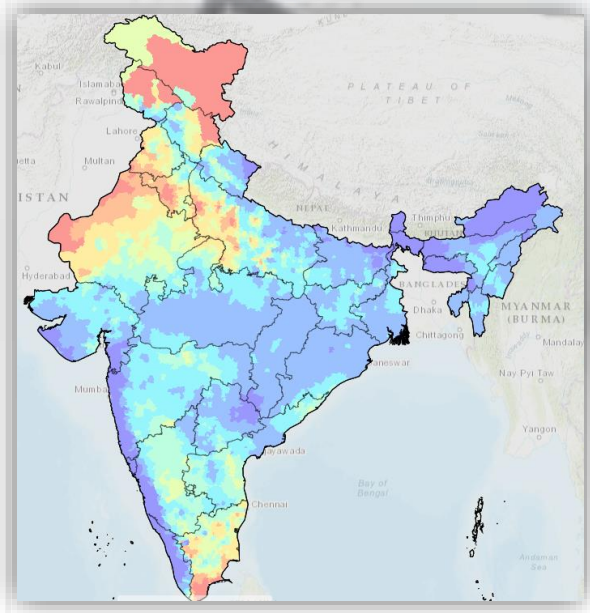




सत्यमेव जयते



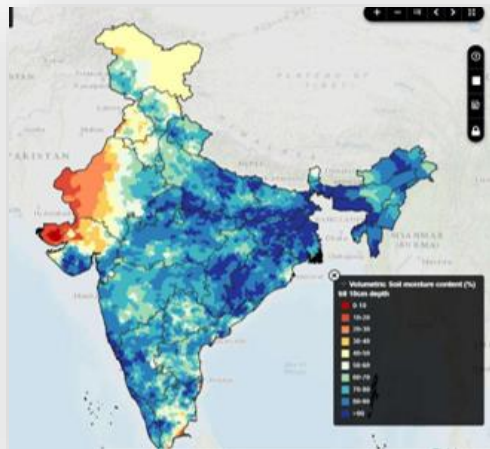
India – WRIS
India
Water
Resources
Information
System



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



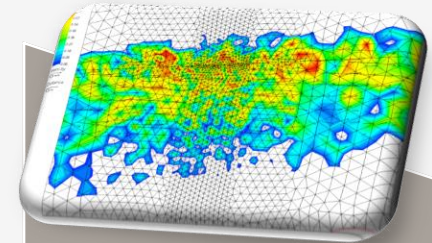
To collect available data from varied sources, generate new database, organize in standardized GIS format and provide scalable web-enabled information system.



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.





SYSTEM OVERVIEW

India-WRIS

Water
Data

Dynamic Real time
Semi-Dynamic
Static data

WRIS
Tools

Input Data Builders

Utilities

Value Added Products

WIMS

Surface Water and
Ground water Data



Manual / Telemetry data management



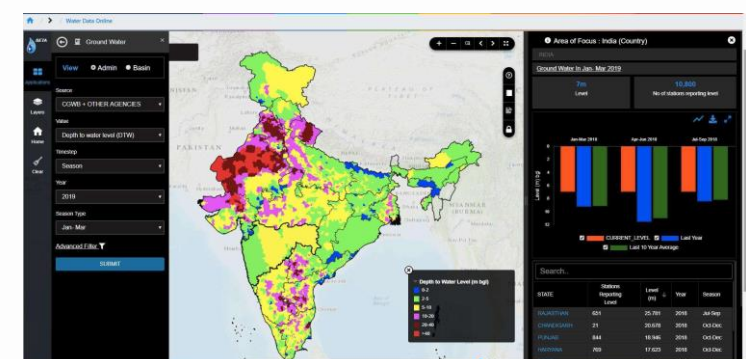
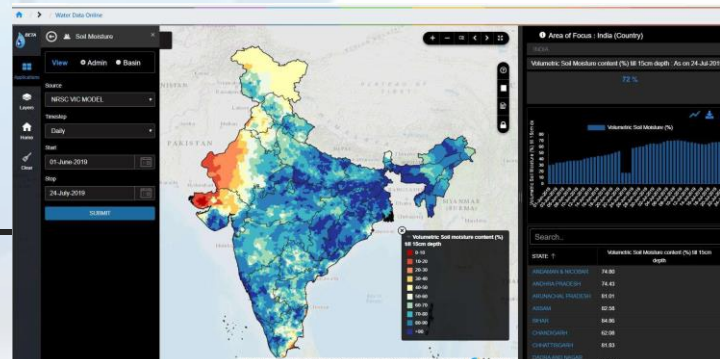
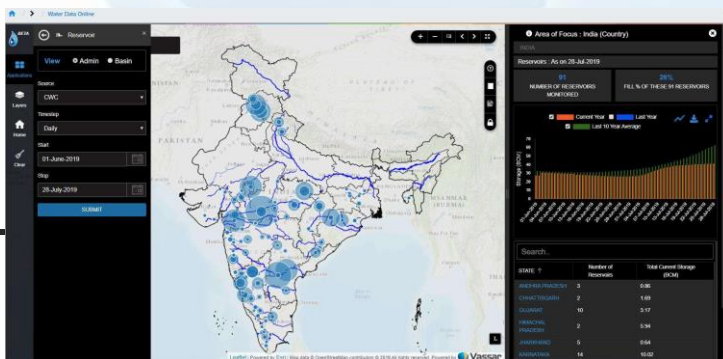
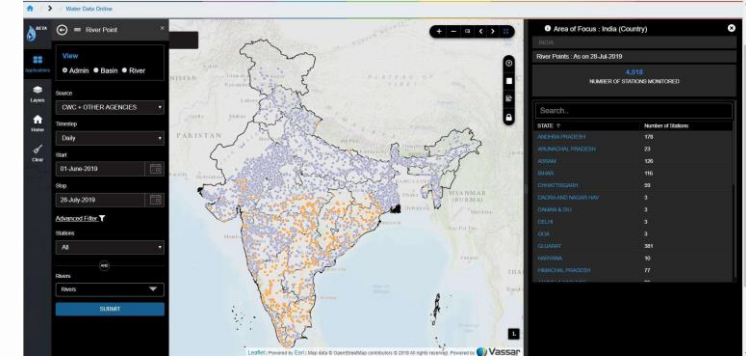
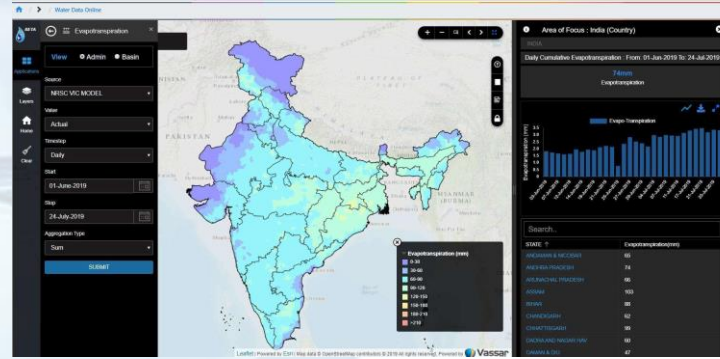
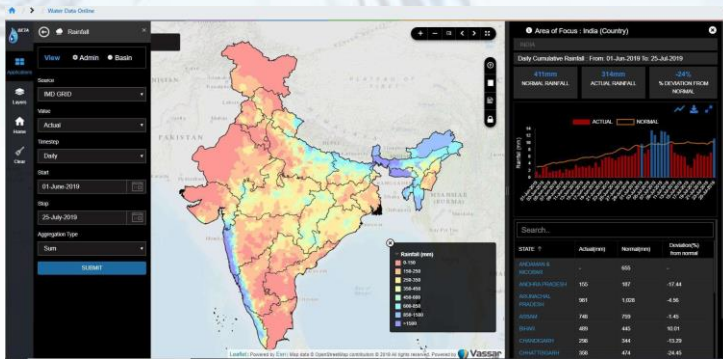
India – Water Resources Information System

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





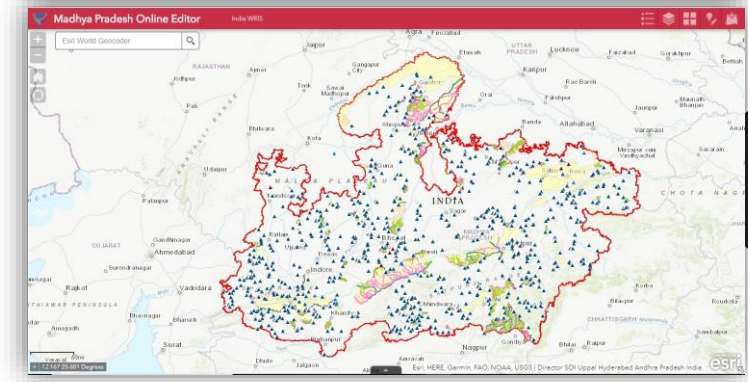
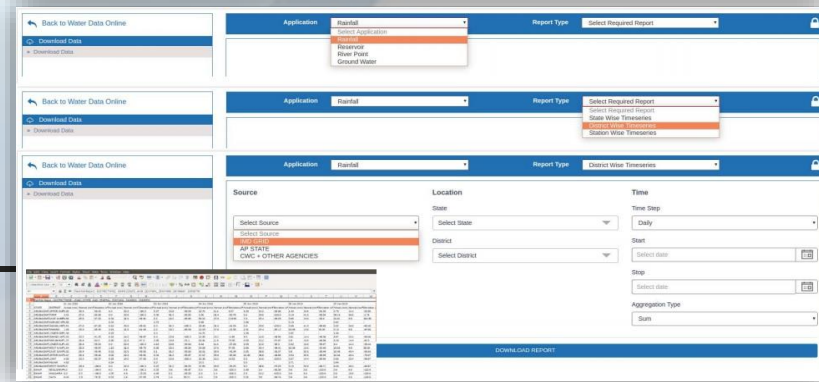
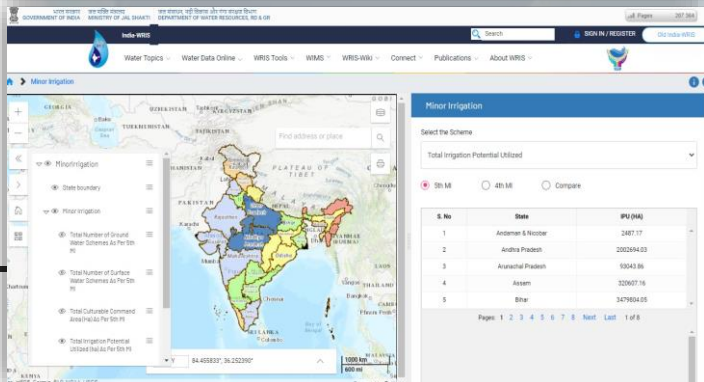
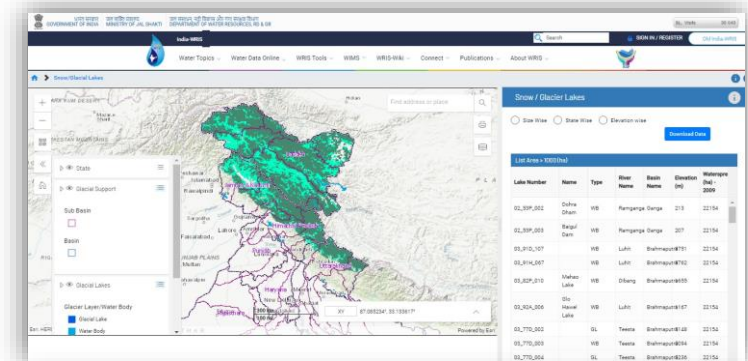
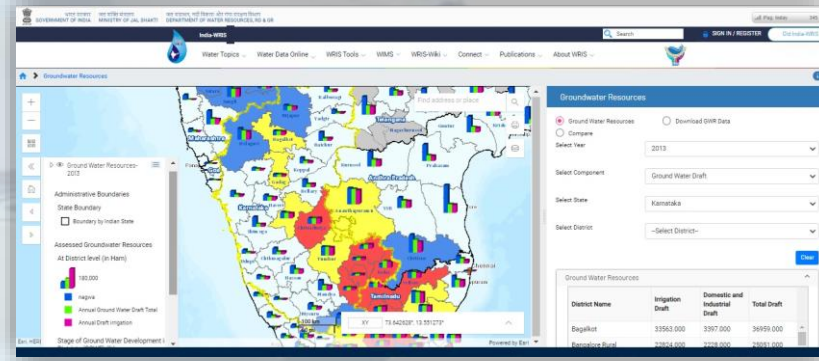
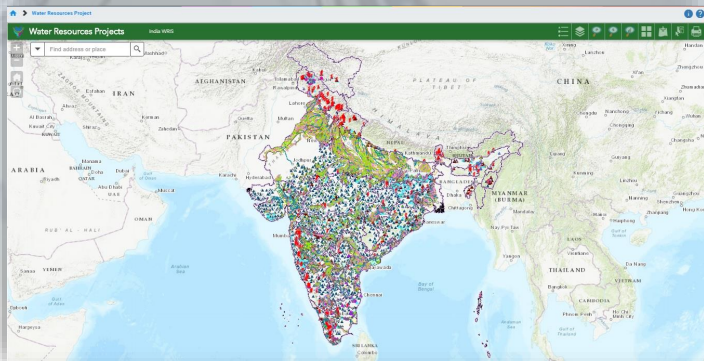
India – Water Resources Information System

India-WRIS

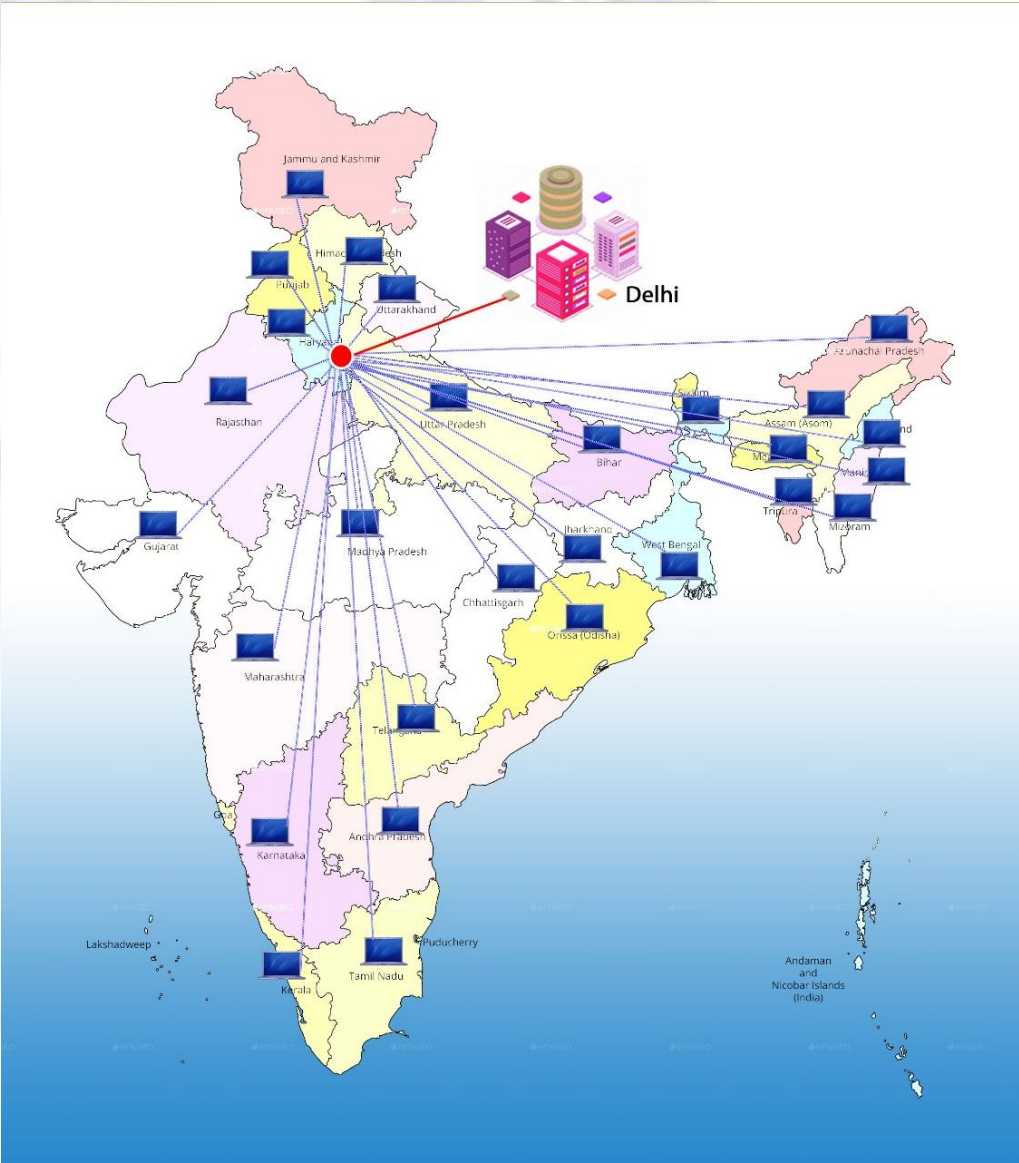


Water Data – Semidynamic & Static Modules

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



DATA AGENCIES



Data Available in WRIS



Central Ground Water Board

- Ground water observation well location and GW level
- Ground water quality sites and data
- Litholog well location and survey data
- Ground water resource estimation
- Aquifer systems
- Basin-CGWB



Central Water Commission

- Hydrological Observation Stations
- Surface Water Quality Stations
- Reservoir level and storage
- Glacial Lake and Water Body
- Rainfall
- WRP projects
- Reservoir sedimentation studies
- Shape files AIBP Canal, Command Area, Hydro Structure
- PMP atlas-major basins



National Remote Sensing Centre

- ET and Soil moisture
- Flood inundation maps.
- LULC, Wasteland, Land degradation, wetland cover
- Waterlogged Area and Saline areas
- Rainfall gridded data
- Ground water prospects maps
- Forest Cover – Classes



Survey of India

- Shape files of International Boundary
- State Boundary
- District Boundary
- Village Boundary
- Infrastructure Layers

Data Available in WRIS



National Water Development Authority

- Shape files
- IBTL Component
- Structure on Links (Dams, Barrages, Weirs, Anicuts)
- Detailed Links (canal, Tunnel, etc.)



Indian Meteorological Department

- Gridded Rainfall Data 0.25*0.25
- Seismic zones
- Extreme Temp and RF
- District-wise Rainfall Monitoring Station Location (DRMS)
- Earthquake events



Inland Waterways
Authority of India

Inland Waterways Authority of India

- Reports on
 - Beacon
 - Harbour Limit
 - Navigation Canal
 - Rail Road Bridge
- River(Inland Navigation)
- Settlement Location
- Waterways



Other agencies

- NHP implementing state and central agencies data (RF, water quality, Reservoir level, etc)
- MI Census Data
- Minor irrigation tank storage and capacity data
- 2011 census data (upto village level)
- Parliament and assembly constituency boundary
- Soil data (NBSS-LUP)
- Water tourism sites (States)
- DPAP and DDP (MoRD)
- Reports related to WR collected from State WRD and local state agencies



<https://indiawris.gov.in/wris/#/>



भारत सरकार
GOVERNMENT OF INDIA

जल शक्ति मंत्रालय
MINISTRY OF JAL SHAKTI

जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
DEPARTMENT OF WATER RESOURCES, RD & GR

राष्ट्रीय जल सूचना-विज्ञान केंद्र
NATIONAL WATER INFORMATICS CENTRE



India Water Resources Information System



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BACK



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Water Data +

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Artificial Recharge Structure

The term Artificial Recharge refers to the process of human intervention through which ground water recharge is augmented at the rate much higher than those under natural conditions. The Artificial Recharge Structure (ARS) module in India-WRIS developed under National Water Informatics Centre (NWIC), MoJS has been built for the management of centralized artificial recharge structure database. The module facilitates user agencies/ Nodal departments (Central/ State/ UT's/ Other) to populate the information pertaining to all the artificial recharge structures constructed under various schemes through authorized user login and the information collected is disseminated to public through India-WRIS web portal.

[View More](#)

**INDIA-WRIS MODULES : A WALK THROUGH
34 MODULES, TOOLS (2) & UTILITIES (8)**



Home About WRIS **Water Data** - WRIS Tools + Utilities + Publications + Contact Us +

Surface Water - Storage - MI Tanks

Ground Water + River + Reservoir

Land Resources + Snow-Glacial Lake Reservoir Sediment Studies

Hydro-meteorological + Surface Water Quality Surface Water Bodies

Allied Themes + Wetlands

Projects +

Ground Water Quality
Explore water quality for ground water

[View More](#)

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Ground Water + **River** - **River Information**

Land Resources + Snow-Glacial Lake River Monitoring

Hydro-meteorological + Surface Water Quality

Allied Themes + Wetlands

Projects +

Surface Water Quality
Explore water quality for surface water

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Map Sat Hy

WRIS Wiki
India WRIS Wiki gives an overview of water resources.

Ground Water - **GW Exploration** - **Aquifer-2D (2013)**

Land Resources + Water Level Behaviour + Exploration details/Litholog

Hydro-meteorological + Ground Water Resource Estimation

Allied Themes + Ground Water Prospects Study (2011)

Projects + Artificial Recharge Structure - Viewer

Ground Water Quality

Ground Water Quality
Explore water quality for ground water

[View More](#)

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Ground Water - **GW Exploration** +

Land Resources + **Water Level Behaviour** - **Ground Water Level**

Hydro-meteorological + Ground Water Resource Estimation

Allied Themes + Ground Water Prospects Study (2011)

Projects + Artificial Recharge Structure - Viewer

Ground Water Quality

Ground Water Quality
Explore water quality for ground water

[View More](#)

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Water Resources Projects
The total irrigation potential for major comprehensive database of India's water project entities.

Land Resources - **Land Degradation (2005-06)**

Hydro-meteorological + Land Use - Land Cover

Allied Themes + Soil Type

Projects + Water Logging/Soil Salinity (2003-05)

Wasteland Study (2005-2006)

Water Resources Projects

[View More](#)

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Groundwater
The water flowing beneath the earth's surface is subject to temporal variation caused by seasonal changes in water availability.

Hydro-meteorological - **Rainfall**

Allied Themes + Evapo-transpiration

Projects + Soil Moisture

Agro-Climatic Ecological Region

Groundwater

[View More](#)

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Surface Water Quality
Explore water quality for surface water

Allied Themes - **Inland Navigation Waterways**

Projects + Storm Surge Study (2011)

Socio-Economic Census (2011)

Flood Inundation (2008-2010)

Drought Affected Areas (2002)

Reported Extreme Temperature, Rainfall & Earthquake Events

Surface Water Quality

[View More](#)

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Live Telemetry
The stations established by the Central Water Resources Board and the State agencies throughout the country measure important hydrological and meteorological data on a real time basis for immediate action and planning.

Projects - **Water Resources Projects**

Inter-Basin Transfer Links

Minor Irrigation Census

Live Telemetry

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[Online Web Editor](#)
[Artificial Recharge Structure Data Entry](#)

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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[Data Availability](#)
[Data/Report Download](#)
[District MA Glance](#)
[Geo Viewer](#)
[Meta Data](#)
[PMP Atlas](#)
[Surface Water Audit](#)
[WRIS Wiki](#)

Artificial Recharge Structure

The term Artificial Recharge refers to the process of human intervention through which the water table is recharged at a rate much higher than those under natural conditions. The Artificial Recharge Structure Information System (ARIS) has been built for the management of central water resources. It facilitates user agencies/ Nodal departments (Central/ State/ UT's/ Other) to register and monitor the structures constructed under various schemes through authorized user login on the India-WRIS web portal.

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[Atlas](#)
[Basin Reports](#)
[Compendium](#)
[Groundwater Year Book](#)
[Pre-generated Maps](#)
[Project Documents](#)
[Wasteland Distribution Atlas](#)
[Waterlogging and Salinity Assessment](#)

Reservoir Information

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[Contact Details](#)
[External Links](#)

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

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

Semi Dynamic Modules

- Groundwater Resources
- Snow-Glacial Lake
- Reservoir- Sediment studies
- Water Resources Project
- Minor Irrigation Census
- LULC
- Wasteland
- Land Degradation
- Extreme Events – Flood Inundation/Drought affected areas/Earthquake-Rainfall-Temperature
- Artificial Recharge Structure Viewer

Static Modules

- Litholog
- Aquifer
- Surface Water Bodies
- River Information
- Socio Economic Census
- Groundwater Prospects
- Region-Agro-Climatic / Agro Ecological
- Soil
- Water Logging & Soil Salinity
- Wet Land
- Inland Navigation Waterways
- Inter-Basin Transfer Links
- Storm Surge Study

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

Applications

Surface water

- Rainfall
- Reservoirs
- River Points
- Evapotranspiration
- Soil Moisture
- Water Quality
- Minor Irrigation Tanks

Ground water

- Water Audit
- Content Management

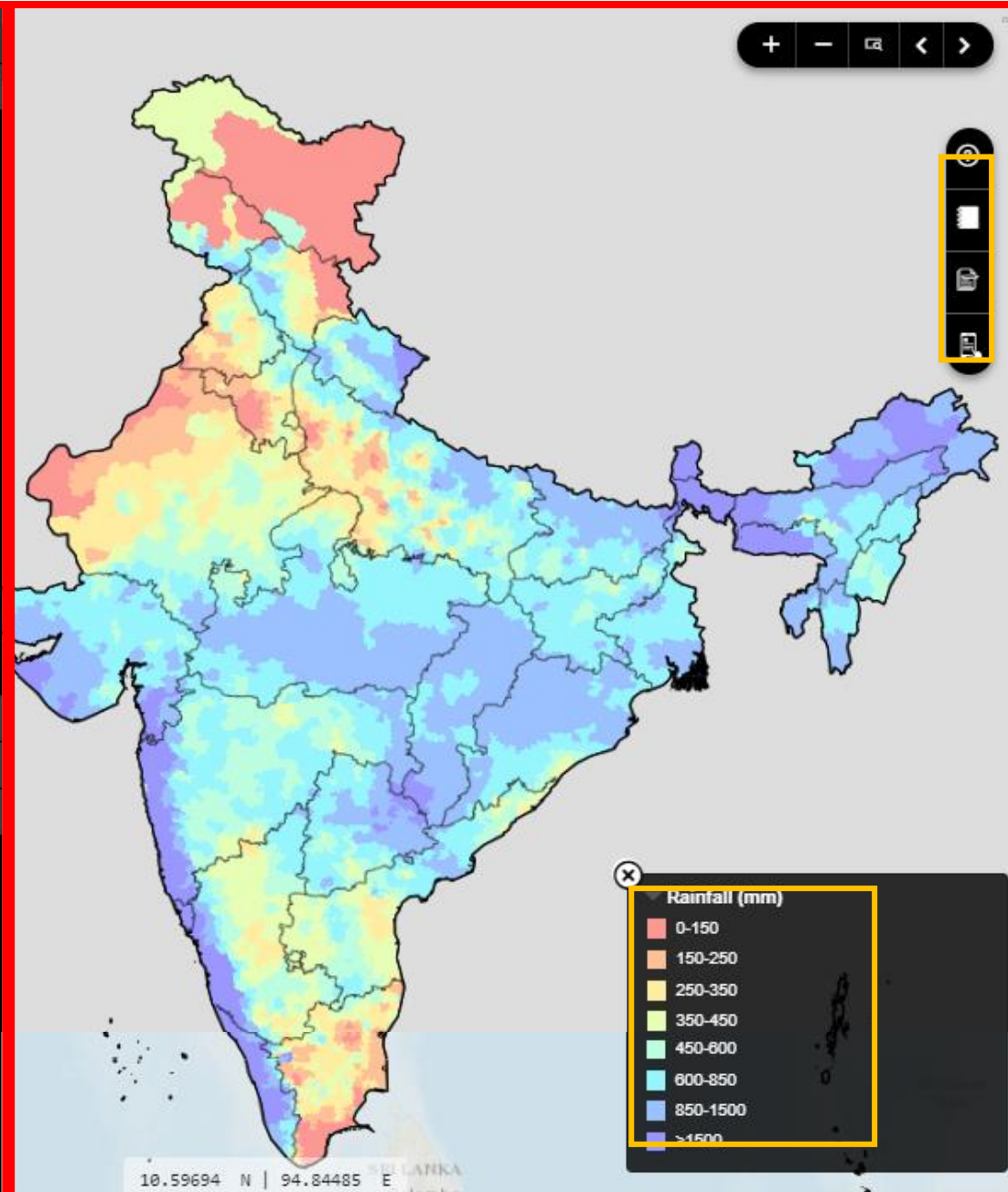
Applications

Layers

Full Extent

Clear

Map Compare



Area of Focus : India (Country)

INDIA

Daily Cumulative Rainfall information from 01-Jun-2020 to 17-Sep-2020 using IMD GRID data

850mm	749mm	-12%
NORMAL RAINFALL	ACTUAL RAINFALL	% DEVIATION FROM NORMAL

Legend:

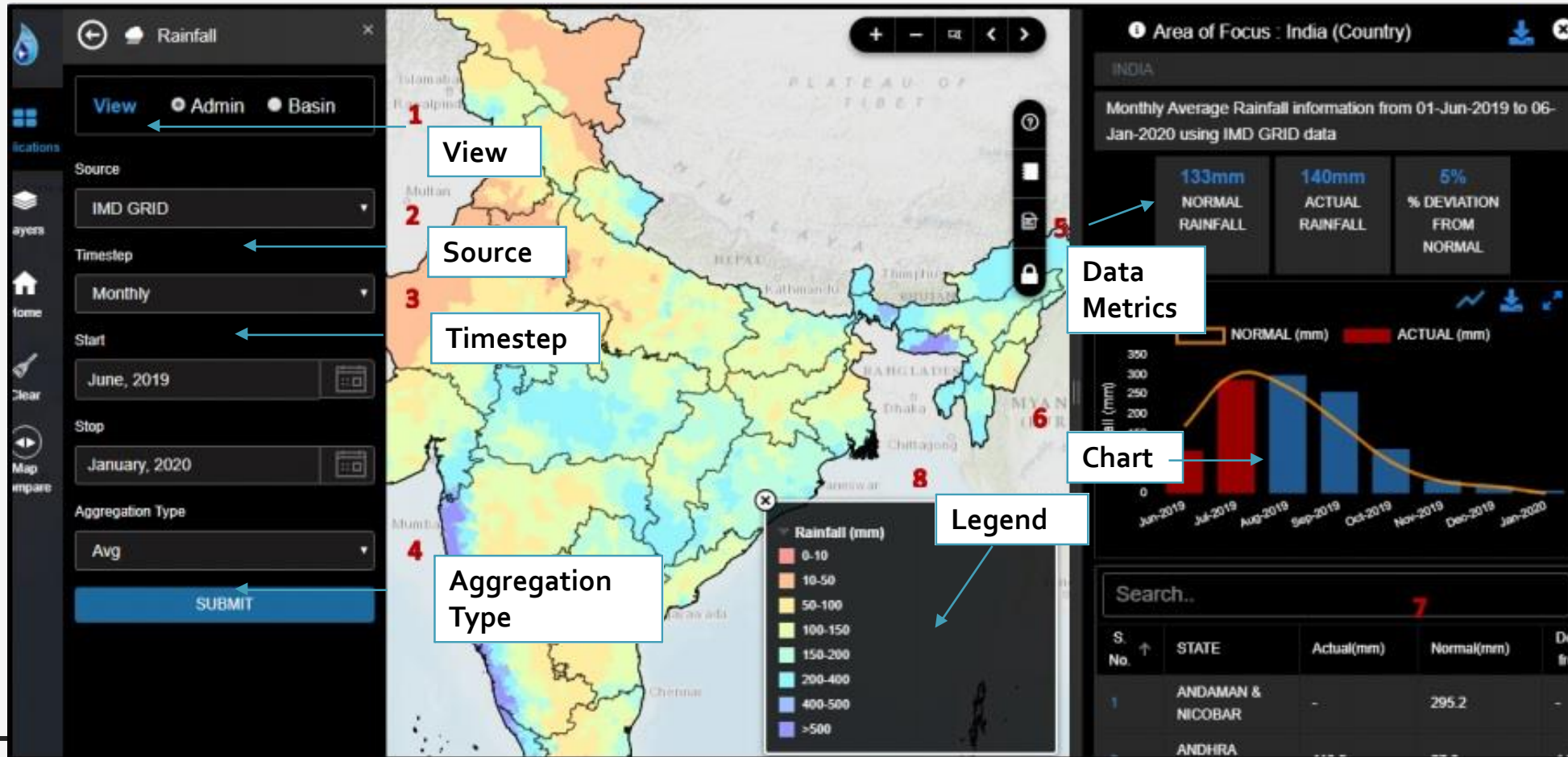
- NORMAL (mm)
- ACTUAL(< NORMAL) (mm)
- ACTUAL(> NORMAL) (mm)

Search..

S. No.	STATE	Actual(mm)	Normal(mm)	Deviation(from norm)
7	ANDAMAN & NICOBAR	-	1,261.8	-
8	ANDHRA	520.5	415.0	27.51

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.

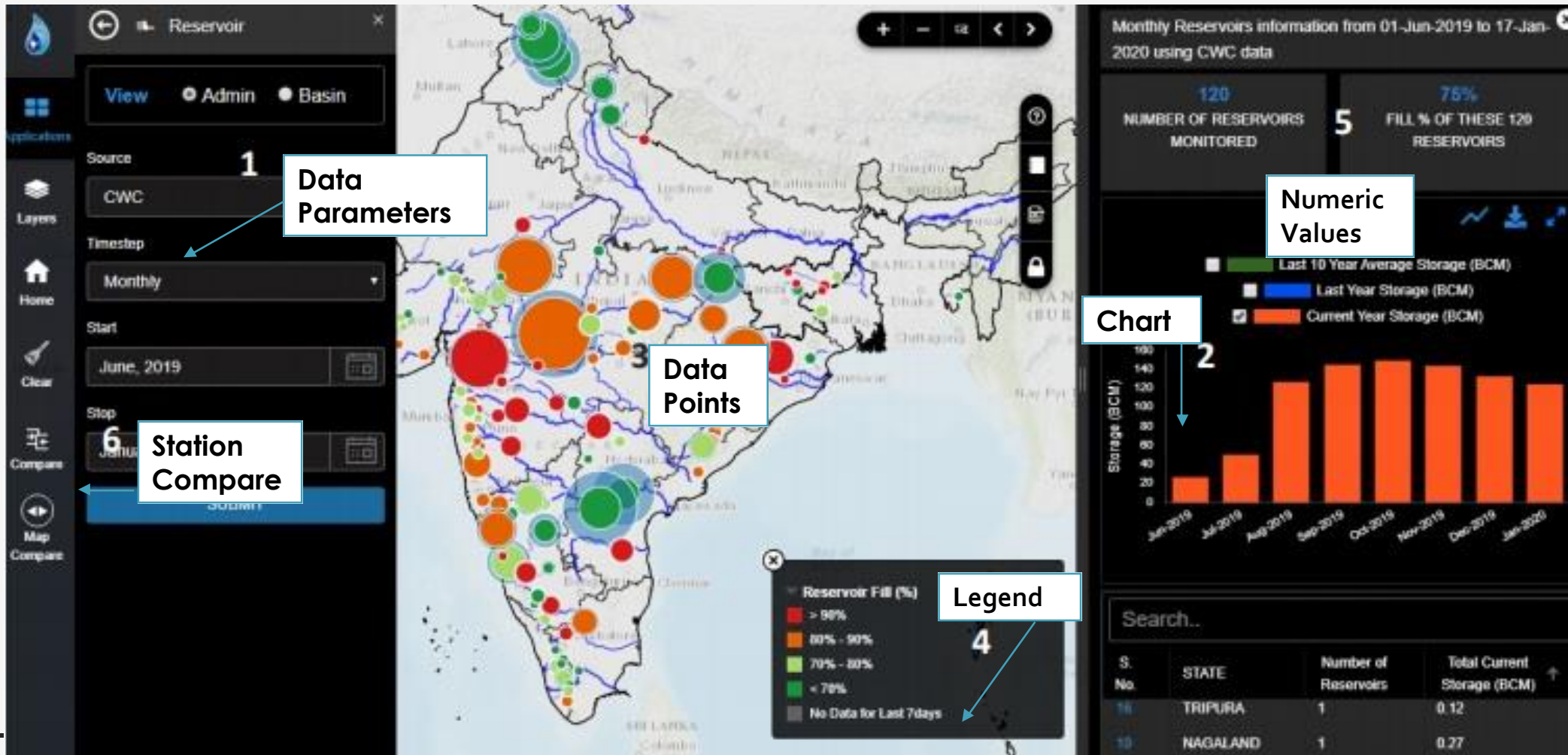


IMD Gridded/Central and State Agency Data

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

1.2 Reservoir

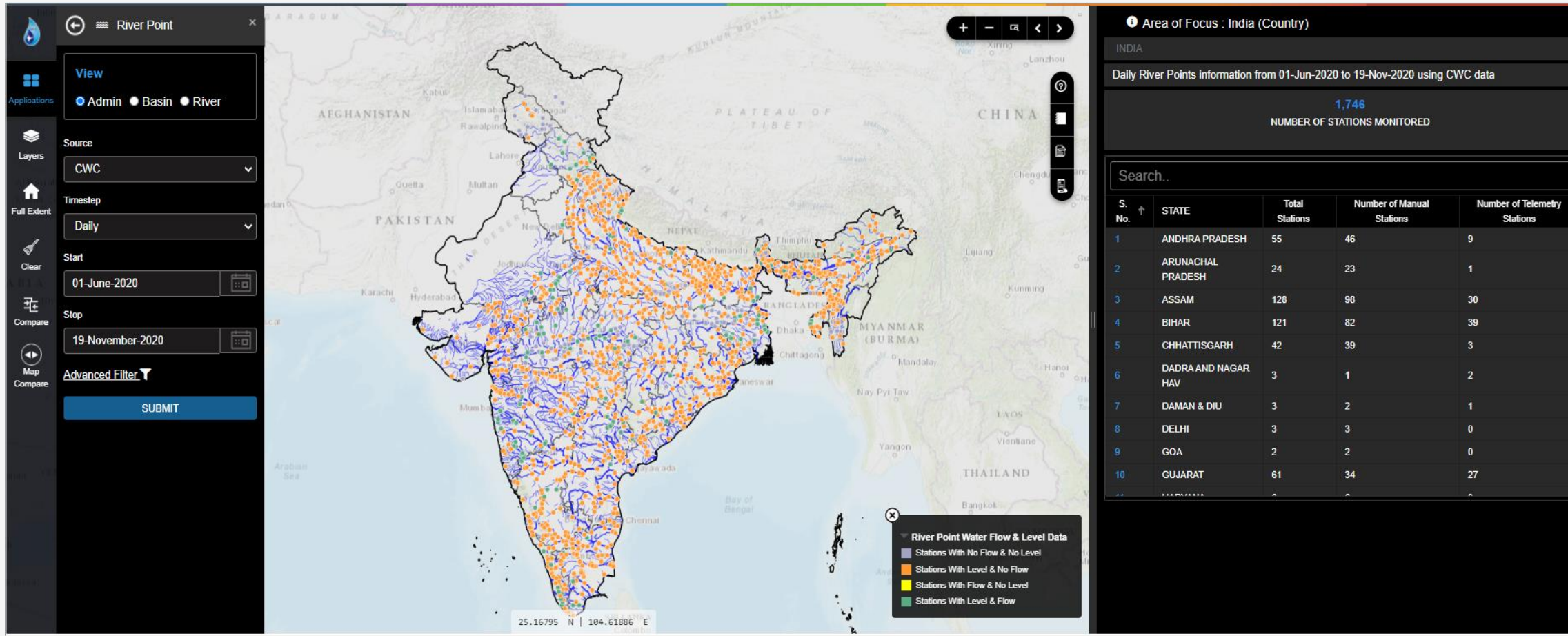
- Volume of water (in billion cubic meters) stored in reservoirs across the country.



Monitoring Reservoirs recent water level and storage data

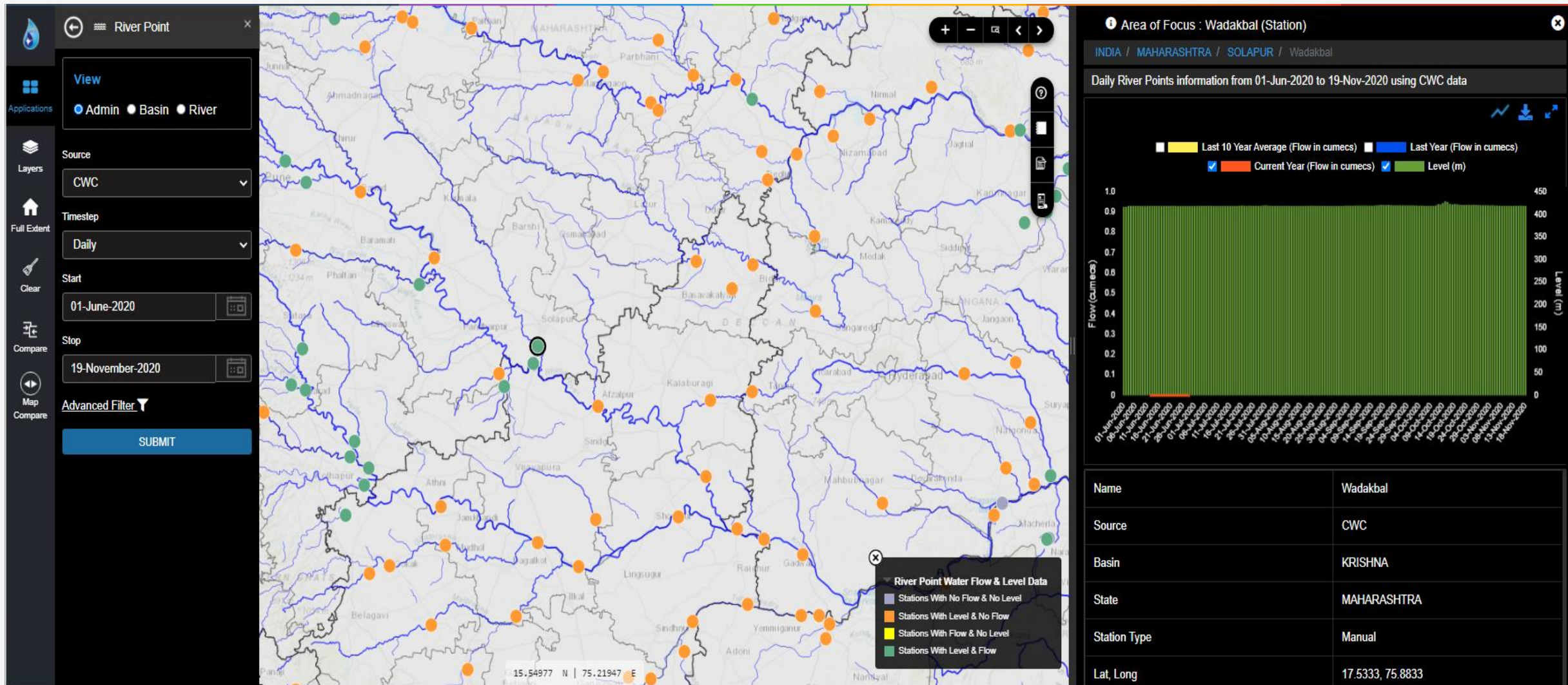
1.3 River Monitoring

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



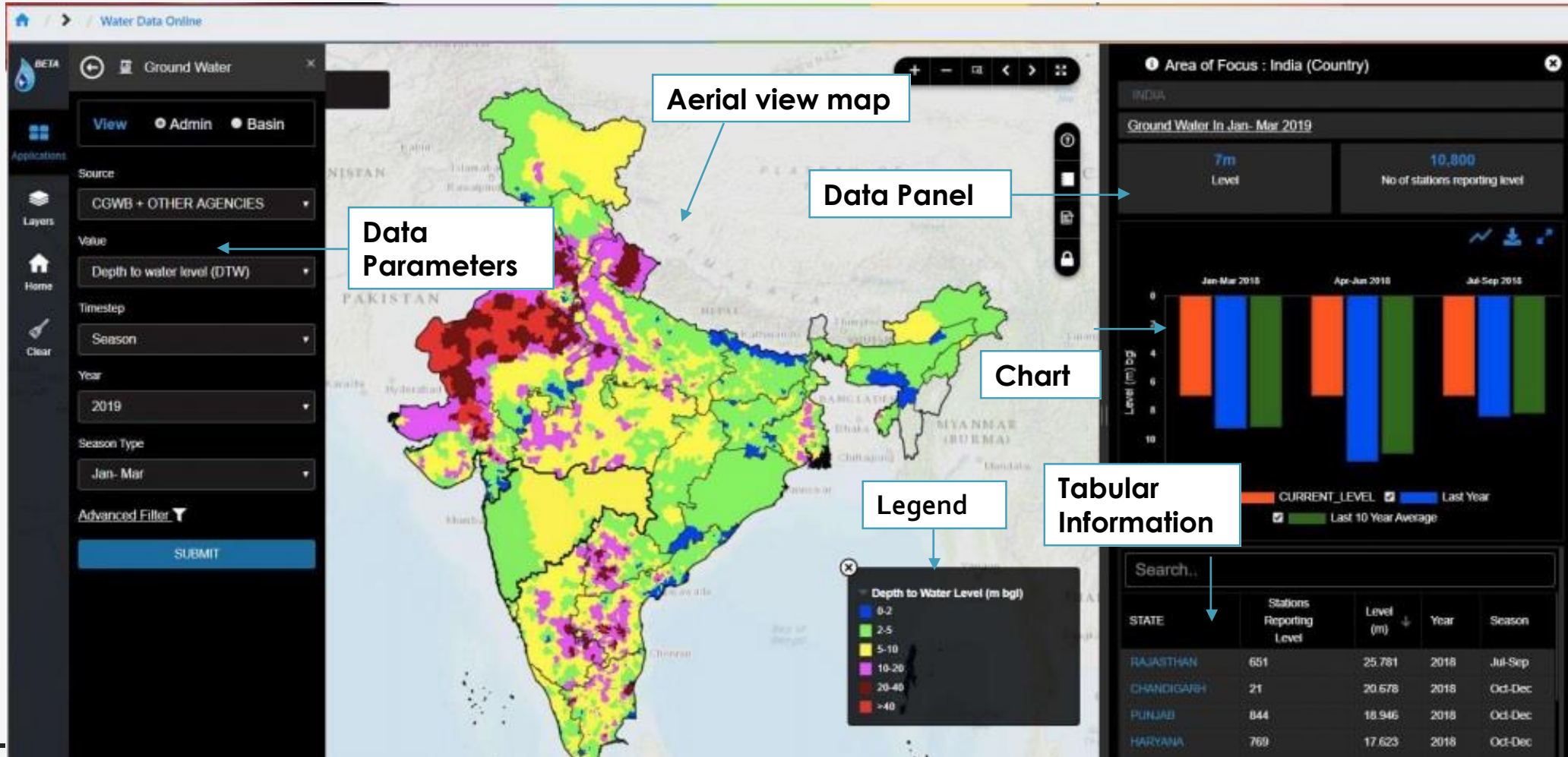
Agency wise – Stations with water level and flow data Within range most recent data color code depiction

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

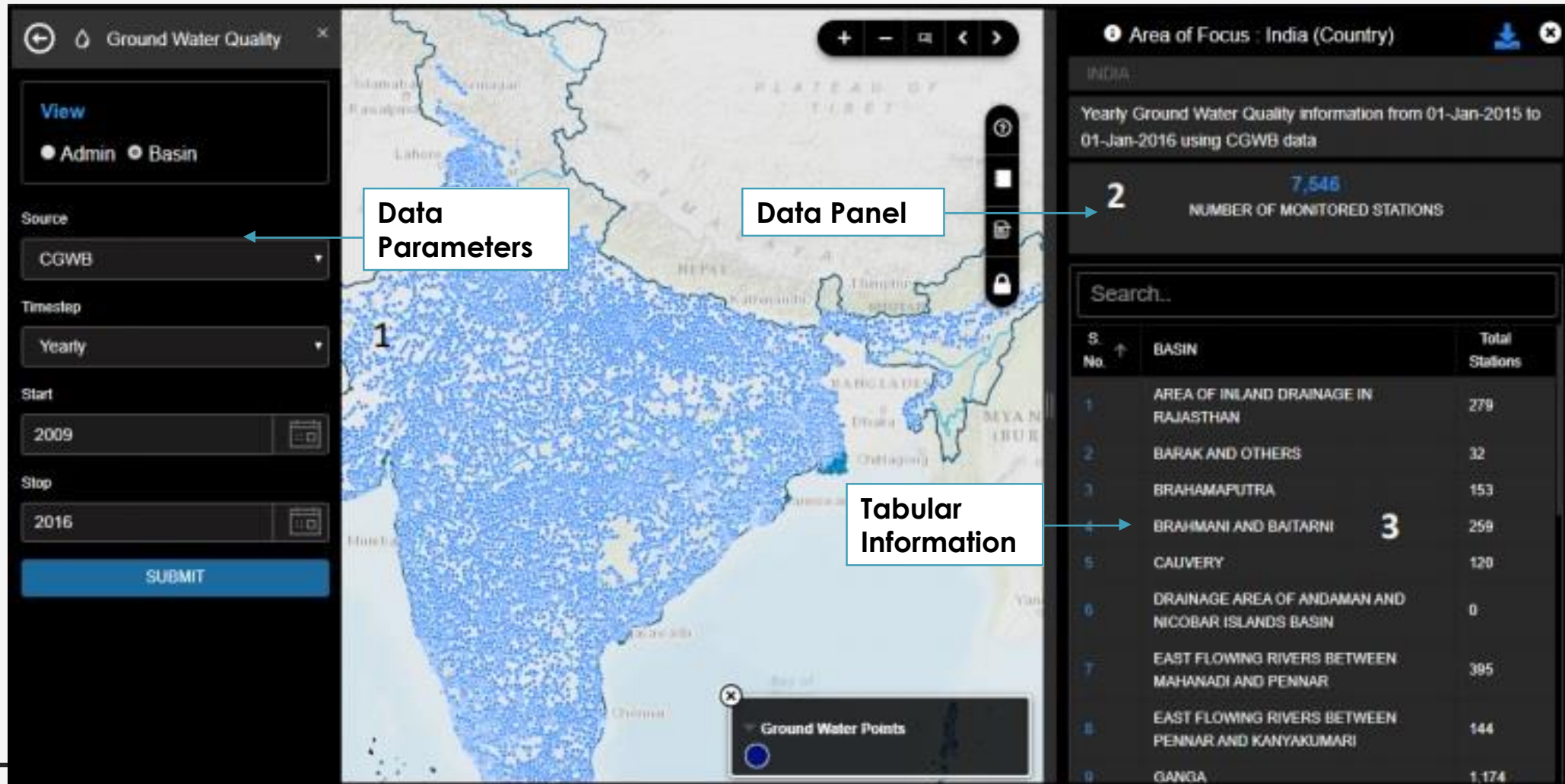


CGWB and State data

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

1.5 Water Quality – Groundwater

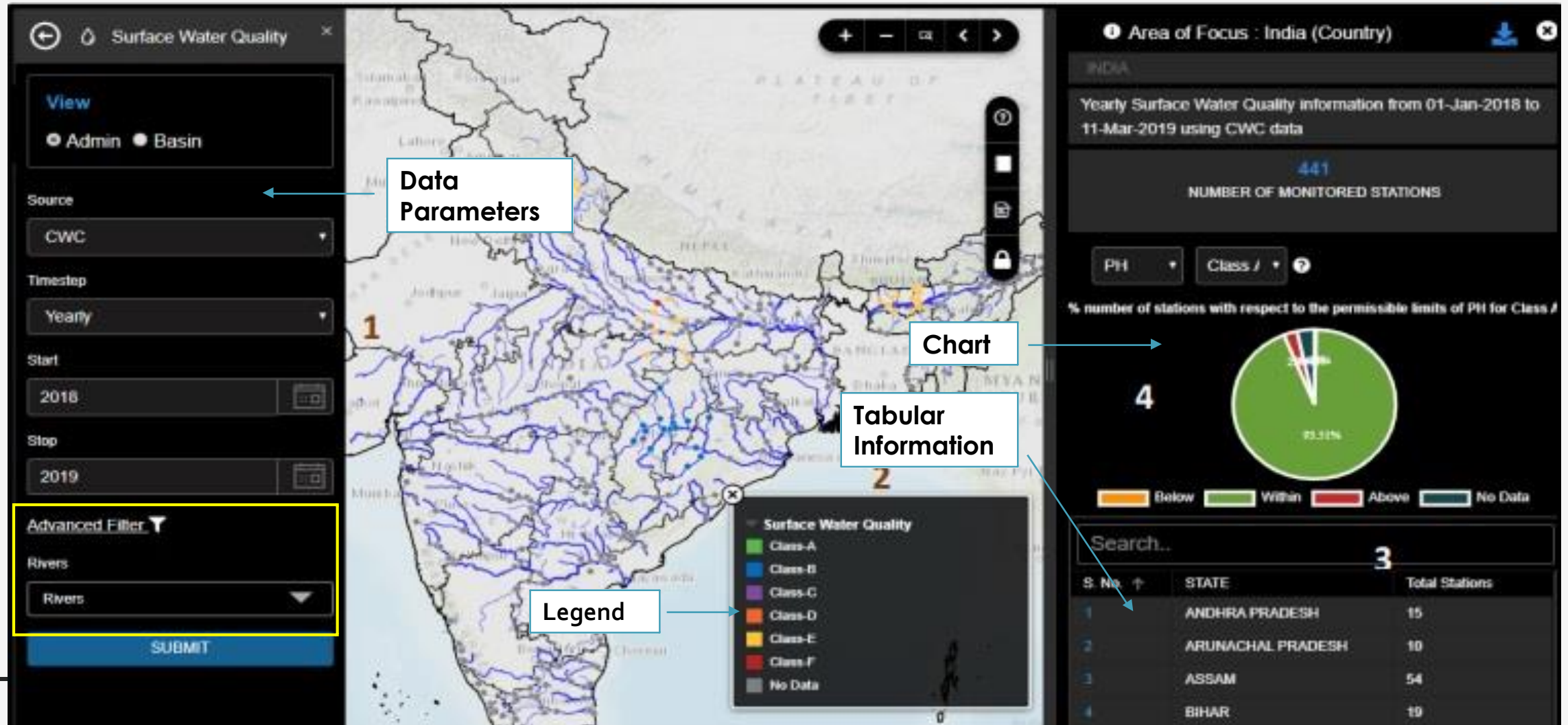
- Station wise ground water quality information for a given time period



1.6 Water Quality – Surface Water

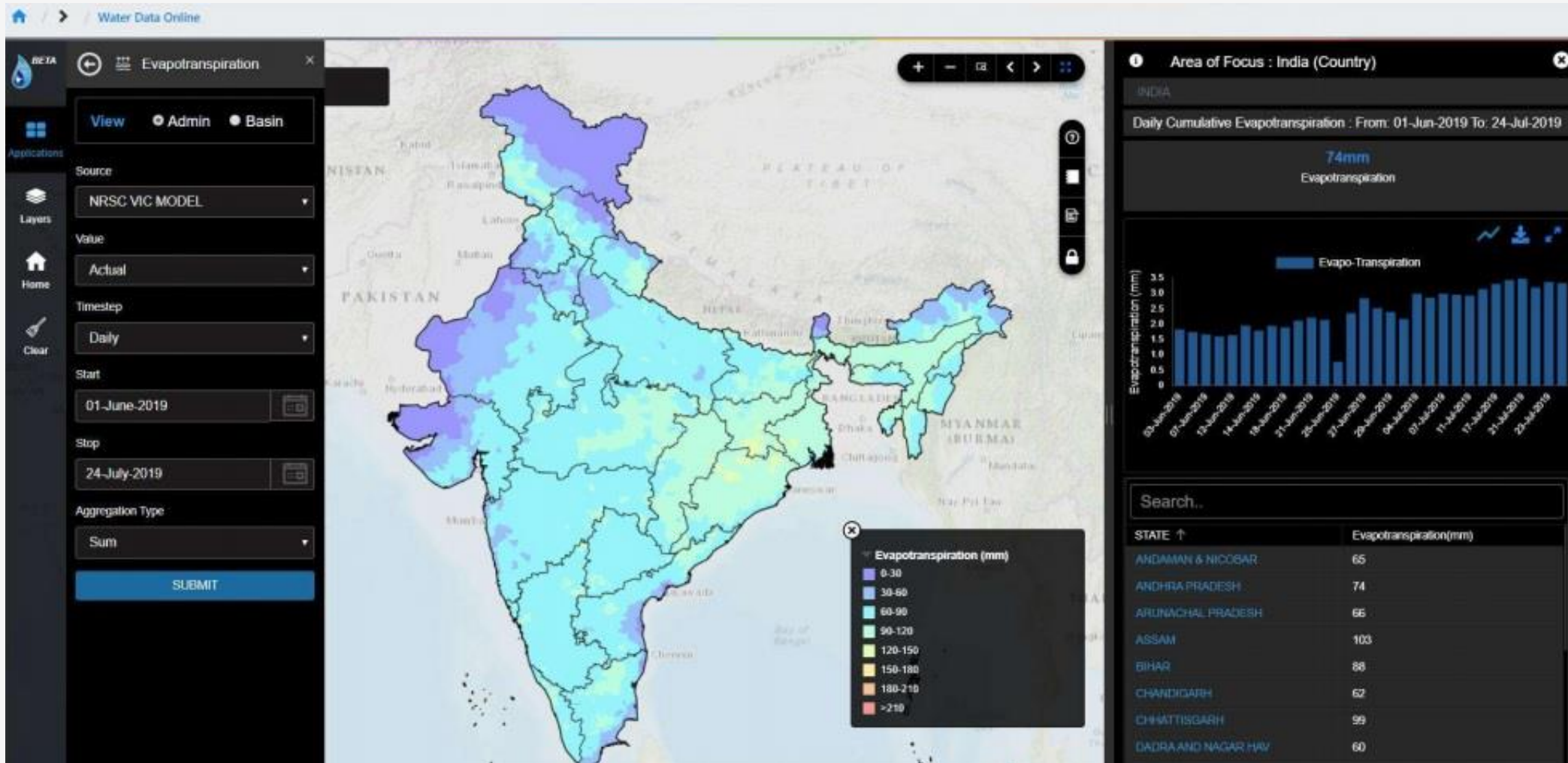
-Station wise surface (river) water quality information

-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)

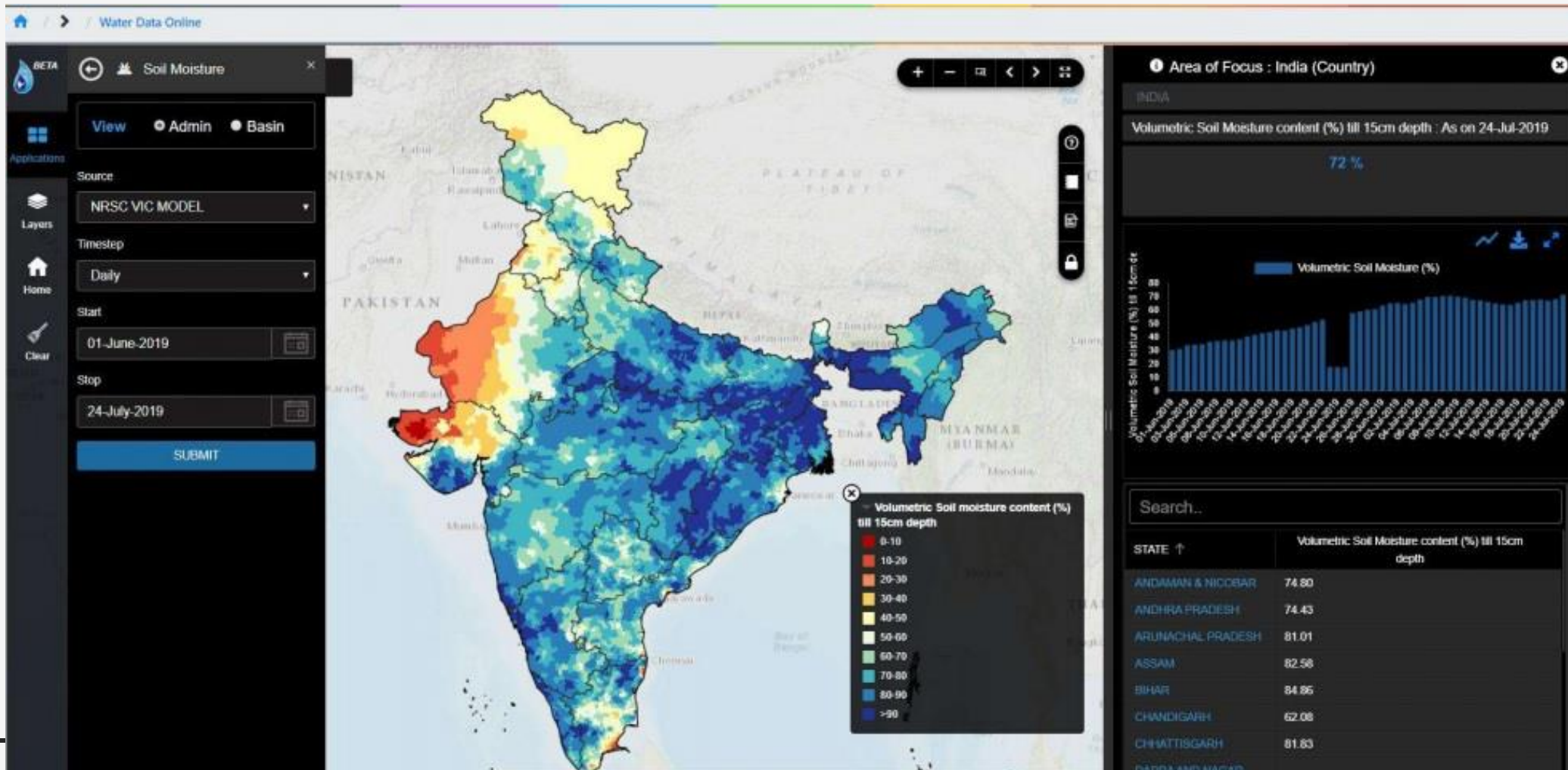


NRSC VIC Model Gridded data

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.

Minor Irrigation Tanks

View Admin Basin

Source: APWRIMS

Timestep: Yearly

Start: 2018

Stop: 2020

SUBMIT

15.56120 N | 92.95822 E

Area of Focus : Andhra pradesh (State)

INDIA / ANDHRA PRADESH

Yearly Minor Irrigation Tanks information from 01-Jan-2018 to 31-Jul-2020 using data

37,974
NUMBER OF MITANKS MONITORED

34%
FILL % OF THESE 37,974 MITANKS

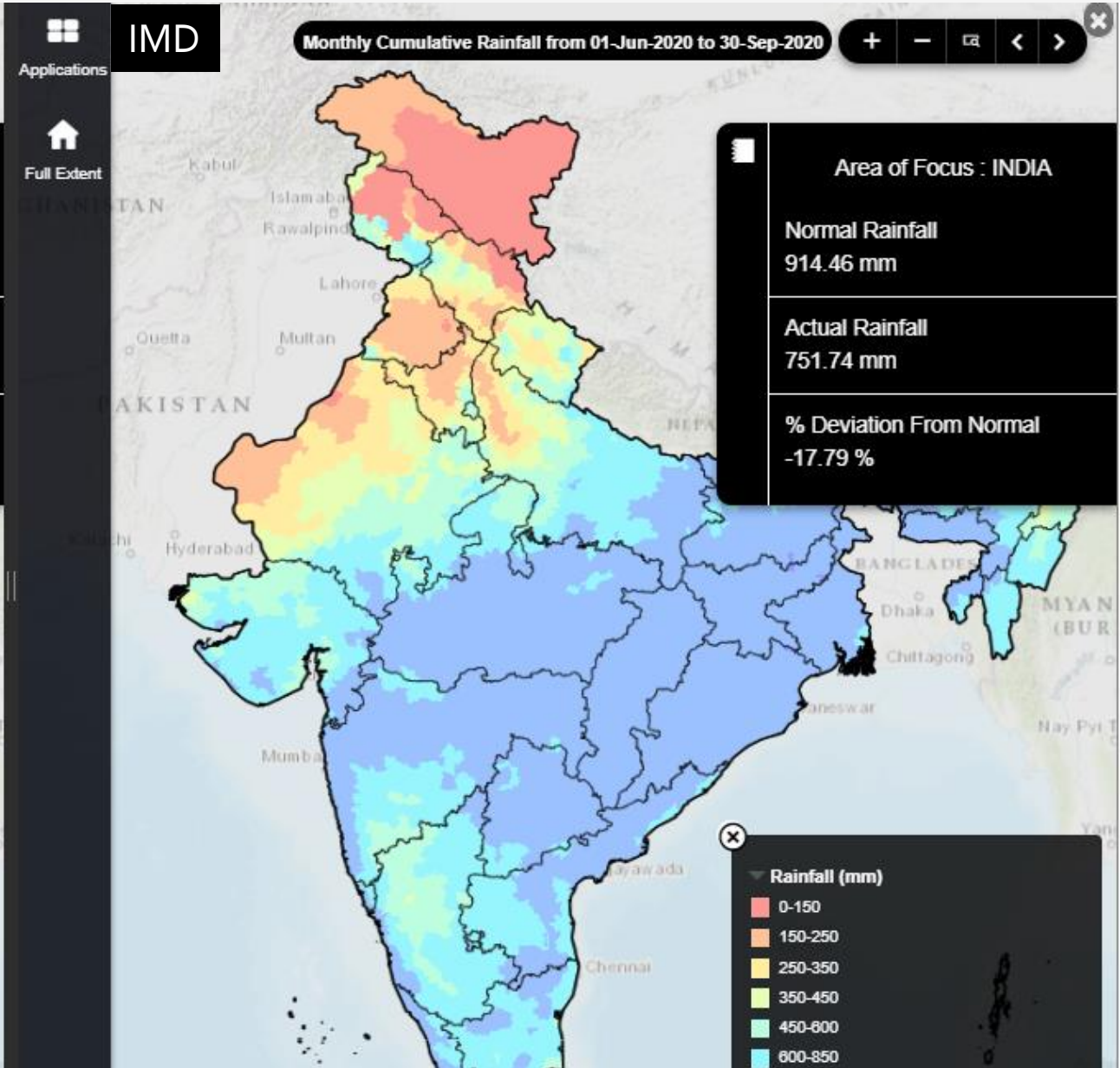
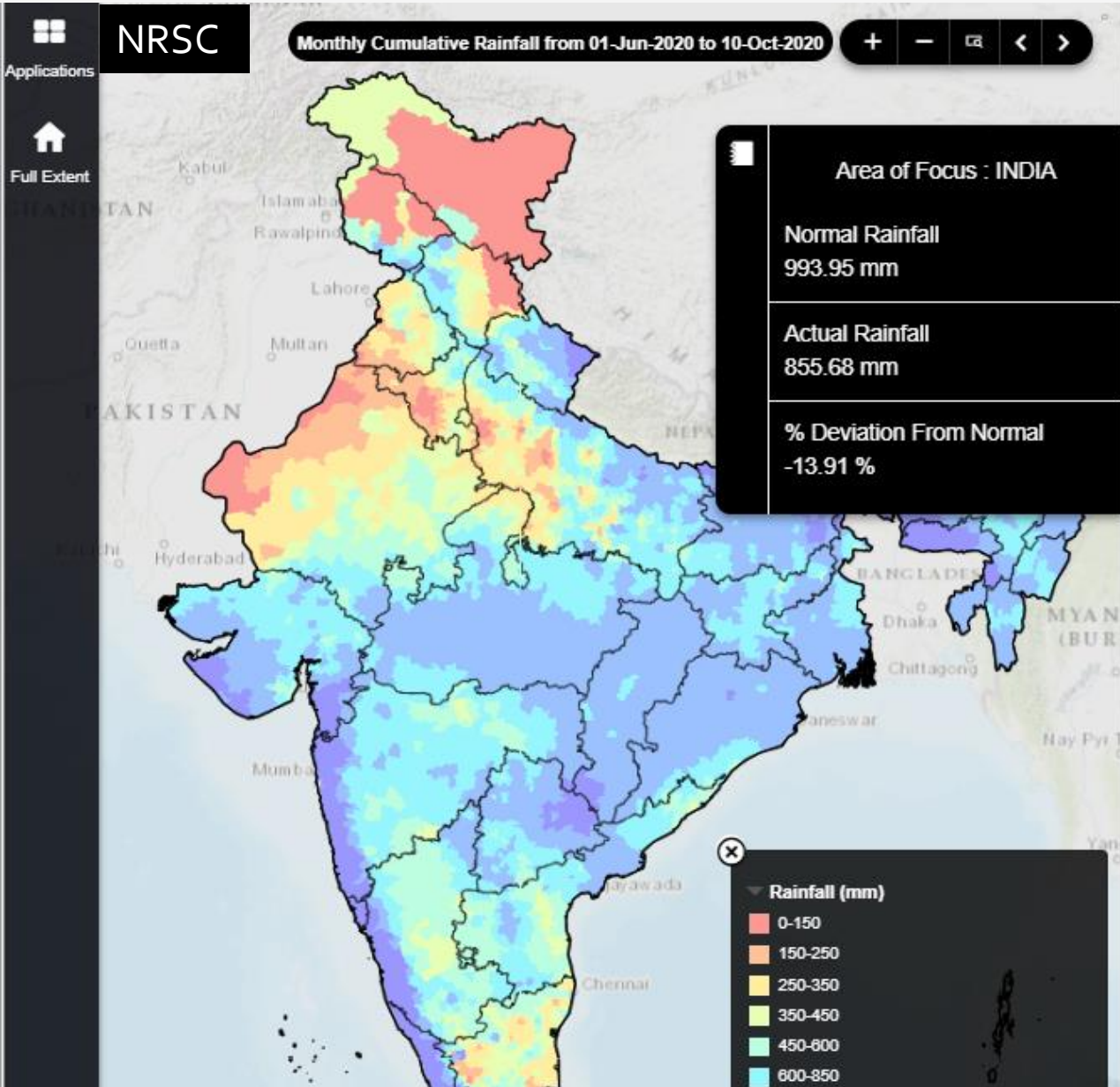
Current Year Storage (BCM)
 Last Year Storage (BCM)
 Last 10 Year Average Storage (BCM)

Year	Current Year Storage (BCM)	Last Year Storage (BCM)	Last 10 Year Average Storage (BCM)
2018	0.55	0.55	0.55
2019	2.05	0.55	1.05
2020	1.95	2.05	1.25

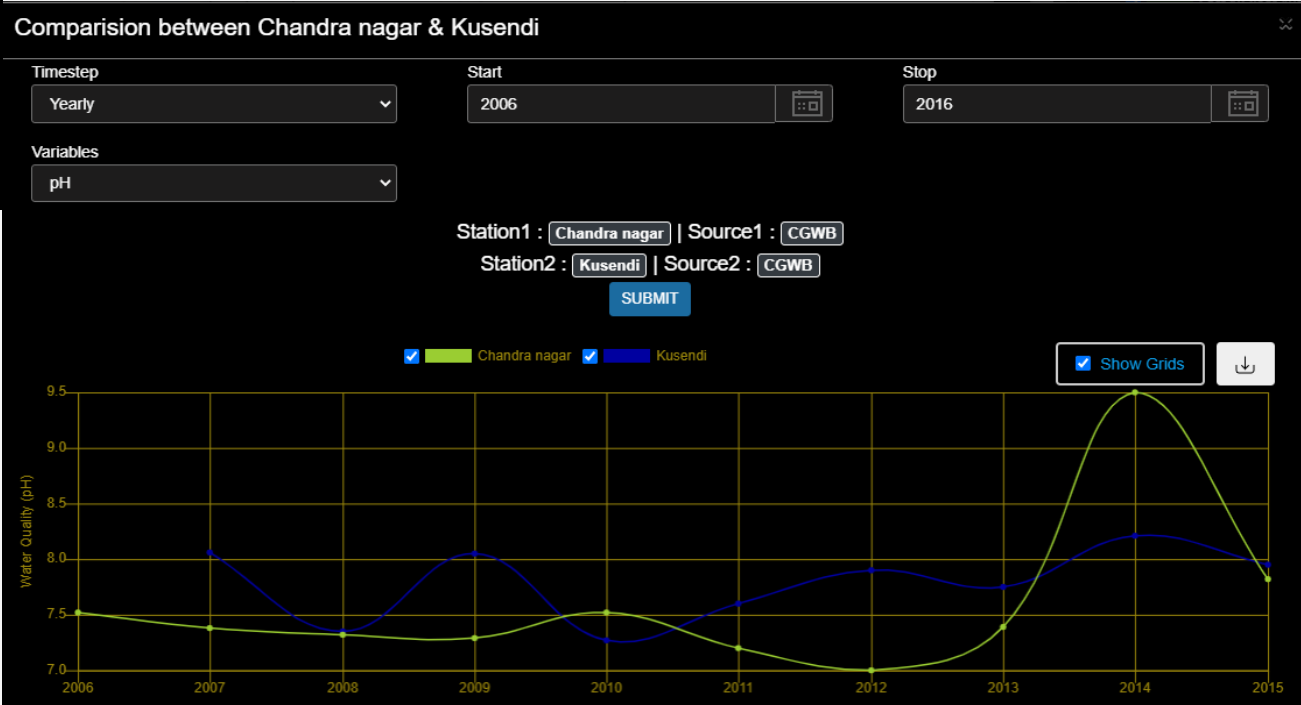
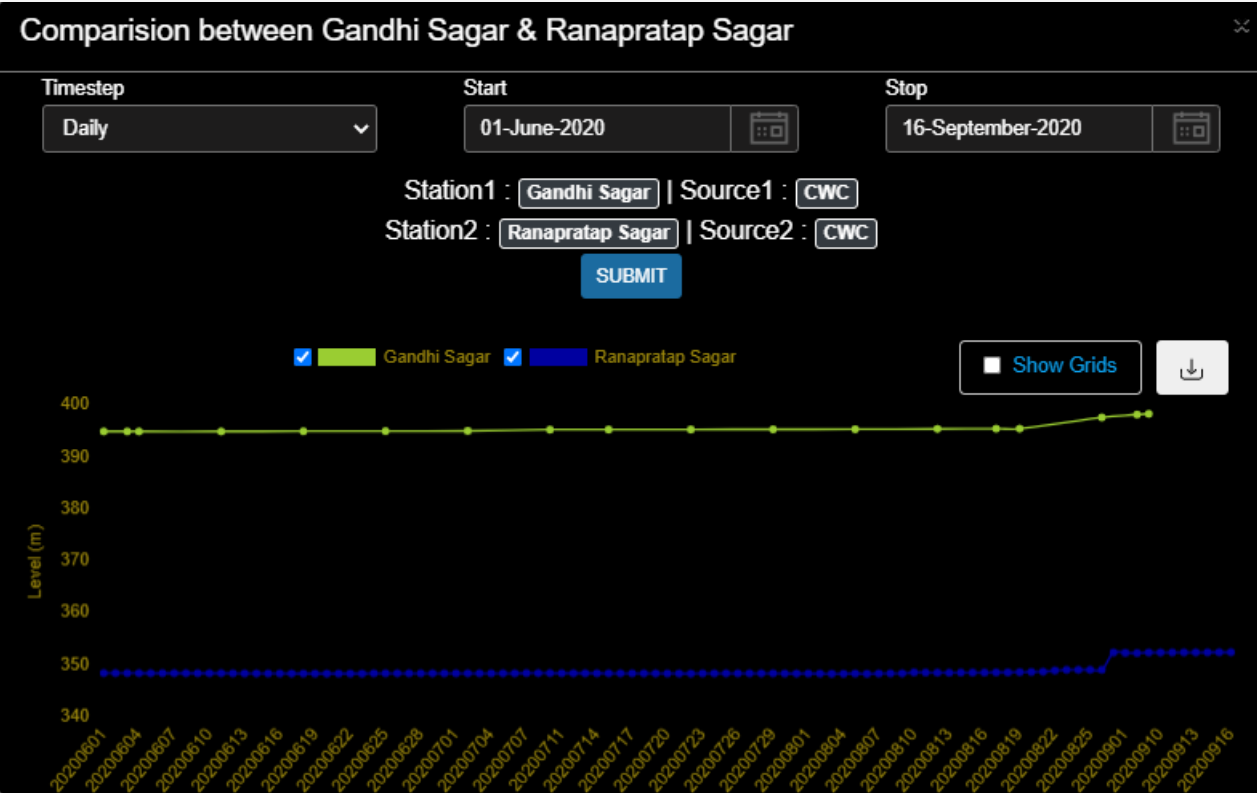
Search..

S. No.	DISTRICT	Number of MITanks	Total Capacity (BCM)	Total Storage (BCM)	Fill (%)
1	ANANTAPUR	1,426	0.67	0.15	21.77
2	CHITTOOR	7,613	0.90	0.25	27.47
3	EAST GODAVARI	1,683	0.35	0.11	32.22

Map Compare Tool



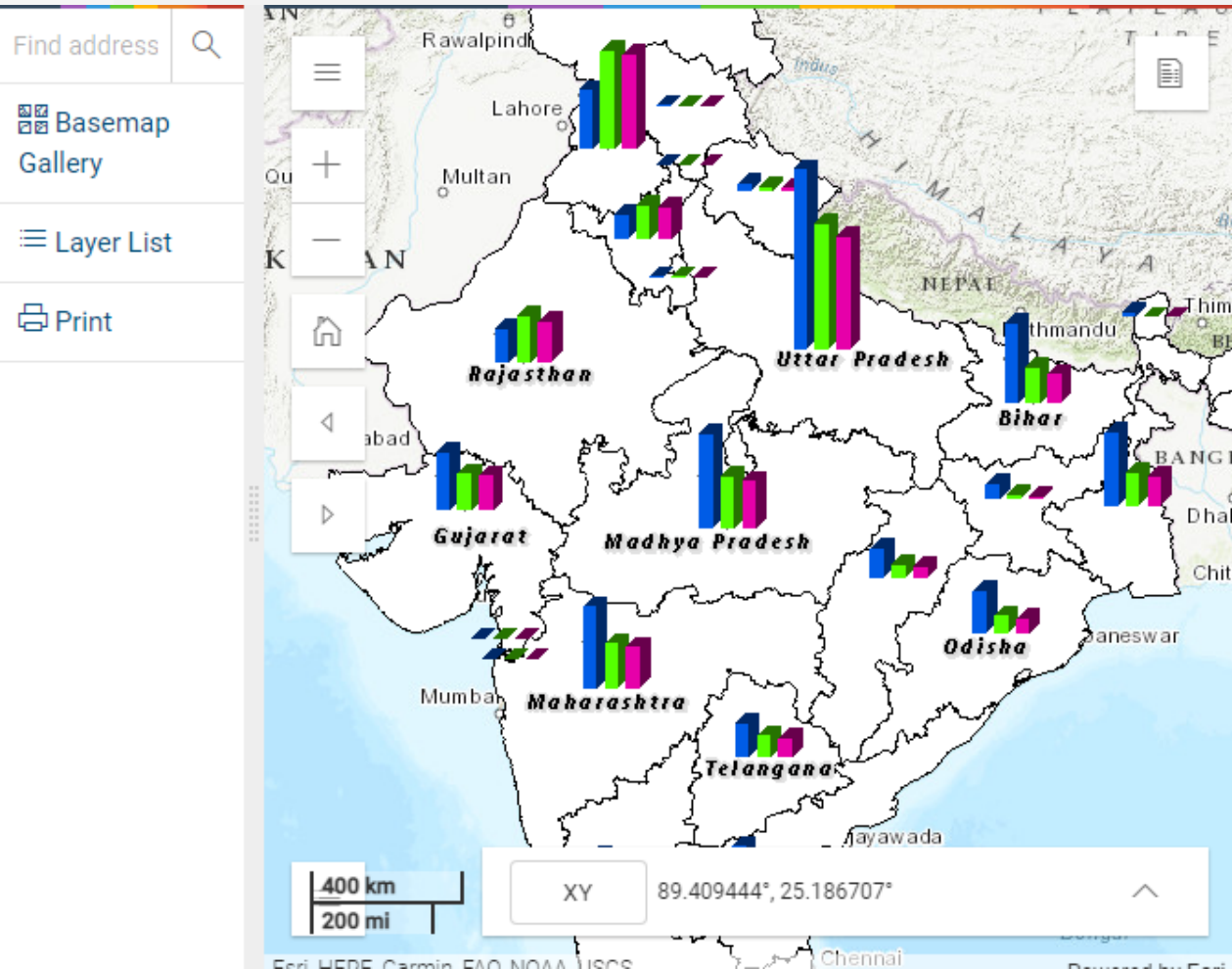
Data Comparison Tool



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 and 2013.
- The GWRE 2017 is under process.



Ground Water Resource Estimation

- Ground Water Resources
- Download GWR Data
- Compare

Select Year: 2017

Select Component: Ground Water Draft

Select State: --Select State--

Ground Water Resources

State Name	Irrigation Draft	Domestic and Industrial Draft	Total Draft
Andaman & Nicobar	0.000	0.010	0.010

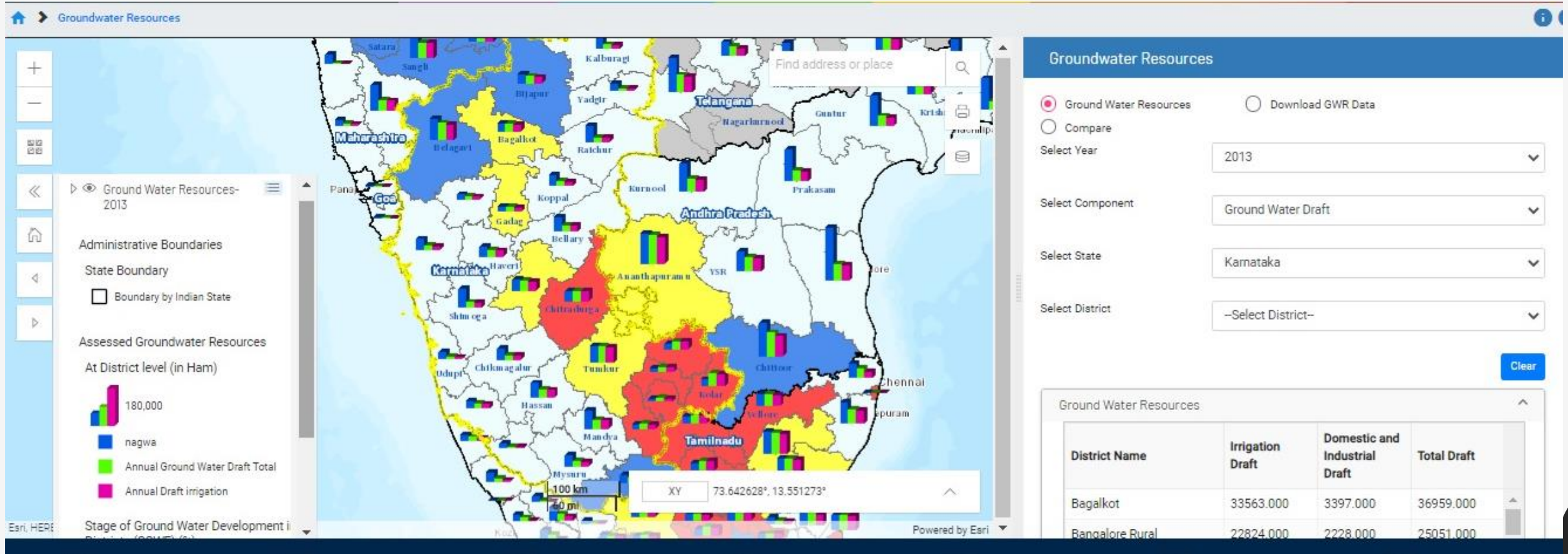
User Guide – Ground Water Resource Estimation

This document is intended to provide all the necessary information about the module, describing all the functions and tools available as well as to provide users with easy navigation guidance through which user may easily explore module and download information.

The following steps may be followed to get access to the tools and their functionalities:

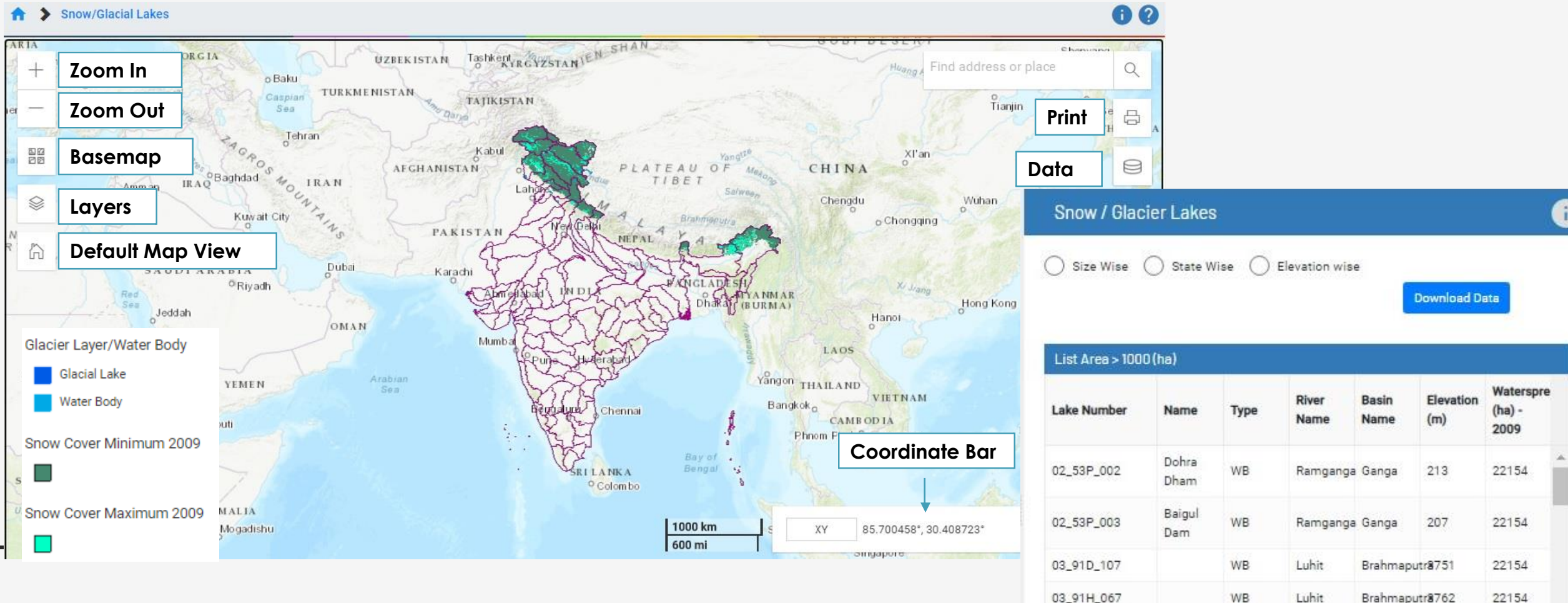
1. The main or home page of the

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.

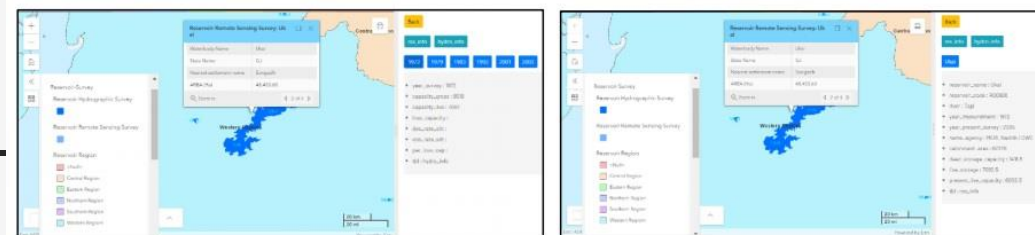
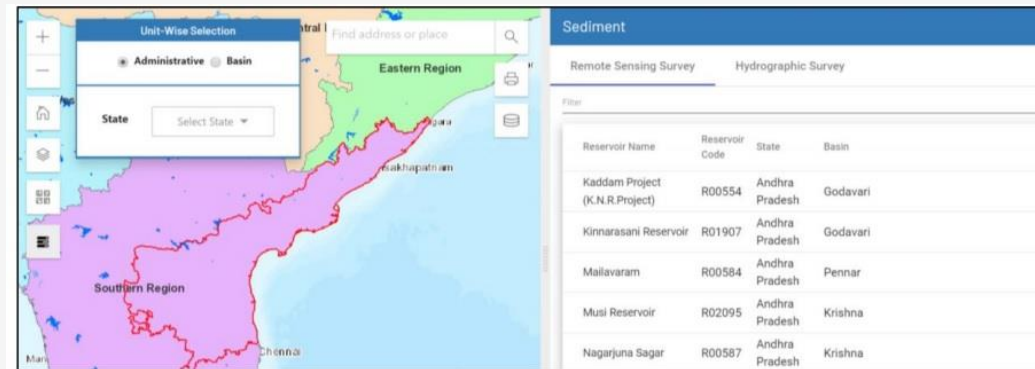


2.3 Reservoir Sedimentation studies

- 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.

Water Resources Project

Zoom In, Zoom Out, Default Extent, My Location, Global Search, Add Data, Selection, Legend, Layer List, Multi-Attribute Query Projects, Basemap, Chart Tool, Print

Tasks	Results
Irrigation Projects_Query result	...
Number of features found: 1	
MMIRR: Agra Canal Major Irrigation Project_Uttar Pradesh	
Irrigation Project Name	Agra Canal Major Irrigation Project_Uttar Pradesh
Project Code	J103261
Type	Major
River	Yamuna
Status	Completed
Inter-Basin	No
Inter-Country	None
Project Sharing	Interstate
Year of Start of work	
Work started in 5yr Plan	Pre-Plan
Year of Completion Of Year	1873
Completed in 5yr Plan	Pre-Plan
Year Of Approval by Planning Comission	
Approved Cost (Rs Crore)	
Actual Cost (Rs Crore)	1.33
Culturable Command Area (Th Ha)	327.00
Ultimate	47.00

2.5 Minor Irrigation Census

- 4th & 5th Minor irrigation census.

- Six layers at district level :

1. ground water schemes

3. Water Distribution devices

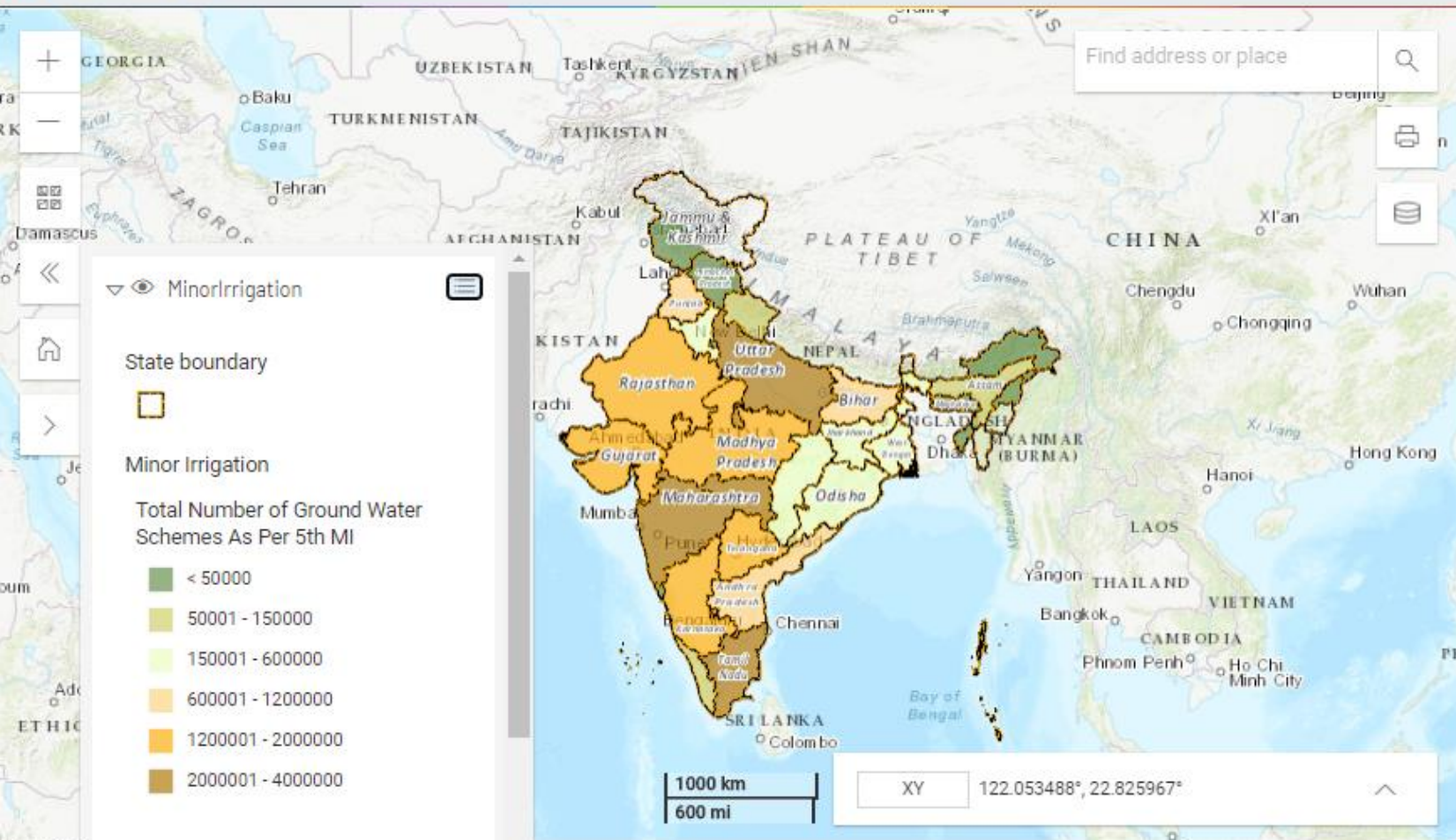
5. Total Irrigation potential utilized

2. surface water schemes

4. Total Irrigation potential created

6. Culturable command area

Minor Irrigation



Minor Irrigation

Select the Scheme

Ground Water Schemes

5th MI

4th MI

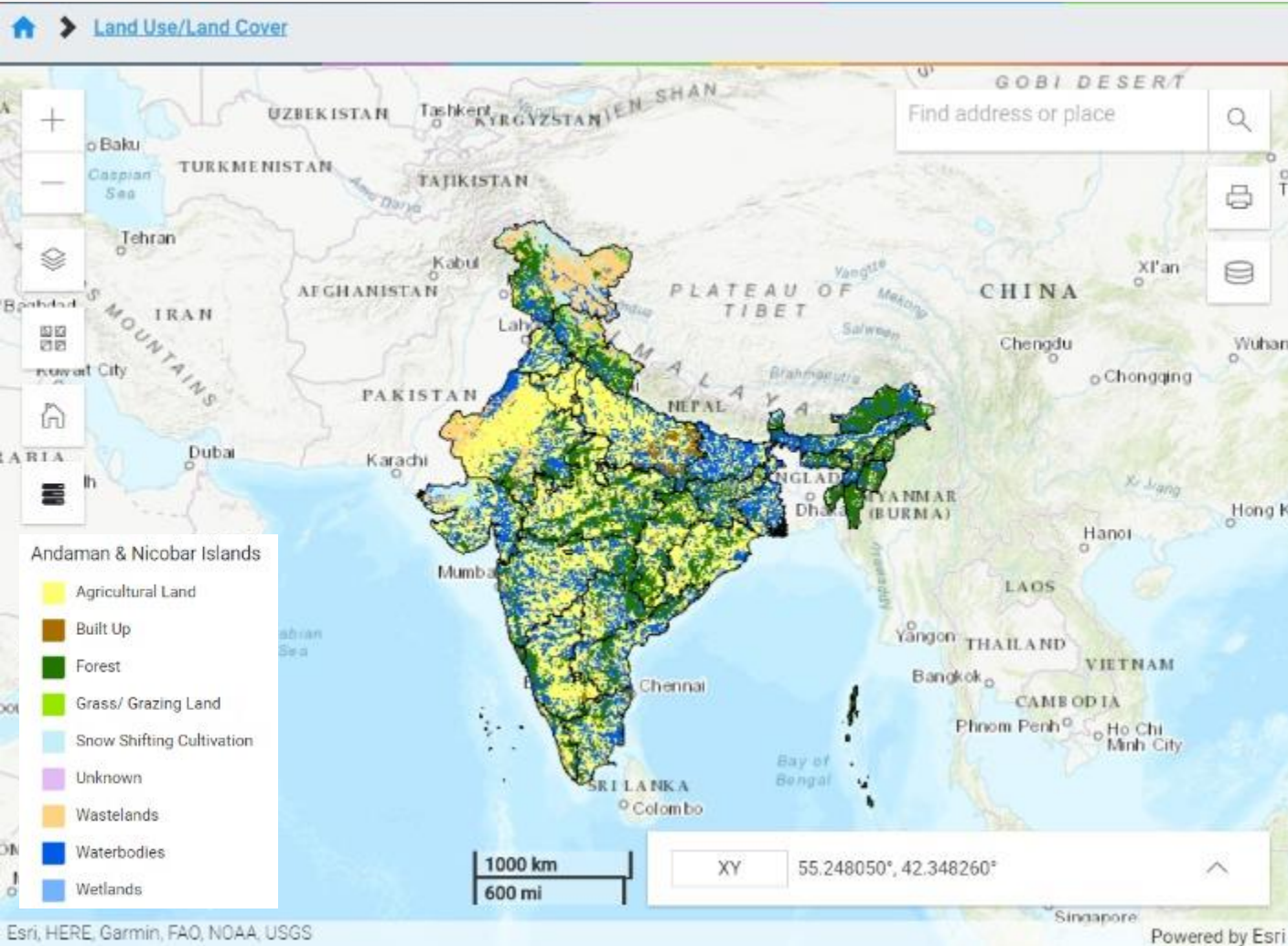
Compare

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

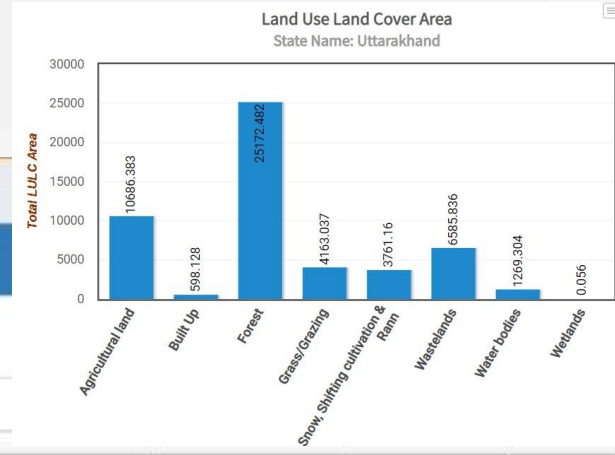
Land use/land cover maps (1:50000 scale) by National Remote Sensing Centre (NRSC).



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	Salt pans	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

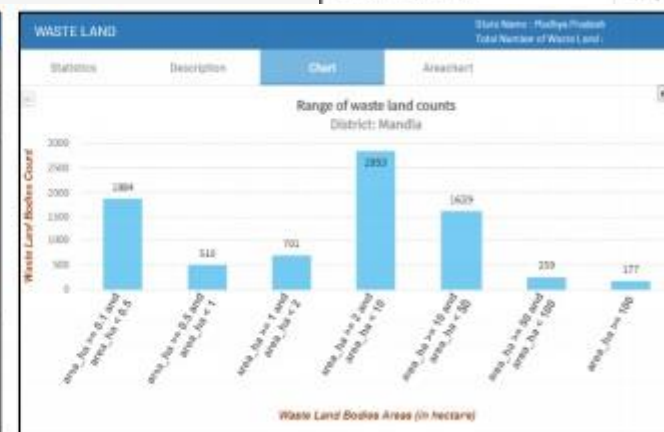
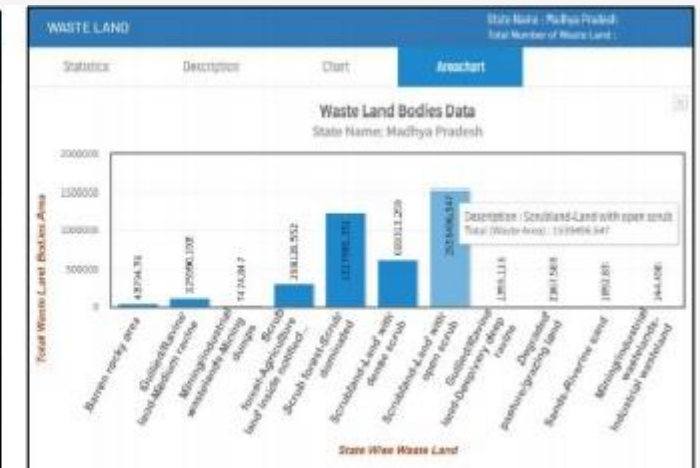
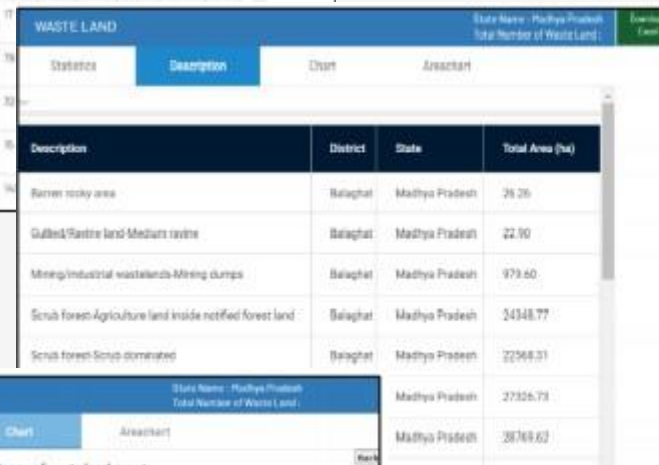
2.7 Wasteland

- 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

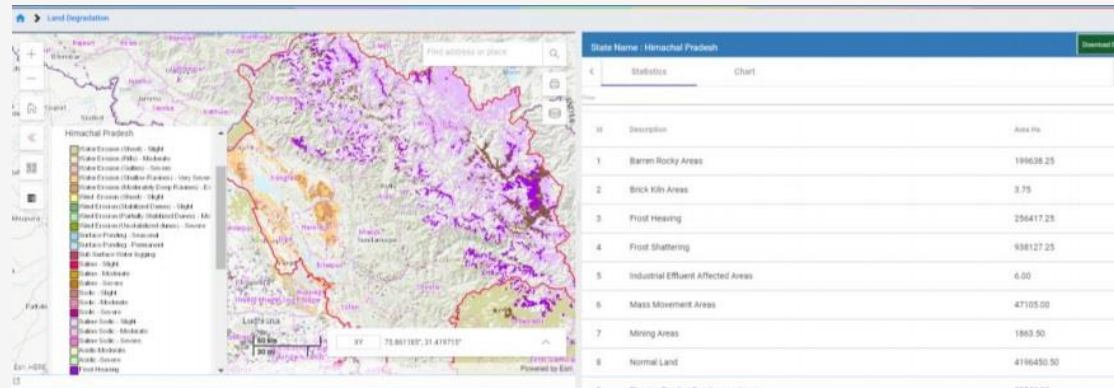
Classes under wasteland statistics and charts



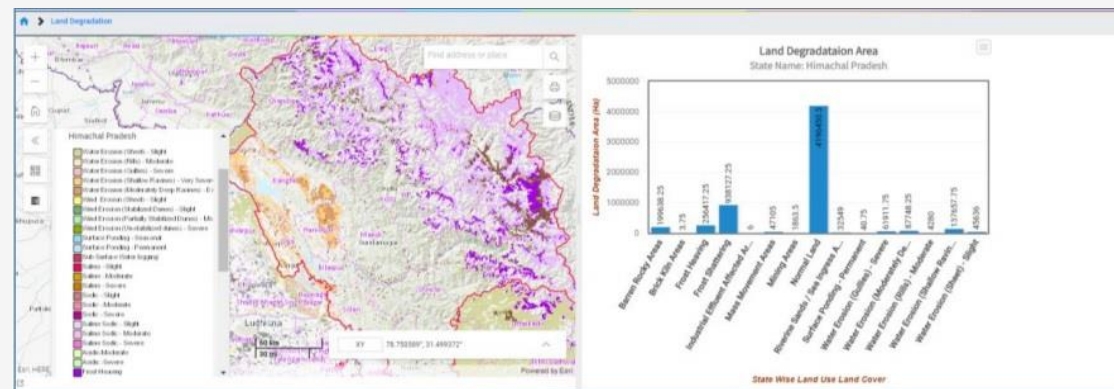
Number of wastelands in unit selected with area wise distribution chart

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.



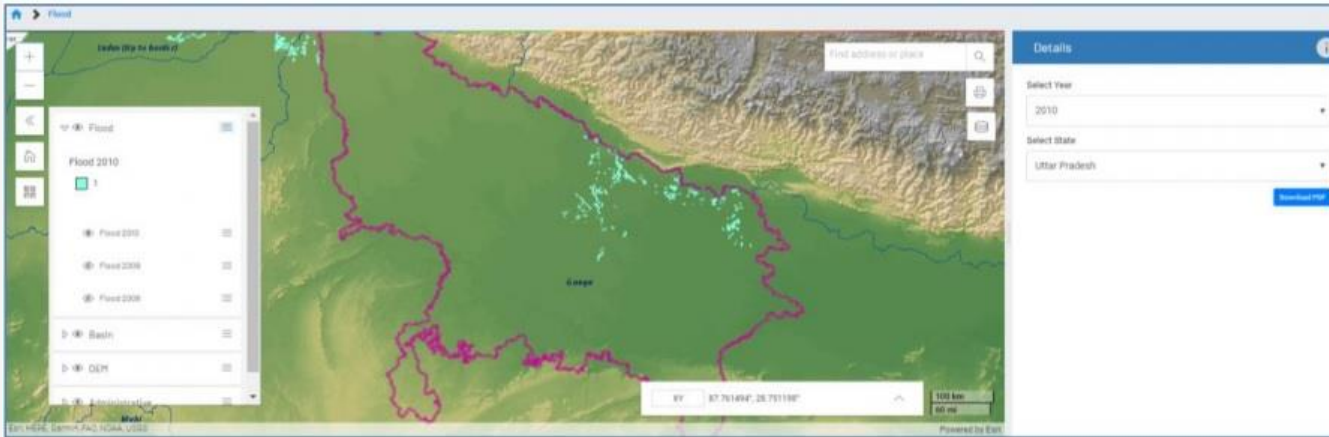
State Selection and Statistics



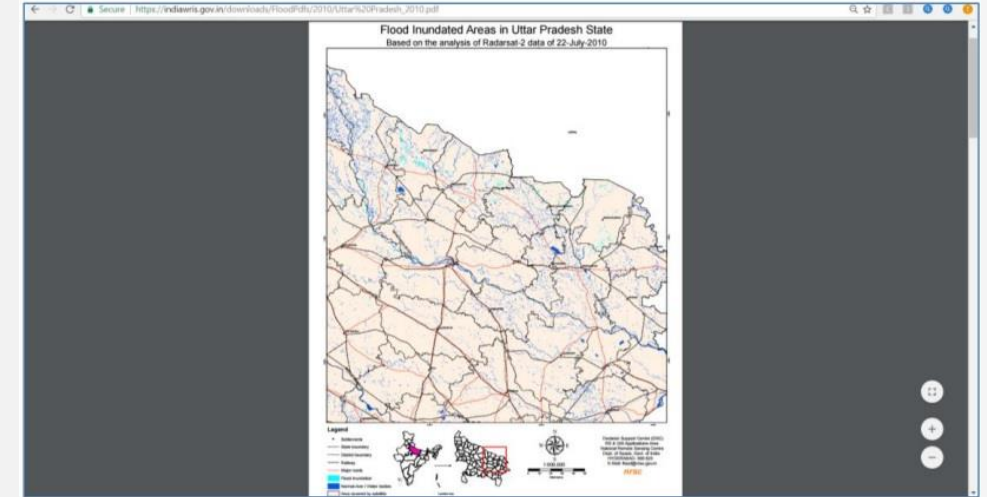
State selection and Chart

2.9 Hydro-met Extremes

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

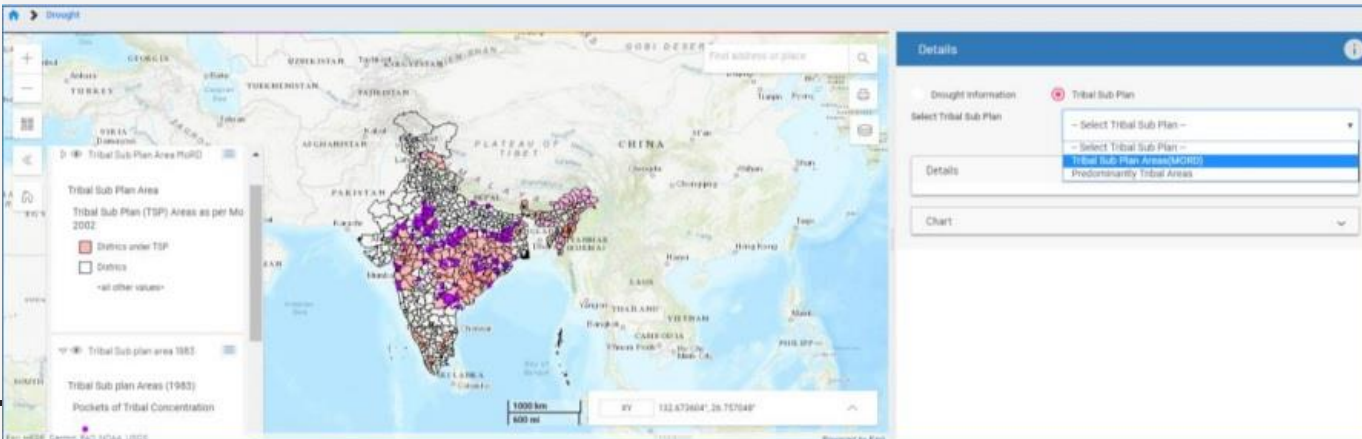


Flood - State selection and pdf downloads

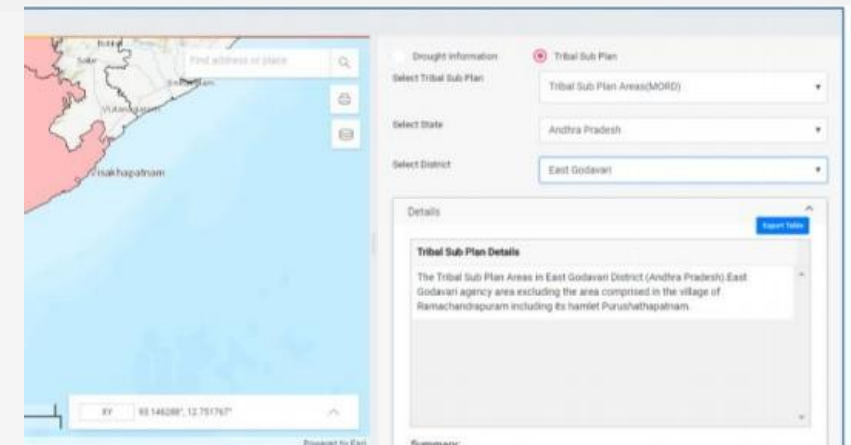


Flood pdfs

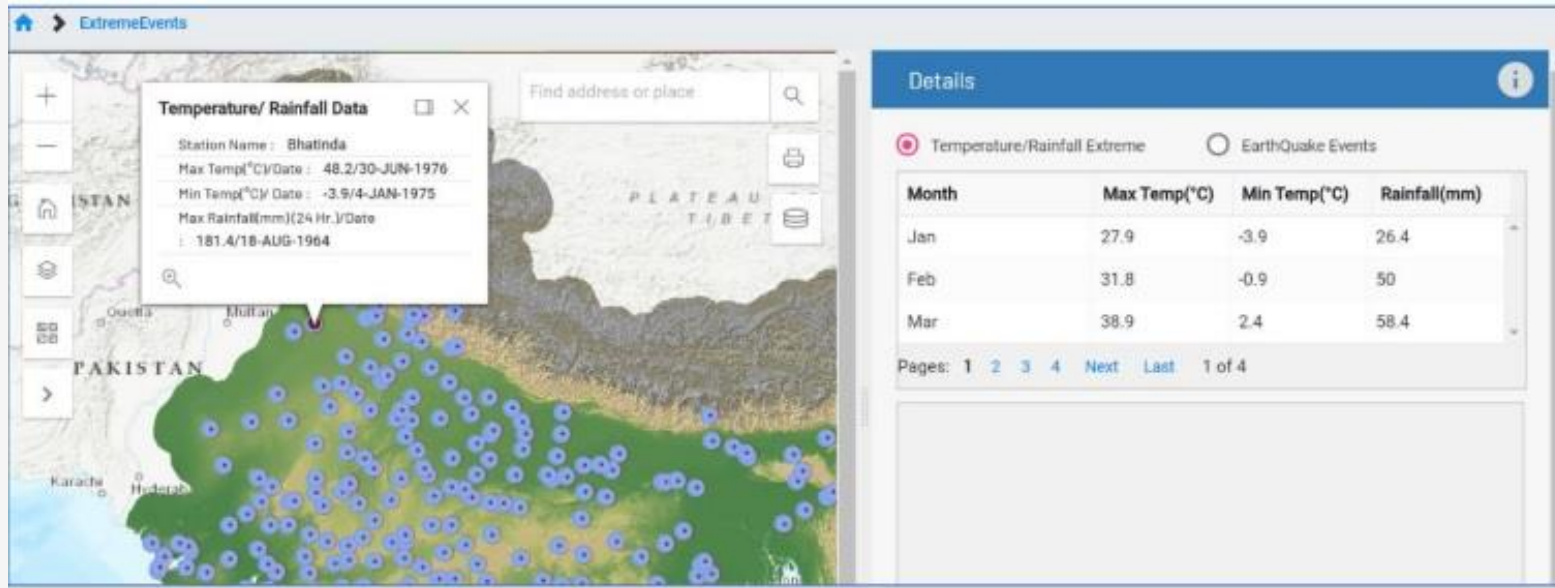
- Drought Prone Area based on the information generated under two main themes i.e. Areas under Drought Prone Development and Desertification Development & Tribal Sub-Plan Areas in the Country



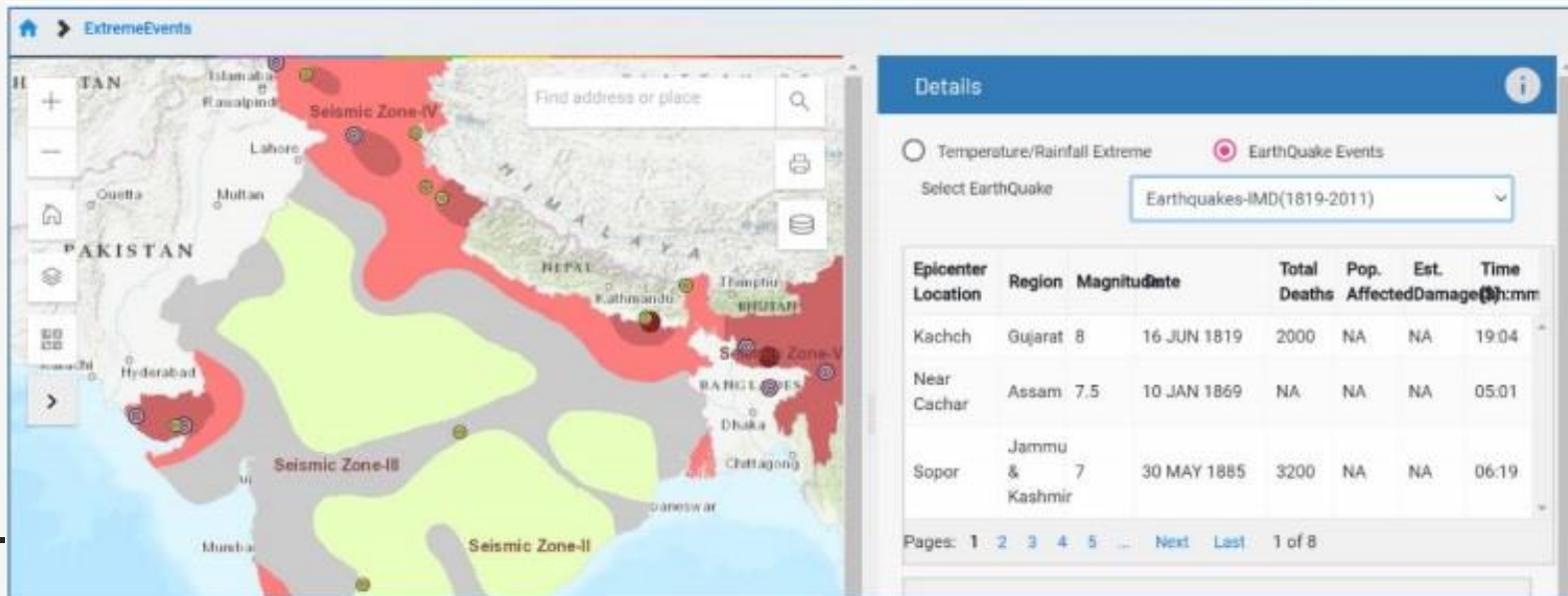
Drought – Tribal sub plan



Drought – District selection and statistics



Temperature / Rainfall Extremes



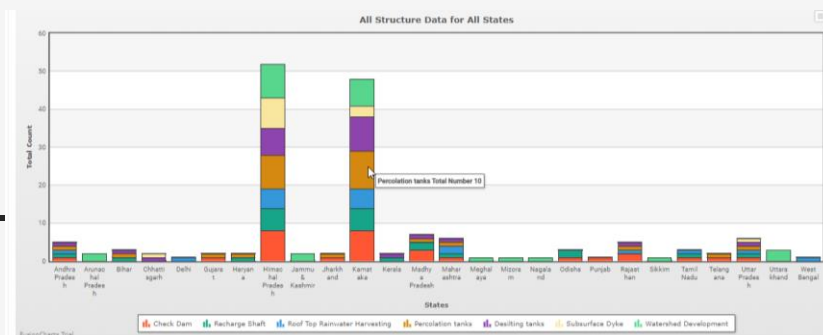
Earthquake

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

The screenshot shows the 'Artificial Recharge Structure - Viewer' interface. On the left, there are navigation controls: Zoom in, Zoom out, Default Extent, Basemap Gallery, and Layers. A Global Search bar is at the top right. The map displays India with various recharge structures marked by colored dots. A coordinate bar at the bottom shows the coordinates 40.168721°, 5.541259°. On the right, there is a control panel with 'Summary View' selected and 'Report Download' as an option. Below this are dropdown menus for 'Boundary Wise Selection' (Administrative Boundary), 'Type of Structure' (All Structure Types), and 'Sub Type of Structure'. There are also dropdowns for 'State' (All States), 'District' (- Select District -), and 'Block' (- Select Block -). A 'Download Data' button and a 'Clear' button are present. Below the control panel is a 'Summary' table.

Sr No	State Name	Count	Storage Capacity (Cub. Meter)	Total Expenditure (Rupees)
1	Andhra Pradesh	5	18,360	12,60,000
2	Arunachal Pradesh	2	3,700	4,70,000
3	Bihar	3	12,670	8,50,000
4	Chhattisgarh	2	2,383	5,80,000
5	Delhi	1	1,088	2,10,000
6	Gujarat	2	3,748	5,20,000
7	Haryana	2	14,600	5,60,000
8	Himachal Pradesh	52	1,46,512	81,20,000



The screenshot shows the 'Report Download' section. It features a dropdown menu with the following options:

- Select the Required Report-
- Select the Required Report-
- Administrative Unit Wise
- Hydrological Basin Wise
- Year Of Completion
- Agency Wise
- Artificial Recharge Structure Type
- Complete Basin Report
- Complete State Report
- Urban / Rural

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.

Home About WRIS Water Data + WRIS Tools + Utilities + Publications + Contact Us +

Find address

Basemap Gallery

Layer List

Print

Litholog Well Locations

Well type

- Exploratory Well
- Observation Well
- Piezometer Well
- Others

User Guide – Exploration Details/Litholog

This document is intended to provide all the necessary information about the module, describing all the functions and tools available as well as to provide users with easy navigation guidance through which user may easily explore module and download information.

The following steps may be followed to get access to the tools and their functionalities:

1. The main or home page of the module consists of different

Individual Bore details

Well Location : Kotar
Well ID: L00667
State: Madhya Pradesh
District: Satna

Depth (m)

Litholog

Aquifer Material

- Non-Aquifer (Alluvium, Sirbu Shale, Bhandar limestone & Ganurgarh Shale)

Year of observation: 2002
Distance of Observation Well: 1.94715774
Year of Drilling: 2006-07
Depth Drilled (m): 142.90000305
Depth of Construction (m): -

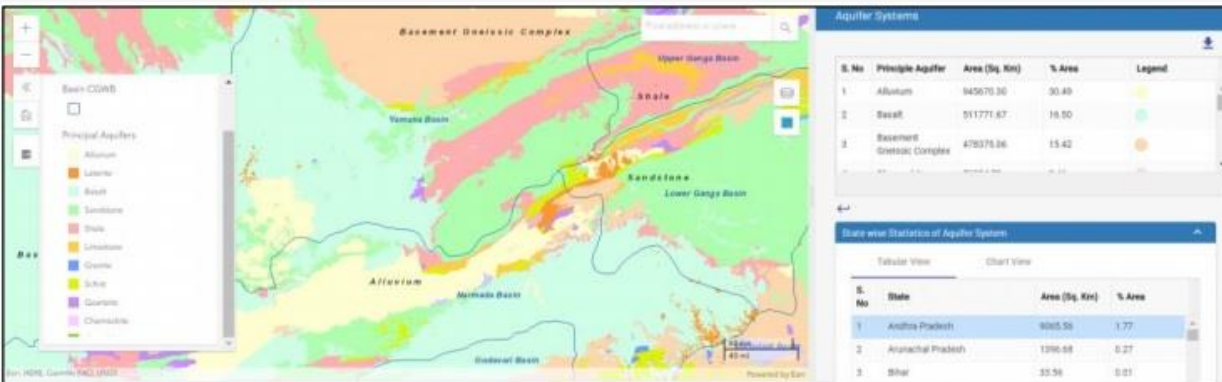
Year of observation: 2002
Distance of Observation Well: 1.94715774
Year of Drilling: 2006-07
Depth Drilled (m): 142.90000305
Depth of Construction (m): -

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.



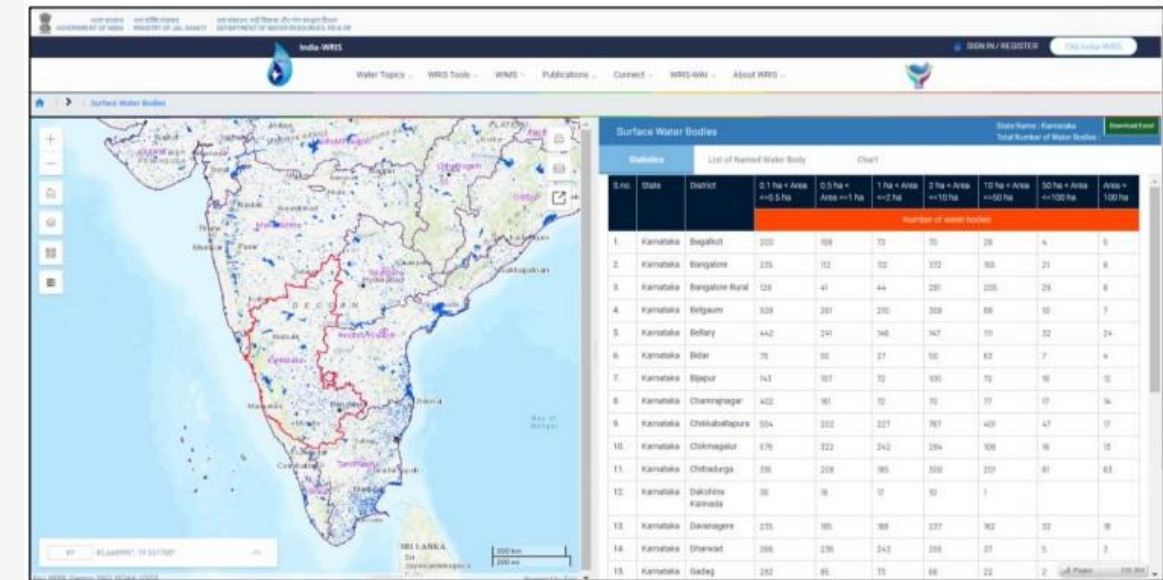
Aquifer Systems



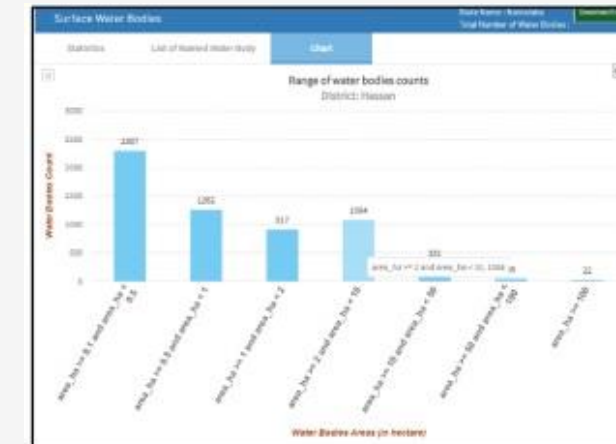
Aquifers statistics state level

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

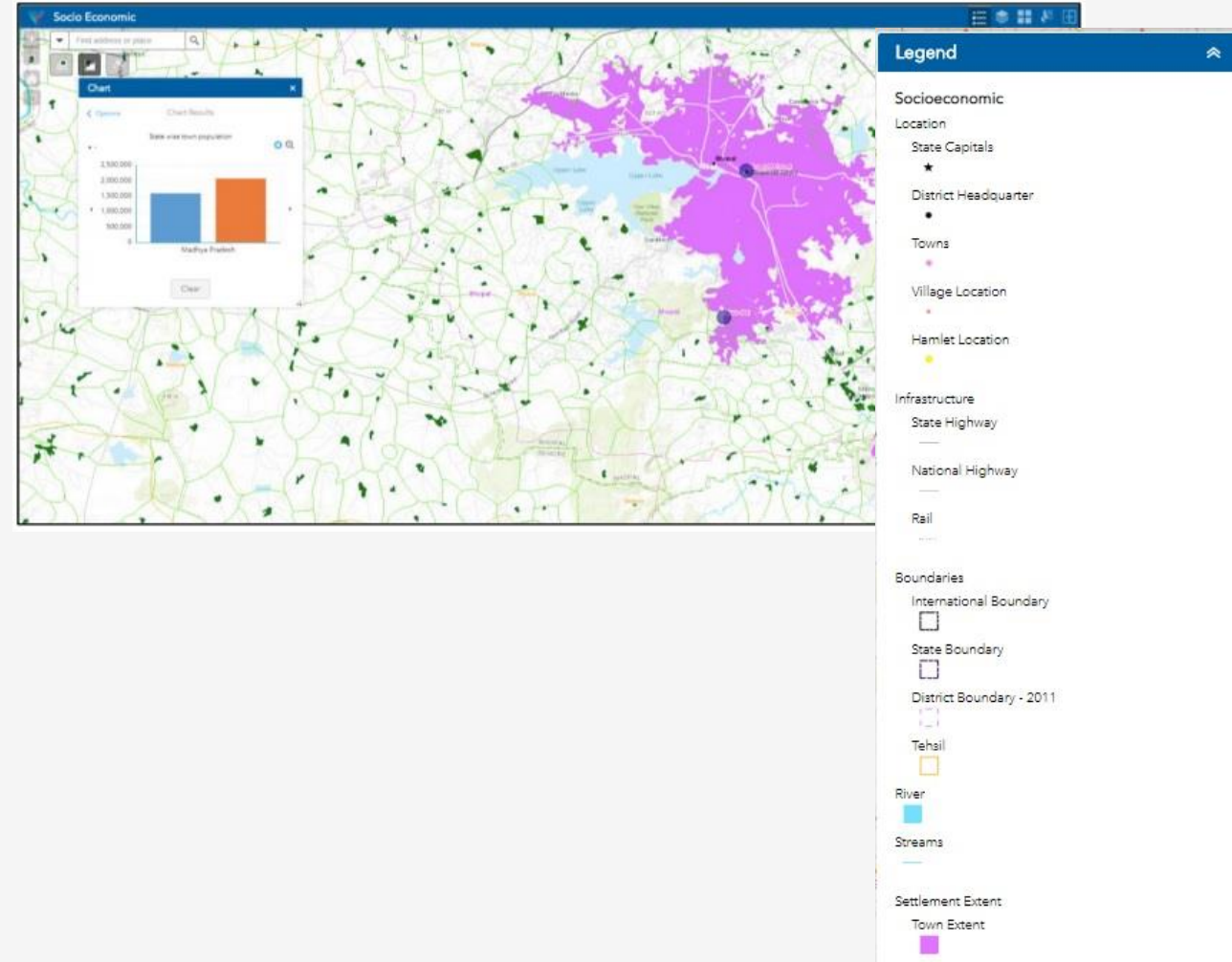


Zoom to feature

3.5 Socio Economic Census

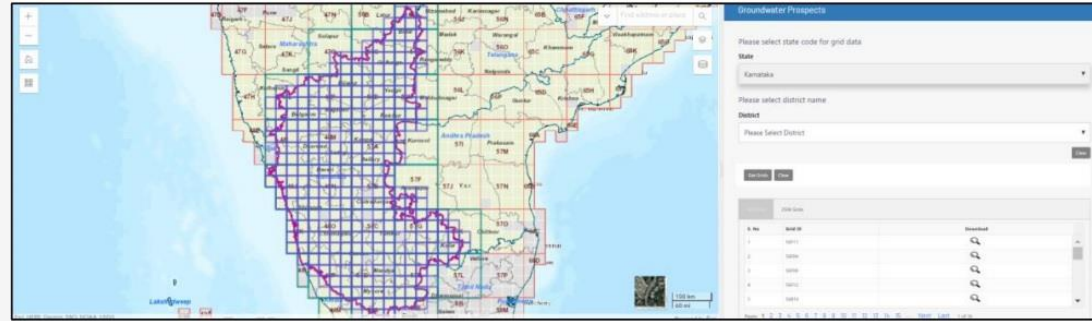
- Information regarding hierarchy of Administrative boundaries, settlement information for urban and rural sets

- Village boundary layer (declared by SOI) also provided

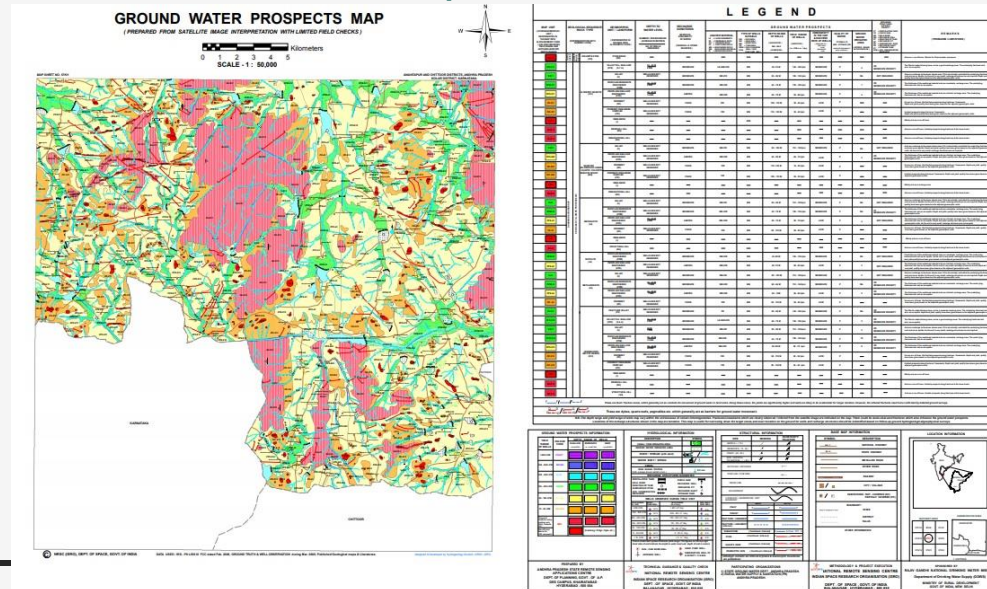


3.6 Groundwater Prospects

- 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.

Soil

State Name : Madhya Pradesh

Download Excel

Soil Depth | Soil Erosion | Soil Productivity | Soil Slope | Soil Texture

Statistics | Chart

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

Soil Report

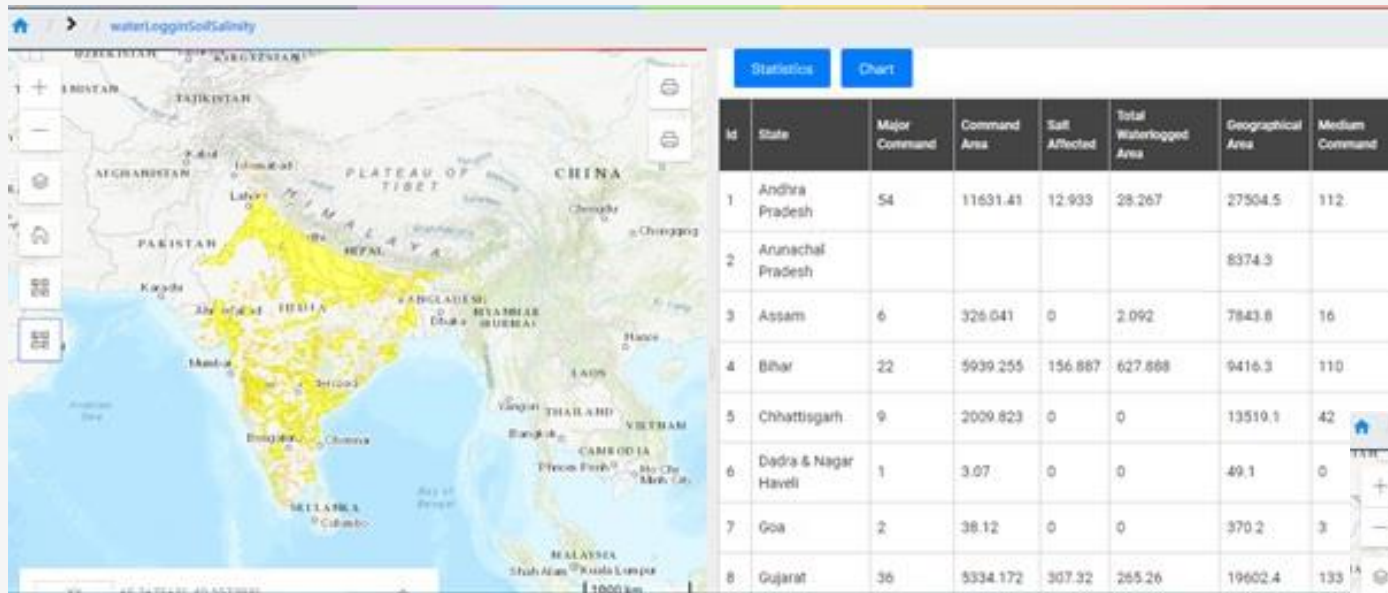
Date : May 21, 2020, 5:04:52 PM

Area	State	Description	District	Tbl
27.878	BR	DATA NOT AVAILABLE	Araria	soil_depth
270161.012	BR	Deep,Moderately deep, slightly/mod	Araria	soil_depth
42175.627	BR	Deep,Moderately deep, slightly/mod	Arwal	soil_depth
2363.175	BR	Extremely shallow (< 10cm)	Arwal	soil_depth
15238.104	BR	Shallow (25-50cm)	Arwal	soil_depth
278805.358	BR	Deep,Moderately deep, slightly/mod	Aurangabad	soil_depth
8929.316	BR	Extremely shallow (< 10cm)	Aurangabad	soil_depth
19734.39	BR	Shallow (25-50cm)	Aurangabad	soil_depth
7648.153	BR	Very shallow (10-25 cm)	Aurangabad	soil_depth
273201.17	BR	Deep,Moderately deep, slightly/mod	Banka	soil_depth
6374.313	BR	Extremely shallow (< 10cm)	Banka	soil_depth
398.223	BR	Shallow (25-50cm)	Banka	soil_depth
18105.346	BR	Very shallow (10-25 cm)	Banka	soil_depth
166834.29	BR	Deep,Moderately deep, slightly/mod	Begusarai	soil_depth
19452.714	BR	Extremely shallow (< 10cm)	Begusarai	soil_depth
207398.749	BR	Deep,Moderately deep, slightly/mod	Bhagalpur	soil_depth
37141.194	BR	Extremely shallow (< 10cm)	Bhagalpur	soil_depth
204434.052	BR	Deep,Moderately deep, slightly/mod	Bhojpur	soil_depth
23630.923	BR	Extremely shallow (< 10cm)	Bhojpur	soil_depth
159949.252	BR	Deep,Moderately deep, slightly/mod	Buxar	soil_depth
4348.298	BR	Extremely shallow (< 10cm)	Buxar	soil_depth
218254.686	BR	Deep,Moderately deep, slightly/mod	Darbhanga	soil_depth
1858.278	BR	Extremely shallow (< 10cm)	Darbhanga	soil_depth
411454.386	BR	Deep,Moderately deep, slightly/mod	Gaya	soil_depth

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.



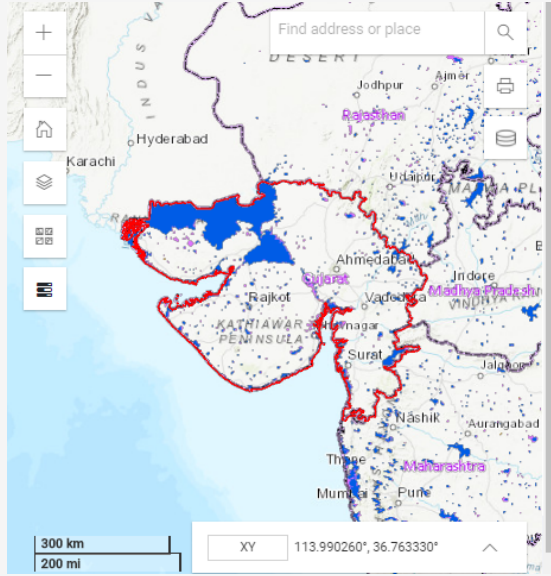
Water Logging and Soil Salinity Module

Statistics and Charts



3.10 Wet Lands

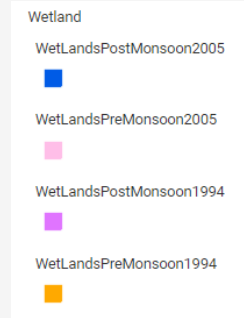
- Spatial distribution and extent of wetlands for the year 1994 & 2005 (pre and post monsoon)
- Satellite based product



State Name : Gujarat

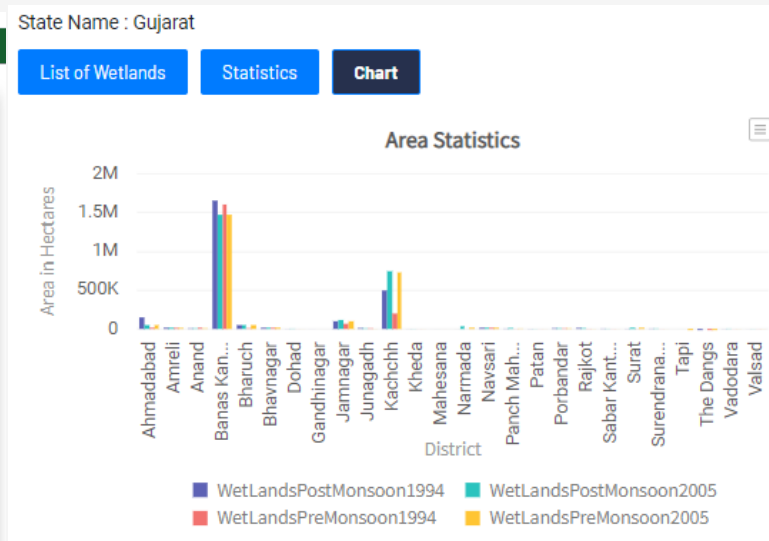
[List of Wetlands](#) [Statistics](#) [Chart](#) [Download Excel](#)

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	141.1
5	Gujarat	Ahmadabad	Coastal	Natural	Sabarmati	Sabarmati Lower	Sand/beach/spit/bar		WetLandsPostMonsoon1994	81.3
6	Gujarat	Ahmadabad	Coastal	Natural	Sabarmati	Sabarmati Lower	Sand/beach/spit/bar		WetLandsPostMonsoon1994	700



[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



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



Downloads – Map view of links

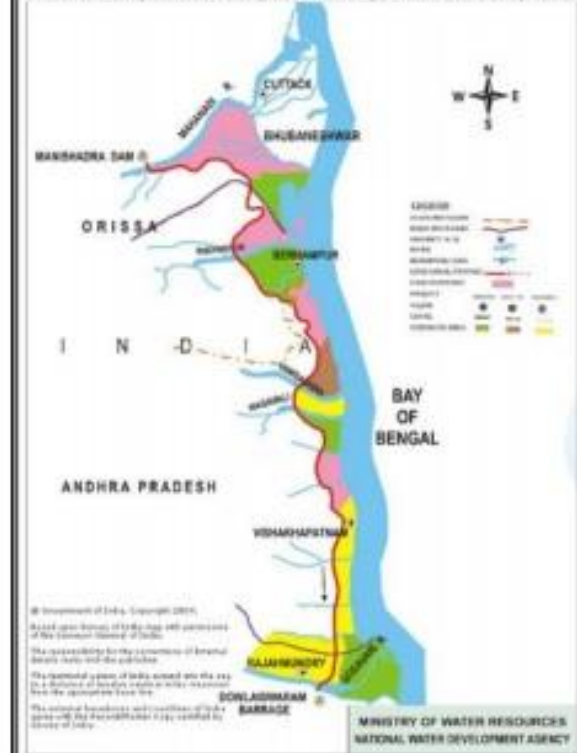


Zoom to link on click

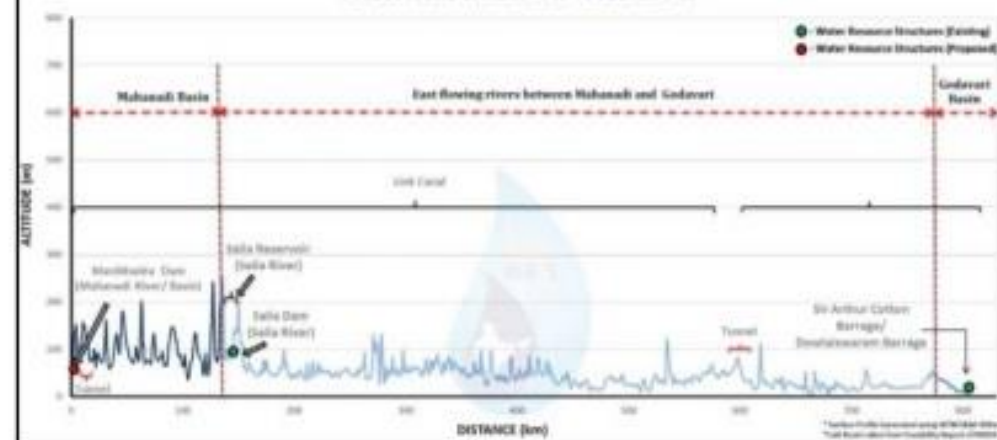
Salient Features of Mahanadi - Godavari Link Project

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

MAHANADI (MANIBHADRA)-GODAVARI (DOWLAISWARAM) LINK

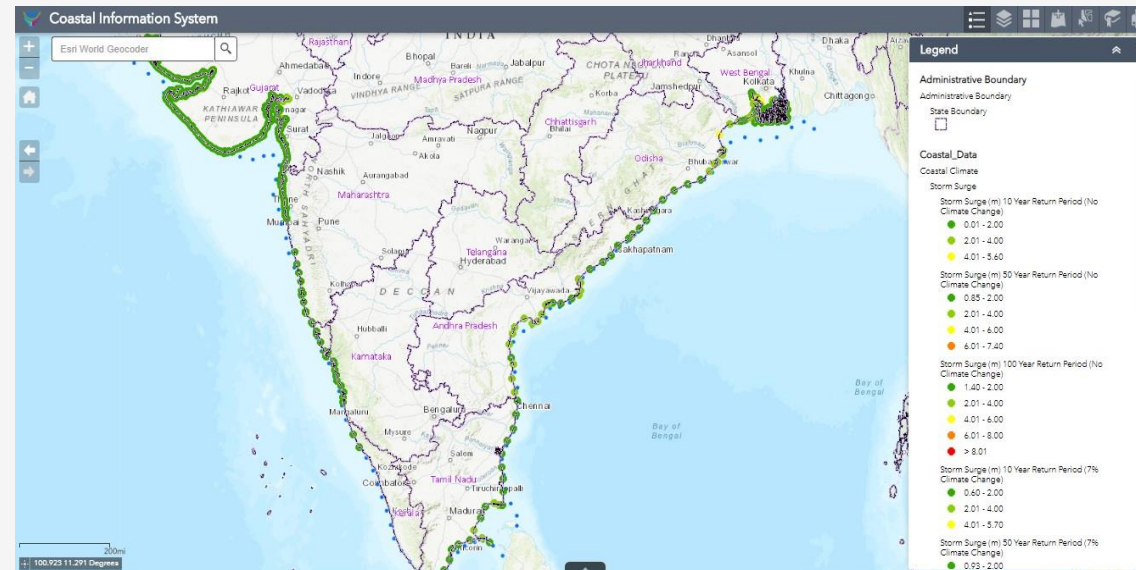


Surface Profile of Mahanadi - Godavari Link



3.13 Storm Surge Study

- Provides a comprehensive database related to oceanographic and meteorological data for the entire coast of India
- The oceanographic and meteorological variables considered includes Storm surge, Cyclone, Wave and Sea-Level Rise
- Storm Surge and Cyclone data are provided at a distance of 10 km for Gujarat, Maharashtra, and West Bengal and rest of the coast line at 50 km interval.

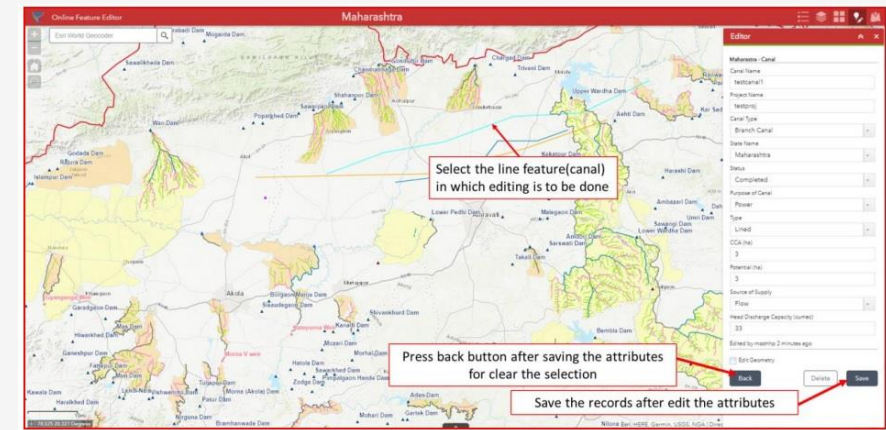
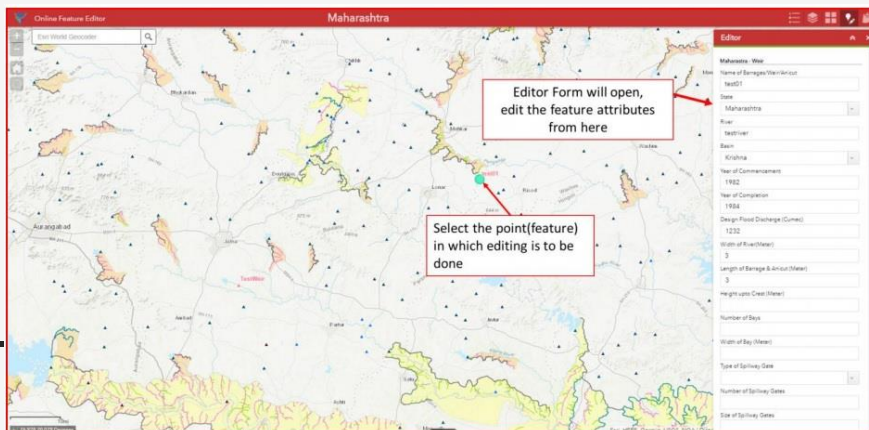
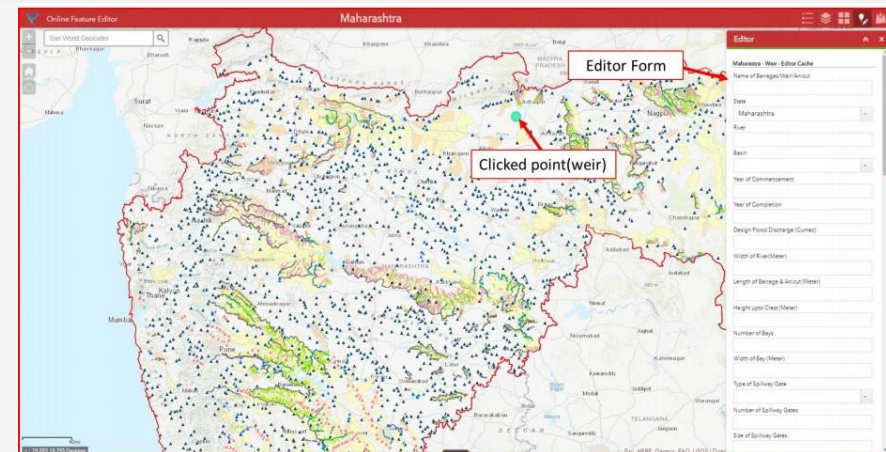
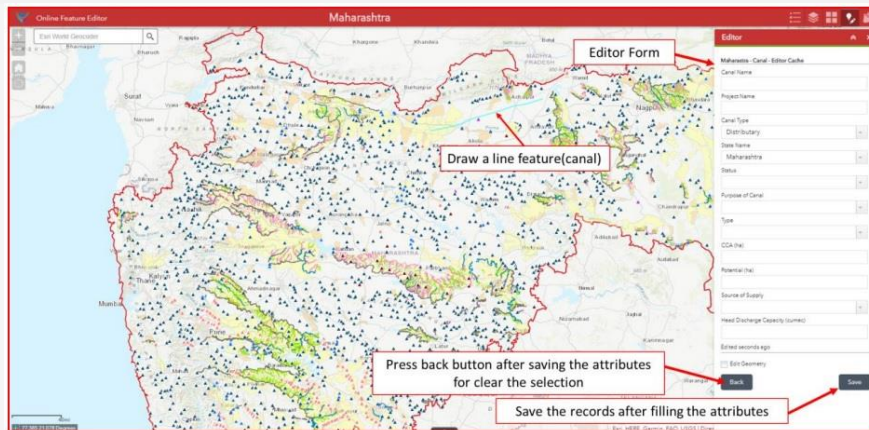


Coastal Information System

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

Sign in

Please sign in to access the item on <https://gis.indiawris.gov.in/portal> (item)

Username:

Password:

OK Cancel

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.

The screenshot displays the 'Water Data Online' interface with several panels for downloading data. The top panel shows the 'Application' dropdown menu with options: Rainfall, Reservoir, River Point, and Ground Water. The 'Report Type' dropdown is set to 'Select Required Report'. Below this, the 'Application' is set to 'Ground Water' and the 'Report Type' dropdown shows options: State wise Level Report, District wise Level Report, and State Wise Station Level Report. The 'Source' is 'COWB + OTHER AGENCIES' and the 'Location' dropdown shows a list of states including Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttaranchal, and West Bengal. The 'Time' section has 'Time Step' set to 'Daily' and 'Start' and 'Stop' date pickers. A 'DOWNLOAD REPORT' button is visible at the bottom.

The screenshot shows the 'Storage Comparison' dashboard. The 'Application' dropdown is set to 'Reservoir' and the 'Report Type' dropdown is set to 'Level & Storage Bulletin'. The 'Source' dropdown is set to 'AP STATE'. The 'Location' section has 'View' set to 'Admin', 'State' set to 'Select State', 'District' set to 'Select District', and 'Reservoir' set to 'Select Reservoir'. The 'Time' section has a 'Date' picker. A data table is displayed below the form, showing columns for 'Station Name', 'Station Code', 'Station Type', 'Station Category', 'Station Group', 'Station Sub-Group', 'Station Level', 'Station Storage', 'Station Capacity', 'Station Status', 'Station Remarks', and 'Station Date'. The table contains multiple rows of data for various stations.

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

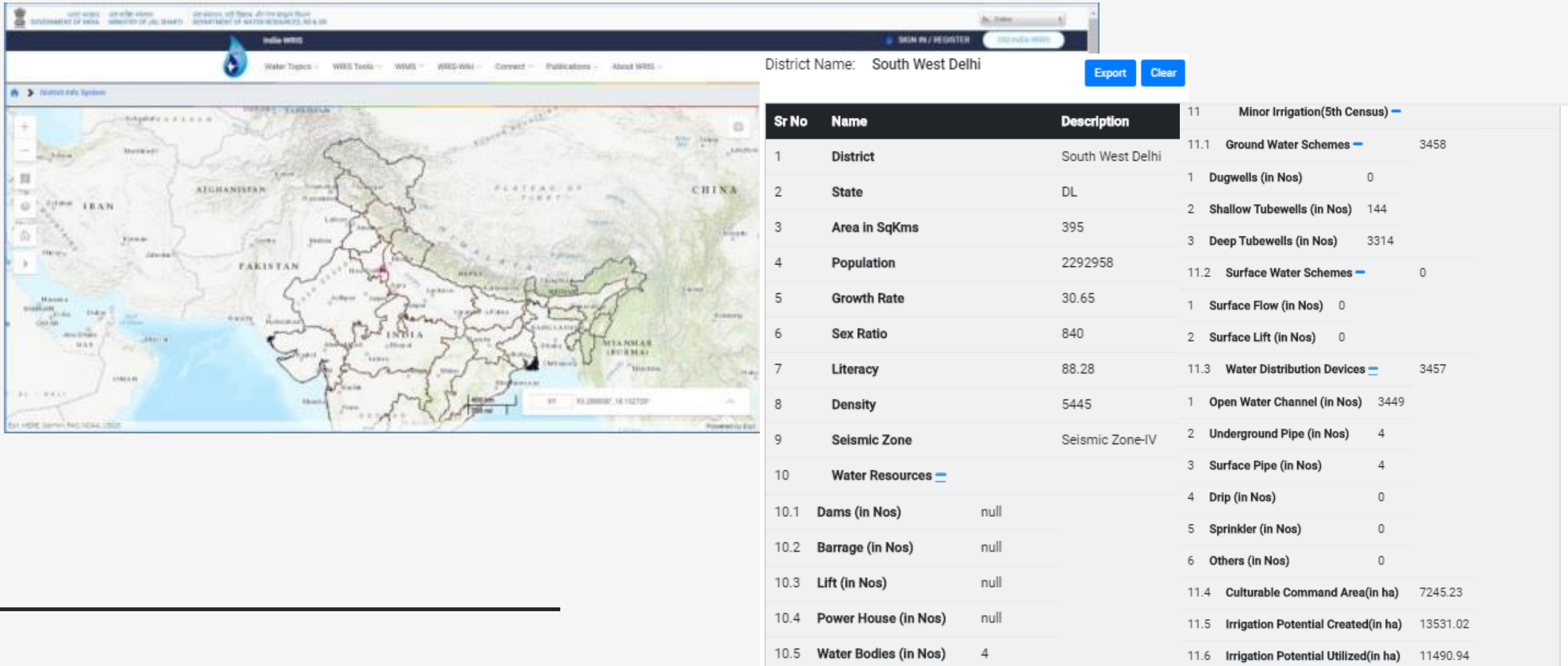
- Comprehensive information for the water resources assets and projects of the country is made available through WRIS Wiki application.

5.5 Metadata

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

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.



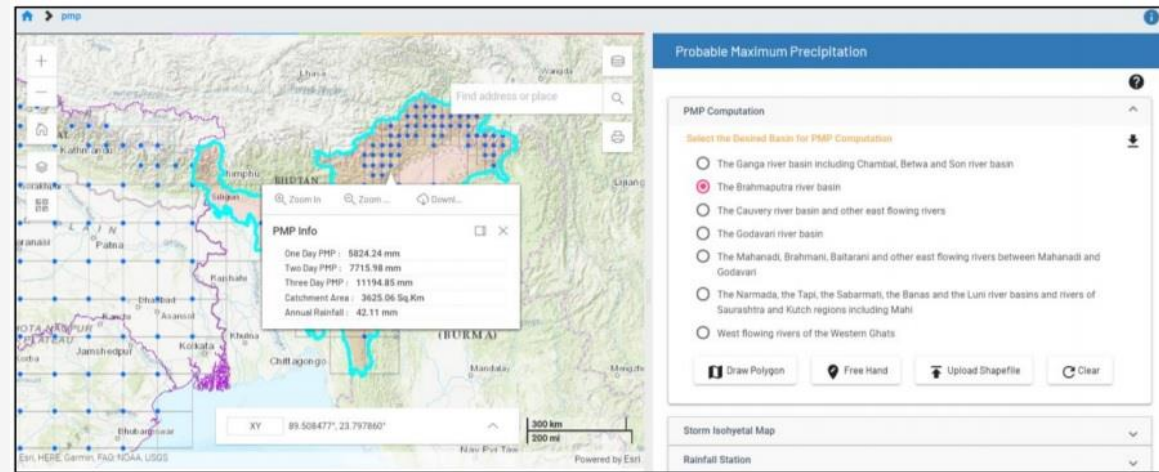
The screenshot displays the India WRS web application interface. On the left, a map of India is shown with South West Delhi highlighted. The main content area features a data table for the selected district, South West Delhi. The table is organized into sections: District Information, Demographics, Seismic Zone, Water Resources, and Minor Irrigation (5th Census). The table includes columns for Sr No, Name, and Description, with some cells containing numerical values and others being null.

District Name: South West Delhi

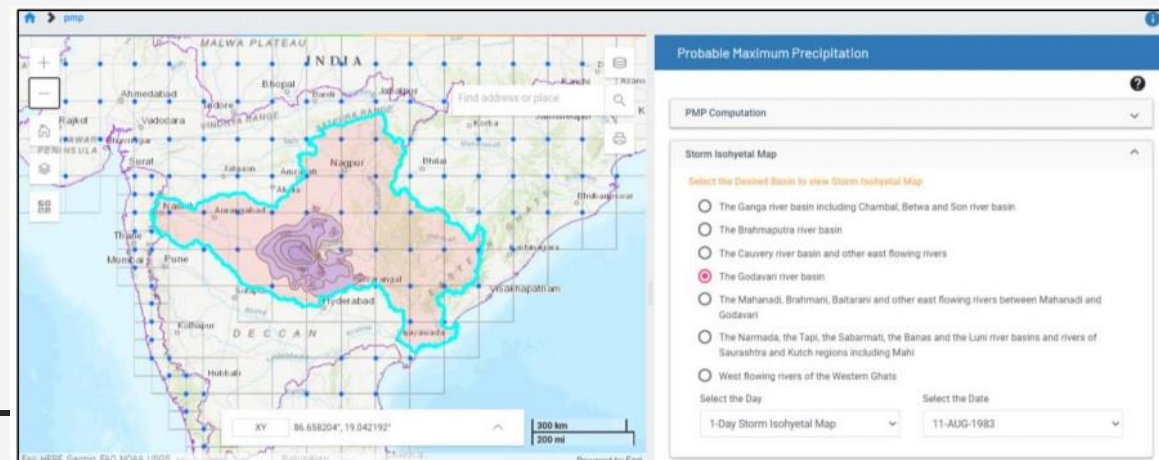
Sr No	Name	Description
1	District	South West Delhi
2	State	DL
3	Area in SqKms	395
4	Population	2292958
5	Growth Rate	30.65
6	Sex Ratio	840
7	Literacy	88.28
8	Density	5445
9	Seismic Zone	Seismic Zone-IV
10	Water Resources	
10.1	Dams (in Nos)	null
10.2	Barrage (in Nos)	null
10.3	Lift (in Nos)	null
10.4	Power House (in Nos)	null
10.5	Water Bodies (in Nos)	4
11	Minor Irrigation(5th Census)	
11.1	Ground Water Schemes	
1	Dugwells (in Nos)	0
2	Shallow Tubewells (in Nos)	144
3	Deep Tubewells (in Nos)	3314
11.2	Surface Water Schemes	
1	Surface Flow (in Nos)	0
2	Surface Lift (in Nos)	0
11.3	Water Distribution Devices	
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.



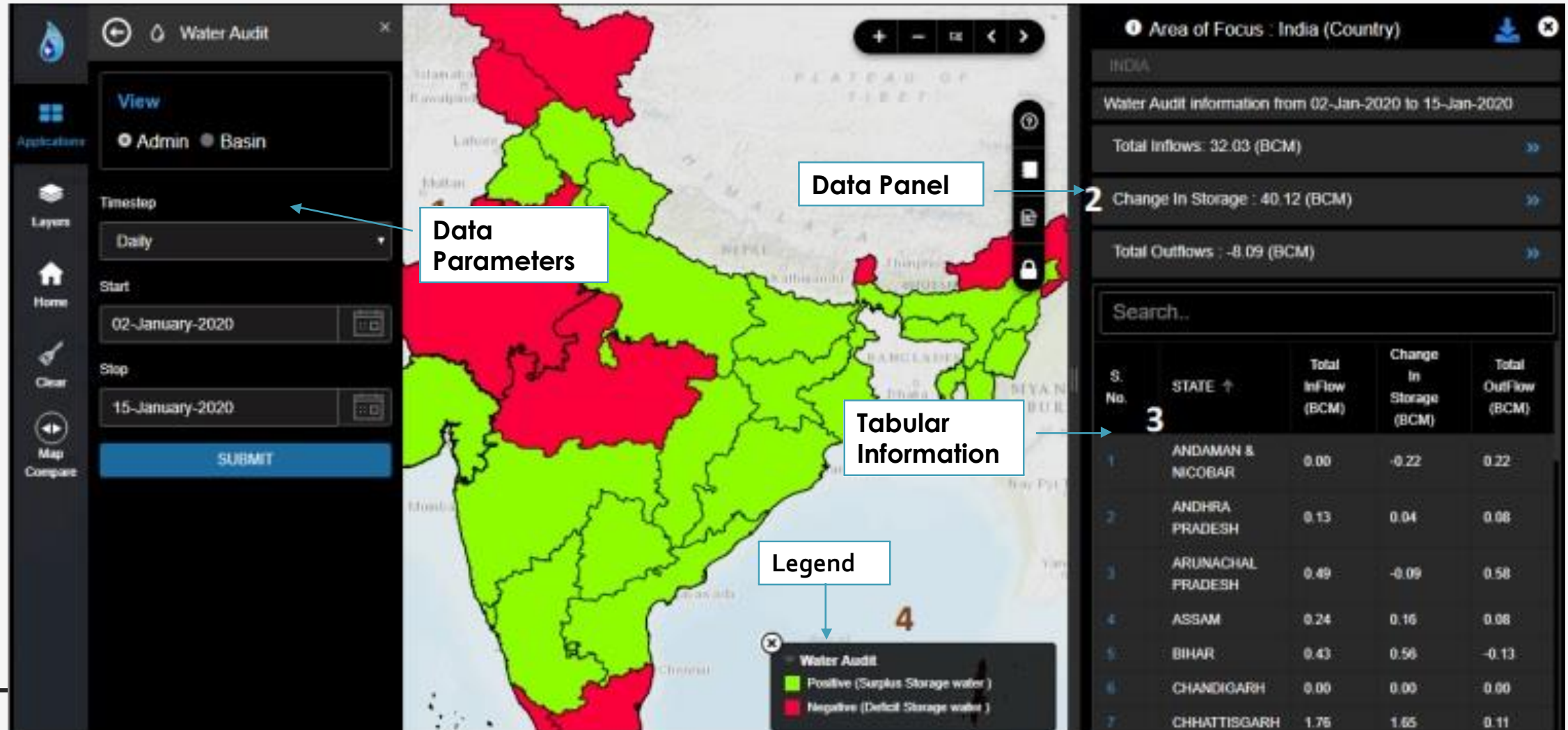
PMP Computation - Result



Storm Isohyetal Map

5.8 Surface Water Audit

- Inflows and outflows in an area and its change in storage for a particular time period.
- displays the excess and low water storage in different parts of the country





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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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Thank you