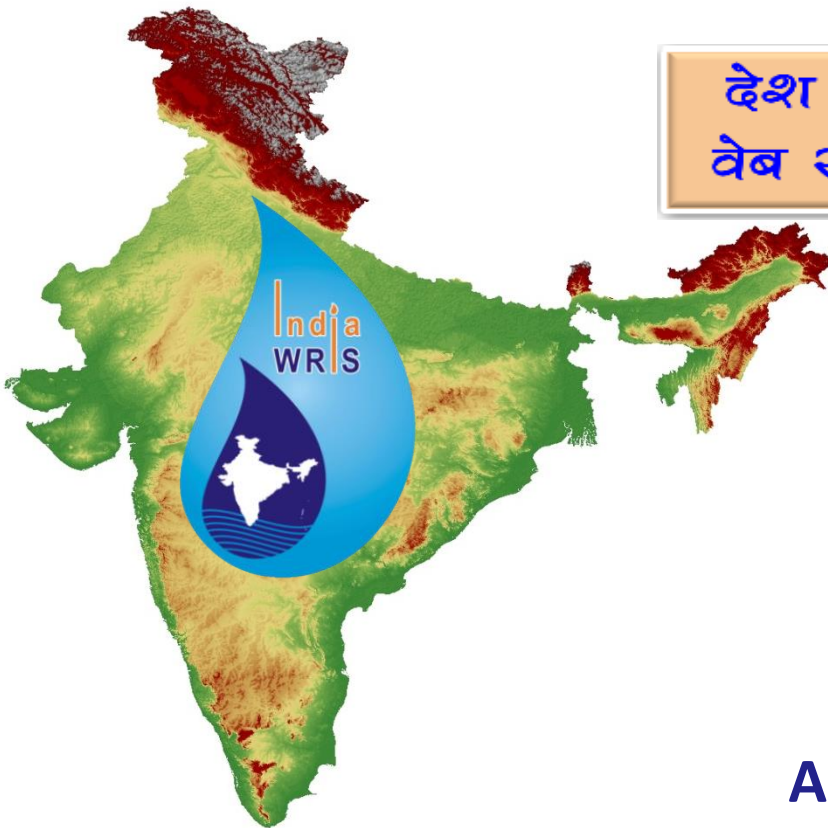




# Project : **India** - **WRIS** **Web GIS**

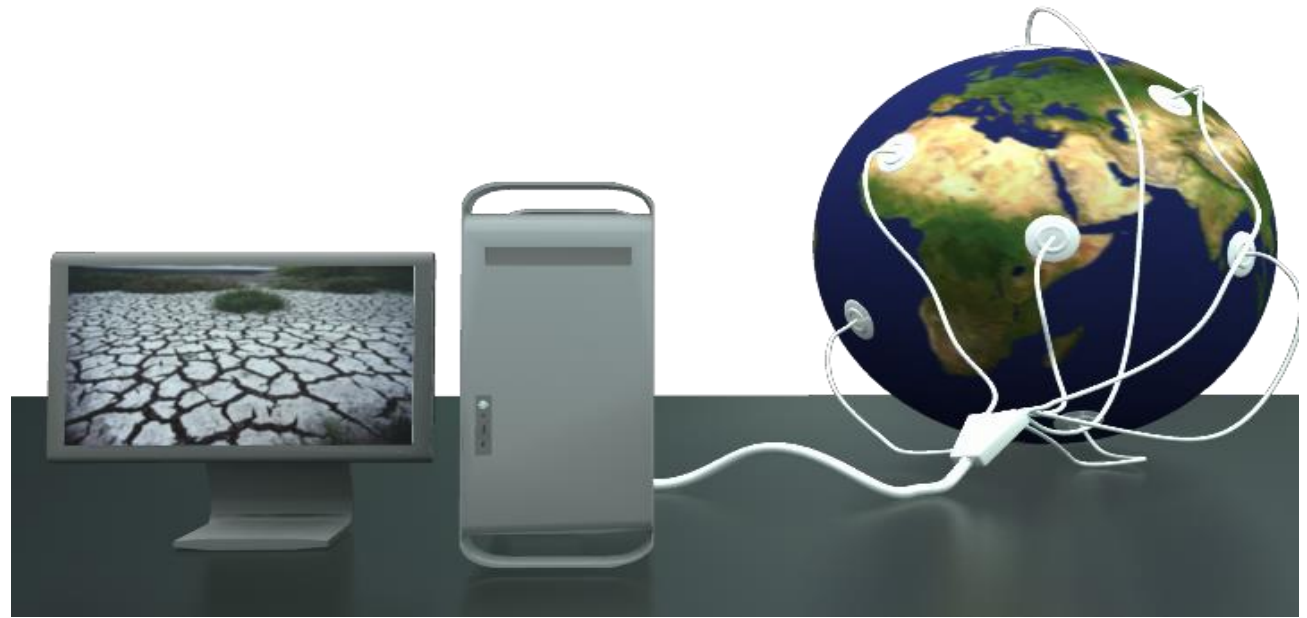
Generation of Database and Implementation of  
Web Enabled Water Resources Information System in  
the Country

देश में जल संसाधन आँकड़ों का जनन व  
वेब सामर्थ्य सूचना प्रणाली का क्रियान्वयन



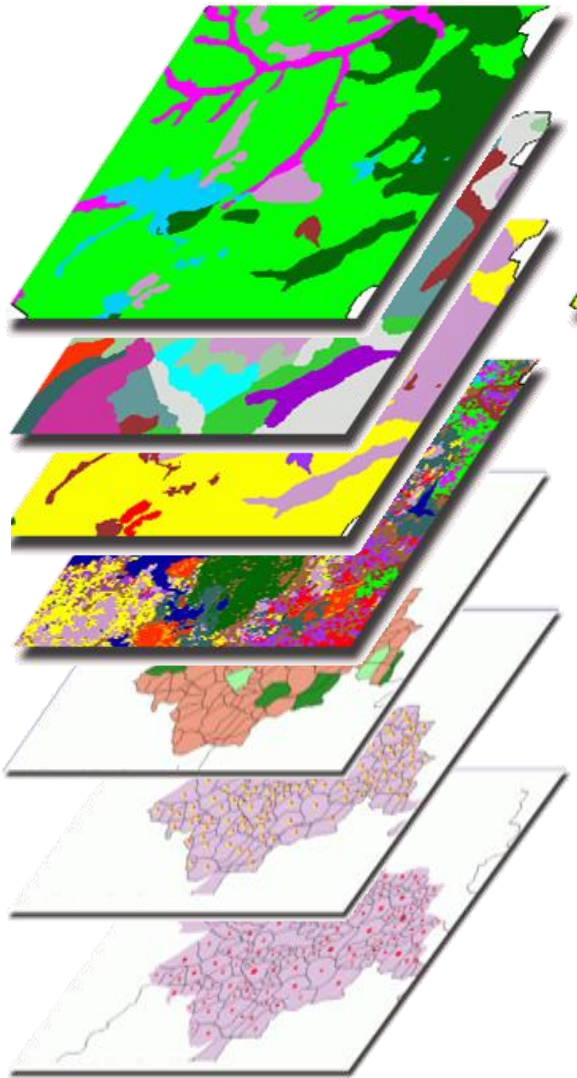
**A Joint Project of CWC and NRSC/ISRO**

# Objectives



- To collect available data from varied sources, generate new database, organize in standardized GIS format and provide scalable web-enabled information system.
- To provide easier and faster access for sharing of nationally consistent water resources data through a centralized database server.
- To provide tools to create value added maps by way of multi-layer stacking so as to provide integrated view to the water resources.
- To provide foundation for advanced modeling and future Spatial Decision Support Systems (SDSS) & automated data collection system.

# SCOPE OF PROJECT



- ❖ Based on the requirements and data availability, the project scope has 5 major groups of datasets having 30 spatial layers with more than 95 sub layers of 5-100 years data and Basin-Wise report generation.
- ❖ All the new database creation under India-WRIS is proposed at 1:50,000 scale.
  - ❖ The project envisages WGS-84 datum and LCC projection for entire country mosaic data.

# India-WRIS - Database 1

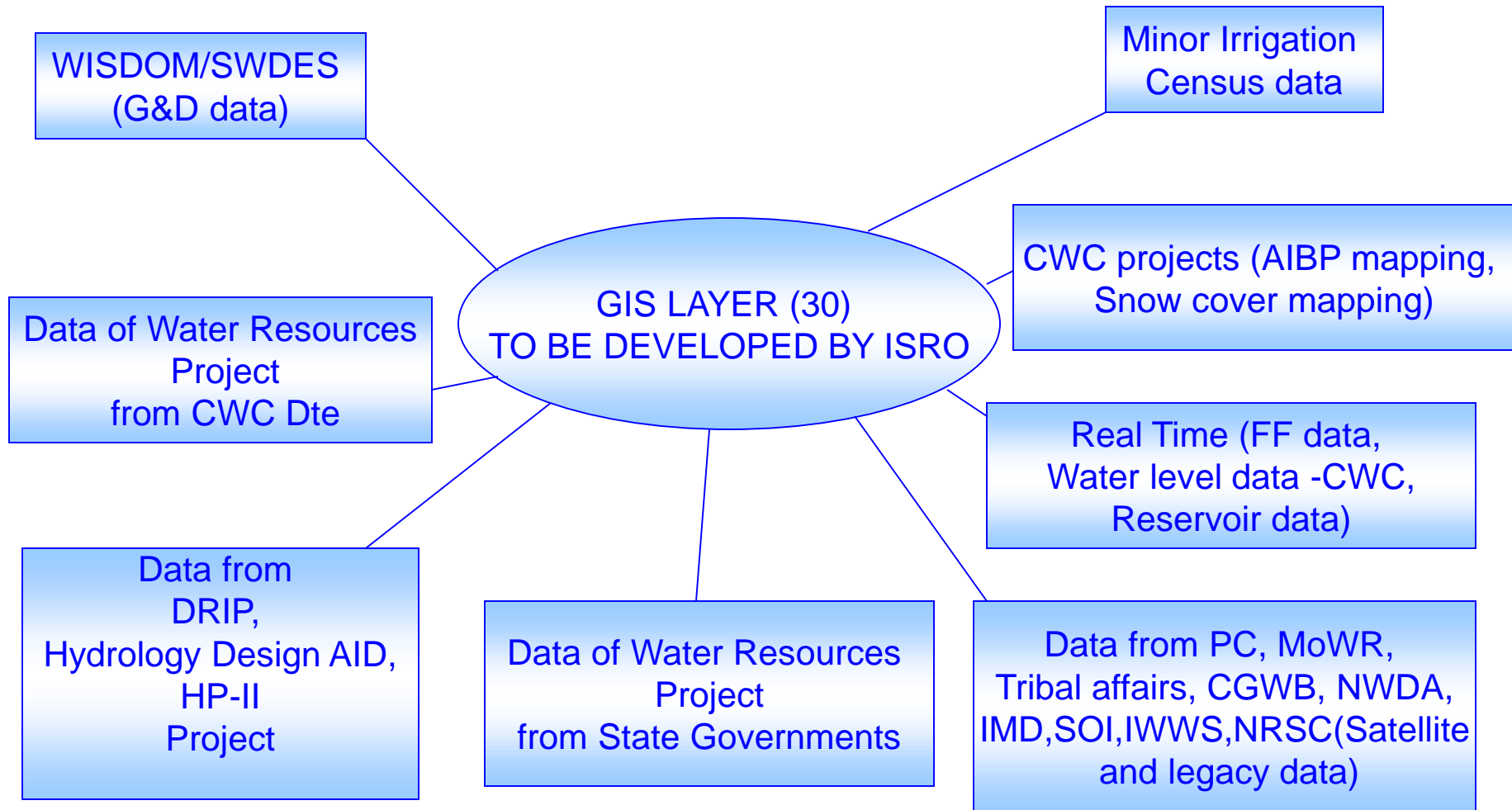
S. No.	Major groups of database	Spatial Layers and details
1.	<b>Watershed atlas</b>	1.1 Basin maps – Basin, sub-basin, catchment, Watershed
		1.2 River network
		1.3 Digital Elevation Map
2.	<b>Administrative layers</b>	2.1 International, State, District, Tehsil
		2.2 Village boundaries
		2.3 Town / Villages location and extent
		2.4 Infrastructure layers
		2.5 Major Tourist Stations sanctuaries, Waterfalls & other issues
3.	<b>Water resources projects</b>	3.1 Location of Major & Medium
		3.2 Location of Hydroelectric projects
		3.3 Location of Multipurpose projects
		3.4 Major and medium Irrigation project command boundaries
		3.5 Water logging and salt affected areas in major, medium projects



# India-WRIS - Database 2

		<b>3.6 Soil samples for major, medium irrigation projects</b>
		<b>3.7 Canal network</b>
<b>4.</b>	<b>Thematic layers</b>	<b>4.1 Surface water bodies</b>
		<b>4.2 Ground water observation wells data analysis</b>
		<b>4.3 Litholog data with aquifer parameters</b>
		<b>4.4 Land use / land cover</b>
		<b>4.5 Land degradation</b>
		<b>4.6 Wasteland maps</b>
		<b>4.7 Snow cover area</b>
		<b>4.8 Flood inundation maps</b>
		<b>4.9 Drought Prone Area Maps</b>
		<b>4.10 Inland navigation waterways</b>
		<b>4.11 Inter-basin transfer Links (As per NWDA Proposal)</b>
<b>5.</b>	<b>Environmental data</b>	<b>5.1 Hydro-meteorological sites of CWC</b>
		<b>5.2 Meteorological station (IMD, CWC)</b>
		<b>5.3 Climate related layers</b>
		<b>5.4 Pollution Monitoring Stations</b>
<b>6.</b>	<b>Report</b>	<b>Basin-wise report generation</b>

# SOURCES OF VARIOUS DATABASE



# PRESENT STATUS

- **Total 4 version uploaded**
- **Present version has 95 GIS layer with 700 attribute and 5 to 100 year time series data**
- **CWC H.O. un-classified data uploaded which can be freely downloaded**
- **CGWB water level for 20 years (download)**
- **CWC telemetry network connected and real time information available**
- **River Basin Atlas of India**
- **Basin reports & Watershed Atlas uploaded**

# Front GUI of Information system

India - WRIS Version 4.1

india-wris.nrsc.gov.in/wris.html

About WRIS Accessibility Tools Metadata WRIS Wiki Help

Search

## India-WRIS WebGIS

Water Resources Information System of India

Publications Gallery Mobile FAQ Feedback Sign In / Register

English

### WRIS Info Discovery

- WRIS Explorer**
  - Geo-Visualization
  - Sub-Info System
  - Temporal Analyst
  - New** Watershed Info System
- WRIS Connect**
  - Live Telemetry Data
  - Data Download
  - New** Reservoir Module
  - New** Automatic Map Generation
  - New** Advanced Report Generation
  - New** Web Map Services
- Share Success Story**
- WR Planning & Management**
  - Create Your WRIS
  - 2D-3D Linked View
  - Collaborative Planning
- Input Data Builder**
  - Spatial Data
  - Non-Spatial Data
  - Metadata

### India-WRIS

A- A A+

The project "Generation of Database and Implementation of Web Enabled Water Resources Information System in the Country" short named as India-WRIS WebGIS is a joint venture of the Central Water Commission (CWC), Ministry of Water Resources, Govt. of India and Indian Space Research Organization (ISRO), Department of Space, Govt. of India, as per the Memorandum of Understanding (MOU) signed on December 3, 2008 between the two departments for a period of four years - January 2009 to December 2012 and has been extended till December, 2015.

India-WRIS WebGIS aims as a 'Single Window' solution for comprehensive, authoritative and consistent data & information of India's water resources along with allied natural resources in a standardized national GIS framework (WGS-84 datum and LCC projection) tools to search, access, visualize, understand and analyze the data for assessment, monitoring, planning, development and finally Integrated Water Resources Management (IWRM).

### News And Events

- New** [New Updates](#)
- [Basin Reports available for download](#)
- [Watershed Atlas of India](#)
- [Non-Classified HO data available for download](#)
- [River Basin Atlas of India has been launched on November 1, 2012.](#)

Visitor Number : 1188839 | Disclaimer | Sitemap | Links | Contact Us | Updated on: November 06, 2015

\*Best viewed in resolution 1280x960.

India - WRIS Version ...

EN 16:46

# Modules/Sub Modules of the Information System

## WRIS Info Discovery

- Data Catalog

## WRIS Explorer

- 2D Geo-visualization
- Sub Info Systems
- Temporal Analyst
- Watershed info system

## WRIS Connect

- Live Telemetry Data
- Data Download
- Reservoir Module
- Automatic Map Generation
- Advance Report Generation
- Web Map Services

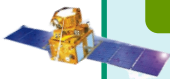
## Share Success Story

## Water Resources Planning

- Create Your WRIS
- 2D-3D Linked View
- Collaborative Planning

## Input Data Builder

- **WRIS Info Discovery & Data Catalog** module provides the details about the layers and data availability along with metadata information based on area of interest
- **WRIS-Explorer** module has Interactive system for Geo-visualization, exploring various sub-info systems and analyzing the temporal data & Watershed info system as well as watershed report based on basin and administrative unit
- **WRIS Connect** contains module: *Data Download module, CWC Live telemetry data, CWC monitored Reservoir data, Map and Report generation as per area selection & Web Map services*
- **Share Success Story** module to share/view various water related success stories over the globe
- **Water Resources Planning** It allow user to create your maps, 2D to 3D visualization with Google earth and sharing information among users in participatory mode like text file, maps, videos etc
- **Input Data Builder** module allows privileged users to add or update the spatial, non-spatial data and metadata information





# Main Information System – 12 Sub System – 36, Layers - 95 and Attributes - > 700



## 1. Base Data Info Systems

- |                   |                   |
|-------------------|-------------------|
| 1. Administrative | 3. Infrastructure |
| 2. Region         | 4. Terrain        |



## 2. Surface Water Info Systems

- |                   |                              |
|-------------------|------------------------------|
| 5. Water Resource | 9. Surface Water Body        |
| 6. Basin          | 10. Water Resources Projects |
| 7. Watershed      | 11. Command Area             |
| 8. River          | 12. Minor Irrigation         |
|                   | 13. Canal                    |



## 3. Ground Water Info Systems

- |                                    |
|------------------------------------|
| 14. Aquifer / Litholog             |
| 15. Ground Water Level             |
| 16. Ground Water Resources         |
| 17. Ground Water Potential (RGDWM) |



## 4. Hydro - Met Info Systems

- |                    |                         |
|--------------------|-------------------------|
| 18. Meteorological | 20. Hydro - Observation |
| 19. Climate        | 21. Flood Forecasting   |



## 5. Water Quality Info Systems

- |                           |
|---------------------------|
| 22. Surface Water Quality |
| 23. Ground Water Quality  |



## 6. Snow Cover / Glacier Info Systems

- |                          |
|--------------------------|
| 24. Snow Cover / Glacier |
|--------------------------|



## 7. Inland Navigation Waterways Info Systems

- |                                 |
|---------------------------------|
| 25. Inland Navigation Waterways |
|---------------------------------|



## 8. Inter - Basin Transfer Links Info Systems

- |                                  |
|----------------------------------|
| 26. Inter - Basin Transfer Links |
|----------------------------------|



## 9. Hydro - Met Extremes

- |                     |
|---------------------|
| 27. Flood           |
| 28. Drought         |
| 29. Extremes Events |



## 10. Land Resources Info Systems

- |                           |               |
|---------------------------|---------------|
| 30. Land Use / Land Cover | 32. Wasteland |
| 31. Land Degradation      | 33. Soil      |



## 11. Water Tourism Info Systems

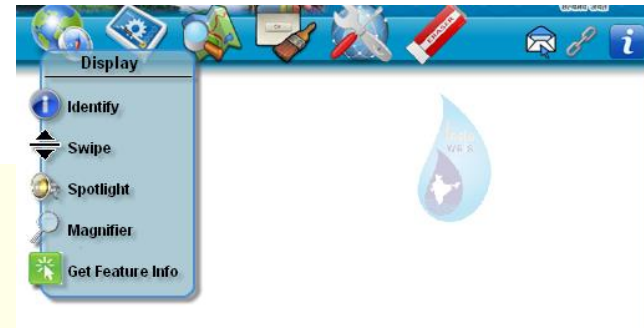
- |                   |
|-------------------|
| 34. Water Tourism |
|-------------------|












## 12. Socio Economic Info Systems

- |           |
|-----------|
| 35. Rural |
| 36. Urban |






# Tools and Functionalities

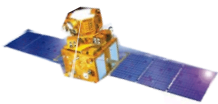


## Navigation Tools

-  **Zoom In:** It zoom into a particular area on map selected by the user.
-  **Zoom Out:** Is zooms-out the map to come out of the detailing..
-  **Pan:** It allows user to Pan around the whole map
-  **Full Extent:** It allows viewing the map at the full extent..
-  **Previous Extent:** It allows going to previous extent when the map extent is changed.
-  **Next Extent:** It allows returning from the previous extent.
-  **Map Overview:** Provides location of current view in context with larger map area.
-  **Go To:** Zoom to an area based on specified latitude and longitude
-  **Select Area Zoom/Rubber Zoom:** Smooth Zooming into a selected area

## Display Tools

-  **Swipe:** It swipe the selected layer in the map to reveal underlying layers.
-  **Spotlight:** It removes overlaid layer from the selected portion for better visualization
-  **Magnifier:** To view the zoom in layer details of selected portion only
-  **Get Feature Info:** On selecting a particular feature it displays summary info
-  **Identify:** Identify the details of all the visible layers including the elevation details of the point



# Tools and Functionalities

## Personalization Tools



**Print:** To print the current viewing area in landscape or portrait mode.



**Save as Image**



**Bookmark:** Allows book marking a specific location on the map for future reference.



**Pin Mark:** User can pin mark his location of interest and type his comment on same

## Sharing Tools



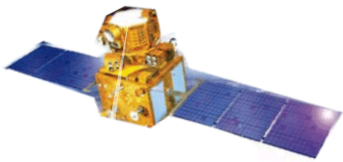
**Share a Link:** Share the current view of map with another user through mail.



**iFrame:** Sharing frame of India-WRIS in other applications.



**Links on twitter/Facebook/Google+**



## Advanced Tools



**Surface Profile:** Generate the surface terrain height graph of selected points on map.



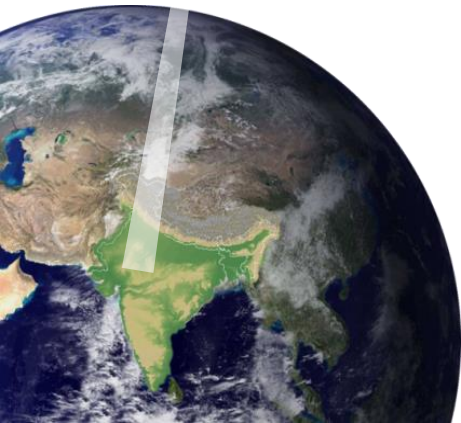
**Network Analysis/Route Tool:** It specifies the defined route of road, rail and river network.



**Geo-Calculator:** Tools to calculate parameters based on location and user input.



**Linked View:** Can View multiple view of different information in a single window.



## Search & Query Tools



**Query Builder:** create user defined queries



**Search by Proximity**



# Geo-Visualization (Surface profile tool)

India-WRIS Version 4.0 | India WRIS Geo-Visualization | india-wris.nrsc.gov.in/GeoVisualization.html?UType=R2VuZXJhA==?UName=

About WRIS | Accessibility | Tools | Metadata | WRIS Wiki | Help | Search

## India-WRIS WebGIS

Water Resources Information System of India

HOME | WRIS Explorer | **GeoVisualization** | SubInfoSystem | Temporal Analyst

### Surface Profile

Start Drawing | Read from File | Save

Distance: 15.40Km  
Height: 351.65m

Elevation in (m)

Distance (Km)

Location: Move mouse on map

start | India WRIS Geo-Visu... | EN | 09:32

# Major Digitization Work

- Source: Merged Product of Cartosat – I & LISS-IV data & SOI, SRTM
- Scale: 1:50K

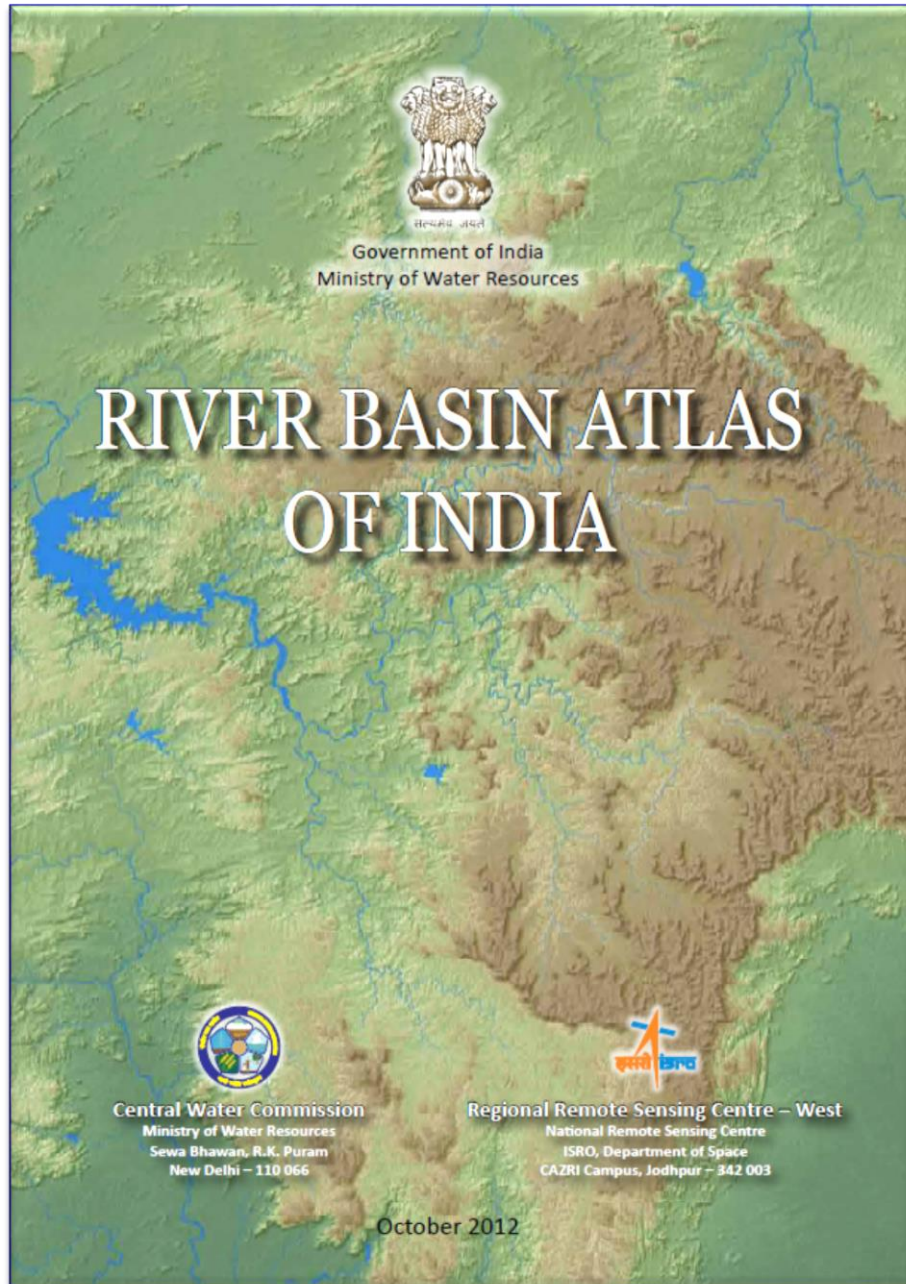
- Basin/Sub-Basin/Watershed – 27/101/4566
- River – 36 lakh km
- Water bodies (upto 0.01 ha) – 8 lakh
- Road Network (Upto village) – 27.0 lakh km
- Settlement Location & Extent – 9 lakh/8.9 lakh ( 77,798 sq km)
- Canal network – 3.20 lakh km



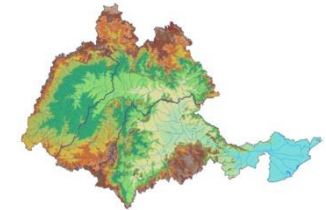
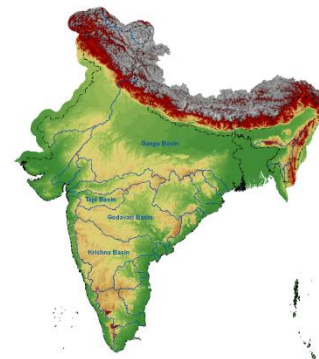
# Watershed Delineation in India

- All India Soils and Landuse Survey (AISLUS) atlas at 1:1 M scale (35 Basins)
- CGWB basin map 1: 250,000 (34 Basins)
- CWC basin map – 20 Basins
- NCIWRD – 25 Basins

# NEW Digital Watershed atlas



Sl. No.	Hydrological Levels	Digits	Range
1	Region	1	A-F
2	Basin	02	1 – 25
3	Sub Basin	03	XYZ
4	Watersheds	02	1 – 99
5	Sub Watersheds	03	L 1 - 99 M 1 - 99 U 1 - 99
6	Micro Watersheds	02	1 - 99



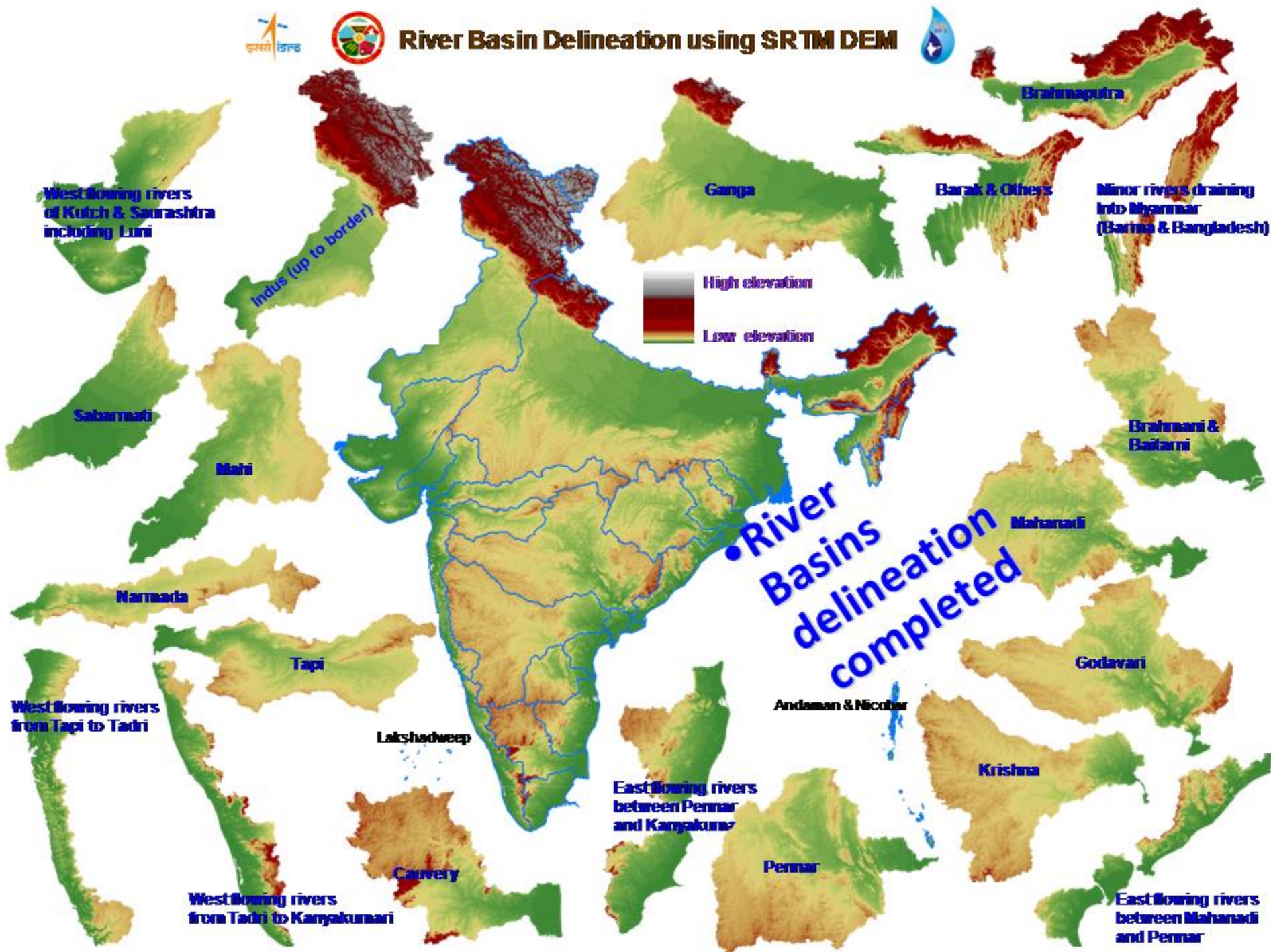
Mahanadi Basin

**C 08 xyz 99 L99 99**





# River Basin Delineation using SRTM DEM



# River Network



Total Length – 36  
lakh km



# Different Components of Water Resources Project







# WATER RESOURCES PROJECT

**India-WRIS WebGIS**  
Water Resources Information System of India

HOME » WRIS Explorer » GeoVisualization | SubInfoSystem » Water Resource Projects | Temporal Analyst

Get Details | Sedimentation Studies | Reservoir Level | Download Report | WRP Linkages

India-WRIS Data Set

- Administrative
- Canal & Related Layer
- Watershed Atlas
- River Layer
- Surface Waterbody
- Sedimentation
- WRP
- Infrastructure

500 km  
400 mi

Location: Move mouse on map

Spatial Relation  
Query Result  
Search by Proj  
Project:  
 Structure  
 Projects  
 State-wis  
 Basin-wi

**Total major & Medium Irrigation Projects - 1748**

**Total Large Dams- 4575**

**Number of Barrages/Weir - 540**

**Number of Lifts - 452**

**Canal Network –3.2 lakh km**

**Hydro Power Stations – 293**

**Water-bodies- 8.0 lakh**

start | List of defectsin WRI... | WARIS\_Presentation ... | WARIS\_Presentation ... | Main Page -- Microso... | India-WRIS Water Re... | 12:07

# Mapping of Irrigation Infrastructure using Cartosat Data

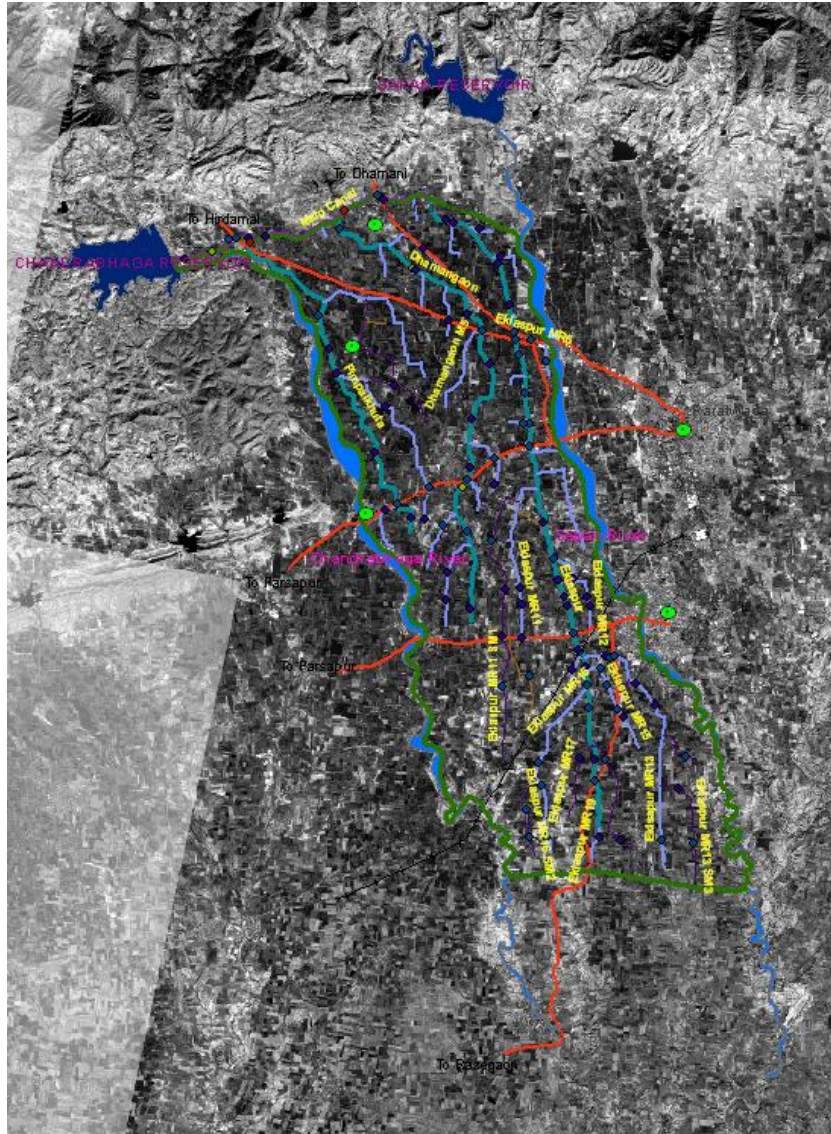
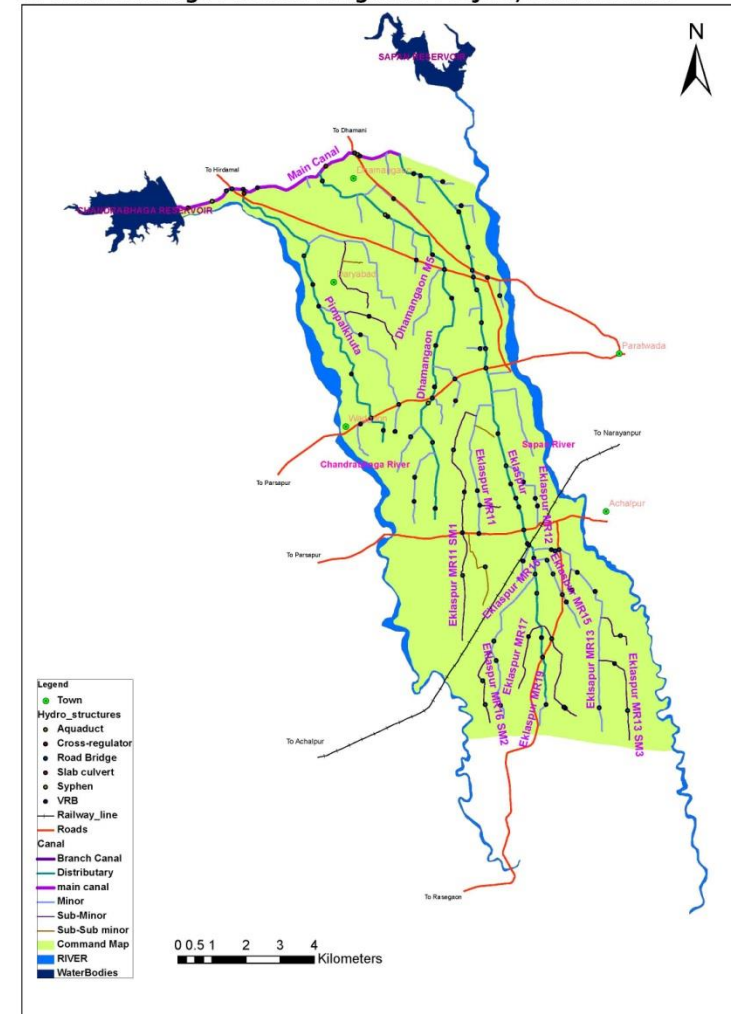


Fig : 5 - Map showing Satellite derived Irrigation Infrastructure of Chandrabhaga Medium Irrigation Project, Maharashtra





# WATER RESOURCES PROJECT & COMMAND AREA

India-WRIS Version 4.0
India-WRIS Water Resource

india-wris.nrsc.gov.in/WRPApp.html?UType=R2VUZjhbA==?UName=
Search

[About WRIS](#) | [Accessibility](#) | [Tools](#) | [Metadata](#) | [WRIS Wiki](#) | [Help](#)

## India-WRIS WebGIS

Water Resources Information System of India

HOME » WRIS Explorer » GeoVisualization | SubInfoSystem » **Water Resource Projects** | Temporal Analyst

[Get Details](#) | [Sedimentation Studies](#) | [Download Report](#)
WRP Linkages

**India-WRIS Data Set**

- Administrative
- Canal & Related Layer
- Watershed Atlas
- River
- Surface Waterbody
- Sedimentation
- WRP
- Infrastructure

Spatial Relations | Non Spatial Query

Query | Result

Records Found: 389

Name-wise Search:

No.	Name	Type
252	Jayakwadi Stage - I Major Irrigation Project	Irrigation Project
253	Jayakwadi Stage - II Major	Irrigation Project

Related Structures | Salient Features

Sl. No.	Attribute Name	Value
1	Basin	Godavari
2	Crest Level of	455.96
3	Design Flood	22656
4	District	Aurangabad
5	Length of dam	10415
6	Length of	417
7	Max. height	41.3
8	Name of the	Jayakwadi-I Dam
9	Name of the	Paithan Dam
10	Name of the	Godavari
11	Nearest city	Paithan
12	Number of	27
13	Sedimentation	0.75 Acre/Sq.

start
India-WRIS Water Re...
Microsoft PowerPoint ...
EN 09:38

# Water-Bodies

India WRIS

About WRIS | Accessibility | Tools | Metadata | WRIS Wiki | Help

Search

## India-WRIS WebGIS

Water Resources Information System of India

HOME » WRIS Explorer » GeoVisualization | SubInfoSystem » Surface Waterbody | Temporal Analyst

Waterbodies Information System | Wetlands Information System | Identify Waterbodies

India-WRIS Data Set

- DEM
- WaterBodies
- WetLands
- WatershedAtlas
- Administrative

**Total around 8.0 lakh water bodies**

Ganga Basin

INDIA

500 km  
400 mi

Water Bodies Search | Water Bodies Results

**Size/ Type wise Search**

Size (Ha):

Type:

Search

**Name wise Search**

Name:

Minimum 3 letters

Search

**Basin/ Sub Basin wise Search**

Basin:

Sub Basin:

Search

**State/ District wise Search**

State:

District:

Search



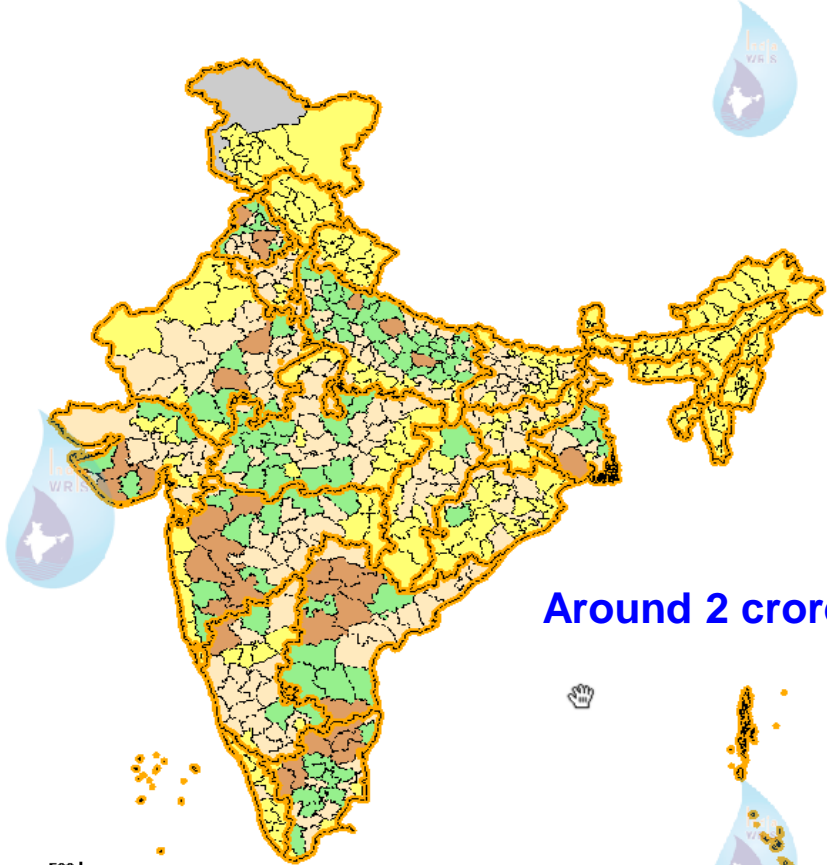
# MINOR IRRIGATION

India-WRIS WebGIS  
Water Resources Information System of India

HOME » WRIS Explorer » GeoVisualization | SubInfoSystem » Minor Irrigation | Temporal Analyst

Select the Scheme: Total No. of M.I. Schemes

India-WRIS Data Set  
Total No Of Scheme



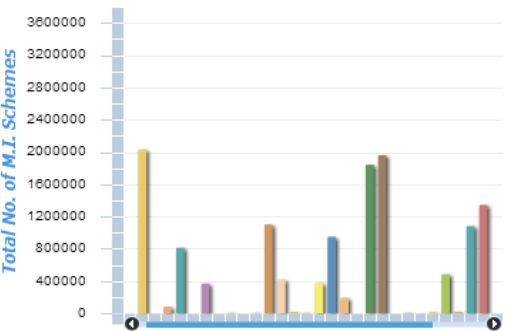
Around 2 crore

Shortly 4<sup>th</sup> Minor irrigation census data will be included

Total No. of M.I. Schemes

Show Label

- JHARKHAND
- KARNATAKA
- KERALA
- MADHYA PRADESH
- MAHARASHTRA
- MANIPUR
- MEGHALAYA
- MIZORAM
- NAGALAND
- ORISSA
- PUNJAB
- RAJASTHAN
- SIKKIM
- TAMIL NADU
- GUJARAT
- GOA
- DELHI
- DADRA & NAGAR HAVELI
- CHHATTISGARH
- CHANDIGARH
- BIHAR
- ASSAM
- ARUNACHAL PRADESH
- ANDHRA PRADESH
- ANDAMAN & NICOBAR
- WEST BENGAL
- UTTARANCHAL
- UTTAR PRADESH
- TRIPURA



Total No. of M.I. Schemes

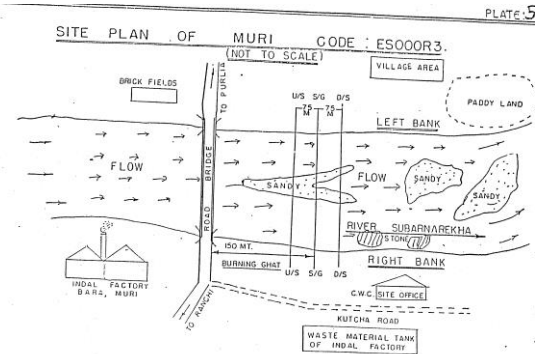
STATES

Zoom

# CWC HO Network



Total Stations – 878



## Activities

- Water Level
- Discharge
- Silt Measurement
- Water Quality

# CWC H.O. Network

India-WRS

India-WRIS WebGIS  
Water Resources Information System of India

HOME » WRIS Explorer » GeoVisualization | SubInfoSystem » Hydro Observation Stations | Temporal Analyst

Get Details ---Select Sub Zone--- Download Report Download Data

Total – 878 Sites

Time Series Data from 10 to 40 years for Un-classified Region

New 800 stations to be added during XII plan

The screenshot displays the India-WRIS WebGIS interface. At the top, there is a navigation menu with links for 'About WRIS', 'Accessibility', 'Tools', 'Metadata', 'WRIS Wiki', and 'Help'. A search bar is located on the right. The main header features the 'India-WRIS WebGIS' logo and the text 'Water Resources Information System of India'. Below the header, there is a breadcrumb trail: 'HOME » WRIS Explorer » GeoVisualization | SubInfoSystem » Hydro Observation Stations | Temporal Analyst'. A toolbar contains buttons for 'Get Details', a dropdown menu for '---Select Sub Zone---', 'Download Report', and 'Download Data'. The central part of the interface shows a map of India with numerous hydro observation stations marked by colored dots and stars. A red box in the top right corner of the map area states 'Total – 878 Sites'. A red box in the bottom left corner of the map area states 'Time Series Data from 10 to 40 years for Un-classified Region'. A scale bar at the bottom indicates 1000 km and 500 mi. A blue box at the bottom right of the map area states 'New 800 stations to be added during XII plan'. The interface also includes a 'Loading Legend' button and a vertical slider on the left side.



# CWC Meteorological Network



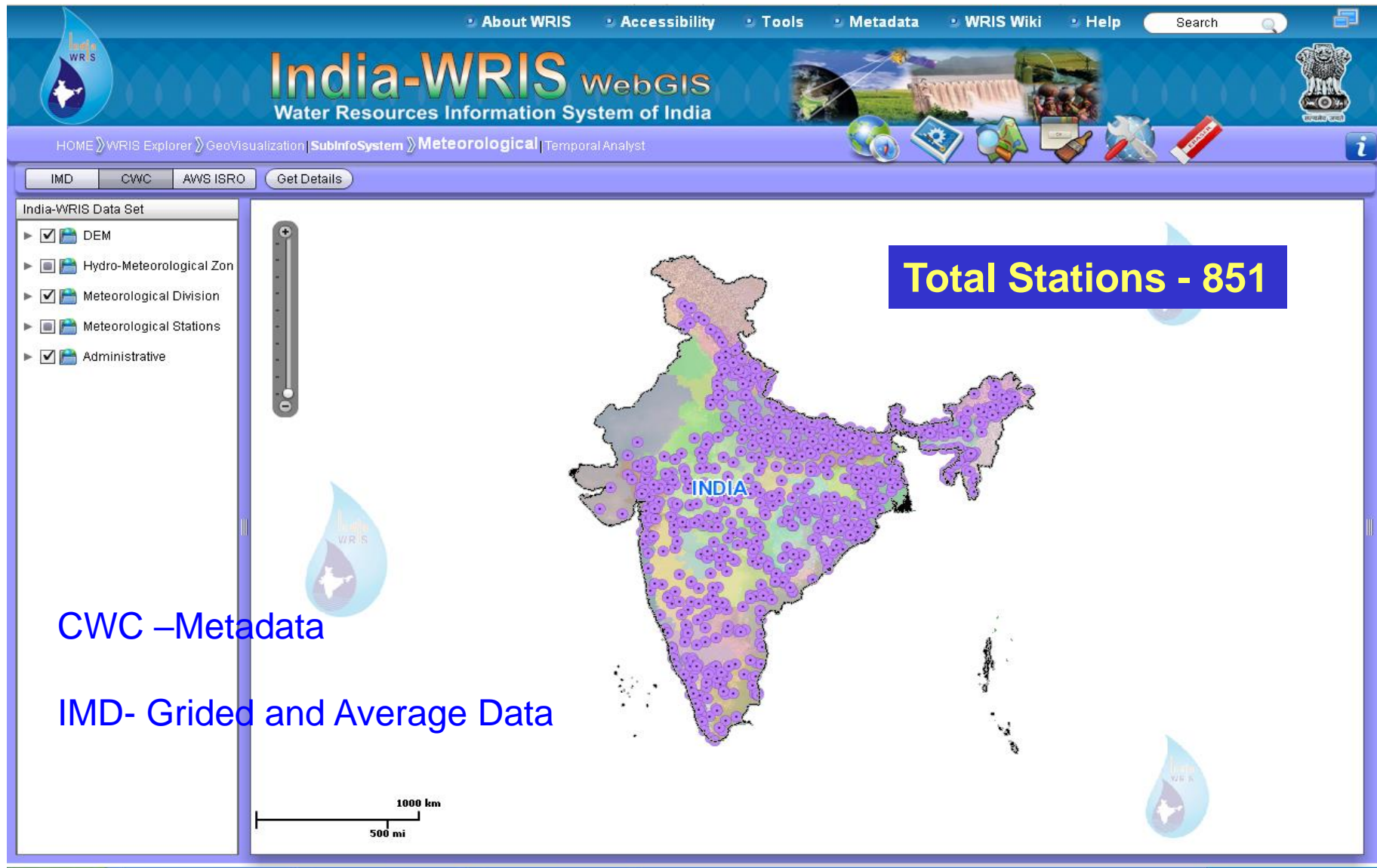
Total Stations - 851



## Activities

- Rainfall
- Temperature
- Humidity
- Evaporation
- Wind Speed/Wind Direction

# CWC/IMD Meteorological Network

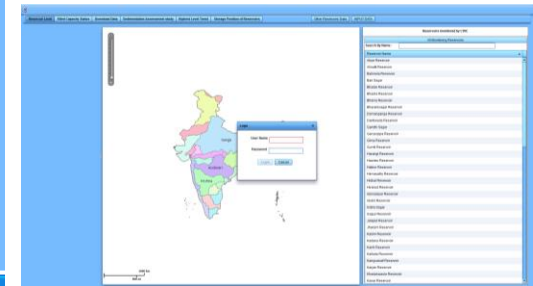
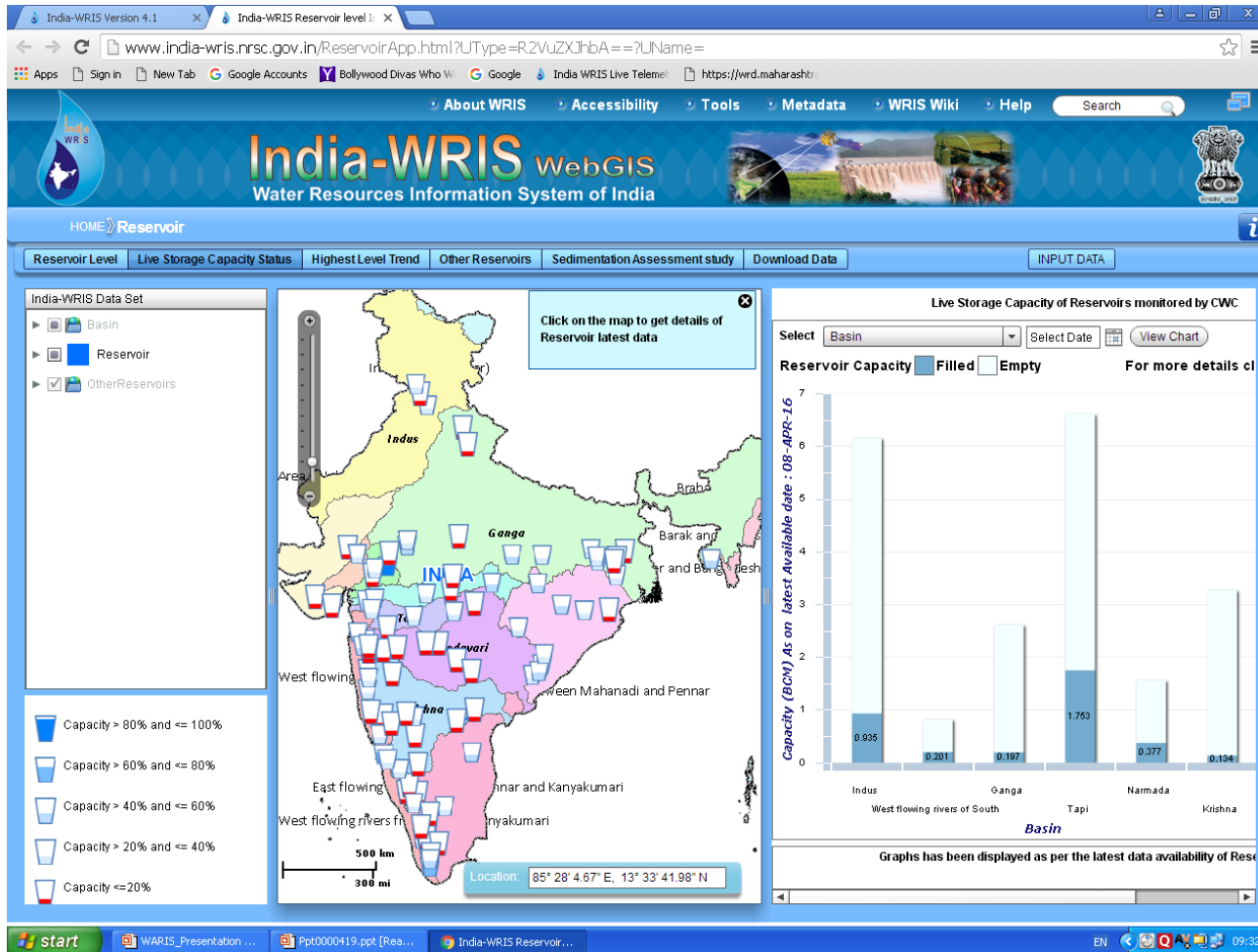


CWC –Metadata

IMD- Grided and Average Data

# CWC Monitored Reservoir Module

## CWC Monitors for 91 Reservoir



During XII plan 139



# CWC Telemetry Network

India-**WRIS** WebGIS  
Water Resources Information System of India

About WRIS | Accessibility | Tools | Metadata | WRIS Wiki | Help

Search

India-**WRIS** WebGIS  
Water Resources Information System of India

Legend

- Non Classified Sites
- Classified Sites

Search by name

State Wise Selection

Select State::  
Select A State

Classified Telemetry Sites::

Non-Classified Telemetry Sites::

Basin Wise Selection

Telemetry Site Selection

Disclaimer:

The Telemetry data available on this page are provisional data that have not been reviewed and edited. These data may be subject to significant change and are not citeable.

Select station from left menu or click on the map to get details

Total – 467 Stations

Water Level Chart

The diagram illustrates the data flow in the CWC Telemetry Network. It shows a 'SITE OFFICE' connected to a 'YAGI satellite antenna'. Data is transmitted from the antenna to the 'METSAT' satellite via 'Bus mode transmission'. The satellite then sends data to a 'Data Collection Platform (DCP)' on the ground via a 'Satellite Down Link'. The DCP is connected to 'TUBING' and a 'Direct Digital Readout Ground Station (DDRGS) At Jaipur and Burla'. The DCP also transmits data to the 'INSAT' satellite via 'VSAT Transmission'. The INSAT satellite then sends data to 'MODELLING CENTERS' on the ground via another 'Satellite Down Link'.

# CGWB Ground Water Well Network

India WRS

About WRIS Accessibility Tools Metadata WRIS Wiki Help Search

## India-WRIS WebGIS

Water Resources Information System of India

HOME WRIS Explorer GeoVisualization|SubInfoSystem Ground Water Level Temporal Analyst

Get Details Water Level Maps

India-WRIS Data Set

- DEM
- WatershedAtlas
- Administrative
- GW Level

Graphical view of Water level Data

Select a State  Go

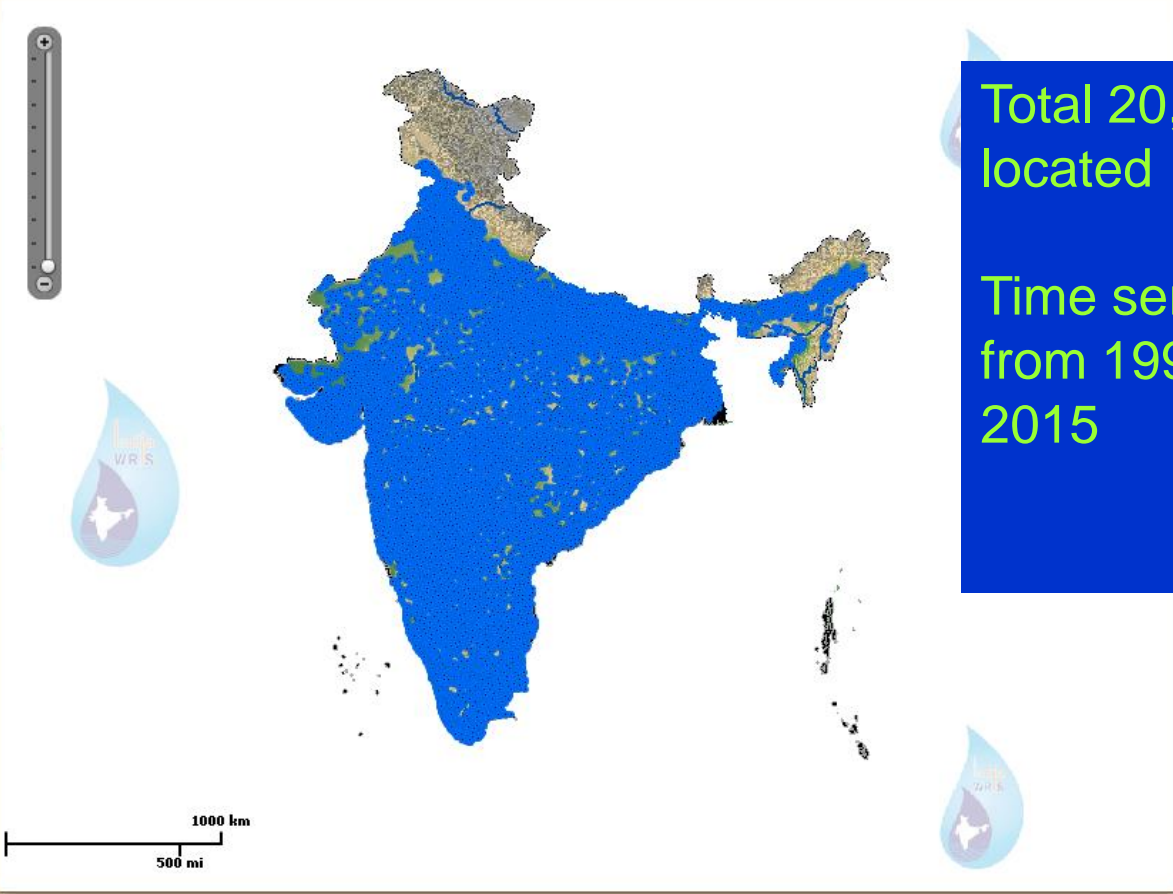
Select a District  Go

Select a Basin  Go

Select a SubBasin  Go

Click to draw area on map  Go

Clear



Static Parameters of Well

Attribute	Value

View in Temporal Analyst

Source:CGWB, Farid

**Total 20,166 well located**

**Time series data from 1995 to 2015**

# Automatic Map Generation

Automatic Map Generation Procedure

1 Area of Interest

Basin: Madhya Pradesh  
State: Madhya Pradesh  
Parliamentary Constituency: Hoshangabad  
District: Hoshangabad

Theme: Surface Waterbodies

2 Quality Parameters

FASTEST NORMAL BEST

3 Background

No DEM  
DEM in Area of Interest  
Overlay DEM

4 Layout Parameters:

A3-PORTRAIT A3-LANDSCAPE  
A4-PORTRAIT A4-LANDSCAPE

Submit Clear Download

Hoshangabad District - Surface Waterbodies Map

Legend

- State Boundary
- District
- Lakes/Pond
- Reservoir
- Tank
- Aquaculture pond
- Island
- River Polygon
- Elevation (m)
- High
- Low

Prepared by  
India-VRIS Project  
National Remote Sensing Centre  
Indian Space Research Organisation  
Dept. of Space  
Government of India



# WRIS-WIKI



## India-WRIS wiki

Water Resources Information System of India



सत्यमेव जयते

Log in

Page Discussion

Go Search

### Navigation

Main page  
Detailed Projects  
Recent changes  
Help  
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Related Links

### Categories

India's Water Wealth  
Basins  
States  
Rivers in India  
Water Resources Projects  
Hydro Electric Projects  
Multi Purpose Projects  
Inter State Projects  
Irrigation and Power Complexes  
AIBP  
CADWM  
Evaluation Studies for Irrigation Projects  
Hydro-meteorological Sites  
Hydro-Observation Sites  
Flood Management  
River Water Quality

## Welcome to Water Resources Information System-Wiki

### About India - WRIS Project



Vision of India-WRIS is to provide a 'Single Window Solution' for all water resources data and information in a standardized national GIS framework. It will allow users to Search, Access, Visualize, Understand and Analyze comprehensive and contextual water resources data for assessment, monitoring, planning, development and finally Integrated Water Resources Management (IWRM).

"India WRIS a **Single Window Solution** for all Water Resources data and information in a standardize National GIS Framework"

read more

### About WRIS Wiki



India-WRIS Wiki is a collaborative knowledge sharing web application developed for sharing 'updated information' regarding the various aspects of the Water Resources of the nation.

A lot of information of India-WRIS is available in Non-GIS form, mainly textual and imagery. India-WRIS Wiki provides a platform to this Non-GIS data with intricate links to the GIS component.

India-WRIS Wiki has a number of tools like Search, Recent Changes, Interactive maps (India-WRIS and Bhuvan), Image view, Help, Sitemap, Print etc.

read more

### Categories



- India's Water Wealth UPDATED
- Water Resources Projects In India | Hydro Electric Projects| Multi Purpose Projects| Inter State Projects| Irrigation and Power Complexes NEW
- Basins UPDATED
- States
- Rivers in India
- Inland Waterways
- Inter Basin Water Transfer Links
- Ground Water Resources
- Hydro-Meteorological Sites
- Flood Management NEW
- Legal Instruments on river in India NEW
- Water Tourism
- Inter State Disputes in India NEW
- Large Dams in India NEW

Internet

start

List of defectsin WRI...

WRS Presentation

WARIS\_Presentation ...

WARIS\_Presentation ...

India-WRIS Version 4...

Main Page - - Microso...

EN

10:22

# Linked View with Bhuvan Portal

**India-WRIS wiki**  
Water Resources Information System of India

India-WRIS Version 4.0 | Indira Sagar D02080 -

india-wris.nrsc.gov.in/wrpinfo/index.php?title=Indira\_Sagar\_D02080

Help  
Sitemap  
Related Links

**Categories**

- India's Water Wealth
- Basins
- States
- Rivers in India
- Water Resources Projects
- Hydro Electric Projects
- Multi Purpose Projects
- Inter State Projects
- Irrigation and Power Complexes
- AIBP
- CADWM
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- Inland Waterways
- Inter Basin Water Transfer Links
- Legal Instruments on river in India
- Inter State Disputes
- Large dams in India
- Water Tourism
- Glossary of terms

**Toolbox**

- What links here
- Printable version
- Permanent link

Associated Relationships with Dam	
Sl.No.	Name
1	Indira Sagar (NHDC) Reservoir
2	Indira Sagar /Narmada Sagar Project Major
3	Indira Sagar Canal head Power House
4	Indira Sagar Power House
5	Indirasagar Dam (Unit - I)
6	Punasa Lift Irrigation Project

[View in Water Resources Projects Info-System](#)

[India WRIS Map view](#)

Bhuvan | Bing Map | Bing Aerial Map | OSM

Terms of Use

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**Salient Features**

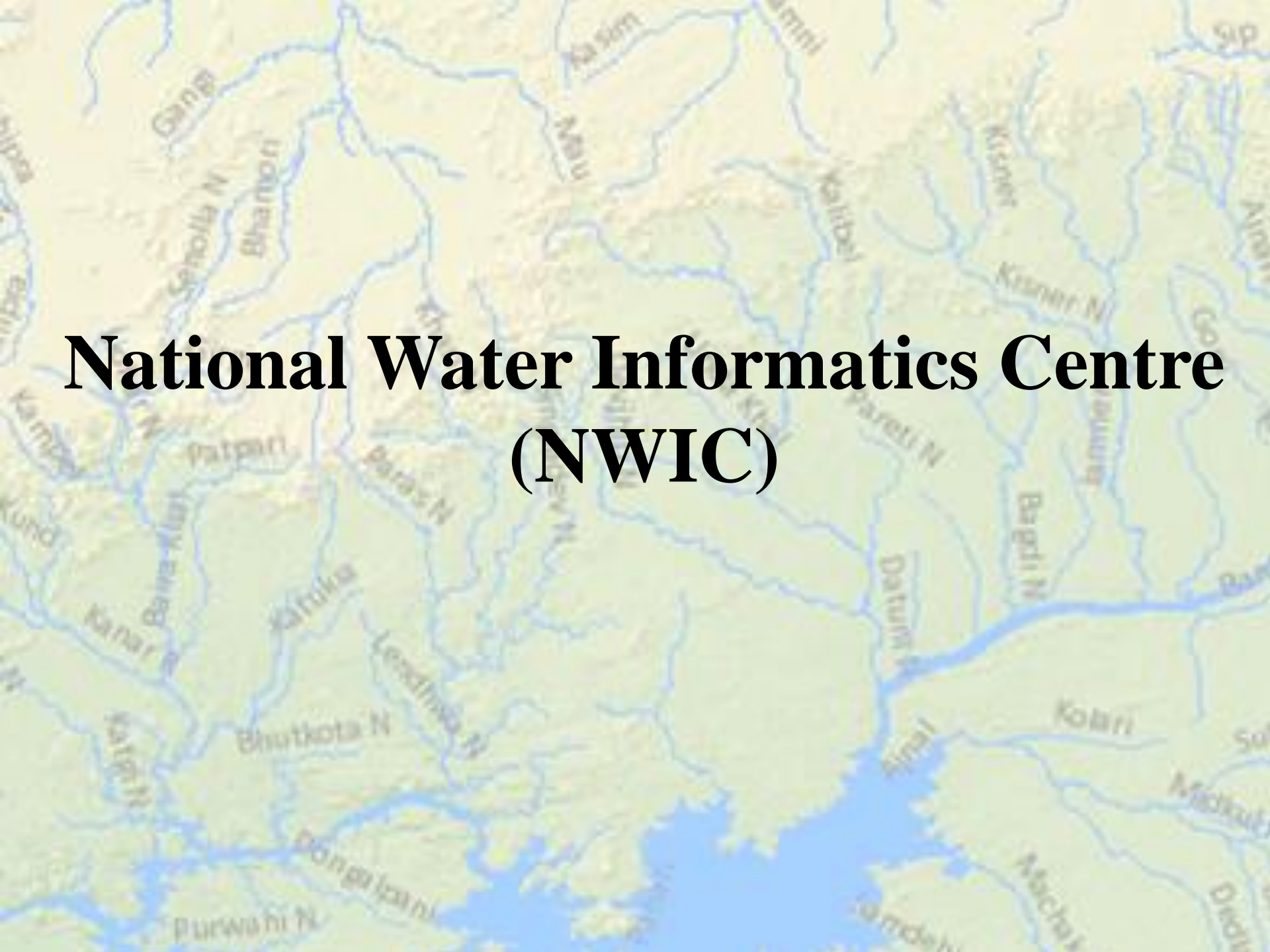
Name of the Dam: Indira Sagar (NHDC) Dam

start | Indira Sagar D02080 ... | Bhuvan - Accelerated... | WARIS\_Presentation ... | WARIS\_Presentation ... | EN | 10:11

# Where are we now

- **Water Resources Information System to Spatial Decision Support System for IWRM has three stages:**
  - 1. Pulling the entire database and designing a common framework of water resources data along with ancillary data to be used by all stakeholders for water related issues.**
  - 2. Detailed studies are carried out on watershed, river basin or state level using detailed data, customized application studies and applying models for problem solutions.**
  - 3. Involve automation in the entire process for data collection & organization and accordingly real or near real time analysis and forecasting.**
- **India-WRIS WebGIS Project jointly executed by CWC & NRSC, ISRO has accomplished the first stage to a large extent. The second and the third stages are to be accomplished by National Water Informatics Centre alongwith stakeholders.**





# National Water Informatics Centre (NWIC)

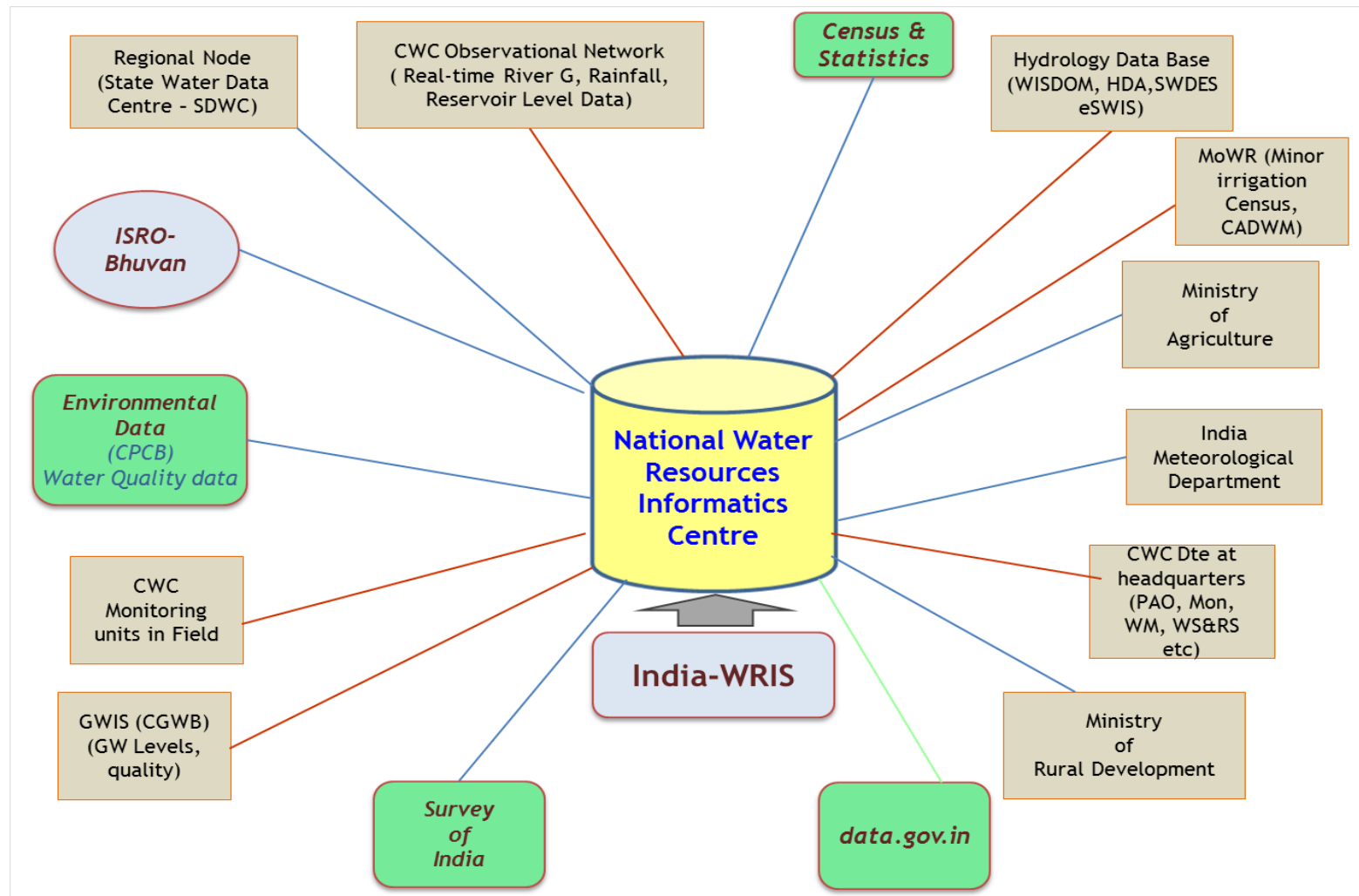
# Goal of NWIC

To empower, inform and enrich every citizen with upto date and reliable water data (other than classified data) and information through web based India Water Resources Information System (India-WRIS) on a GIS platform in Public Domain; and to develop value added products and services for all aspects of integrated water resources management serving the nation through research, capacity building, linkages, outreach and better governance in water resources sector.

**Centre will be manned by Water domain expertise, Geo-Informatics & IT/Systems domain**

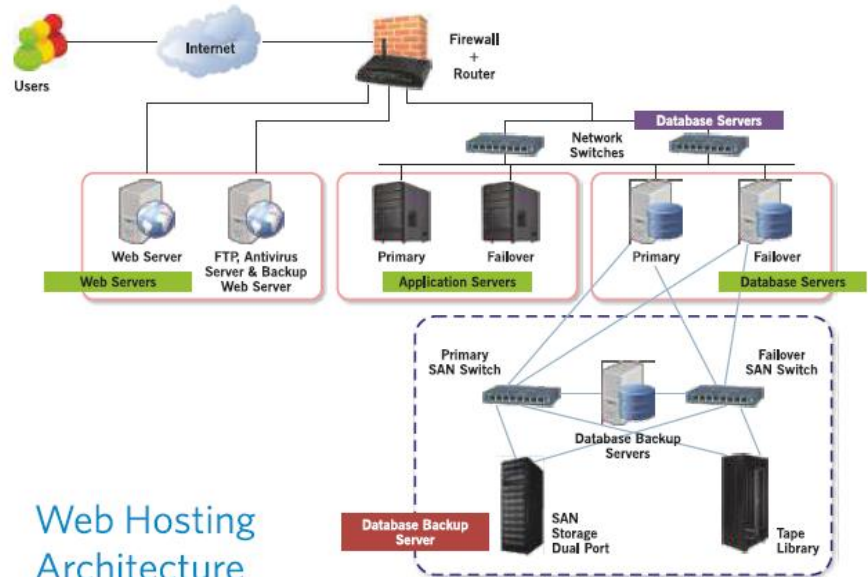
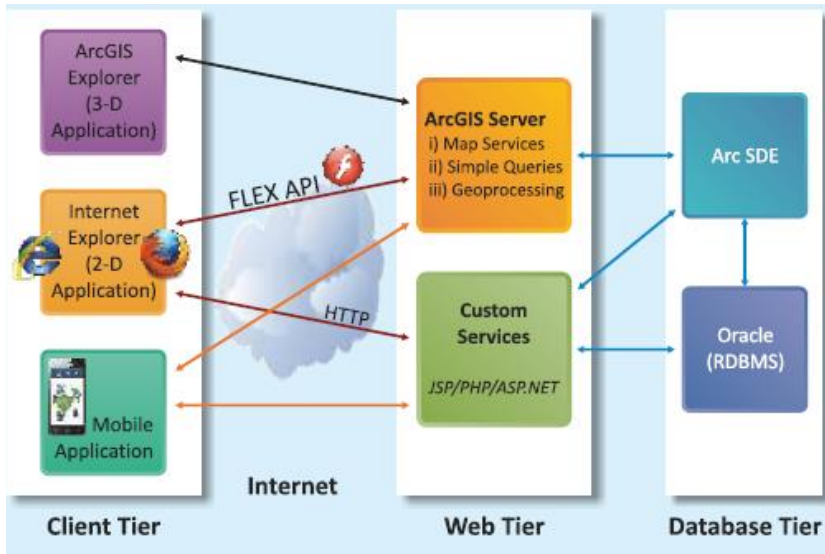
# Conceptual framework of the linkages

- The center will have professional linkages with central government departments, state government water resources departments, regional CWC offices and linkages with the portals having water resources related data/information. Conceptual framework of the linkages is described in figure below.





# Current Architecture

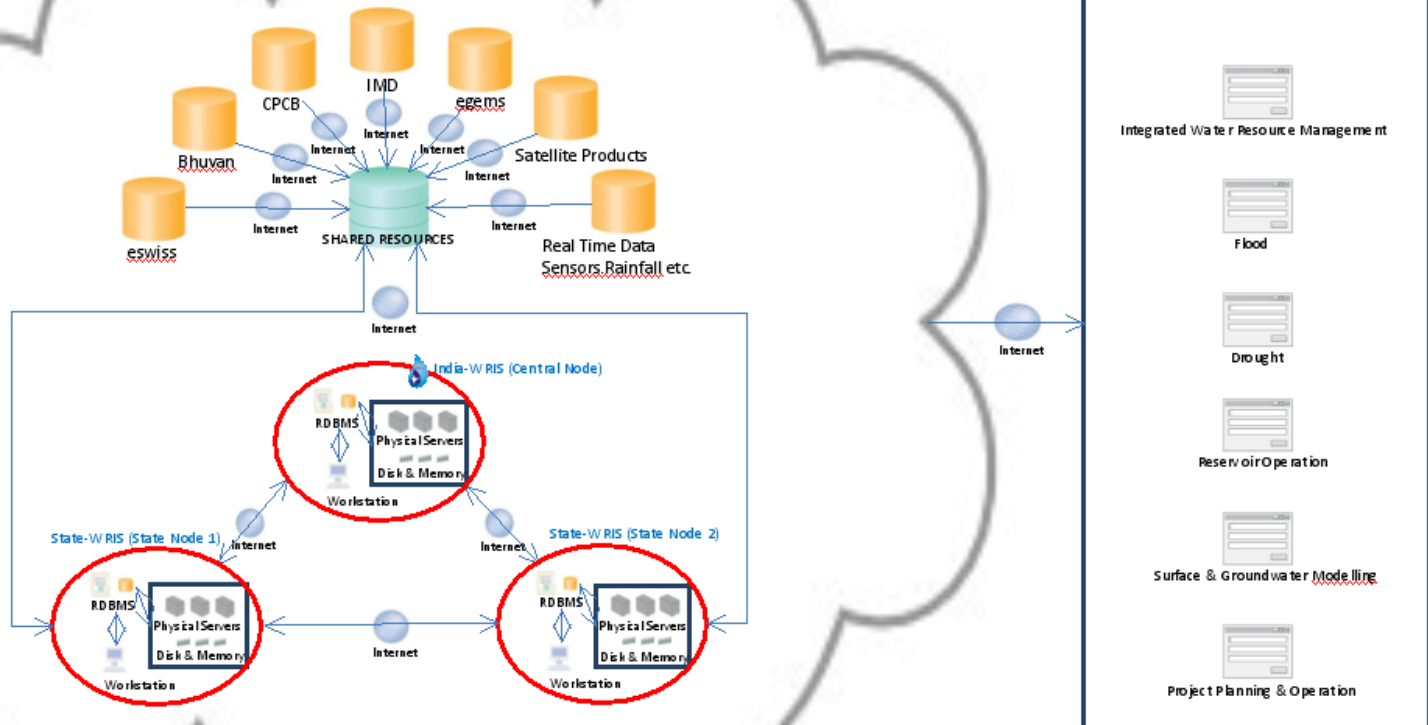


Web Hosting Architecture

# Proposed

## Real Time Distributed Working Environment using Cloud Computing

IS1703296



# Major Focus Area of NWIC (Next 5 years)

- **Creation of Nodes /linkages in states & Institutions - Regular updation and addition of new database**
- **Real time data (Reservoir, River, Water quality, meteorology, Ground water, flood, soil moisture) - Linkage through RTDAS/SMS based (DWRIS & HP-III)**
- **Integration/linkages with modules – HDA, e-SWIS, e-GEMS, e-WQ, DSS (P)**
- **Mapping/Monitoring (Using sub meter satellite data) - CADA works (state to take up), RRR Scheme, AIBP, Flood protection, Glacial lakes & Development of MIS, Coastal Management Information System**
- **Generation of data on 1:10K & 1:4 K (State to take up)**



# Continued

- **Software – Web map & Web feature services, Mobile App, Crowd Sourcing (For floods, water quality and water bodies etc), Improve user friendliness, Multilingual, WRIS Education**
- **Application/Studies with the help of domain expertise (Irrigated and un-Irrigated area, crop mapping in MMI command vis-a-vis originally planned, Sedimentation Index, Watershed prioritization for major reservoirs, Water Quality status of India, Virtual water trade amongst states etc)**
- **Bringing out State of the Art report ( State-wise & Basin Wise Irrigation/Water Resources Development , Water stress Area Atlas etc)**
- **Input – Re-Assessment of Basin-wise water resources potential studies, Morphological studies, e-water, Flood modeling**
- **Awareness Programme**
- **Publication- Irrigation Atlas of India**

# Expectation from State Government for State Node

- Listing out the data to be available on State portal including scale (1:4000)
- Making inventory of available datasets (Spatial and non-spatial)
- Sharing of Data (Hydrological, Ground water, Meteorological, Reservoir, Utilisation)
- Validation of data uploaded on India-WRIS portal so far and future

Thank you



<http://www.india-wris.nrsc.gov.in>

