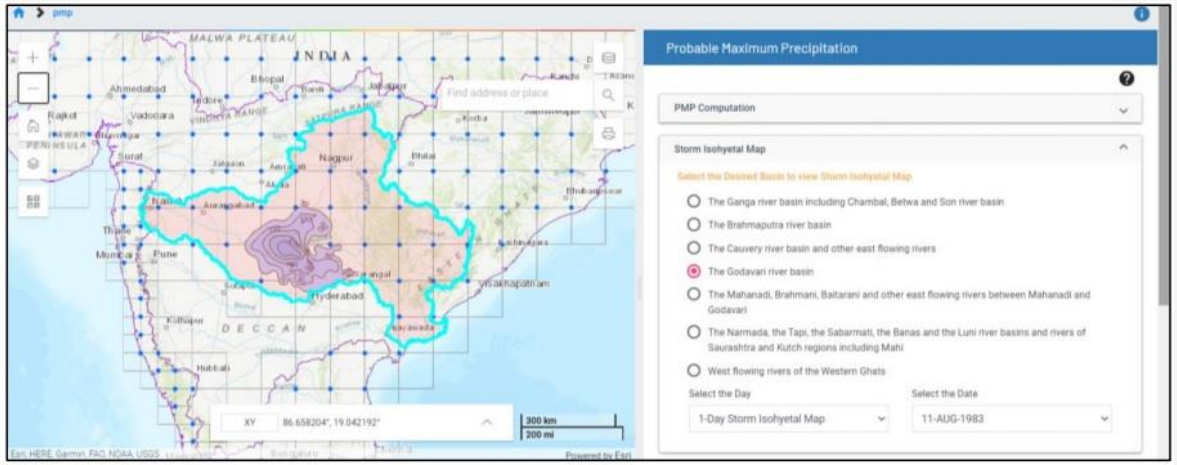
5.7 Probable Maximum Precipitation (PMP)

- PMP value will be computed for an area of interest

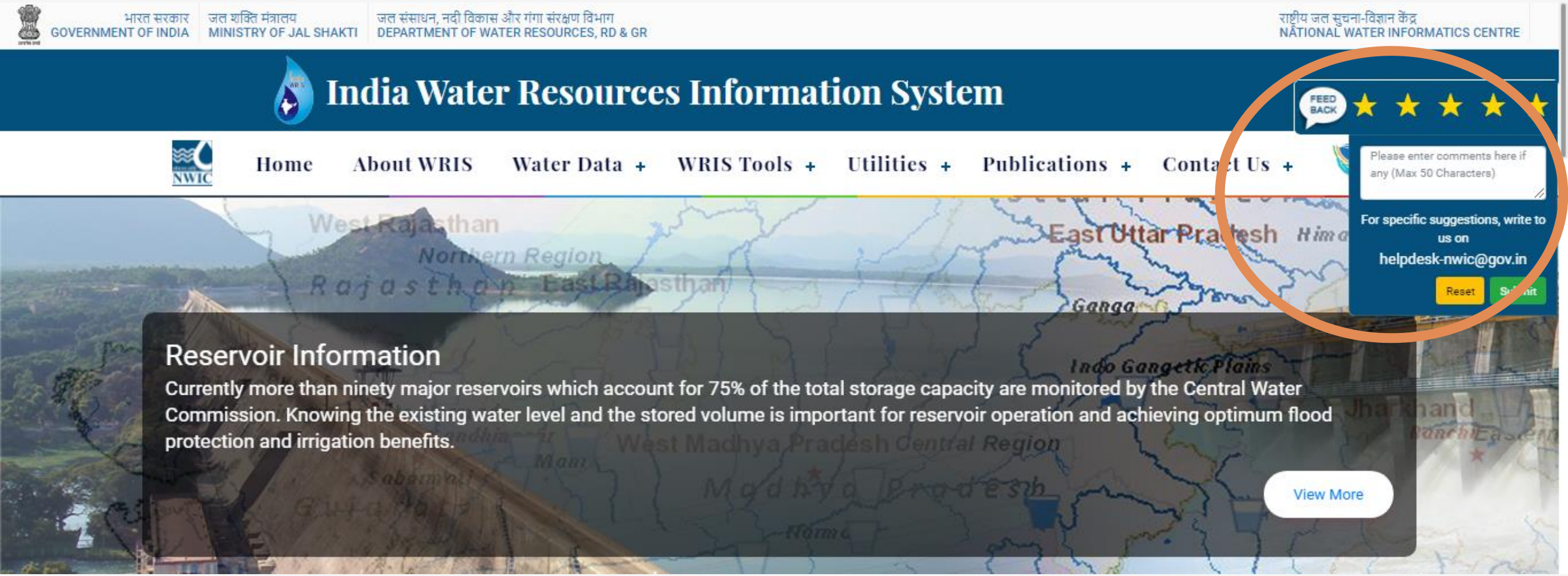
- Query area limit is 500 Sq. km.



PMP Computation - Result



Storm Isohyetal Map



Contact Us at helpdesk-nwic@gov.in

Thank you