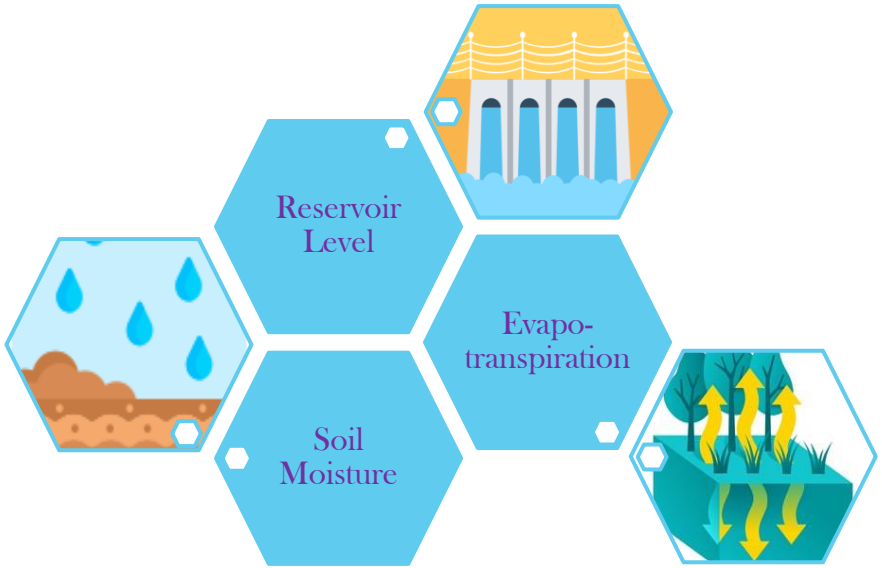
India-WRIS Revamped Modules:

Functionalities and Overview



NATIONAL WATER INFORMATICS CENTRE

Government of India

Ministry of Jal Shakti

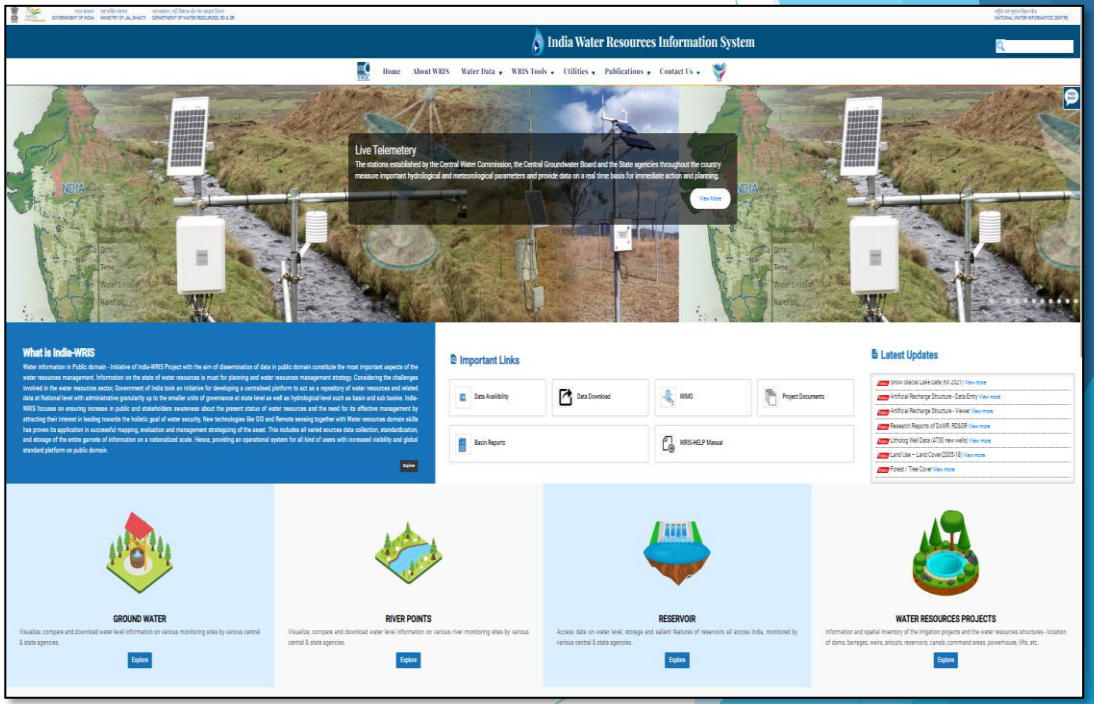
Department of Water Resources, RD & GR

India-WRIS : India Water Resources Information System

A brief introduction

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.

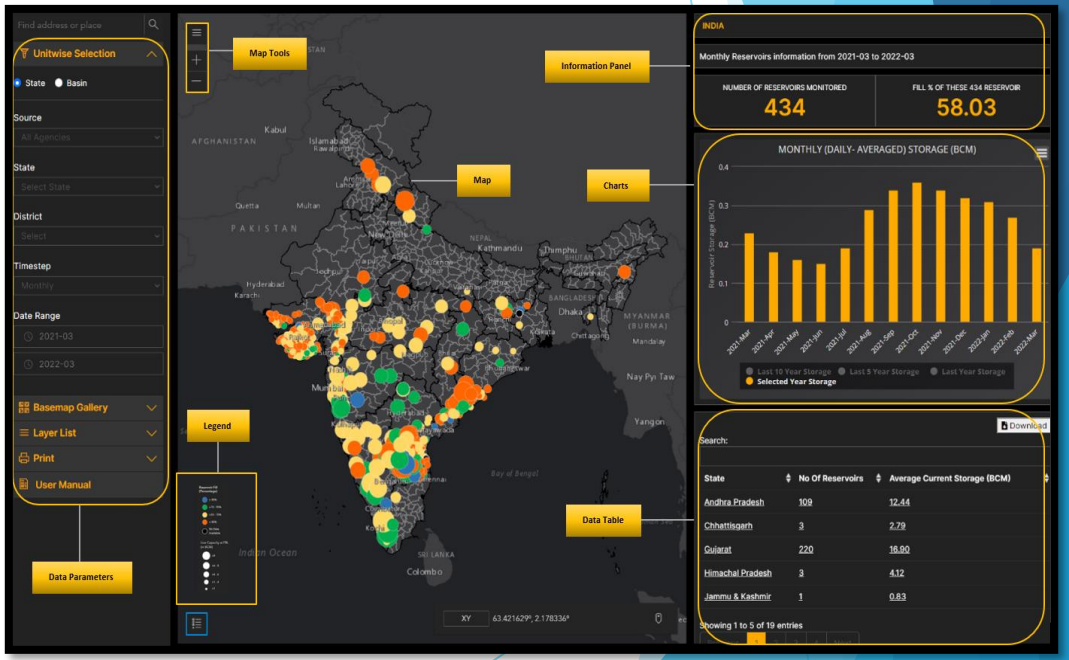


Home Page & Front GUI of India-WRIS

1. Reservoir Level Module

A module that displays the amount of water (in terms of billion cubic meters) stored in reservoirs across the country, based on data from different sources. The data is obtained for both geographical and basin views.

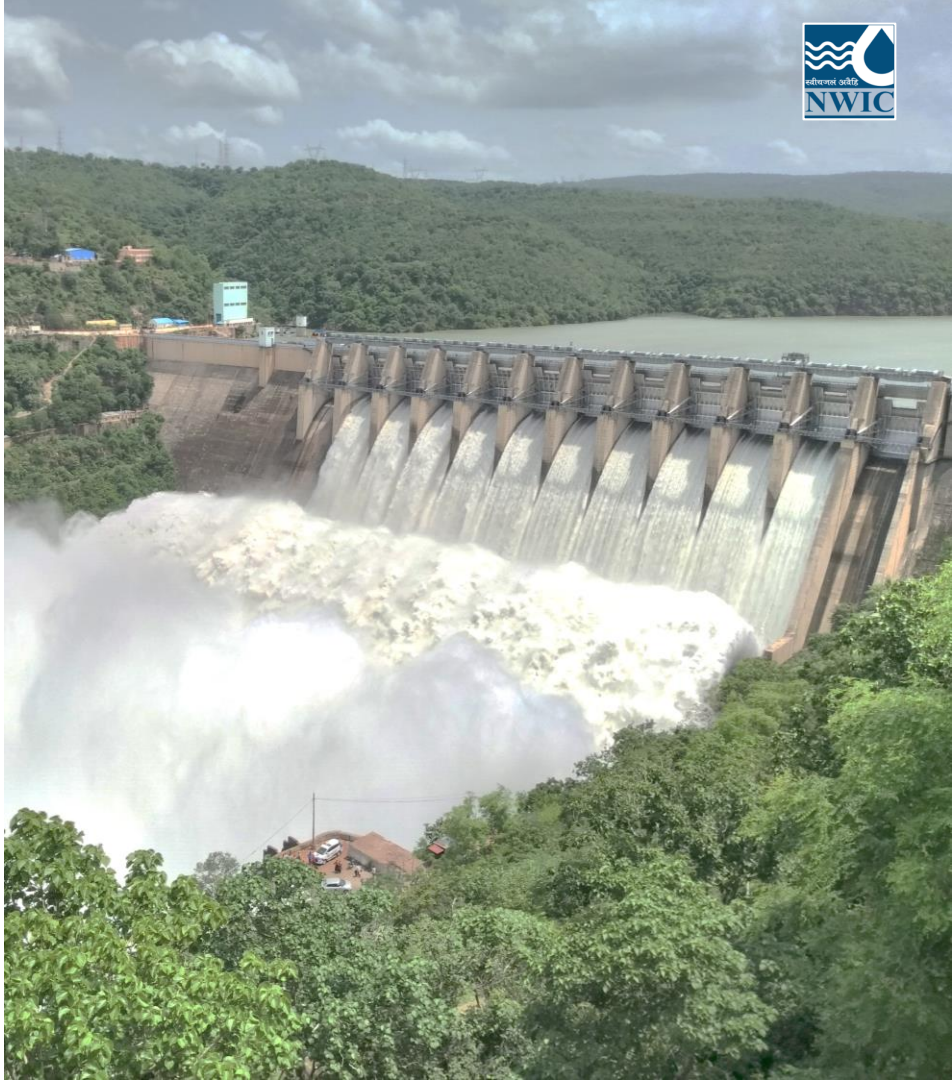
- *Historical and real-time data of Reservoir*
- *Powerful visualizations like heat maps, tables, charts to view and analyze the data at different administrative and hydrological hierarchies*
- *Data Availability – From 01.01.1990 to till date*
- *Data Visualization – Points/Charts/Stats/Admin view/Basin view*



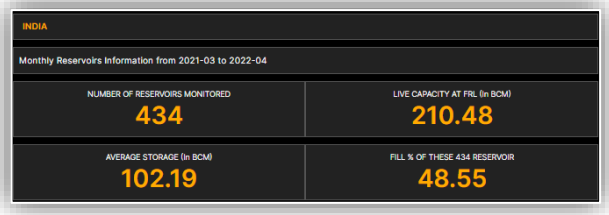
Reservoir Module

BASIC INFORMATION

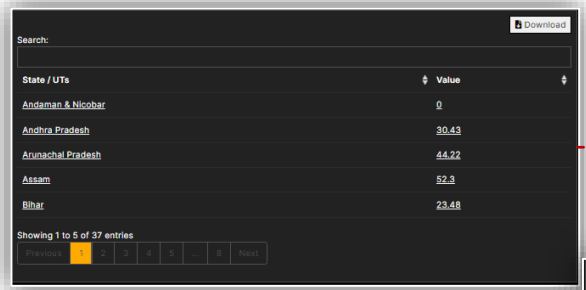
- *Type of Module : Dynamic*
- *Agency : APWRIMS, CWC and Gujarat SW*
- *Gridded / Point : Point*
- *Nature of Data : Water Level and Storage*
- *Unit : BCM and m*
- *Data Frequency : Daily*
- *Data Availability : – From 01.01.1990 to till date*
- *Spatial data : State Boundary, District Boundary, Reservoir stations and Reservoir Fill (%)*
- *Attributes displayed in data panel (State wise and Basin wise) :*
  1. *State*
  2. *No. of Reservoirs and Average Current Storage (bcm)*
- *Chart :*
  1. *Average Undefined Storage (Previous 10 Year)*
  2. *Average Undefined Storage (Previous 5 Year)*
  3. *Undefined Storage (Previous Year)*
  4. *Undefined Storage (Selected Period)*

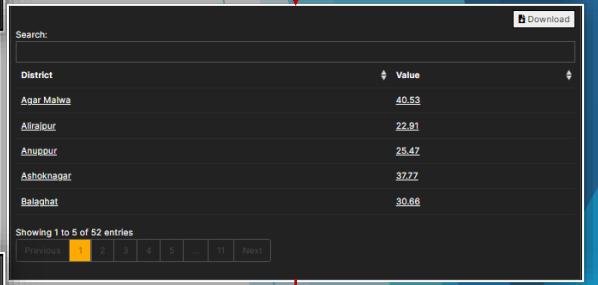


INFO PANEL

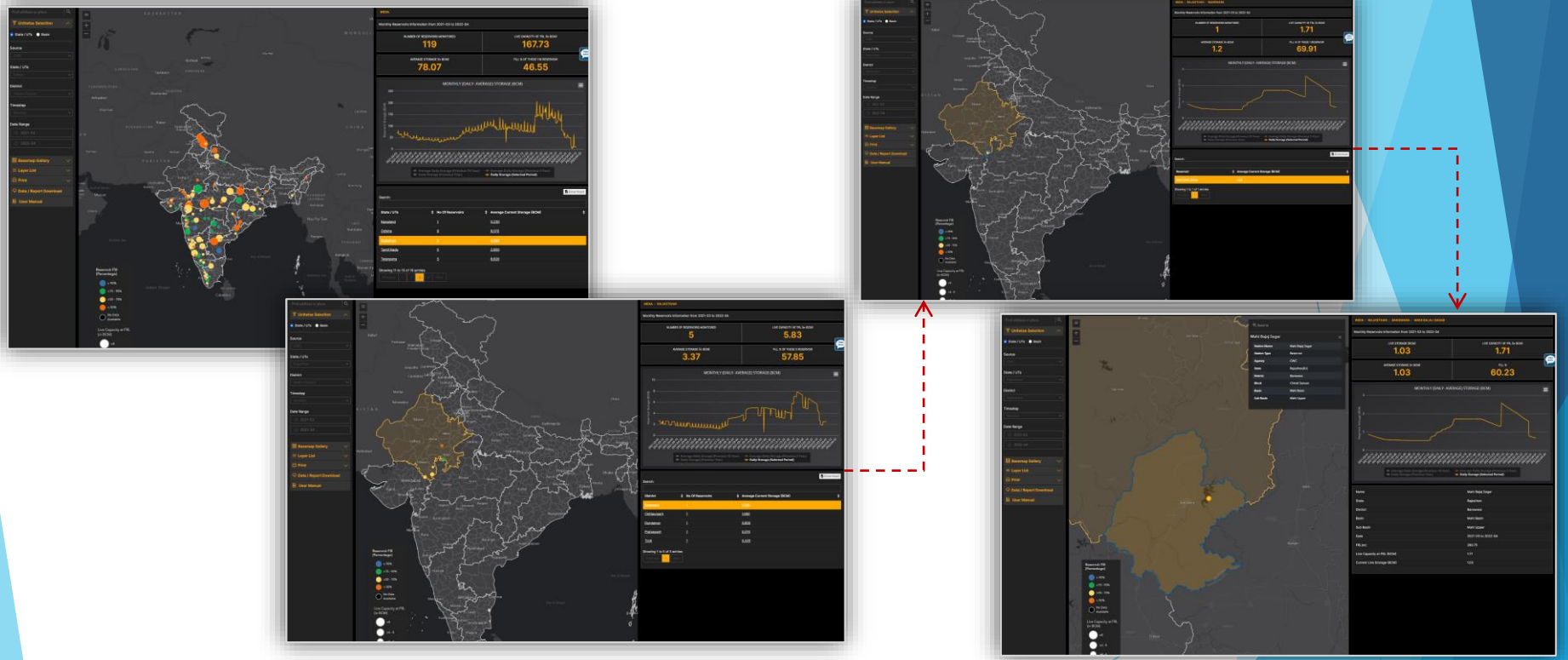


DATA TABLE

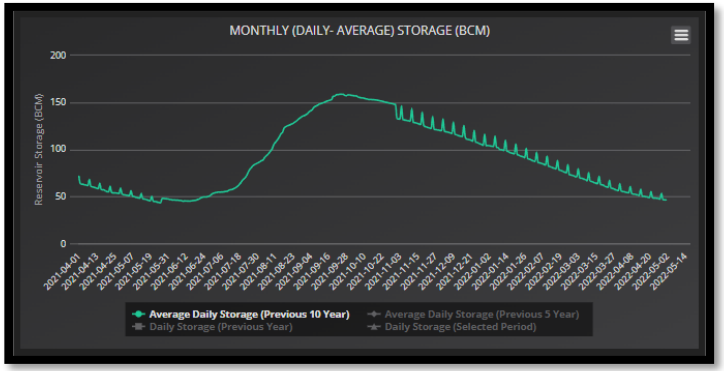




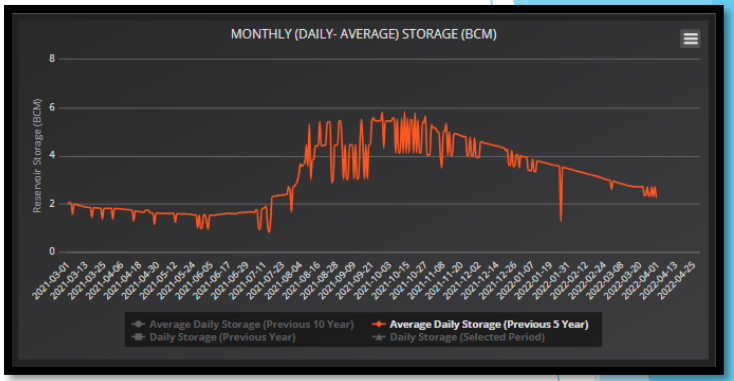
DATA DISPLAY



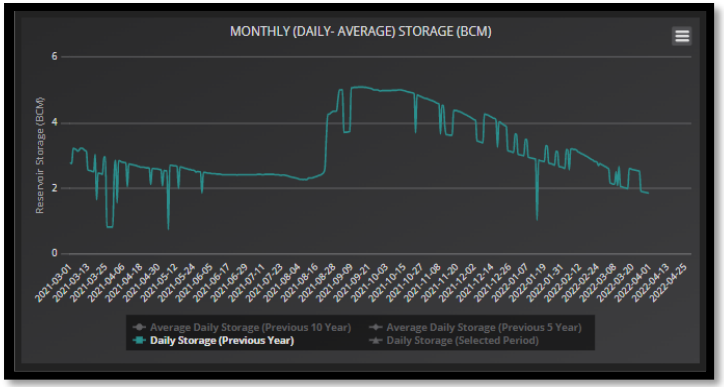
CHARTS VIEW



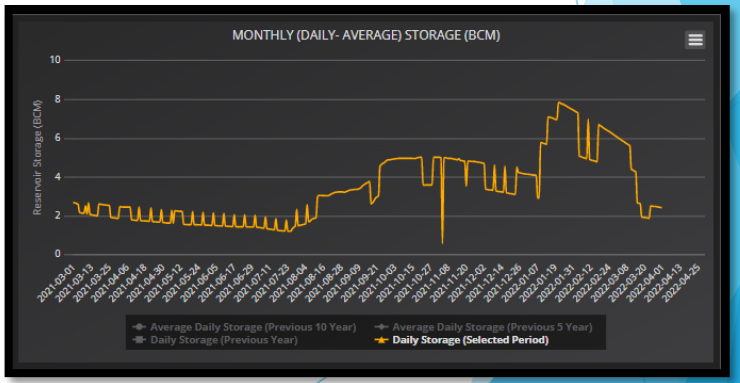
Average Monthly/Daily Storage (Previous 10 Year)



Average Daily/Monthly Storage (Previous 5 Year)

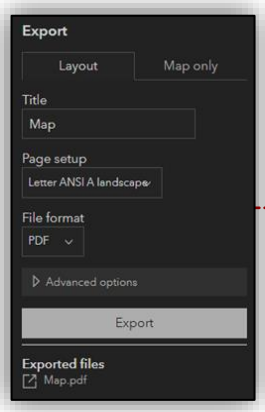


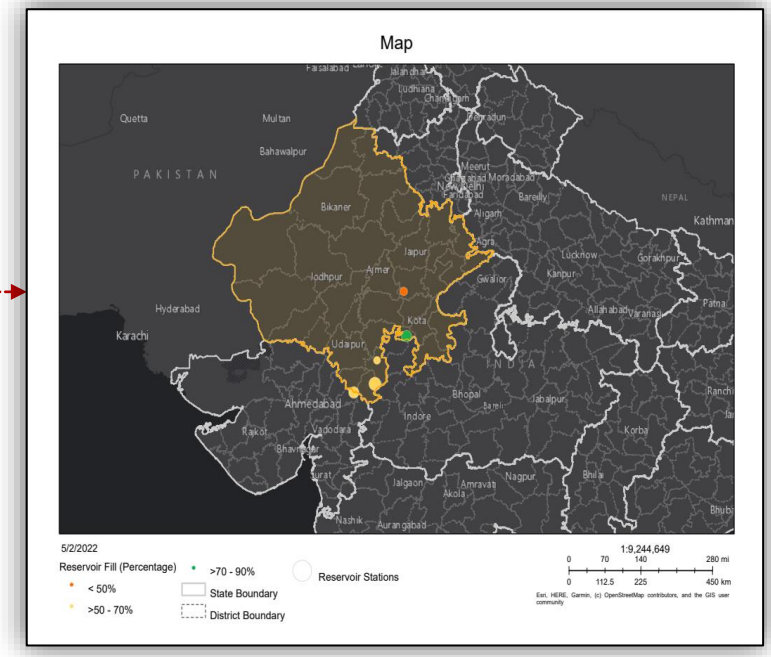
Daily/Monthly Storage (Previous Year)

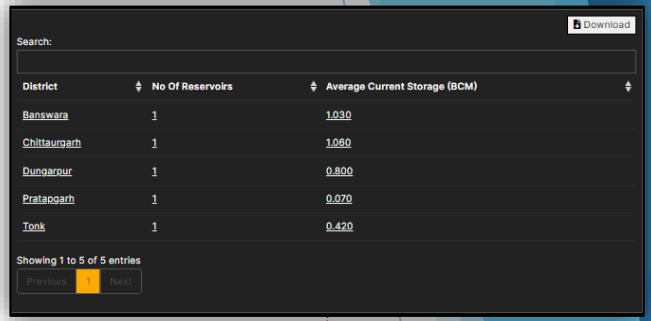


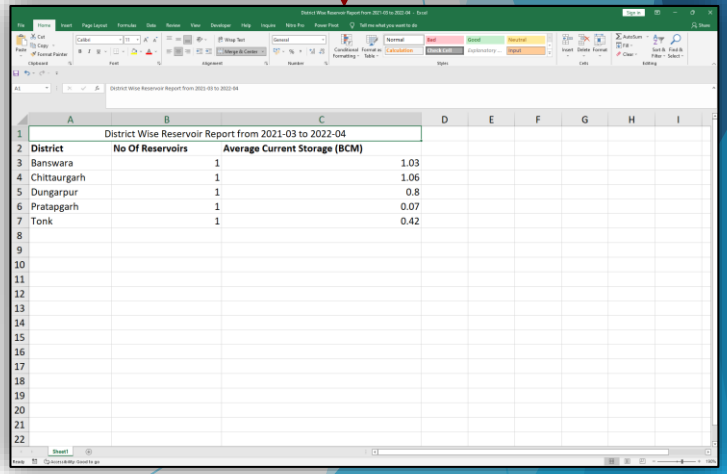
Daily Storage (Selected Period)

DATA DOWNLOAD



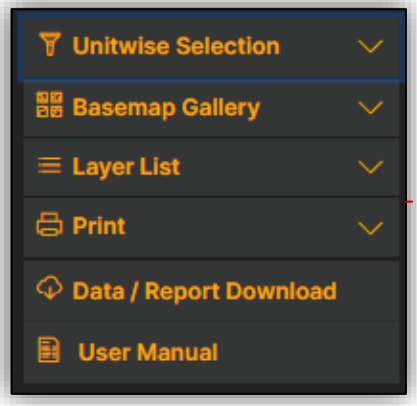


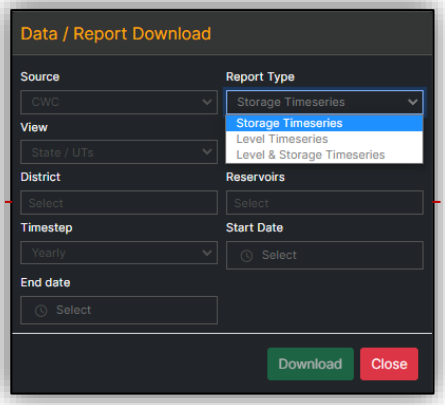


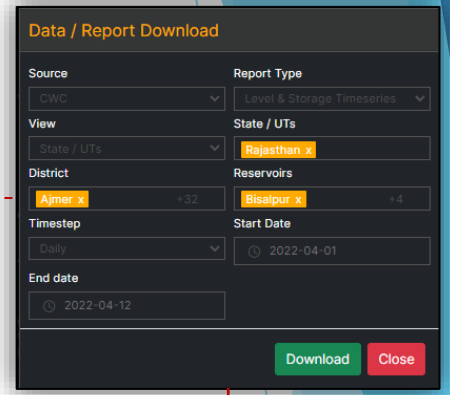


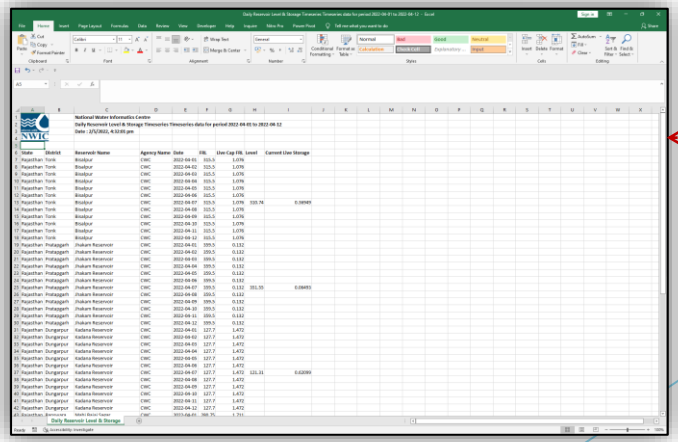
MAP DOWNLOAD

REPORT DOWNLOAD

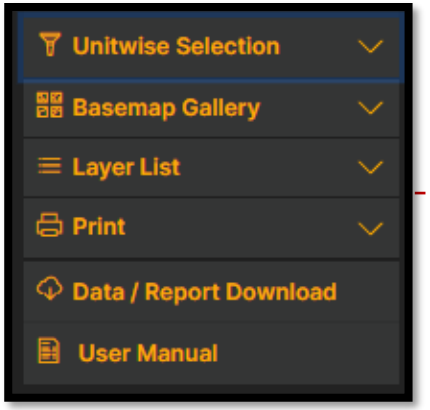


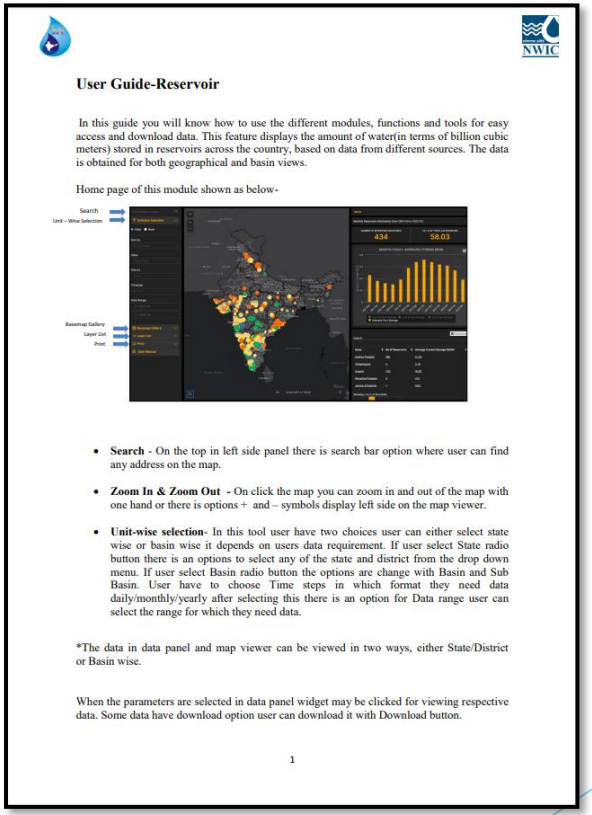






USER MANUAL





User Guide-Reservoir

In this guide you will know how to use the different modules, functions and tools for easy access and download data. This feature displays the amount of water(in terms of billion cubic meters) stored in reservoirs across the country, based on data from different sources. The data is obtained for both geographical and basin views.

Home page of this module shown as below-

- **Search -** On the top in left side panel there is search bar option where user can find any address on the map.
- **Zoom In & Zoom Out -** On click the map you can zoom in and out of the map with one hand or there is options + and – symbols display left side on the map viewer.
- **Unit-wise selection**- In this tool user have two choices user can either select state wise or basin wise it depends on users data requirement. If user select State radio button there is an options to select any of the state and district from the drop down menu. If user select Basin radio button the options are change with Basin and Sub Basin. User have to choose Time steps in which format they need data daily/monthly/yearly after selecting this there is an option for Data range user can select the range for which they need data.

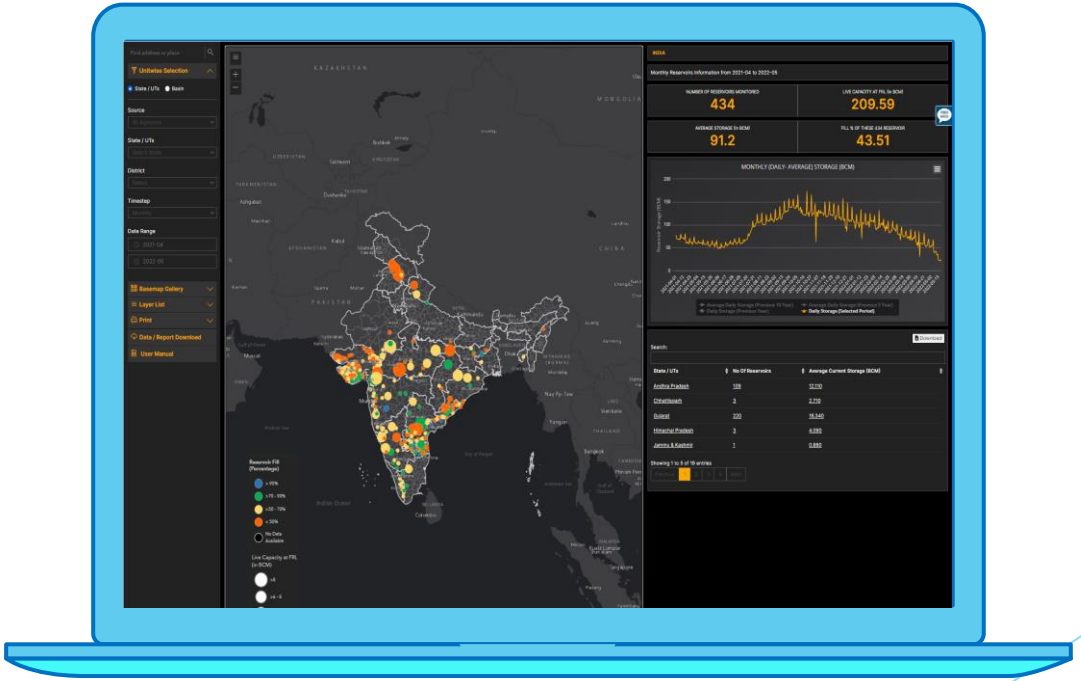
*The data in data panel and map viewer can be viewed in two ways, either State/District or Basin wise.

When the parameters are selected in data panel widget may be clicked for viewing respective data. Some data have download option user can download it with Download button.

1

LIVE DEMONSTRATION

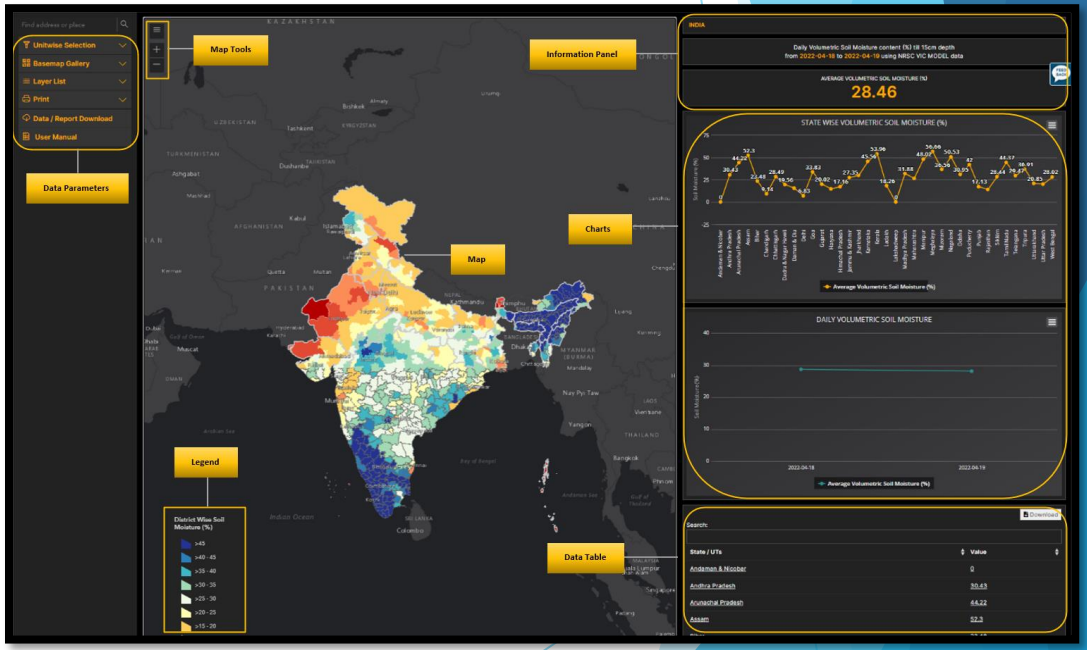
Reservoir Level



2. Soil Moisture Module

A module that shows the volume of soil moisture content in percentage (%) till 15 centimetres depth, for a given time period using the given source information.

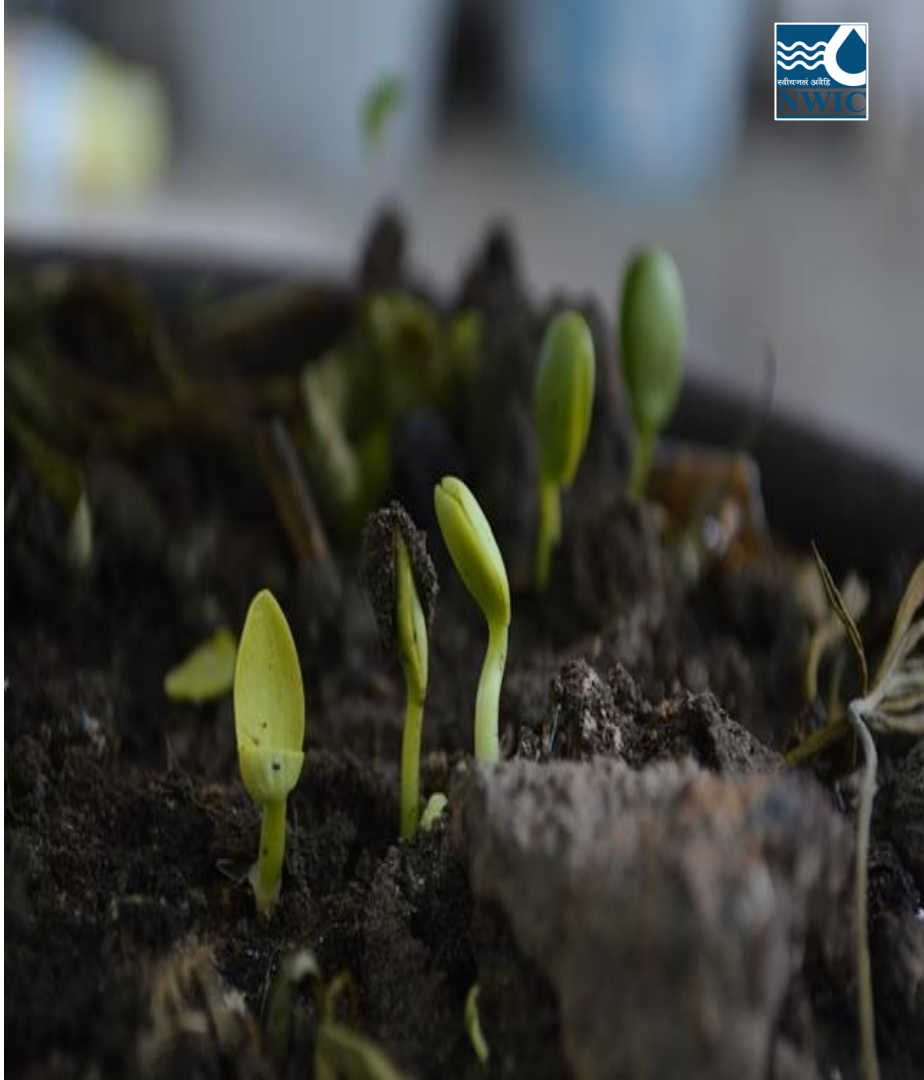
- *Data Availability – From 2018 to till date*
- *NRSC VIC Model Gridded data (0.05 x 0.05-degree)*
- *Data Visualization – Heatmaps/Charts/Stats/Admin view/Basin view*



Soil Moisture Module

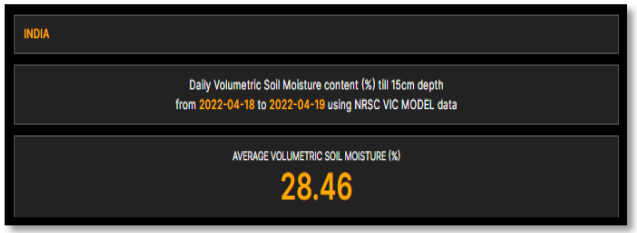
BASIC INFORMATION

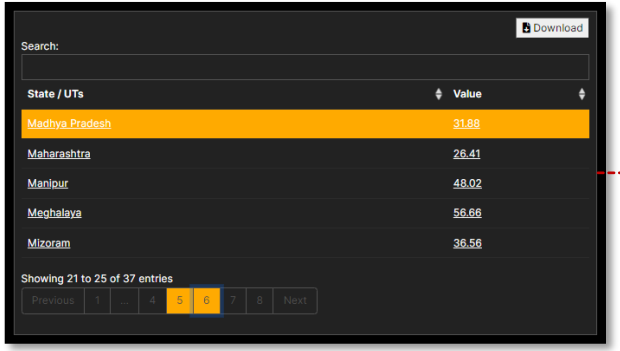
- *Type of Module : Dynamic*
- *Agency : NRSC VIC Model*
- *Gridded / Point : Gridded (0.05 x 0.05)*
- *Unit : Volumetric Soil Moisture Content (%)*
- *Data Frequency : Daily*
- *Data Availability : From 01.06.2018 to till date*
- *Spatial data : State Boundaries, District Boundaries, Basin and Sub-Basin Boundaries, India Boundary and Soil Moisture Heatmap*
- *Attributes displayed in data panel (State wise and Basin wise) :*
  1. *State*
  2. *Volumetric Soil Moisture Content (%) till 15 cm depth.*
- *Chart : Volumetric Soil Moisture Content (%) till 15 cm depth.*

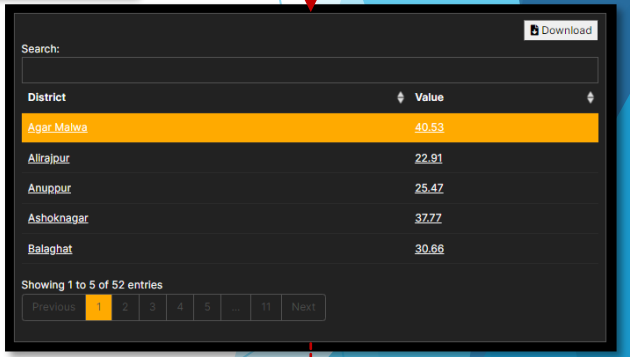


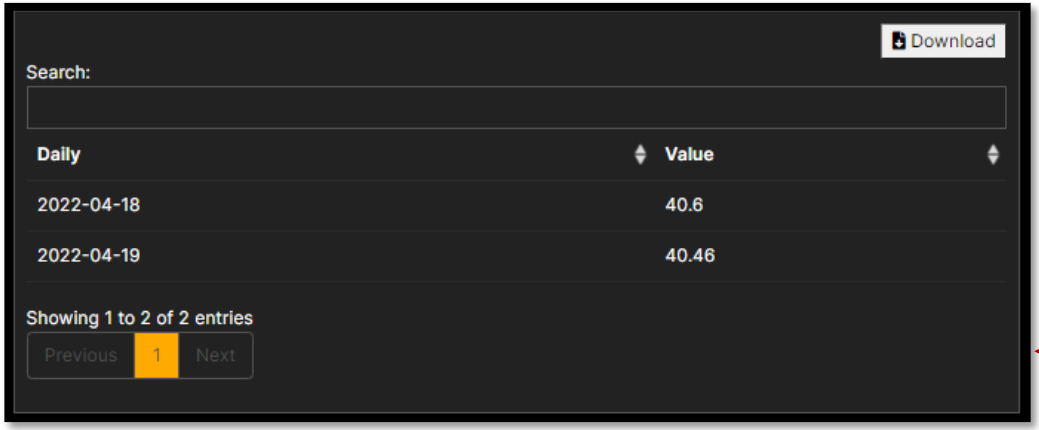
DATA TABLE

INFO PANEL

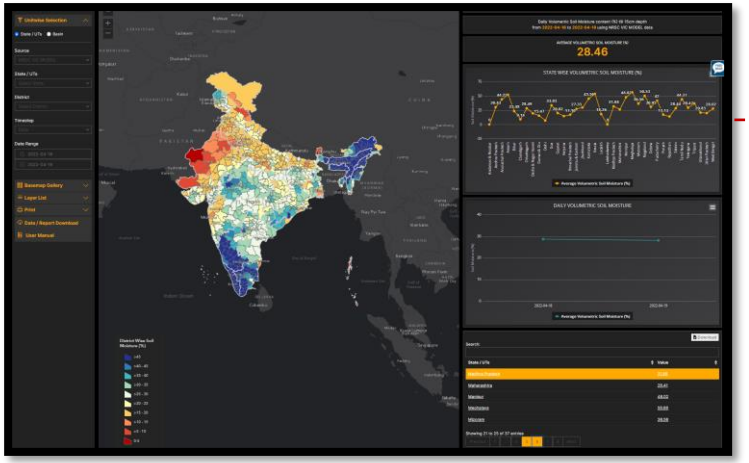


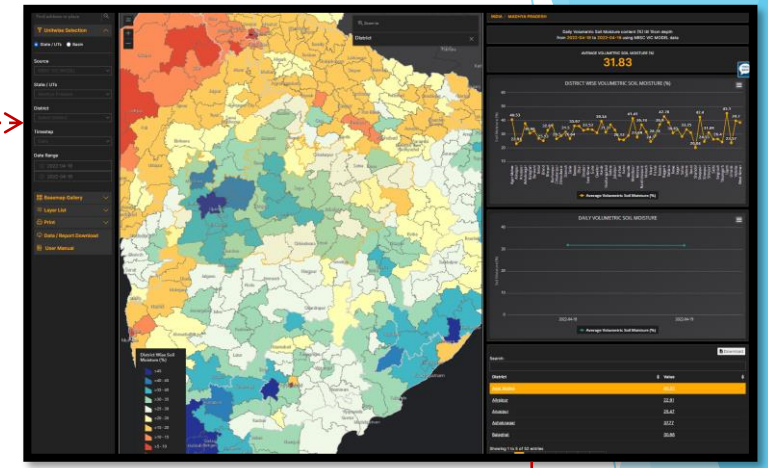


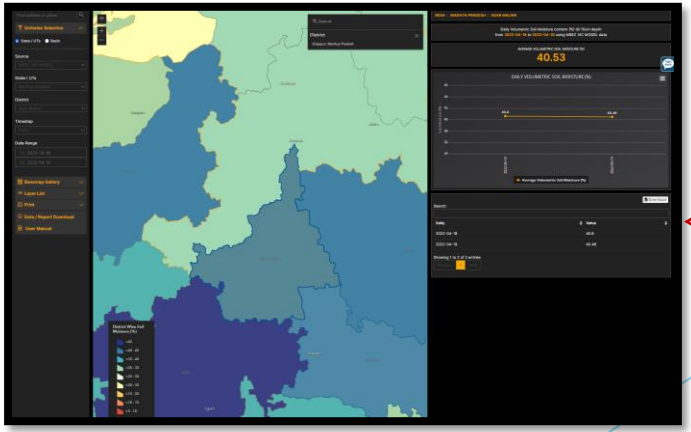




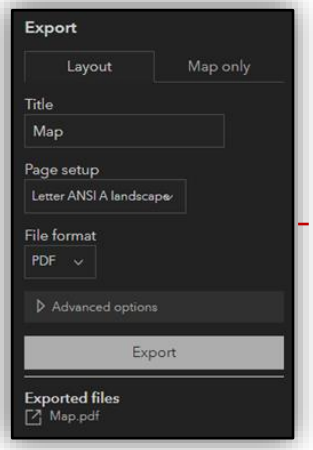
DATA DISPLAY

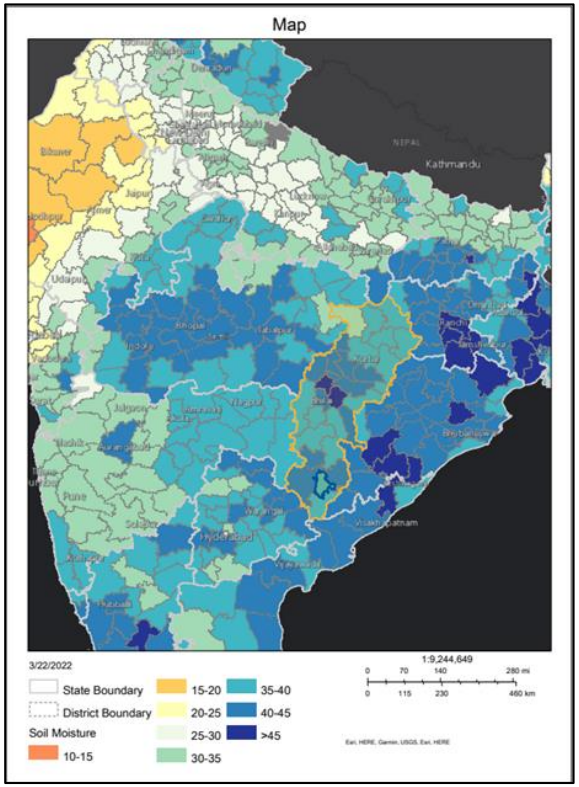


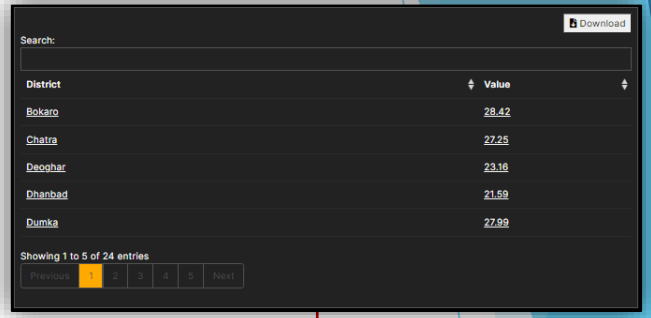


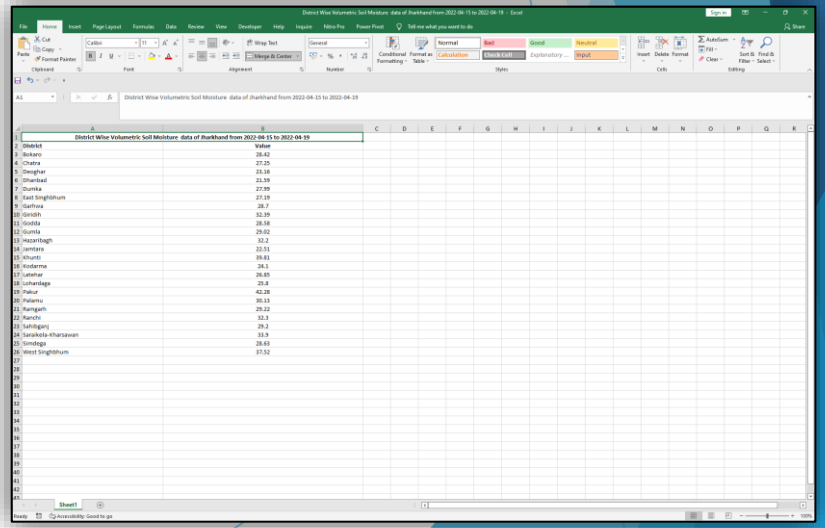


DATA DOWNLOAD



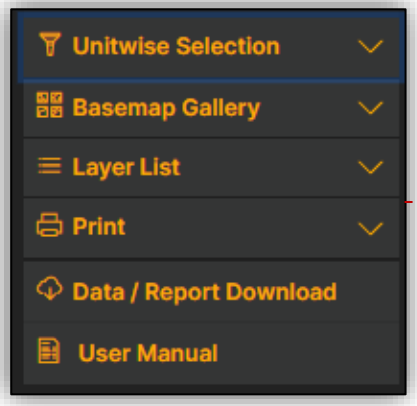


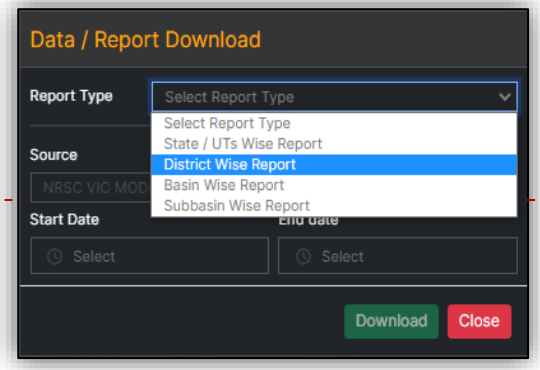


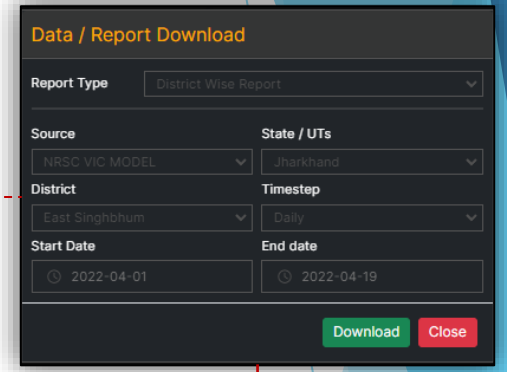


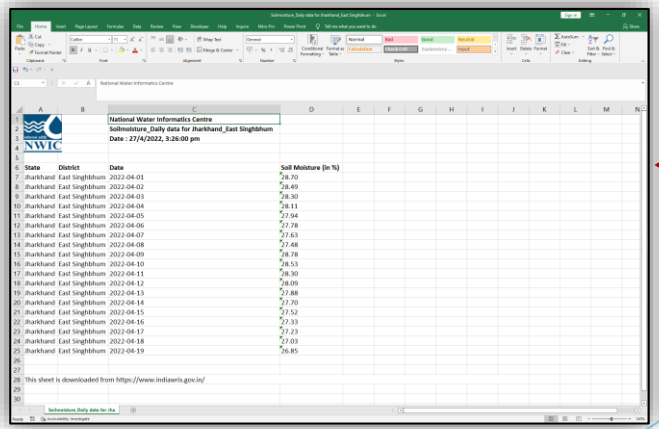
MAP DOWNLOAD

REPORT DOWNLOAD

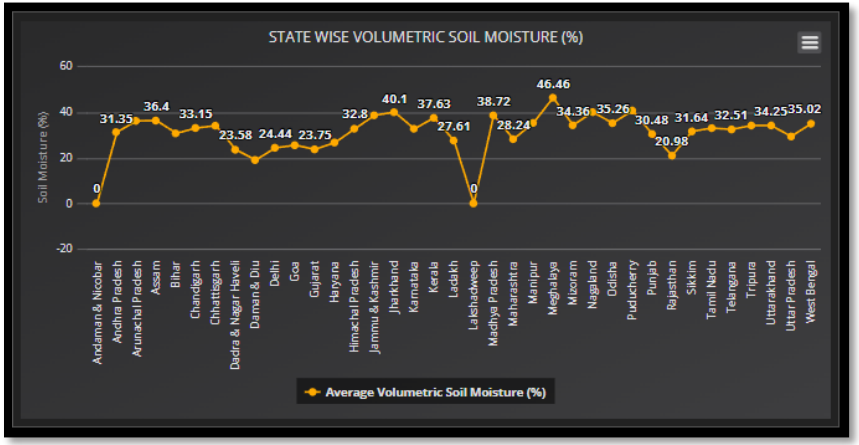


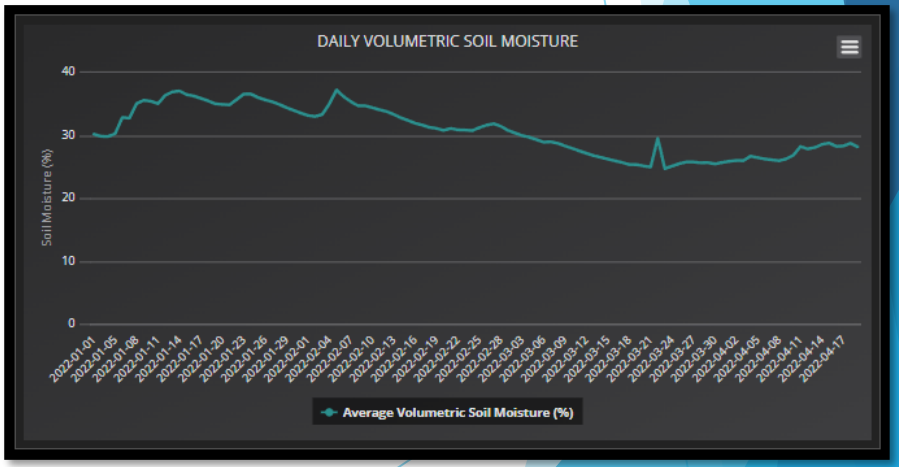




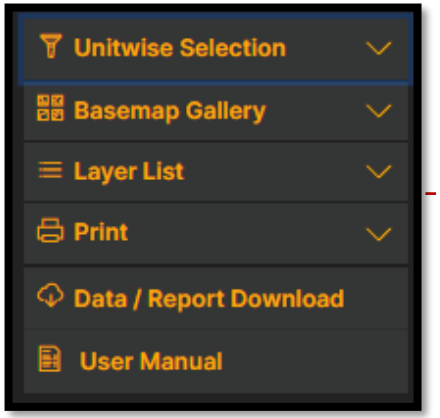


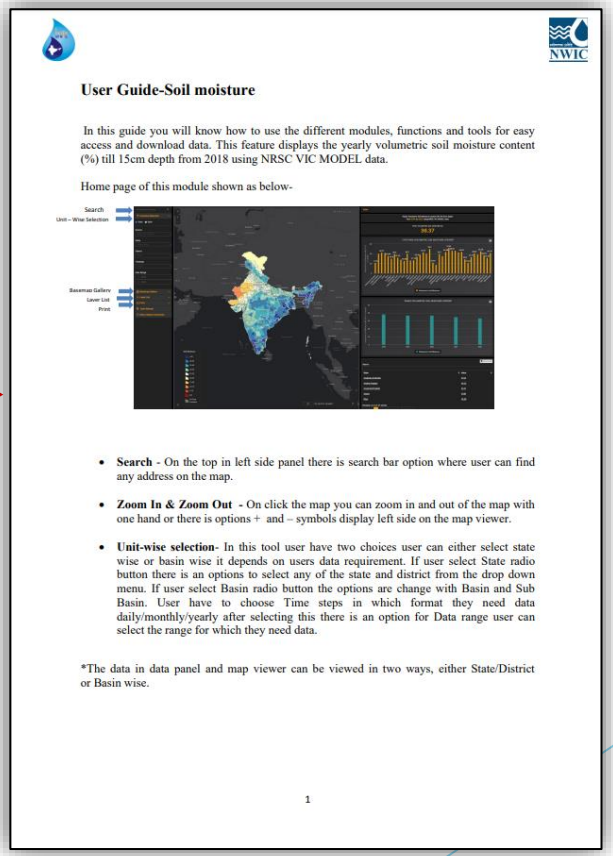
CHARTS VIEW


STATE WISE VOLUMETRIC SOIL MOISTURE (%)
Soil Moisture (%)
60
40
20
0
-20
0
31.35
36.4
33.15
23.58
24.44
23.75
32.8
40.1
37.63
27.61
0
38.72
28.24
46.46
34.36
35.26
30.48
20.98
31.64
32.51
34.25
35.02
Andaman & Nicobar
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Ladakh
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puducherry
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Average Volumetric Soil Moisture (%)


DAILY VOLUMETRIC SOIL MOISTURE
Soil Moisture (%)
40
30
20
10
0
2022-01-01
2022-01-05
2022-01-08
2022-01-11
2022-01-14
2022-01-17
2022-01-20
2022-01-23
2022-01-26
2022-01-29
2022-02-01
2022-02-04
2022-02-07
2022-02-10
2022-02-13
2022-02-16
2022-02-19
2022-02-22
2022-02-25
2022-02-28
2022-03-03
2022-03-06
2022-03-09
2022-03-12
2022-03-15
2022-03-18
2022-03-21
2022-03-24
2022-03-27
2022-03-30
2022-04-02
2022-04-05
2022-04-08
2022-04-11
2022-04-14
2022-04-17
Average Volumetric Soil Moisture (%)

USER MANUAL





User Guide-Soil moisture

In this guide you will know how to use the different modules, functions and tools for easy access and download data. This feature displays the yearly volumetric soil moisture content (%) till 15cm depth from 2018 using NRSC VIC MODEL data.

Home page of this module shown as below-

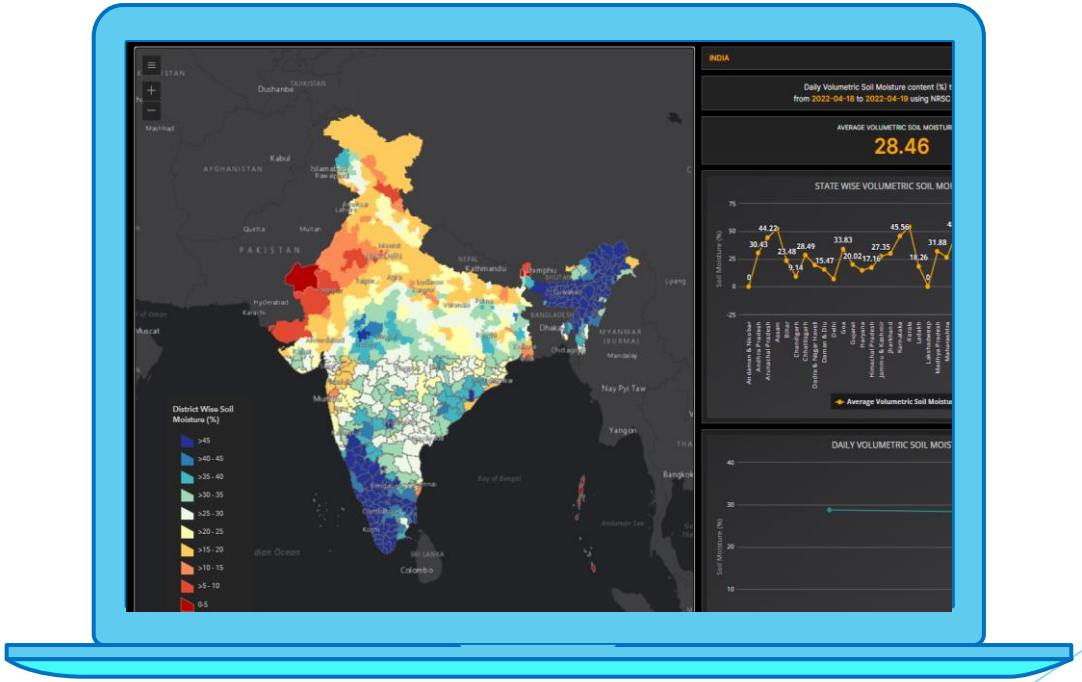
- **Search** - On the top in left side panel there is search bar option where user can find any address on the map.
- **Zoom In & Zoom Out** - On click the map you can zoom in and out of the map with one hand or there is options + and – symbols display left side on the map viewer.
- **Unit-wise selection**- In this tool user have two choices user can either select state wise or basin wise it depends on users data requirement. If user select State radio button there is an options to select any of the state and district from the drop down menu. If user select Basin radio button the options are change with Basin and Sub Basin. User have to choose Time steps in which format they need data daily/monthly/yearly after selecting this there is an option for Data range user can select the range for which they need data.

*The data in data panel and map viewer can be viewed in two ways, either State/District or Basin wise.

1

LIVE DEMONSTRATION

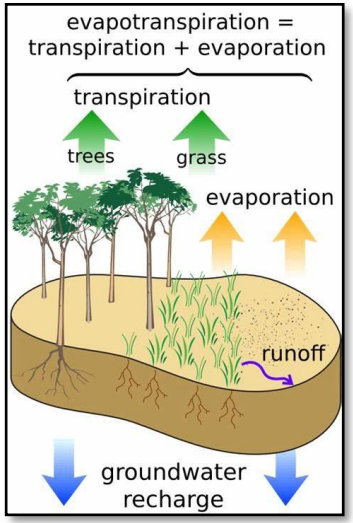
Soil Moisture

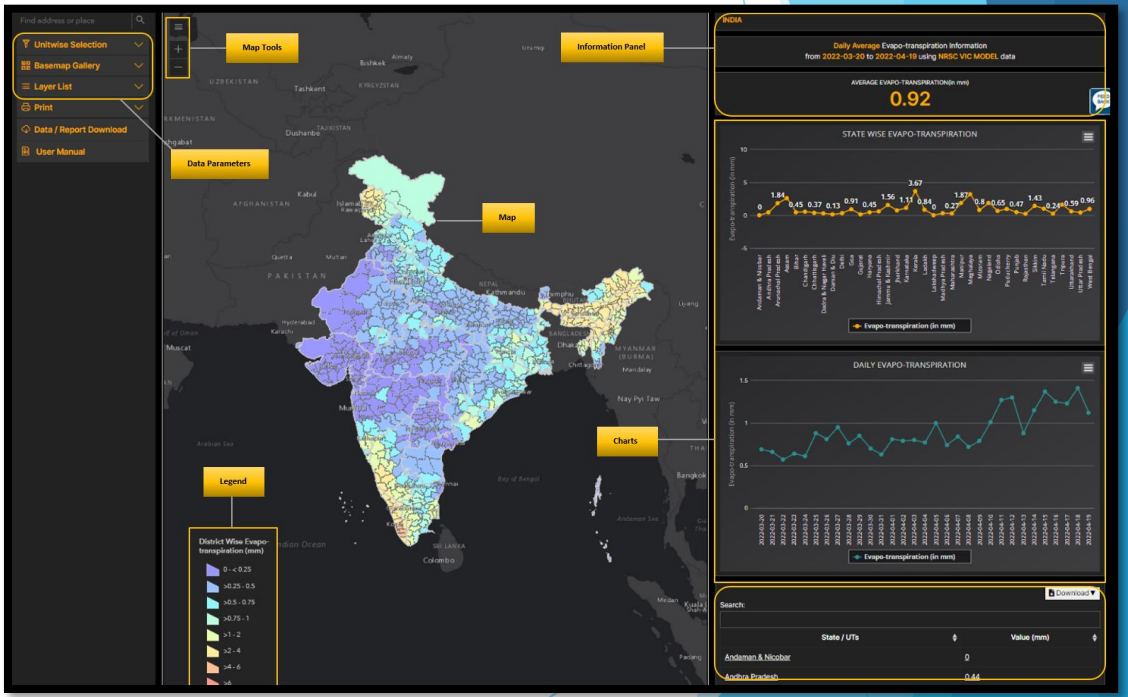


3. Evapo-transpiration Module

A module that shows evapotranspiration data for different states and basins for a given set of data parameters.

- *Data Availability – From 2018 to till date*
- *NRSC VIC Model Gridded data (0.05 x 0.05-degree)*
- *Data Visualization – Heatmaps/Charts/Stats/Admin view/Basin view*



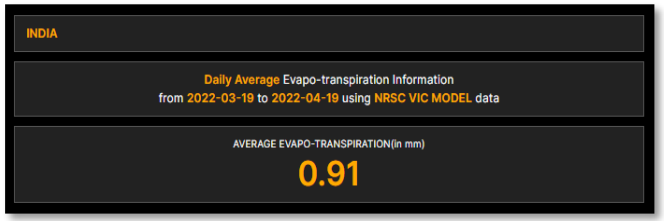


Evapo-transpiration Module

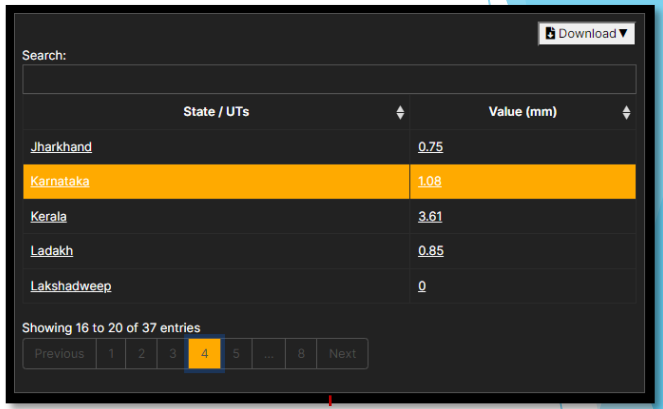
BASIC INFORMATION

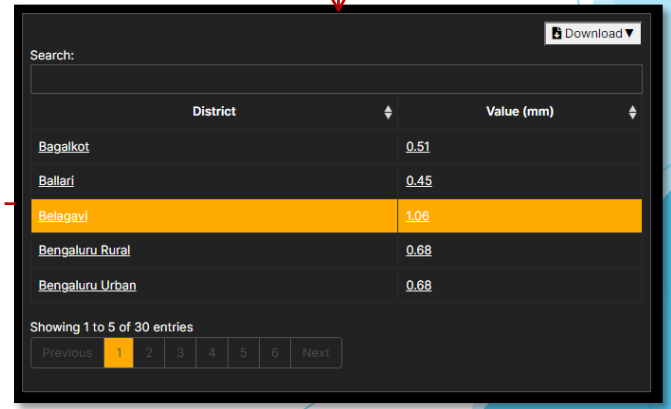
- *Type of Module : Dynamic*
- *Agency : NRSC VIC Model*
- *Gridded / Point : Gridded (0.05 x 0.05)*
- *Unit : mm*
- *Data Frequency : Daily*
- *Data Availability : From 01.06.2018 to till date*
- *Spatial data : State Boundary, District Boundary, Basin and Sub-Basin Boundary, India Boundary and Evapotranspiration Heatmap*
- *Attributes displayed in data panel (State wise and Basin wise) :*
  1. *State*
  2. *Evapo-transpiration in mm*
- *Chart : Evapo-transpiration (mm)*

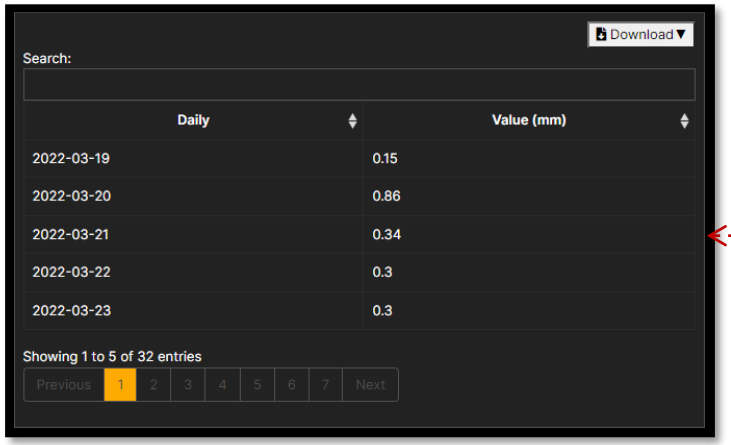
INFO PANEL



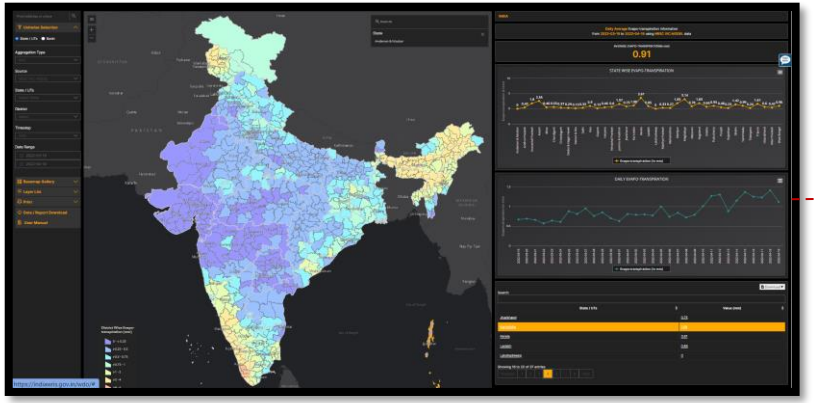
DATA TABLE

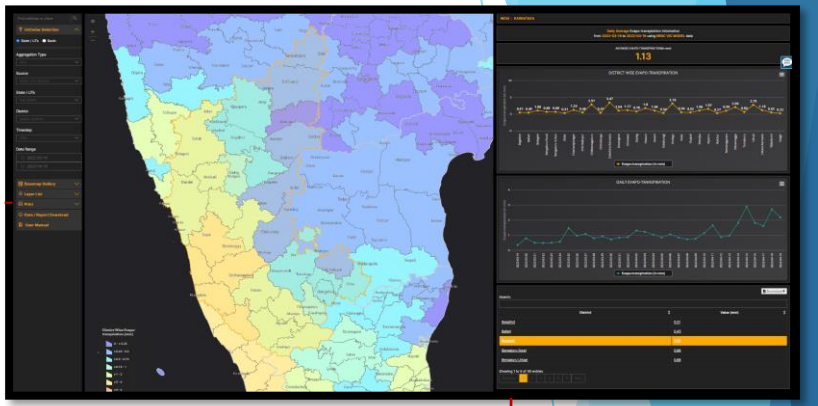


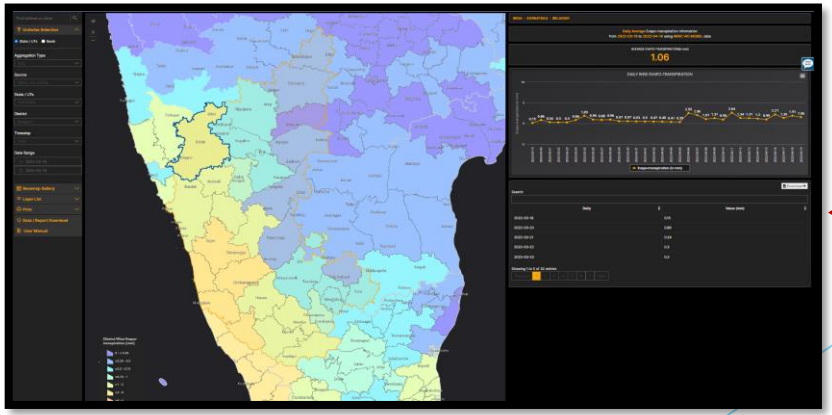




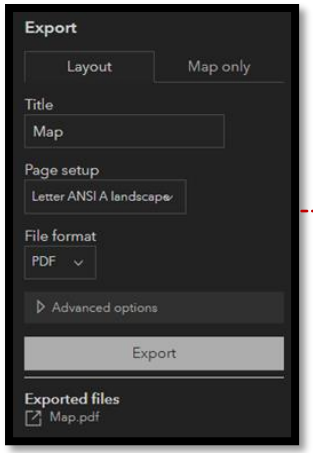
DATA DISPLAY

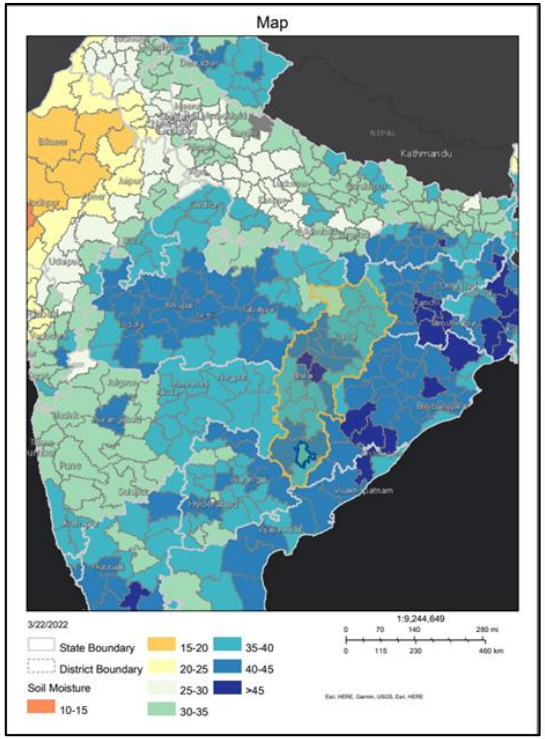


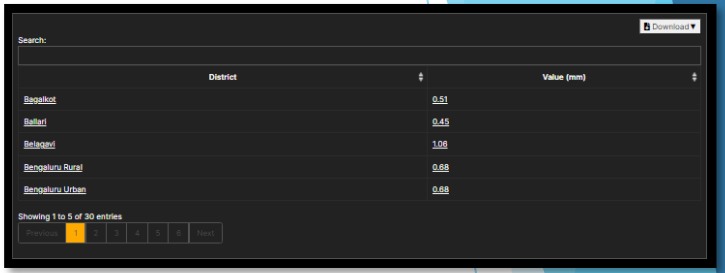


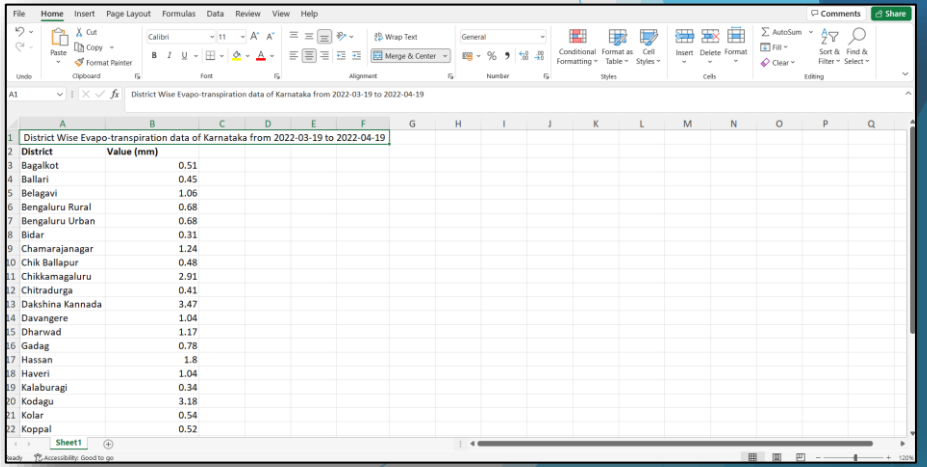


DATA DOWNLOAD



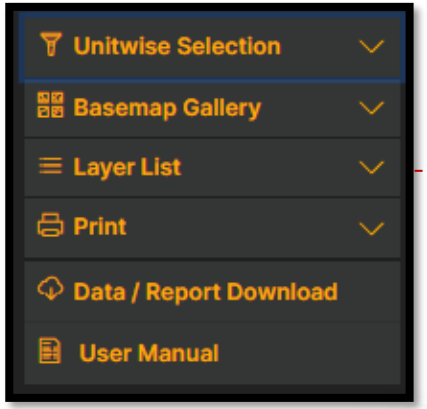


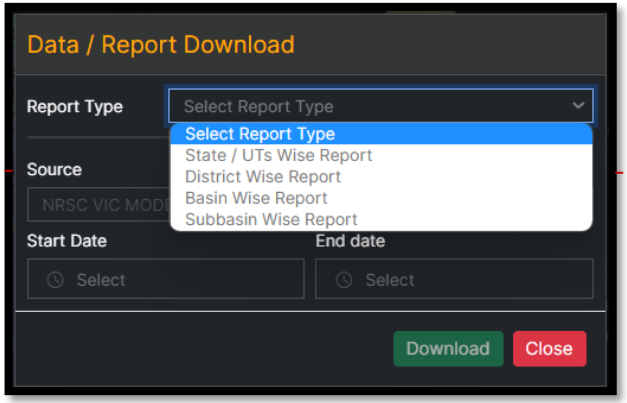


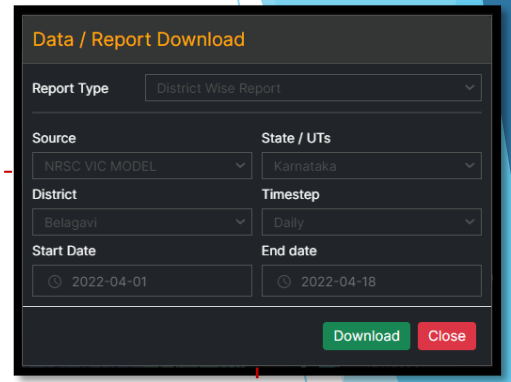


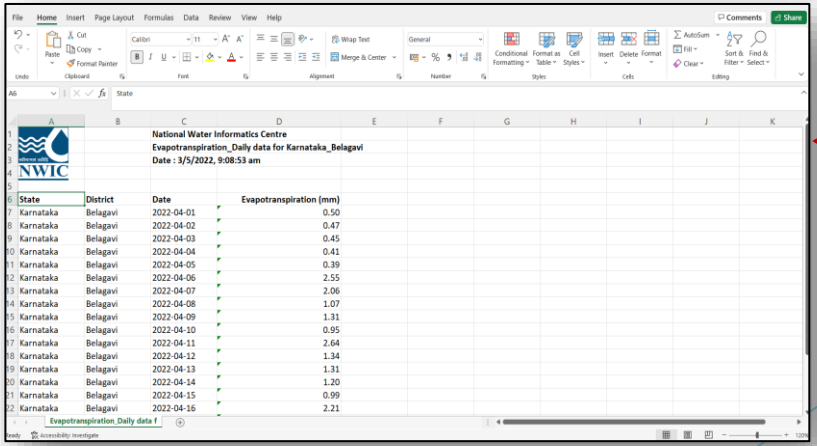
MAP DOWNLOAD

REPORT DOWNLOAD





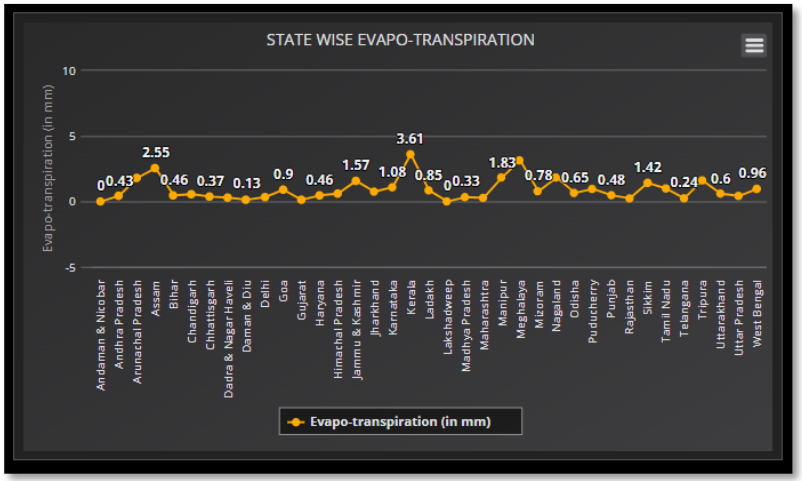


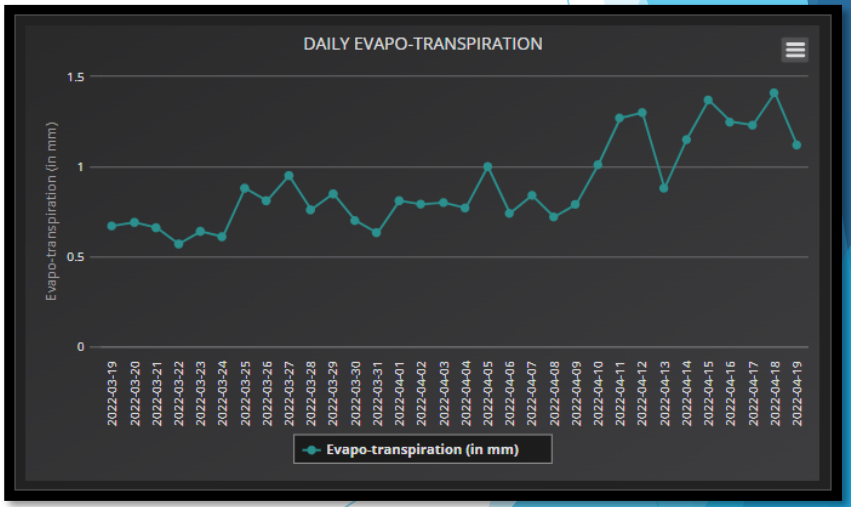


National Water Informatics Centre
Evapotranspiration_Daily data for Karnataka_Belagavi
Date : 3/5/2022, 9:08:53 am

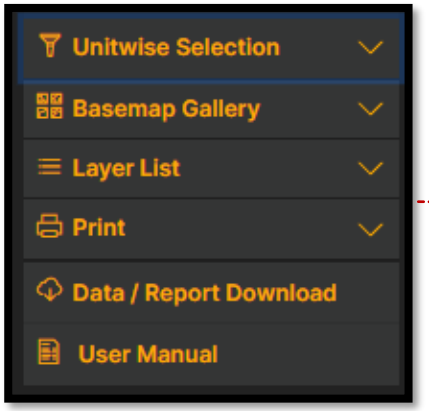
State	District	Date	Evapotranspiration (mm)
Karnataka	Belagavi	2022-04-01	0.50
Karnataka	Belagavi	2022-04-02	0.47
Karnataka	Belagavi	2022-04-03	0.45
Karnataka	Belagavi	2022-04-04	0.41
Karnataka	Belagavi	2022-04-05	0.39
Karnataka	Belagavi	2022-04-06	2.55
Karnataka	Belagavi	2022-04-07	2.06
Karnataka	Belagavi	2022-04-08	1.07
Karnataka	Belagavi	2022-04-09	1.31
Karnataka	Belagavi	2022-04-10	0.95
Karnataka	Belagavi	2022-04-11	2.64
Karnataka	Belagavi	2022-04-12	1.34
Karnataka	Belagavi	2022-04-13	1.31
Karnataka	Belagavi	2022-04-14	1.20
Karnataka	Belagavi	2022-04-15	0.99
Karnataka	Belagavi	2022-04-16	2.21

CHARTS VIEW


STATE WISE EVAPO-TRANSPIRATION
Evapo-transpiration (in mm)
10
5
0
-5
0
0.43
2.55
0.46
0.37
0.13
0.9
0.46
1.57
1.08
3.61
0.85
0
0.33
1.83
0.78
0.65
0.48
1.42
0.24
0.6
0.96
Andaman & Nicobar
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Ladakh
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puducherry
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Evapo-transpiration (in mm)


DAILY EVAPO-TRANSPIRATION
Evapo-transpiration (in mm)
1.5
1
0.5
0
2022-03-19
2022-03-20
2022-03-21
2022-03-22
2022-03-23
2022-03-24
2022-03-25
2022-03-26
2022-03-27
2022-03-28
2022-03-29
2022-03-30
2022-03-31
2022-04-01
2022-04-02
2022-04-03
2022-04-04
2022-04-05
2022-04-06
2022-04-07
2022-04-08
2022-04-09
2022-04-10
2022-04-11
2022-04-12
2022-04-13
2022-04-14
2022-04-15
2022-04-16
2022-04-17
2022-04-18
2022-04-19
Evapo-transpiration (in mm)

USER MANUAL



User Guide- Evapo-transpiration

In this guide you will know how to use the different modules, functions and tools for easy access and download data. This feature shows Evapo-transpiration data for different states and basins for a given set of data parameters

Home page of this module shown as below-

- **Search** - On the top in left side panel there is search bar option where user can find any address on the map.
- **Zoom In & Zoom Out** - On click the map you can zoom in and out of the map with one hand or there is options + and – symbols display left side on the map viewer.
- **Unit-wise selection**- In this tool user have two choices user can either select state wise or basin wise it depends on users data requirement. If user select State radio button there is an options to select any of the state and district from the drop down menu. If user select Basin radio button the options are change with Basin and Sub Basin. User have to choose Time steps in which format they need data daily/monthly/yearly after selecting this there is an option for Data range user can select the range for which they need data.

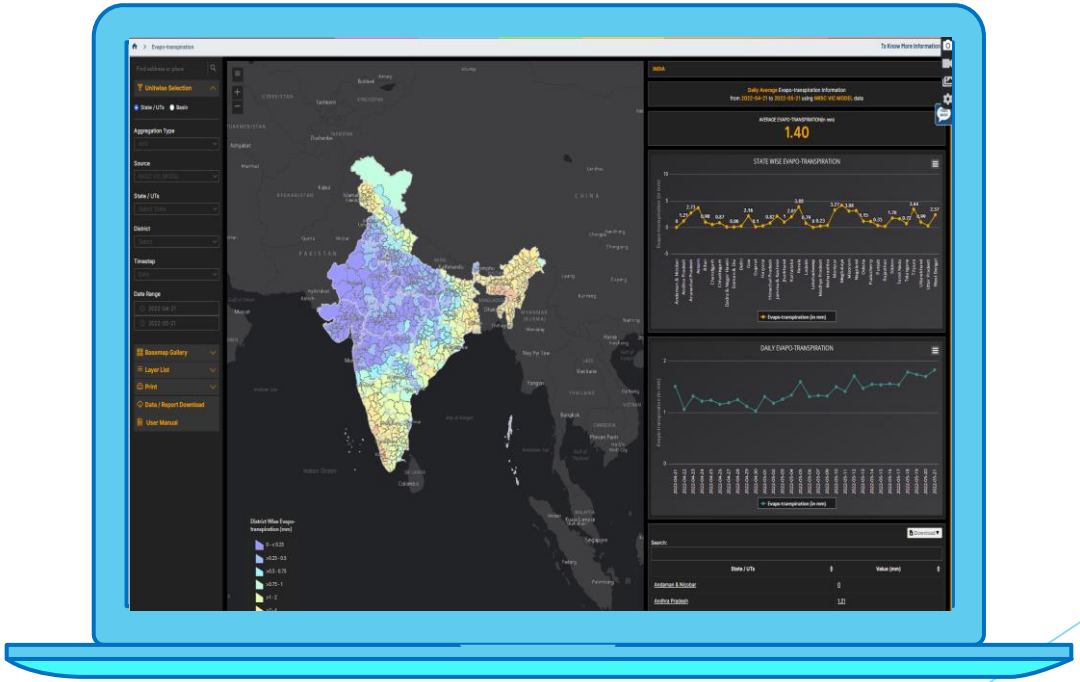
*The data in data panel and map viewer can be viewed in two ways, either State/District or Basin wise.

When the parameters are selected in data panel widget may be clicked for viewing respective data. Some data have download option user can download it with Download button.

1

LIVE DEMONSTRATION

Evapo-transpiration



Thank You!

Contact Us at helpdesk-nwic@gov.in

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https://twitter.com/home

https://lnkd.in/dtVys_kf