

Bhuvan Overview and Applications–
ISRO Geo-Platform

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Sci/Engr 'SD'

Bhuvan Web Services Development

NRSC, Hyderabad– 21 April 2016



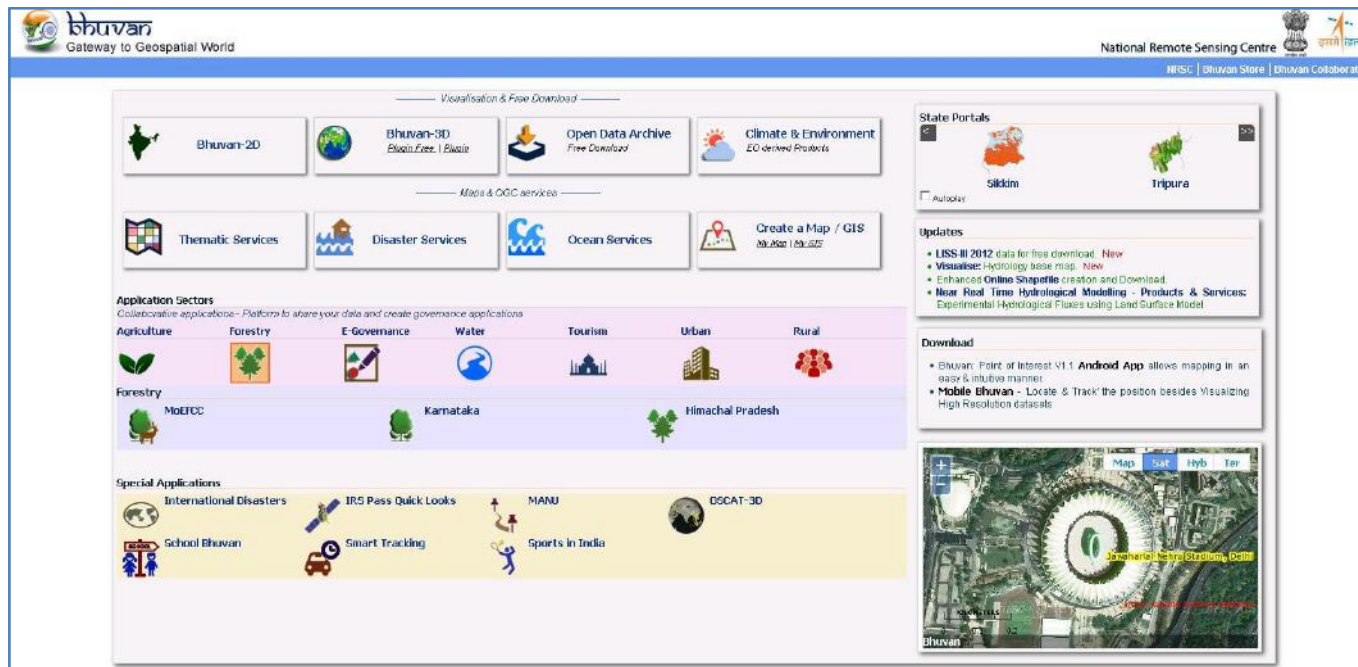
Visualization and Free Download

Maps & OGC Services

Applications

State Portals

Crowd Sourcing



The screenshot shows the Bhuvan Geo-Platform interface. At the top, it features the Bhuvan logo and the tagline 'Gateway to Geospatial World'. The main navigation bar includes 'National Remote Sensing Centre' and 'Bhuvan Collaborators'. The interface is organized into several sections:

- Visualization & Free Download:** Includes links for Bhuvan-2D, Bhuvan-3D (Biomass, Forest, Urban), Open Data Archive (Free Download), and Climate & Environment (EO-derived Products).
- Maps & OGC services:** Includes Thematic Services, Disaster Services, Ocean Services, and Create a Map / GIS (by State / by City).
- Application Sectors:** A grid of icons for Agriculture, Forestry, E-Governance, Water, Tourism, Urban, and Rural. Below this, specific state portals for Karnataka and Himachal Pradesh are highlighted.
- Special Applications:** Includes International Disasters, IRS Pass Quick Looks, MAMU, DSCAT-3D, School Bhuvan, Smart Tracking, and Sports in India.
- State Portals:** A section for state-specific portals, currently showing Sikkim and Tripura.
- Updates:** A list of recent updates, including LISIS III 2012 data for free download, enhanced Online Shuttlefile creation and download, and Near Real Time Hydrological Modelling - Products & Services.
- Download:** Information about downloading the Bhuvan Point of Interest v1.1 Android App and the Mobile Bhuvan - Locate & Track application.

At the bottom right, there is a live map view showing a satellite image of a stadium, with a search bar and navigation controls.



Bhuvan : ISRO's Geoportal

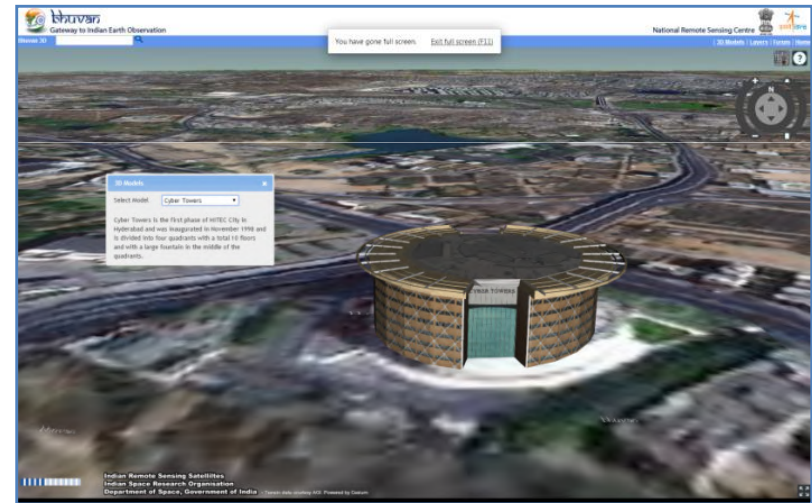
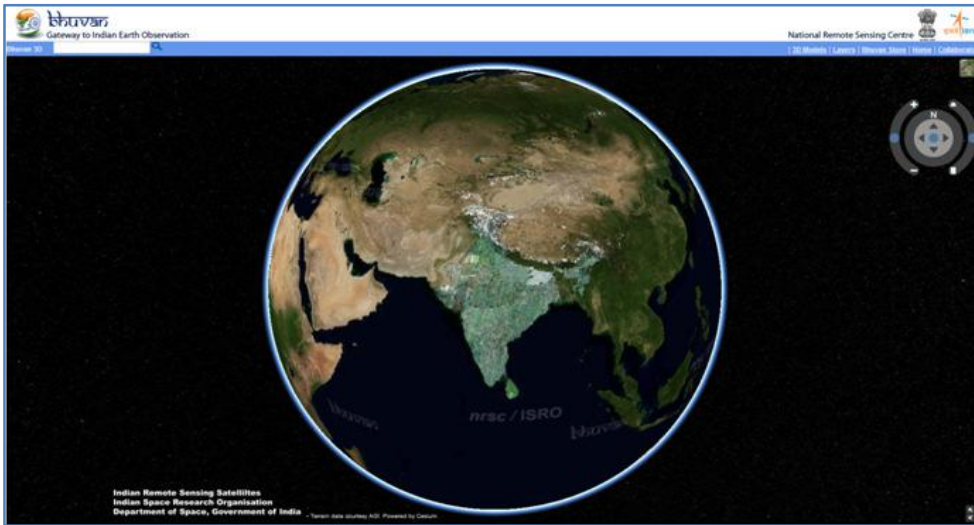
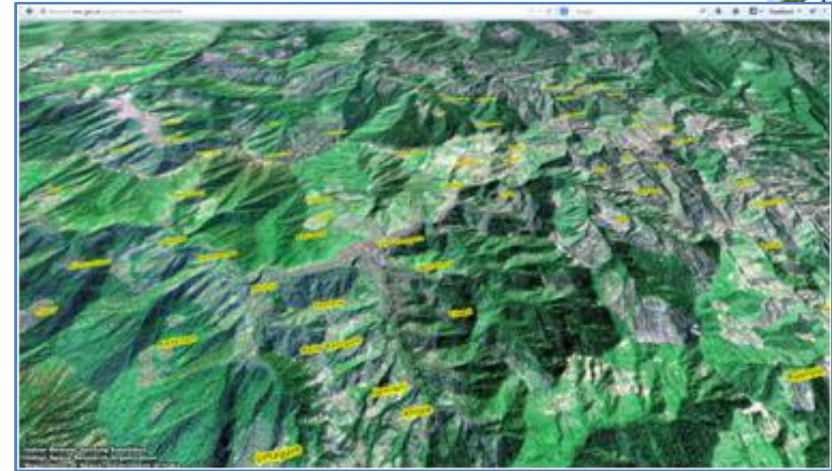


Bhuvan (Sanskrit for Earth) is a Geoportal of ISRO (<http://bhuvan.nrsc.gov.in>), allowing host of services covering visualization, free data download, thematic map display and analysis, timely information on disaster and project specific GIS applications since August 2009 and available in English, Hindi, Tamil and Telugu, developed using Open source Geospatial Solutions.

Name	Description	Data Availability
Bhuvan 2D / 3D	Allows visualization with pan, zoom, place name search, overlays and online editing	Resourcesat-1– AWiFS, LISS III & LISS IV, Cartosat 1 & 2 – PAN (merged with LISS IV), Oceansat – 1&2 - OCM
NRSC Open EO Data Archive	Allows download of free satellite data and products of specified period and resolution	Resourcesat-1: AWiFS Ortho and LISS III Ortho, IMS-1: HySI, CartoDEM, Oceansat-2:OCM2: NDVI, VF and Albedo, Tropical Cyclone Heat Potential, Ocean Heat Content, D 26, Wind Products.
Thematic Services	To display or analyze using WMS / WMTS (OGC web Services)	Thematic Maps of 1:10000, 1:50000, 1:250000 – Landuse/Landcover, Wasteland, Geomorphology, Lineament and Urban Landuse, Soil, Salt Affected and Alkalinity
Disaster Services	To provide timely information on various disasters for better decision making	Drought, Earthquake, Flood, Forest Fire, Landslide and Cyclone. Data Support for International Disasters.
Projects	To provide platform to create, visualize, share, analyze Geospatial data products and services towards Spatial Mashups	Municipal GIS, Tourism GIS, Forestry, Irrigation, Agriculture, Urban etc

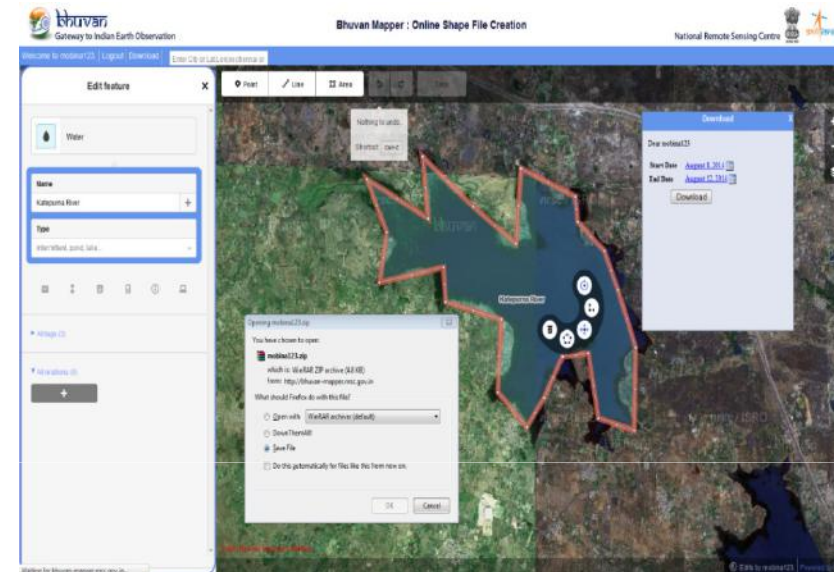


Visualization



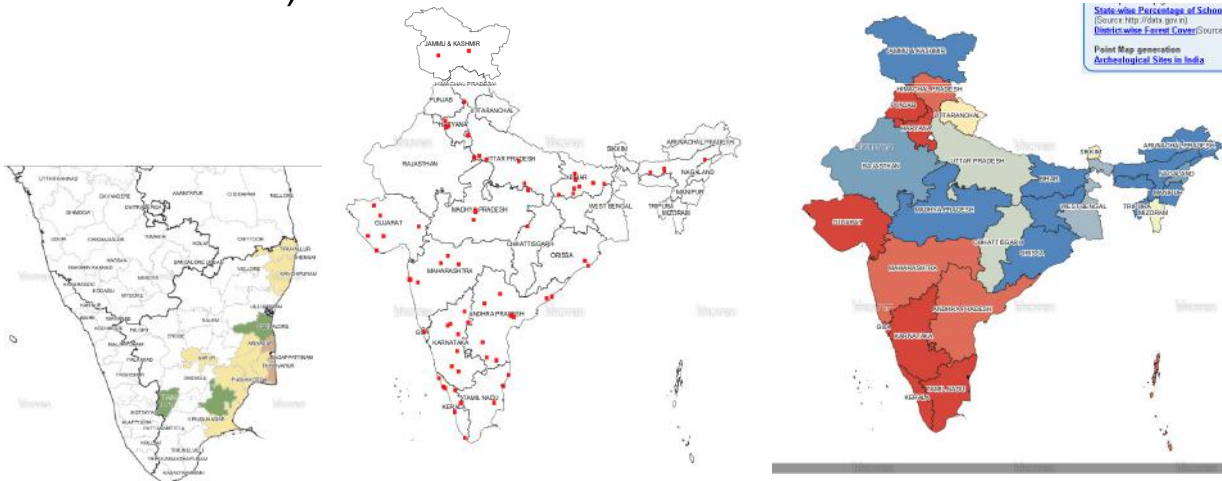
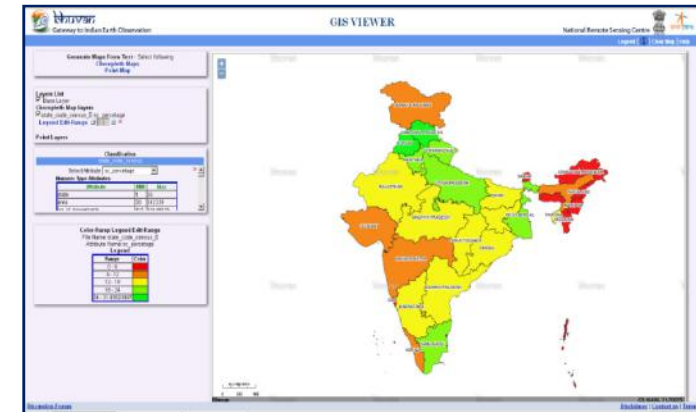
Enhanced Online Shape file Creation

- Facilitates users to download the interpreted/ delineated drawings as shape file along with customised attributes.
- Editing capability
- Filtering based on date and extensible to theme



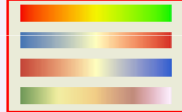
Salient Features

- Maps from State and District Census code or Name(Choropleth Maps) & XY Data (Point Map)
- Classification based on Equal Range, Unique values (color ramp or color parameters, Edit-Range and color values)



Color-Ramp/Legend/Edit-Range
 Attribute Name: st_percentage

Select Color Ramp color select



Number of Classes :

Submit

OR

Start Color :

End Color :


Number of Classes :

Submit

Color-Ramp/Legend/Edit-Range
 File Name: state_code_census_D
 Attribute Name: sc_percentage

Edit-Range & Color

Range	Color
0 - 6	F50000
6 - 12	
12 - 18	
18 - 24	
24 - 31.93623997	



submit



NRSC Open EO Data Archive



<http://bhuvan-noeda.nrsc.gov.in>

“Allows download of free satellite data and products of specified period and resolution”

- Cartosat-1:DEM: 1 arc Sec (v1(2006-08), v1.1(2008-12), v2, v3(2008-14))
- Resourcesat-1:AWiFS Ortho (2008K,2009R&K, 2010 R&K):56m
- Resourcesat-1:LISS III Ortho (2008-09, 2011, 2012):24m
- IMS-1: HySI: Spectral Binned data: 500m
- Oceansat2:OCM2: LAC - Albedo, NDVI, VF (2011-13) – 1 Km
- Oceansat2:OCM2: GAC – NDVI (2013) – 1 Km
- NICES : Tropical Cyclone Heat Potential (TCHP), D26, Ocean Heat Content (OHC) and Wind Products, Water Fraction, Snow Melt Freeze, Snow cover Fraction
- Metadata NSDI 2.0
- Select Area based on ‘Bounding box, Mapsheet(SOI), Tiles, Interactive Drawing’

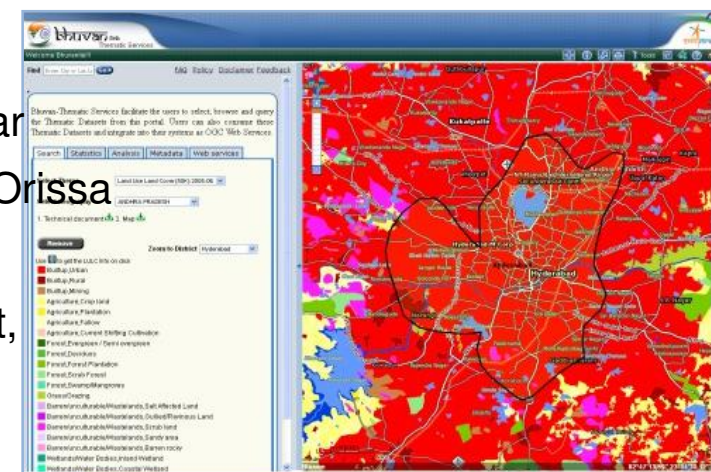
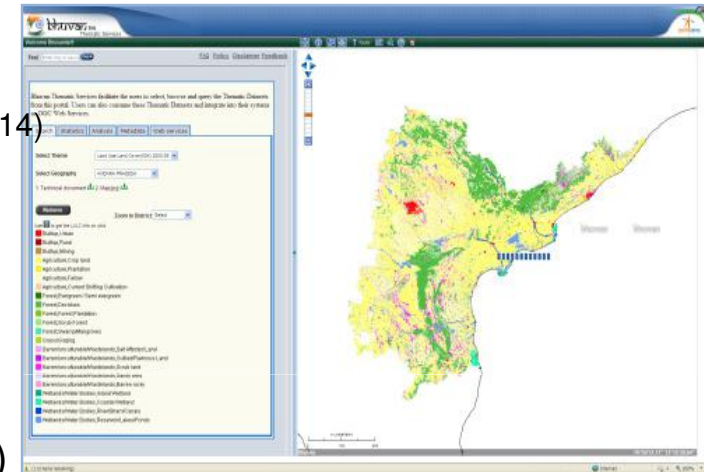


This facility will be extended for other IRS satellite data coarser than 24m in near future.

“OGC Web Services (WMS, WMTS) towards interoperability”

Bhuvan-Thematic Services facilitate the users to select, browse and query the Thematic Datasets from this portal. Users can also consume these Thematic Datasets and integrate into their systems as ‘OGC Web Services’.

- Land Use Land Cover -50 K (2005-06, 2011-12)
- Land Use Land Cover -250 K (10 Cycles : 2004-05 to 2013-14)
- Urban Land Use: 10K
- Wasteland: 50K (2008-09)
- Geomorphology:50K (2005-06) & Lineament: 50K
- Erosion :50K (2005-06)
- Salt Affected and Water Logged Area :50K (2005-06)
- Urban Sprawl
- Water bodies
- Flood Annual Layers (1998 to 2010) – Assam & Bihar
- Flood Hazard Layer (1998-2007) – Assam ,Bihar & Orissa
- Metadata NSDI 2.0
- Analysis, Statistics, Web services, View based Print, Add WMS Layer, Clip & Ship

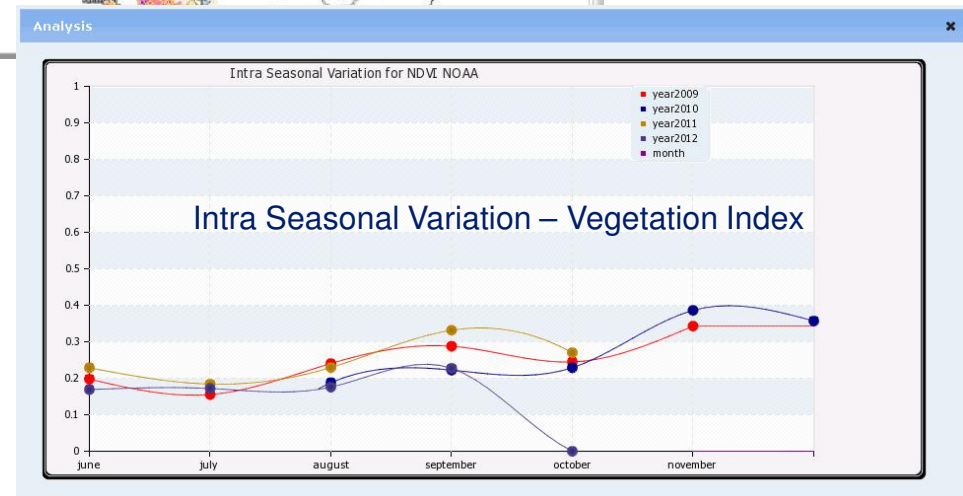


Bhuvan – Disaster Services

“Disaster Management Information Support”

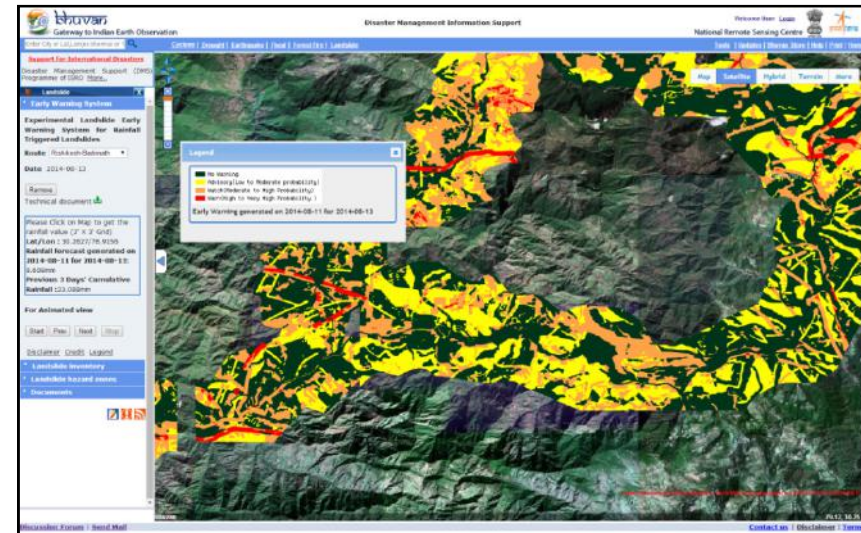
Disaster Management Support from space systems for strengthening the disaster management in the country.

- Flood
- Forest Fire
- Drought
- Landslide
- Cyclone
- Earthquake

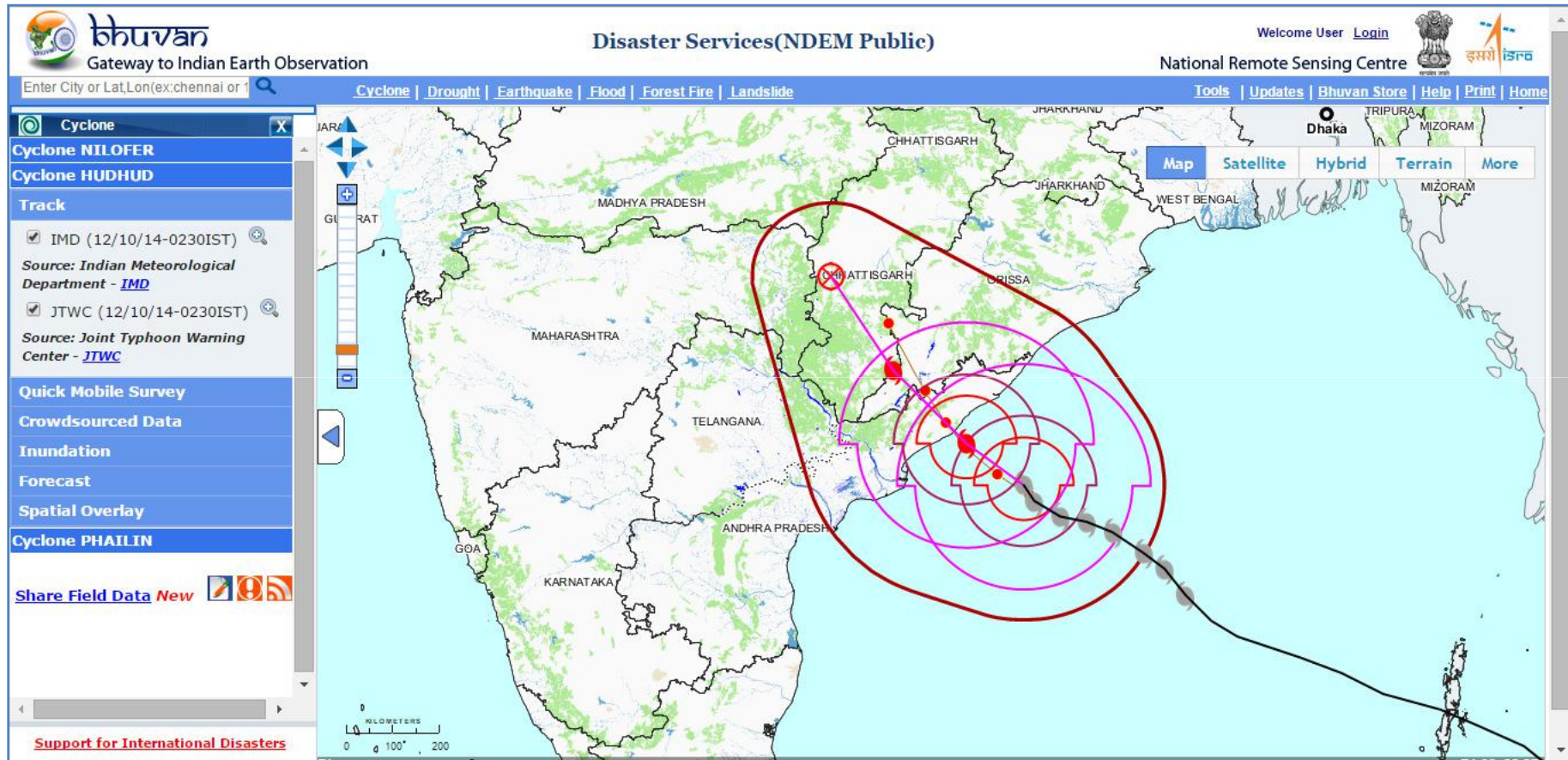


<http://bhuvan-noeda.nrsc.gov.in/disaster>

- Visualization of 'Early Warning' layers for current day and next two days
- Facility for animated view.
- Previous three day's cumulative rainfall and rainfall forecast available on Click on Map.



HUDHUD - Cyclone



ECVs- Environment and Climate Variables



Terrestrial
Sciences

Ocean Sciences

Atmospheric
Sciences

Model Derived
Products

Cryospheric
Products

The screenshot displays the Bhuvan web portal interface. At the top left, the logo for Bhuvan is shown with the text "Gateway to Indian Earth Observation". On the right, there is a "Welcome User" message with a "Login" link and the "National Remote Sensing Centre" logo. A search bar is located below the logo with the text "Open Data Archive" and "Enter City or Lat,Lon(ex:chennai)". Navigation links include "FAQ", "Policy", "Disclaimer", and "Feedback".

The main content area is divided into a left sidebar and a right map area. The sidebar contains the following filters:

- Select Category:** Radio buttons for "Satellite/Sensor", "Theme/Products", and "Program/Projects".
- Select Project:** A dropdown menu showing "National Information System for Clim".
- Select Group:** A dropdown menu showing "Atmospheric and Climate Sciences".
- Select Product:** A list box with options: "Atmospheric and Climate Sciences", "Ocean Sciences", and "Terrestrial Sciences".

The right side of the interface features a map of India with state boundaries and names. A vertical scale bar on the left of the map indicates distances in kilometers (0, 200, 400). The map shows various states including Jammu & Kashmir, Himachal Pradesh, Punjab, Uttarakhand, Haryana, Rajasthan, Uttar Pradesh, Bihar, West Bengal, Tripura, Mizoram, Manipur, Nagaland, Arunachal Pradesh, Assam, Gujarat, Madhya Pradesh, Chhattisgarh, Orissa, Maharashtra, Andhra Pradesh, Karnataka, and Tamil Nadu. Neighboring countries like Afghanistan, Pakistan, Nepal, and Myanmar are also visible.

<http://bhuvan.nrsc.gov.in/data>

ECVs- Environment and Climate Variables



1. Derived Tropospheric Ozone

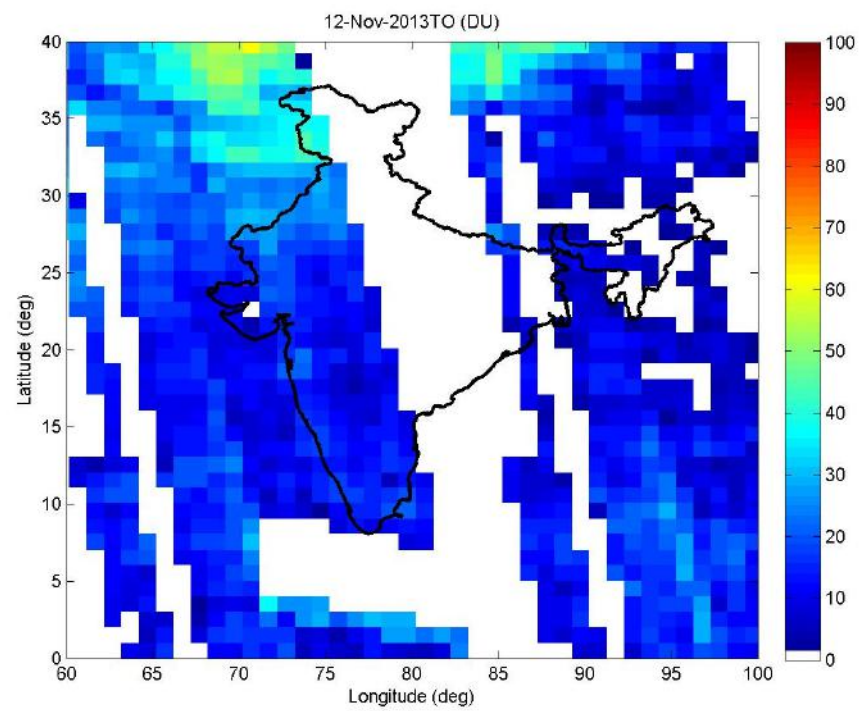
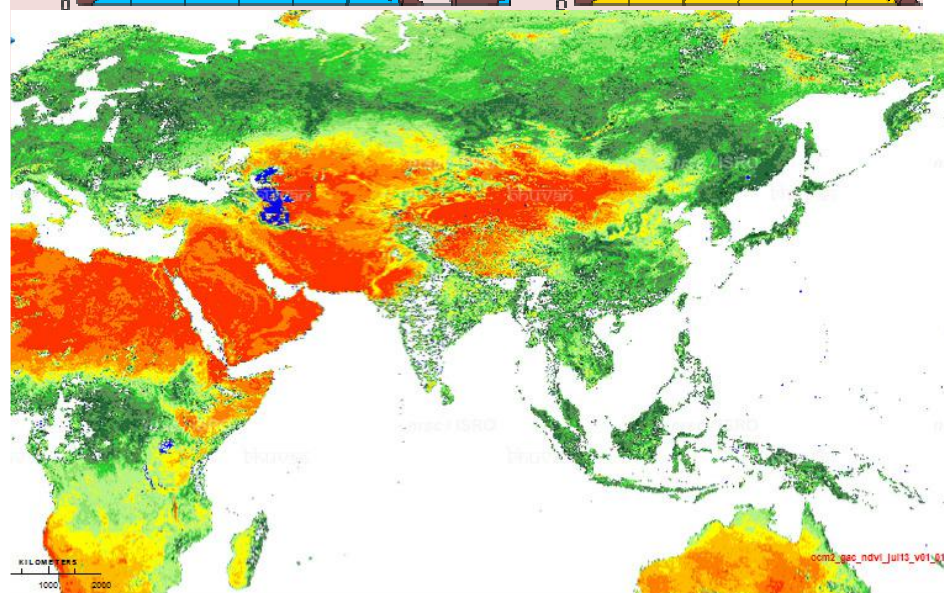
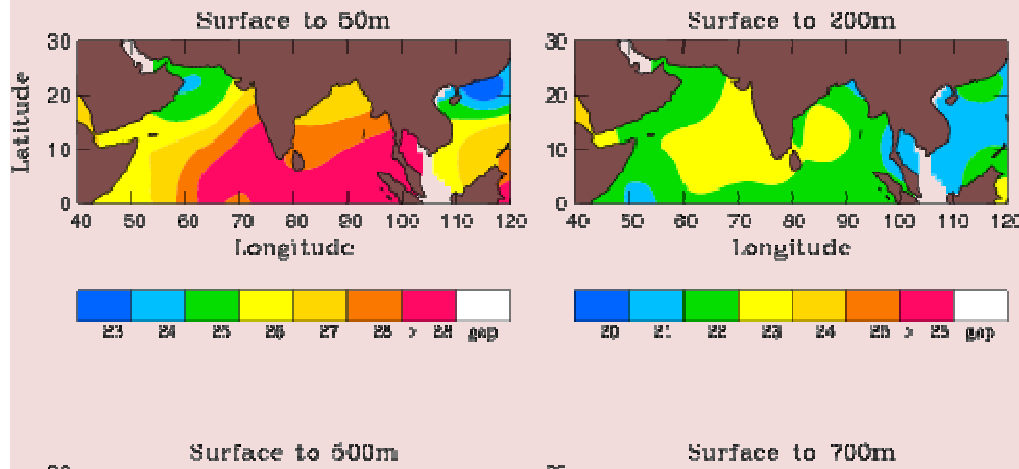
2. AWiFS: Snow Cover Fraction
3. AWiFS: Water Bodies Fraction
4. Mesoscale compatible inputs for: MM5
5. Mesoscale compatible inputs for: WRF
6. OCM2: Albedo
7. OCM2: Normalized Difference Vegetation Index - Global Coverage
8. OCM2: Normalized Difference Vegetation Index - Local Coverage
9. OCM2: Vegetation Fraction
10. Snow Melt and Freeze
11. Surface Soil Moisture - 2 Day

12. Daily Ocean Heat Content of 700m Layer
13. Daily Ocean Mean Temperature & Heat Content of Different Layers
14. Daily Tropical Cyclone Heat Potential
15. Model Derived Depth of 26 °C ISOTHERM
16. Model Derived Tropical Cyclone Heat Potential
17. Ocean Wind Curl
18. Ocean Wind Stress
19. Ocean Wind Velocity

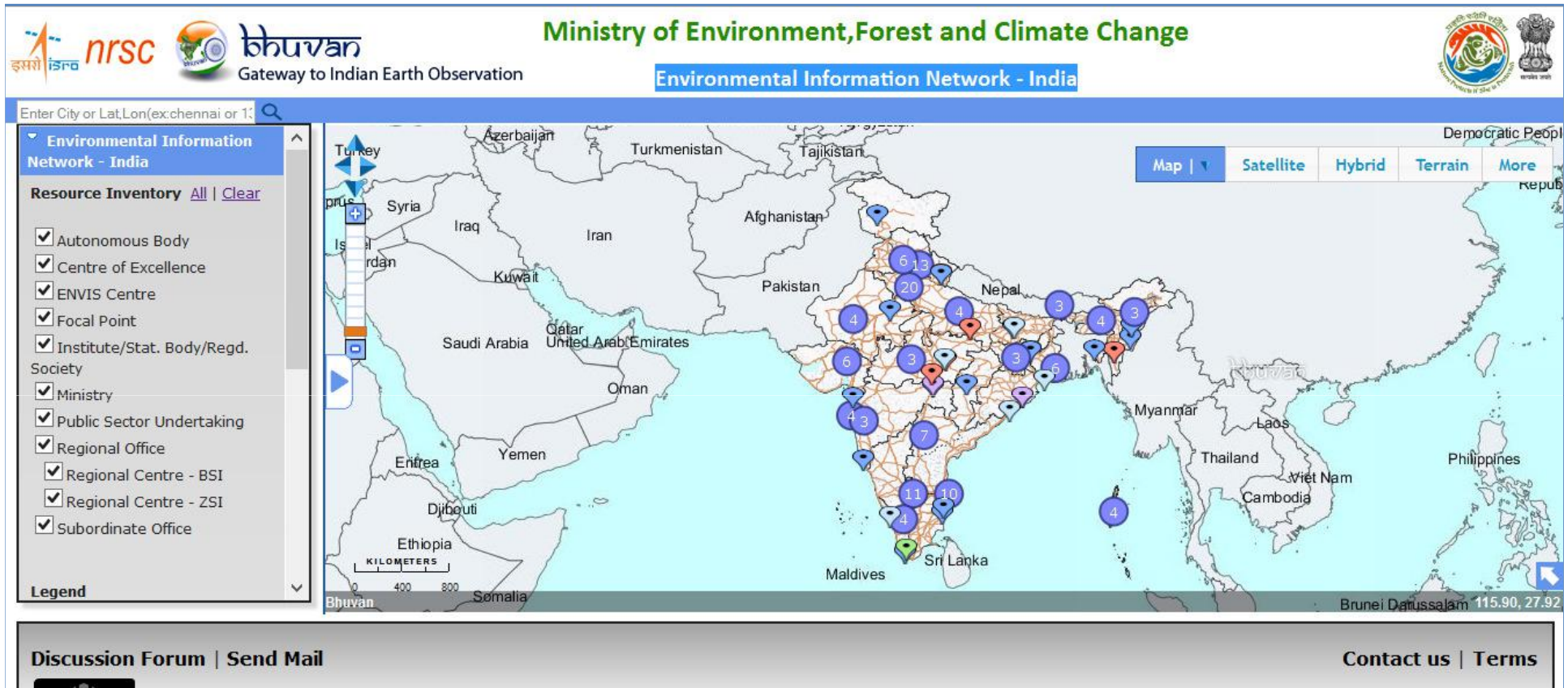
ECVs- Environment and Climate Variables



Ocean Mean Temperature (°C)
2015 02 03



Environmental Information Network – India



nrsc

Bhuvan
Gateway to Indian Earth Observation

Ministry of Environment, Forest and Climate Change

Environmental Information Network - India

Enter City or Lat, Lon (ex: chennai or 13

Environmental Information Network - India

Resource Inventory All | Clear

- Autonomous Body
- Centre of Excellence
- ENVIS Centre
- Focal Point
- Institute/Stat. Body/Regd. Society
- Ministry
- Public Sector Undertaking
- Regional Office
- Regional Centre - BSI
- Regional Centre - ZSI
- Subordinate Office

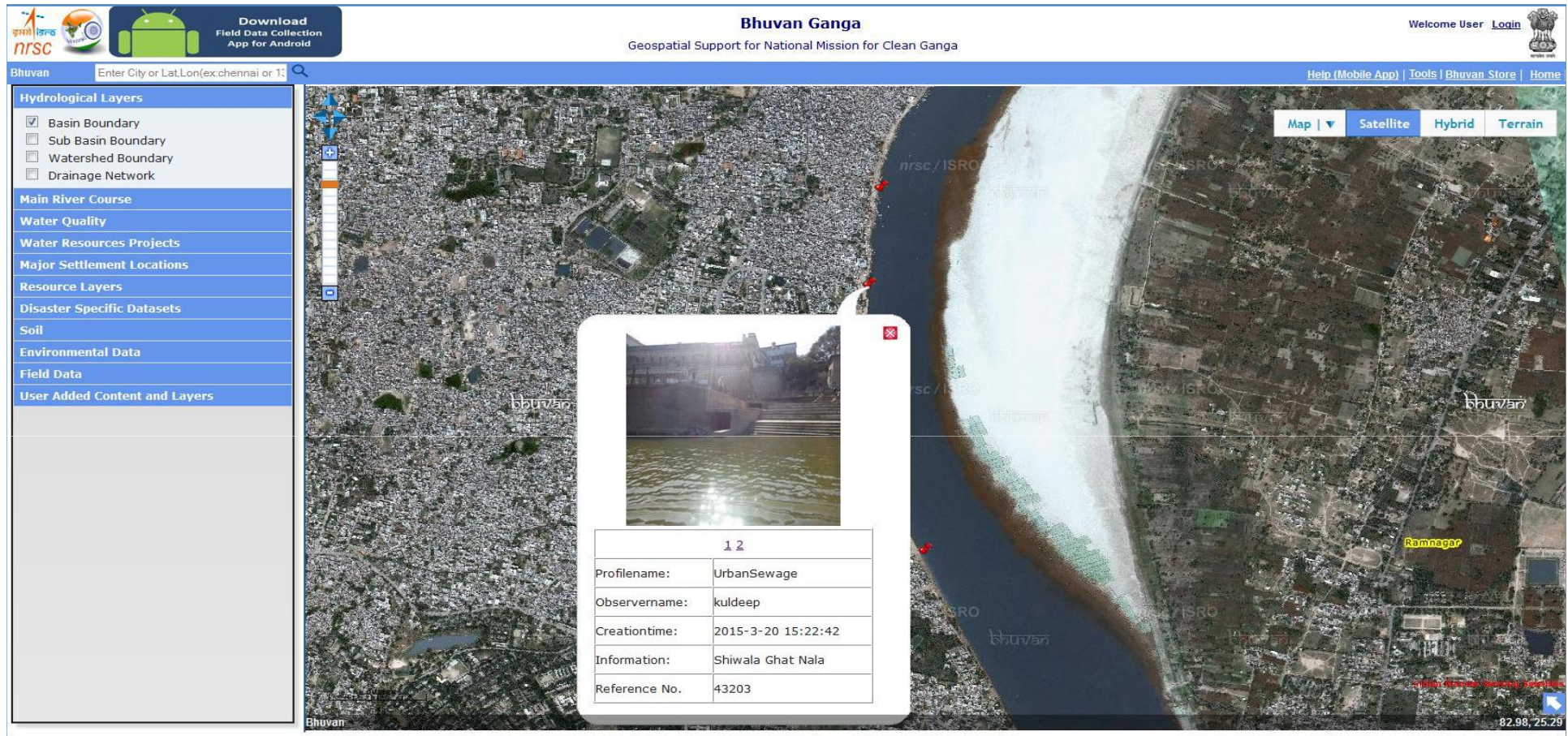
Legend

Discussion Forum | Send Mail

Contact us | Terms

“Autonomous Body, Centre of Excellence, ENVIS Centre, Focal Point, Institute/Stat. Body/Regd. Society, Ministry, Public Sector Undertaking, Regional Office, Subordinate Office”

<http://bhuvan-noeda.nrsc.gov.in/projects/moef/cris.php>

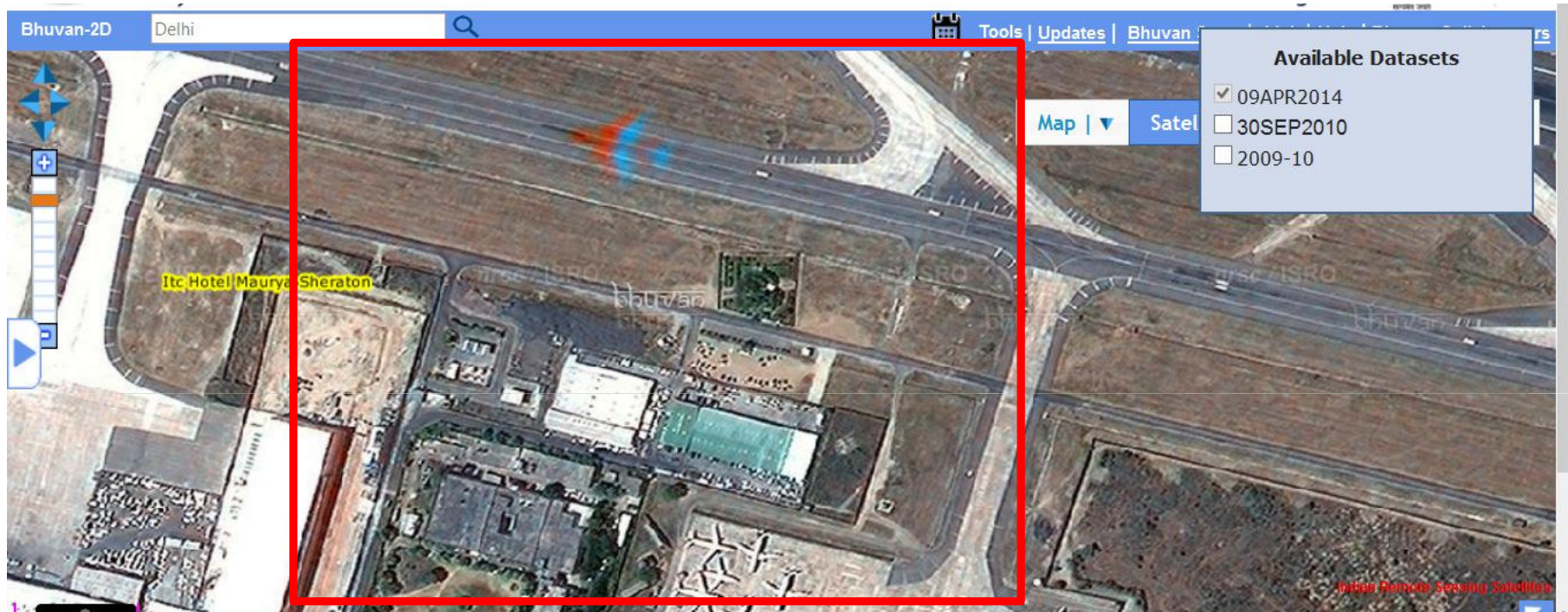


The screenshot displays the Bhuvan Ganga portal interface. At the top, there is a navigation bar with the nrsc logo, a search bar, and a "Download Field Data Collection App for Android" button. The main header reads "Bhuvan Ganga" and "Geospatial Support for National Mission for Clean Ganga". A user is logged in as "Welcome User". The interface features a left-hand menu with various layers and data categories, a central satellite map of the Ganga river, and a right-hand panel with map style options (Map, Satellite, Hybrid, Terrain). A popup window is open over the river, showing a photo of a polluted water body and a table with the following data:

1 2	
Profilename:	UrbanSewage
Observername:	kuldeep
Creationtime:	2015-3-20 15:22:42
Information:	Shiwala Ghat Nala
Reference No.	43203

“Platform for crowd sourcing to monitor pollution in river Ganga and enable decision makers to prioritize interventions by enabling public to collect and report information on various pollution sources that affects the water quality of river Ganga”

<http://bhuvan.nrsc.gov.in/projects/ganga/>

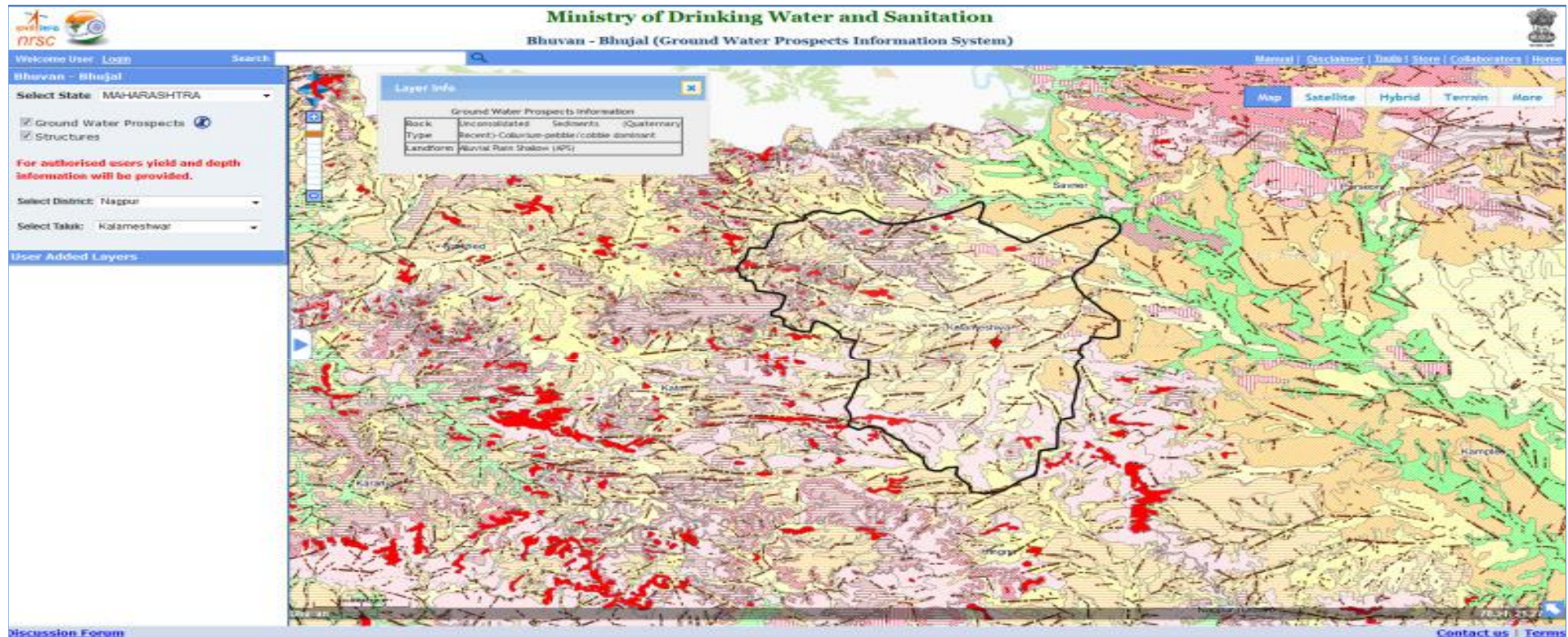


Delhi International Airport – 2010 vs 2014

“multi-date view of all available High resolution data sets based on view extent and available layers along with date of pass information”

<http://bhuvan.nrsc.gov.in/map>

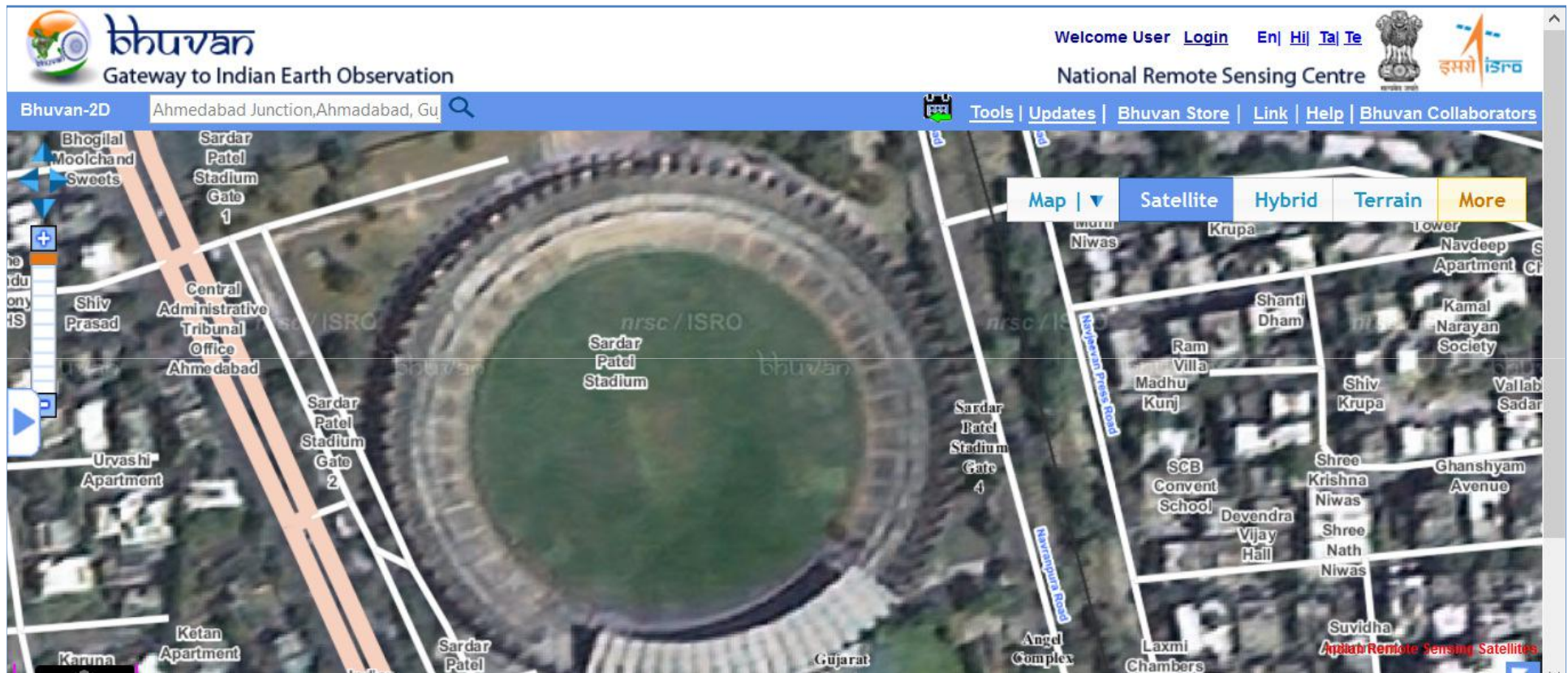
Bhuvan-Bhujal: Ground Water Prospects Information System



“Geological parameters: Lithology (rock type), Geomorphology (landform), Geological structures (fractures/faults) and Ground water prospects (Authorized users): Probable Depth and yield range of wells”

<http://bhuvan-noeda.nrsc.gov.in/projects/gwis/>

Navigation Maps

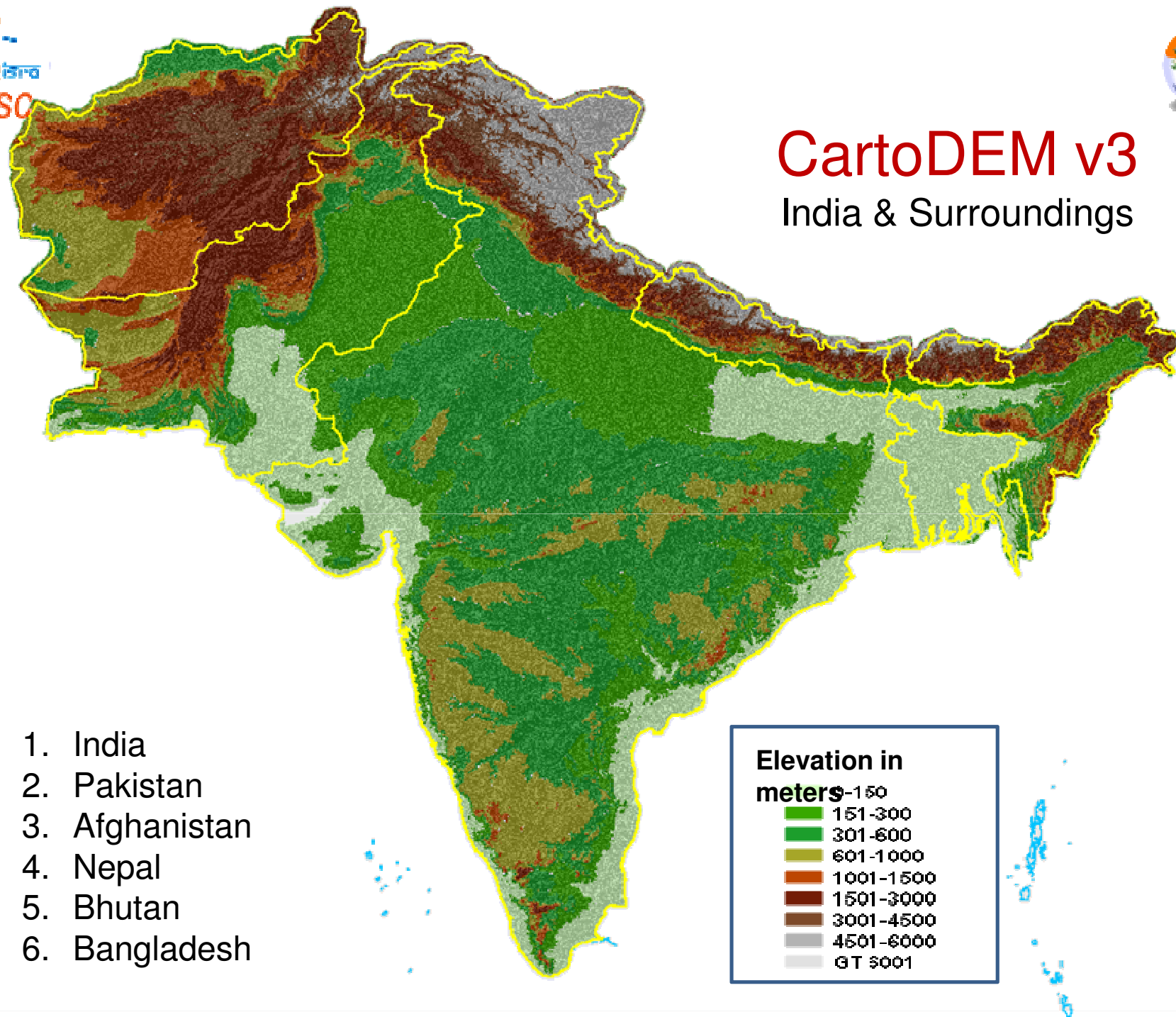


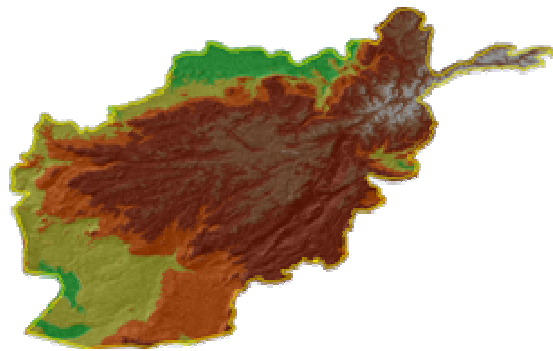
“Large scale Navigation maps with detailed point of interest data”

<http://bhuvan.nrsc.gov.in/map>

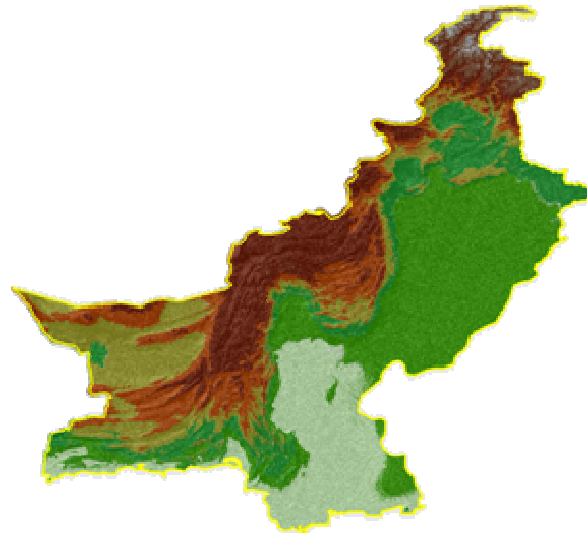
CartoDEM v3

India & Surroundings

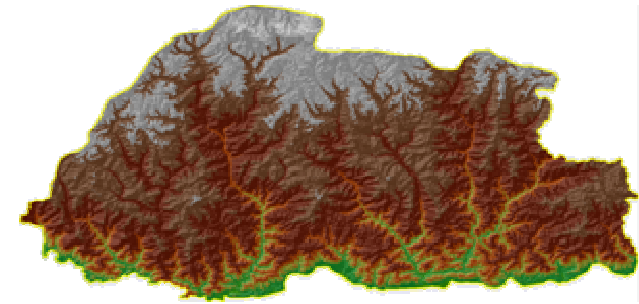




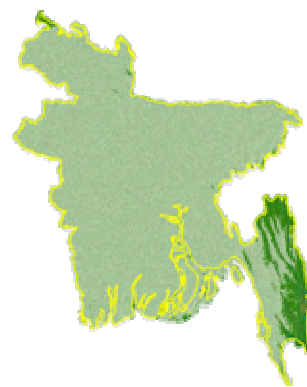
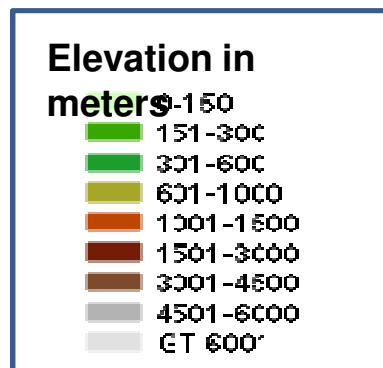
Afghanistan



Pakistan



Bhutan



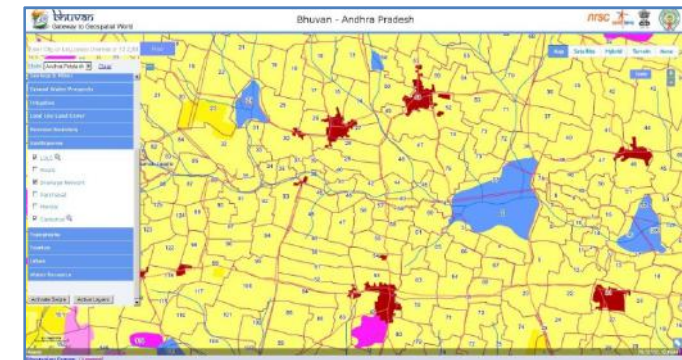
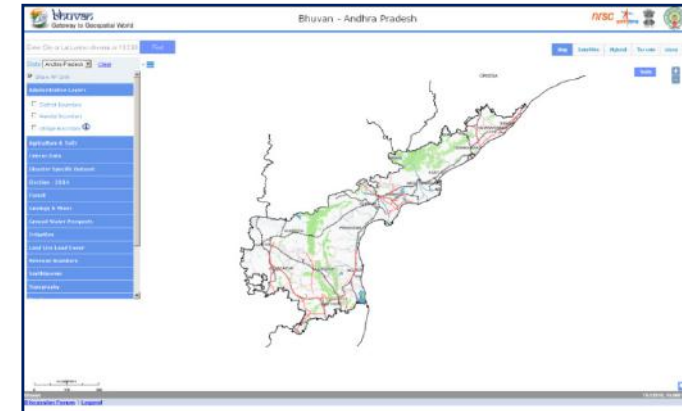
Bangladesh



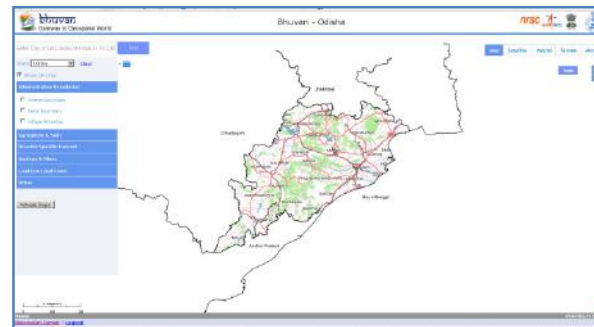
Nepal

Decision-making in an g-Governance environment

- A customized state viewer for the state of Andhra Pradesh having various Natural Resources, Disaster information besides Admin layers and Socio-economic details
- Dynamic custom print with active layers and legend
- Add Layer: KML, Raster, Shapefile, WMS
- Tools: Draw, Measure, AOI, WMS-Manager, Analysis, Search, Custom Print.



Active Layers	
District Boundary	✗
Polling Booths	✗
Anantapur	✗
Cartosat Data	✗





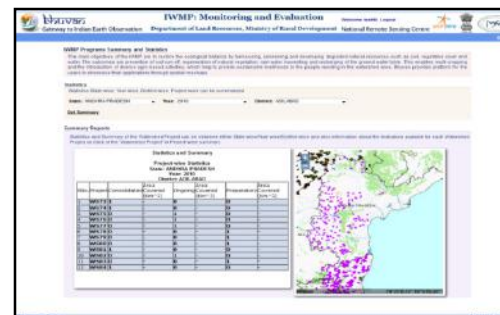
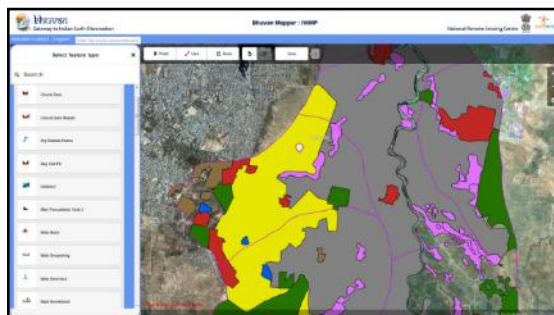
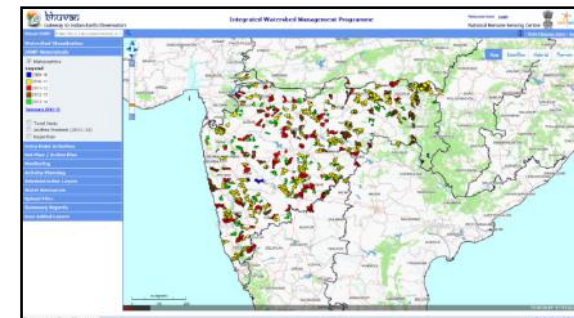
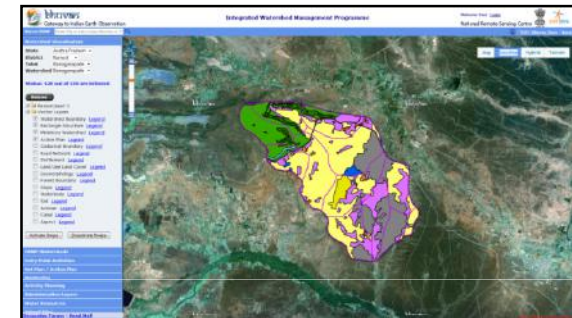
Integrated Watershed Management Programme (IWMP)



“Monitoring and Evaluation”

Application facilitating the consolidated view of the Watersheds along with all supported datasets aimed at planners and general public.

- Hierarchical Watershed Select Mechanism
- Visualization of Watershed datasets Action Plan, Cadastral Boundary, Administrative Layers etc.
- Time series satellite data for monitoring the progress.
- Year-wise IWMP Watersheds, Net Plan Visualization.
- Customized Bhuvan Mapper for IWMP Users
- Admin, Data Provider, Guest views.
- Reports of Watersheds State/District/Year-wise.



<http://bhuvan.nrsc.gov.in/projects/iwmp>

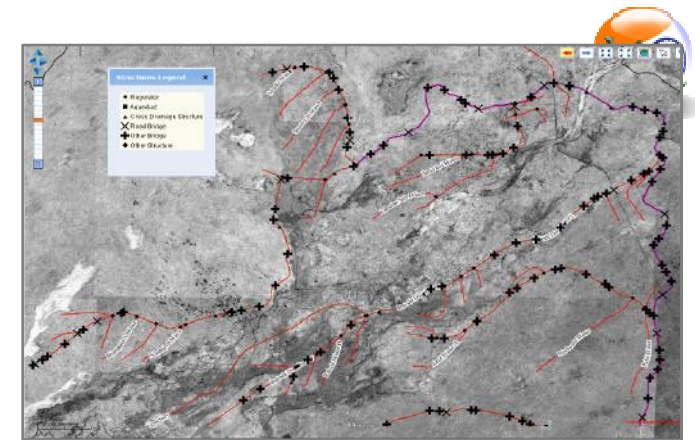
WebGIS Services : Applications on Bhuvan Accelerated Irrigation Benefit Program (AIBP)

- Bhuvan – AIBP Portal: Facilitates Visualization of Irrigation projects carried under 2 Phases
 - Phase-III: Ongoing
- Datasets Available for Visualization:
 - Canal Networks,
 - Canal Boundaries,
 - Hydraulic Structures

Monitoring the Canal progress on Bhuvan

Phase-III: This module is for the Ongoing projects facilitating CWC officials for the Online monitoring through Satellite data and Digitization Tools available.

- Salient Features:
 - Canal Digitization: Facilitates digitization of Canal Networks with Calculation of total Canal Length, No. of gaps, Gaps Segments Length through help of Cartosat data.
 - Add Content option for Remark Notification
 - 3 levels of Access Control
 - Data Editing facility for Field Data.

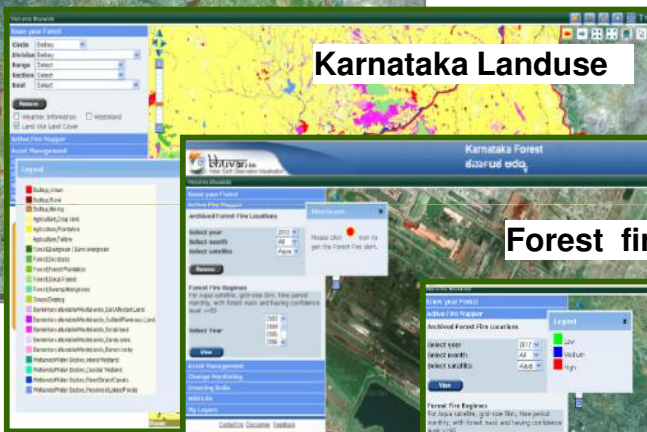


Forestry : Karnataka Forest

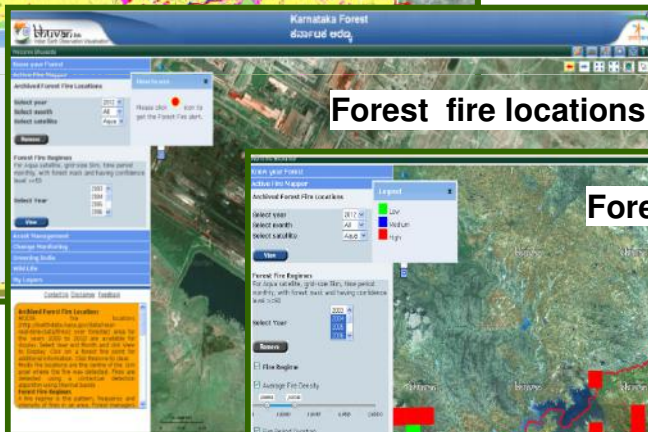
“Joint effort of KFD and ISRO towards developing a geospatial query system resulting a **enterprise image server(EIS)** working as a **virtual GIS laboratory** providing organization wide access to spatial data including high resolution imagery and GIS tools with an emphasis on analysis, processing of spatial data”



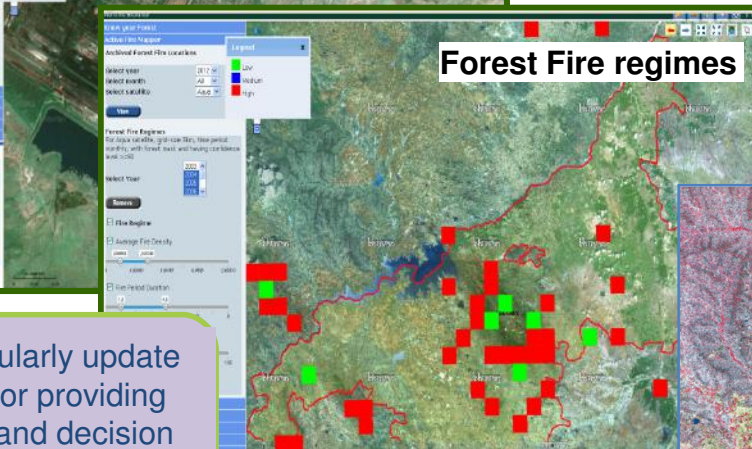
Status of Forest



Karnataka Landuse



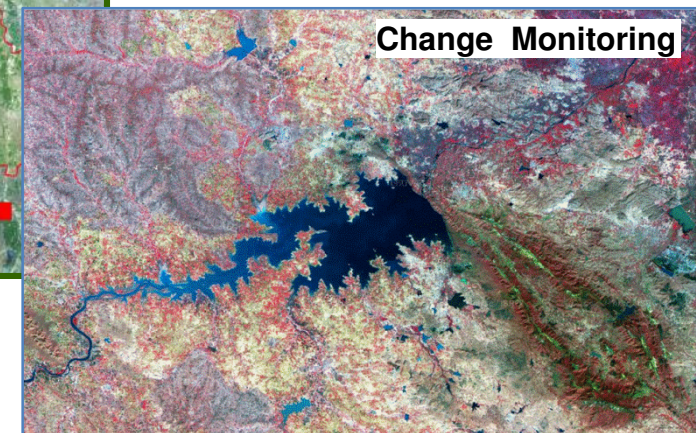
Forest fire locations



Forest Fire regimes



Change Monitoring



Karnataka forest regularly Shares Geospatial data on Forest Management and the field info

Bhuvan regularly update the portal for providing online info and decision making

“Know Your Forest, Active Fire Mapper, Asset Management, Change Monitoring, Greening India, Wild Life, My layers”

<http://bhuvan-noeda.nrsc.gov.in/projects/forest/kfd.php>



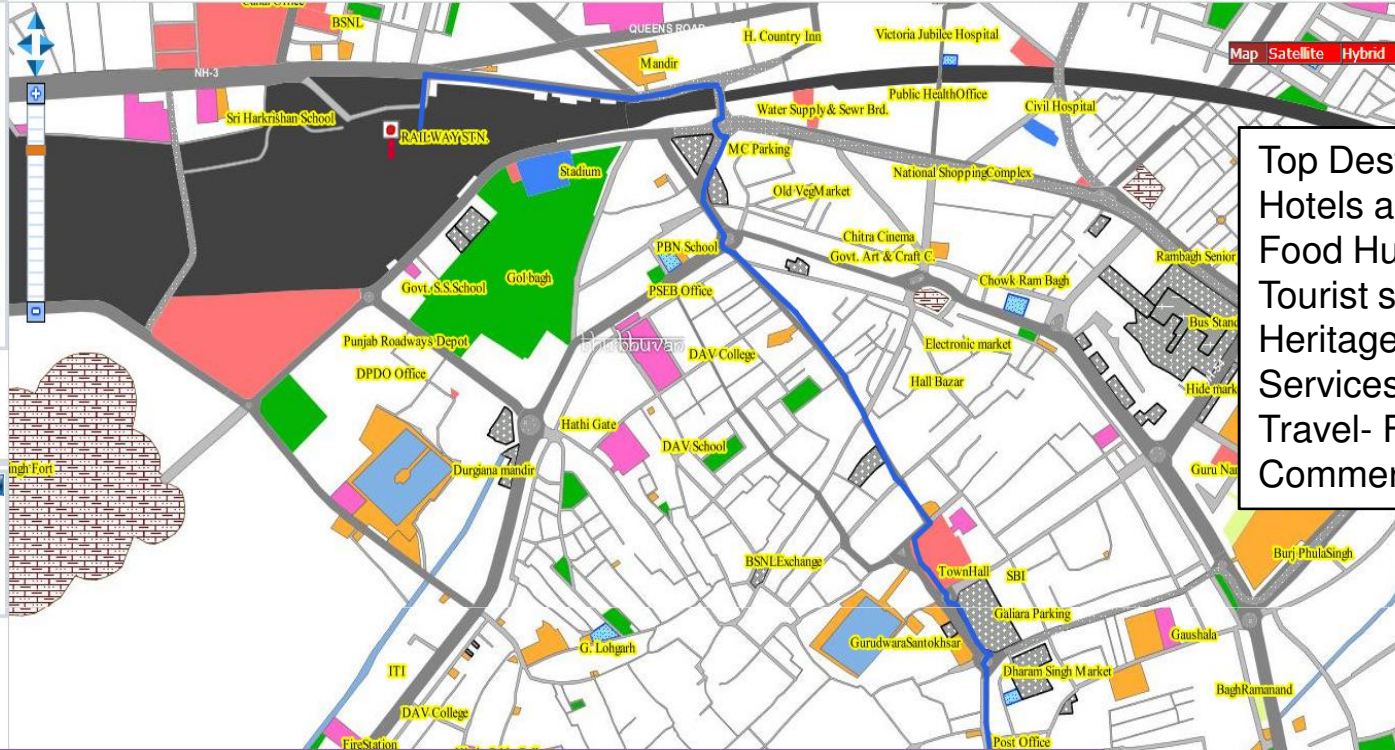
Amritsar historically also known as Ramsadpurspur and colloquially as Ambarsar) is a city in the north-western part of India. It is the spiritual center for the Sikh religion and the administrative headquarters of the Amritsar district in the state of Punjab.

See the City

[Top Destination](#) [Hotel](#) [Travel](#)

Start

Destination

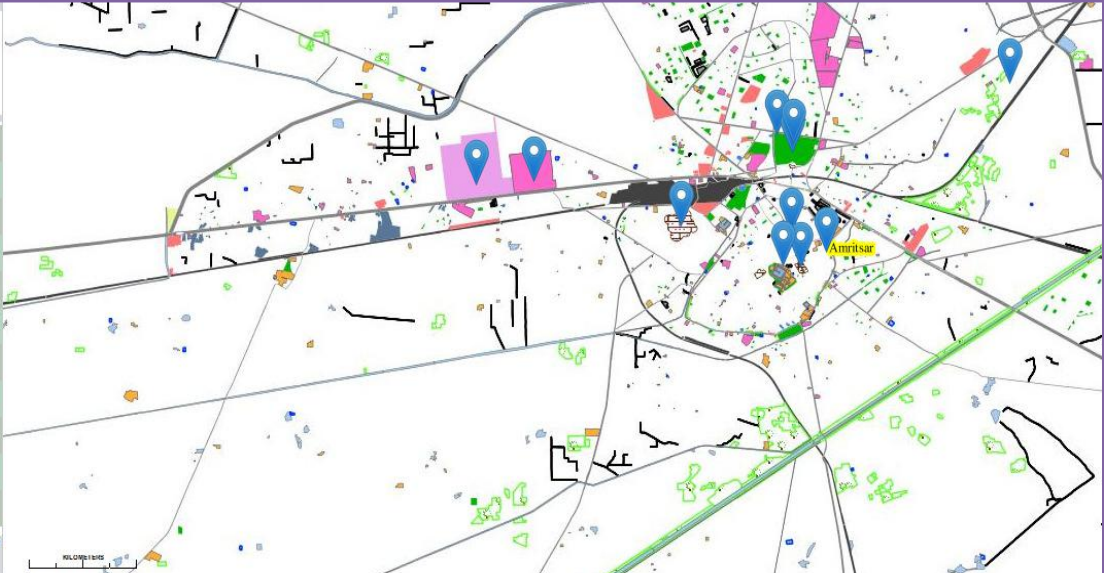


Top Destinations
Hotels and Stay
Food Hubs
Tourist spots
Heritage walk
Services
Travel- Find Route
Commercial

See the City

[Top Destination](#) [Hotel](#) [Travel](#)

- Bagh Ramanand
- Town Hall
- Maharaja Ranjeet Singh Panorma
- Summer Palace
- Sun City Amusement Water Park
- Guru Nanak Dev University
- Khalsa College
- Gobindgarh Fort
- Rambagh Garden
- Jalianwala Bagh
- Golden Temple

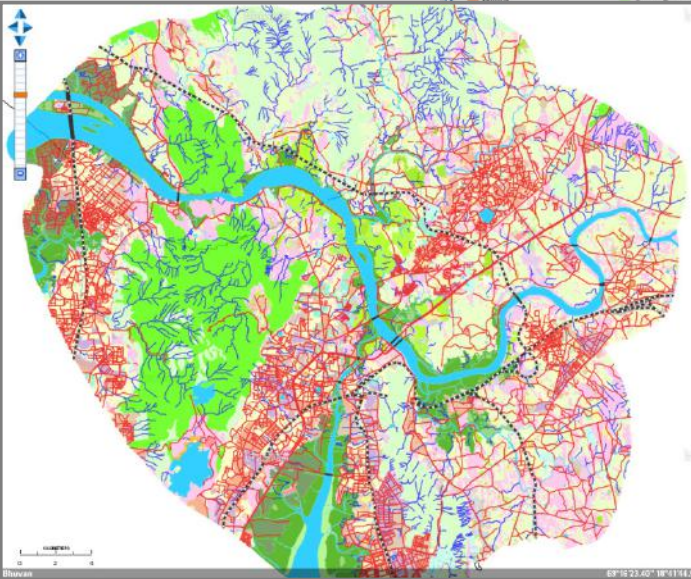
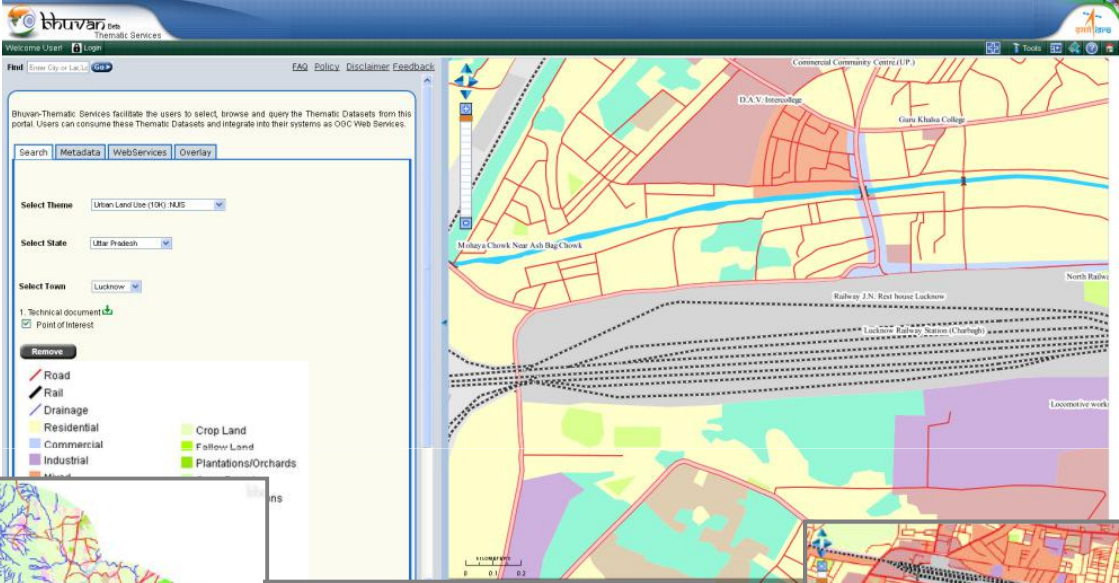
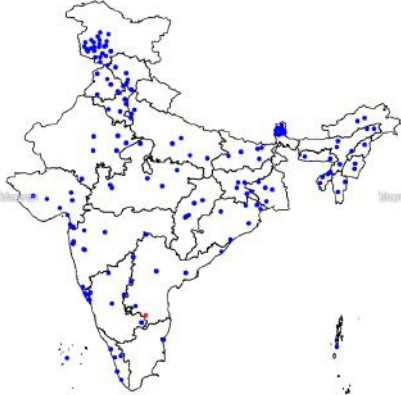


Tourism
Archaeological Sites

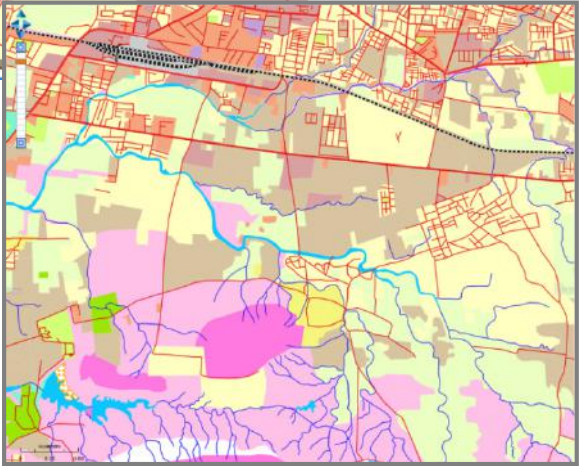
Nalanda
Badami
Hampi
Vijayawada

Urban Information System

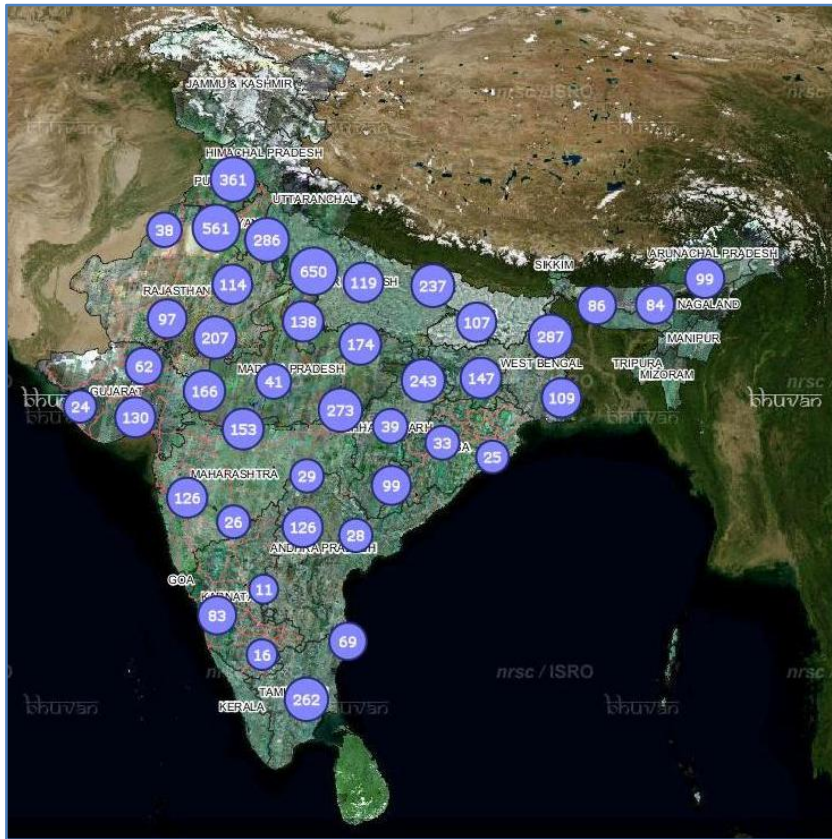
NUIS : 139 towns



- Road
- Rail
- Drainage
- Residential
- Commercial
- Industrial
- Mixed
- Recreational
- Public & Semipublic
- Public Utilities & Facility
- Communications
- Vacant Land
- Reclaimed Land
- Vegetation
- Rural Settlement
- Bus Terminus
- Railway Station
- Canal
- River/Stream
- Lakes/Ponds/Tanks
- Waterbodies Dry
- Crop Land
- Fallow Land
- Plantations/Orchards
- Open Forest
- Forest Plantations
- Dense Forest
- Mangroves
- Scrub land
- Barren/Rocky
- Salt affected
- Gullied/Ravinous
- Sandy area
- Waterlogged
- Marshy/Swampy
- Mudflats
- Quarry/Brick kilns
- Mining Area
- Industrial Dump



<http://bhuvan-noeda.nrsc.gov.in/theme/thematic/theme.php?theme=nuis>



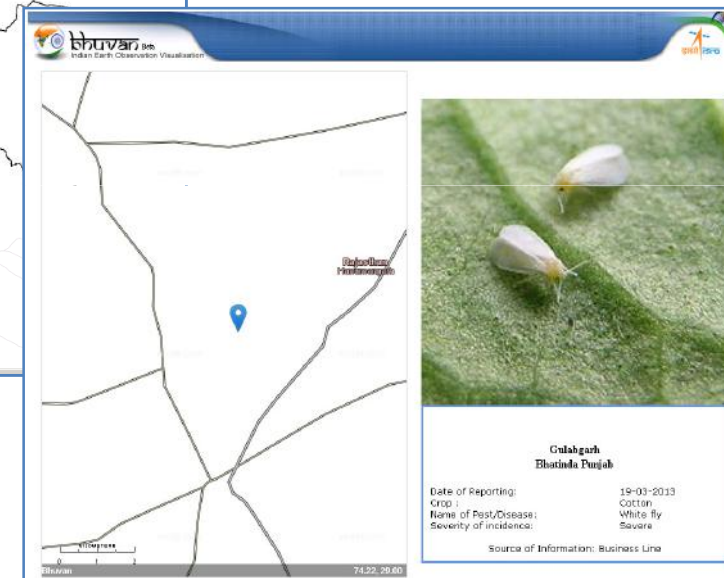
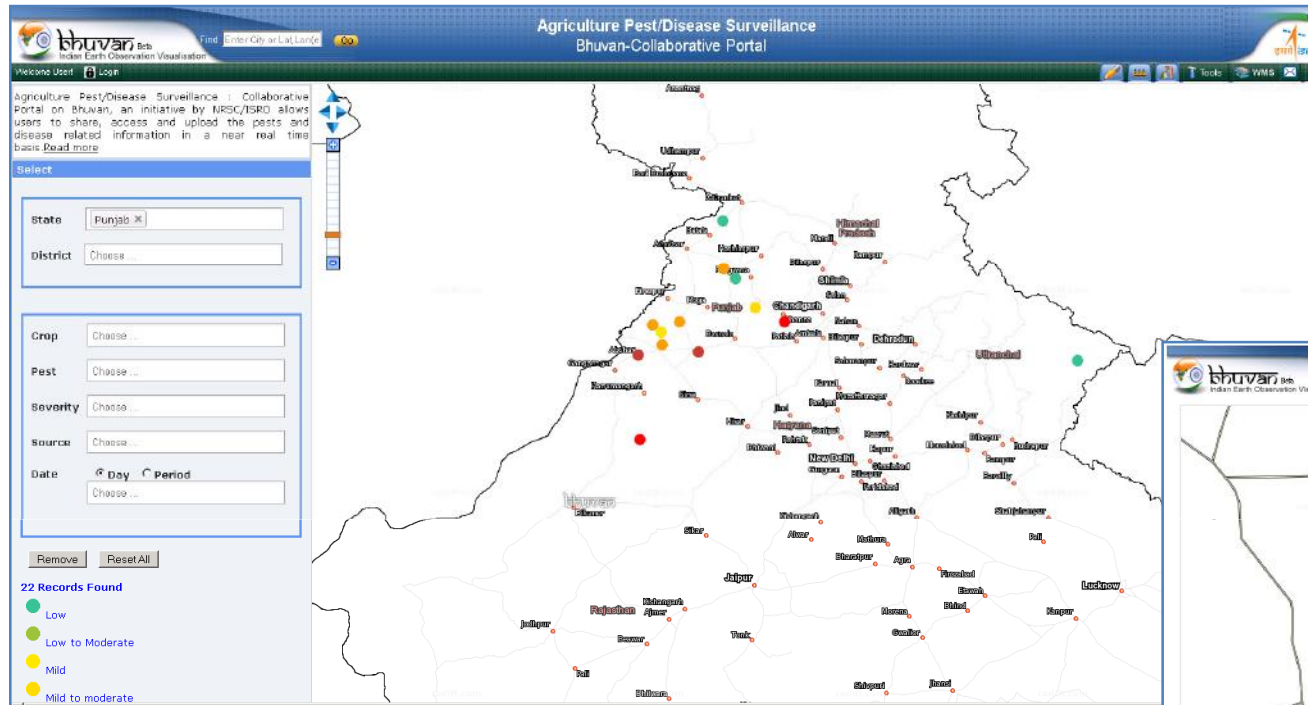

The screenshot shows a map interface with a pop-up window for a specific location. The pop-up window is titled "Crop" and contains a photograph of a golden-brown field. Below the photo is a table with the following information:

Information	Type of Crop:jowar Crop Health Condition:>80%
Posted Time	2014-01-31 12:21:17
Posted By	bhausahab Payghan

Bhuvan Android App allows mapping in an easy and intuitive Manner using smart phones.



Agriculture Pest / Disease Surveillance System



“Collaborative Portal allowing users to share, access and upload the pests and disease related information”

Single Window System for **information collection**
and sharing **expert knowledge.**

An e-learning portal for the students

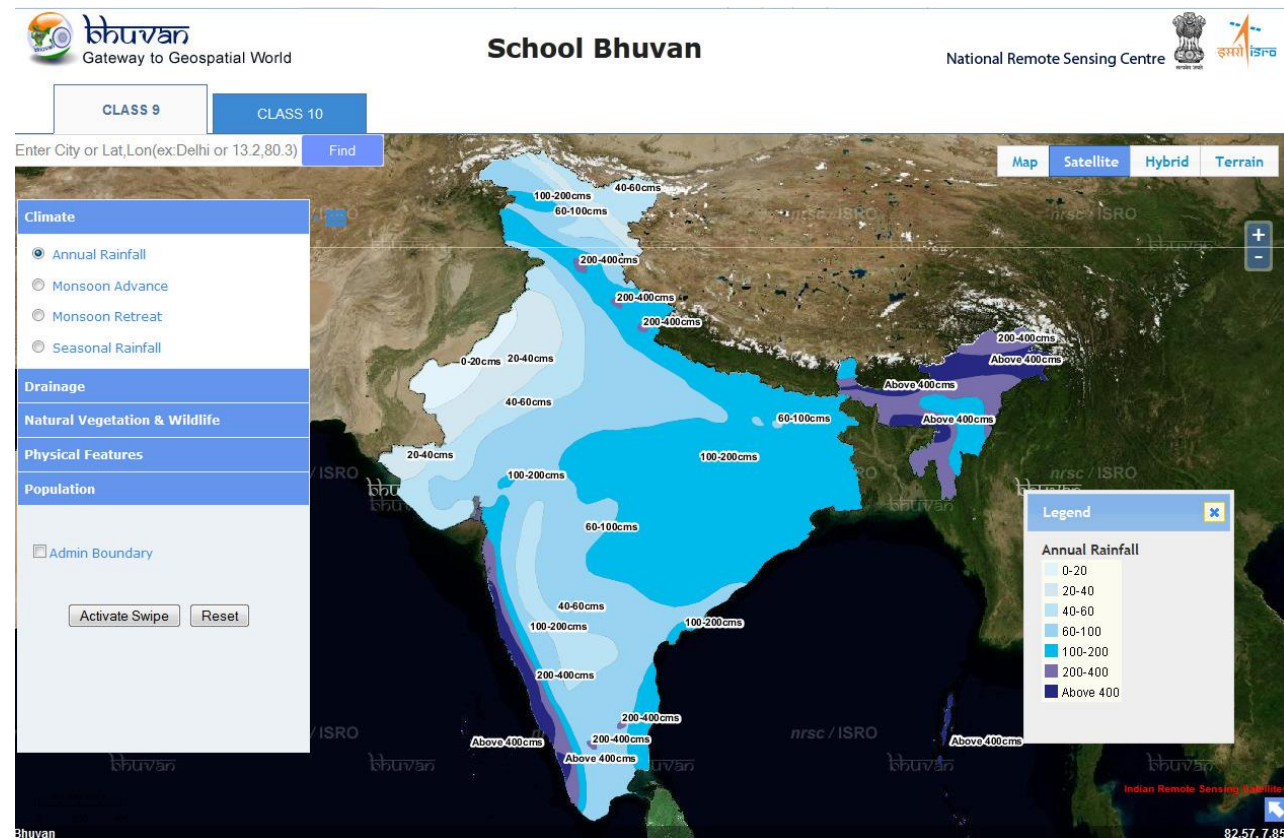
A portal providing map based learning to bring awareness among the students about country's natural resources, environment and their role in sustainable development.

Salient Features

- Visualization of 9th, 10th class maps of various categories (Agriculture, Water, Soil, Mineral etc) based on NCERT syllabus
- Provision to swipe the layers to know the ground reality
- Provision to take print the maps in PDF format

Future Plans

- Online Interactive quiz for both practice and exam
- On click Feature information



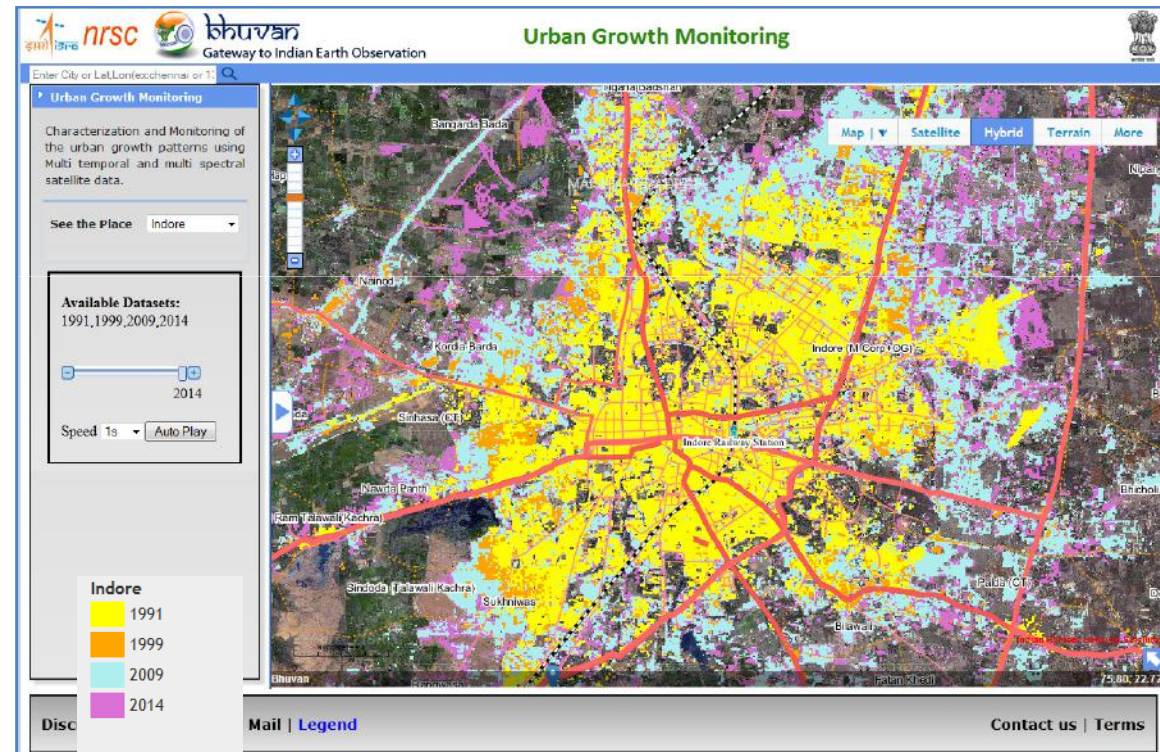
<http://bhuvan-noeda.nrsc.gov.in/projects/schoolbhuvan/>

Characterization and Monitoring of the urban growth patterns using Multi temporal and multi spectral satellite data.

Salient Features

- DB driven framework which can be extended to any number of cities
- Incremental view of urban growth using the single service with dynamic control
- Applying the db driven dynamic color schema to the layer generated
- Animated view for growth monitoring of urban with the speed specified

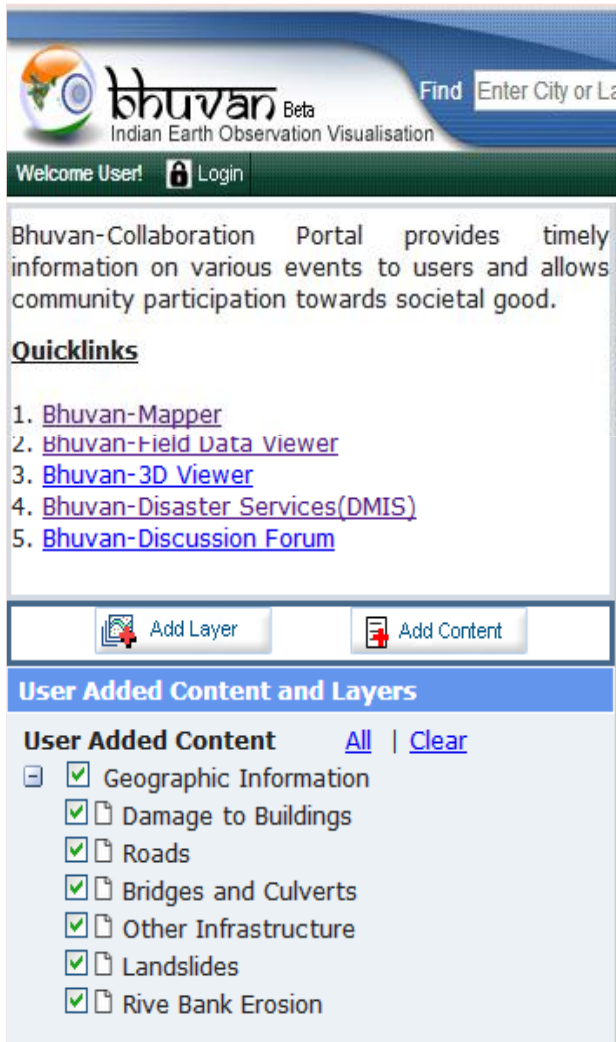
City Details	
City/Town Name	Indore
Population(2011)	1960631
Category	Major Urbans
State	MADHYA PRADESH
More Details	



Crowd Sourcing

- Controlled
- Public

MANU : Map the neighborhood in Uttarakhand



Bhuvan Beta
Indian Earth Observation Visualisation

Find

Welcome User! [Login](#)

Bhuvan-Collaboration Portal provides timely information on various events to users and allows community participation towards societal good.

Quicklinks

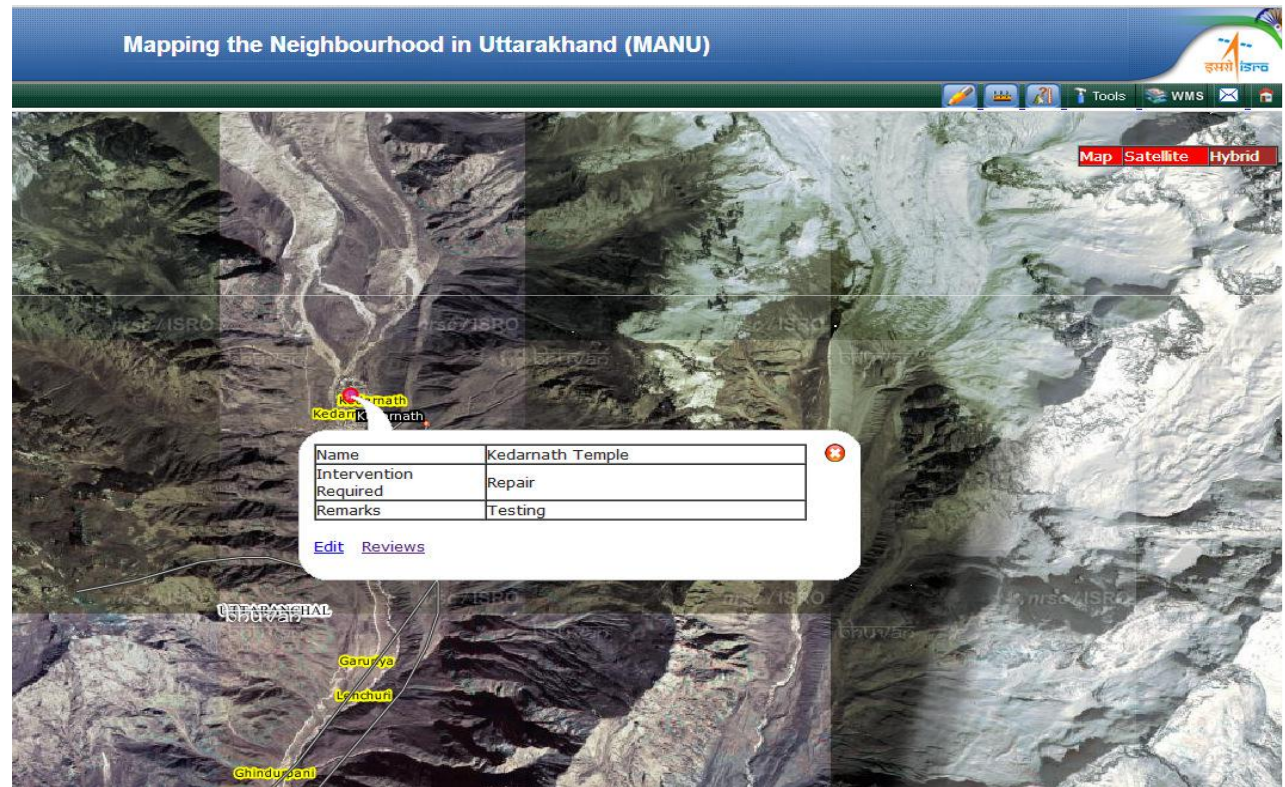
- [Bhuvan-Mapper](#)
- [Bhuvan-Field Data Viewer](#)
- [Bhuvan-3D Viewer](#)
- [Bhuvan-Disaster Services\(DMIS\)](#)
- [Bhuvan-Discussion Forum](#)

[Add Layer](#) [Add Content](#)

User Added Content and Layers

User Added Content [All](#) | [Clear](#)

- Geographic Information
- Damage to Buildings
- Roads
- Bridges and Culverts
- Other Infrastructure
- Landslides
- Rive Bank Erosion



Mapping the Neighbourhood in Uttarakhand (MANU)

Tools WMS

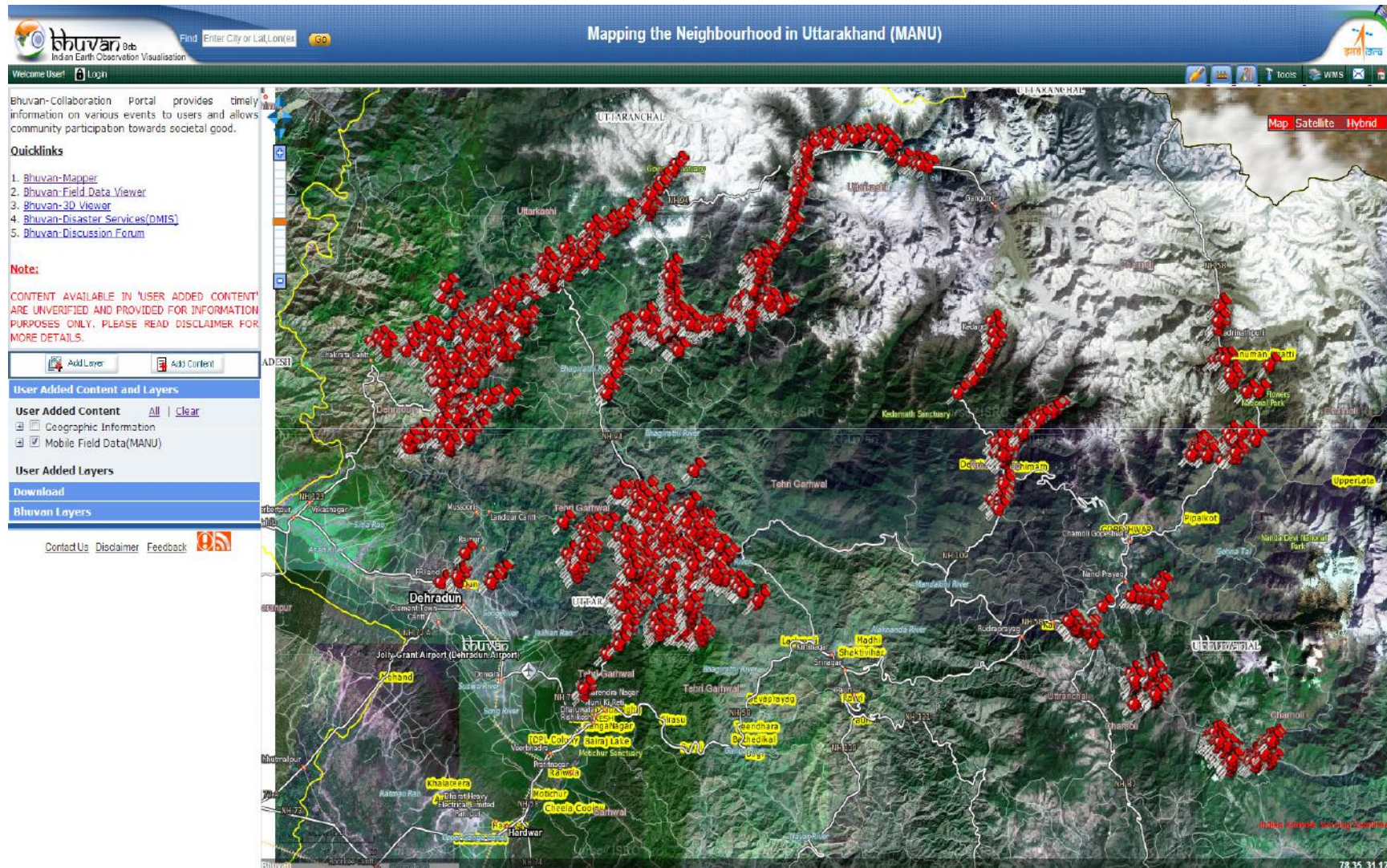
Map Satellite Hybrid

Kedarnath

Name	Kedarnath Temple
Intervention Required	Repair
Remarks	Testing

[Edit](#) [Reviews](#)

Other locations on map: Garunyo, Lanchun, Ghindurpani.



Moderation : Accept, Reject, Edit & Accept

BHUVAN POINT OF INTEREST: AN ANDROID APPLICATION FOR MAPPING THE NEIGHBOURHOOD

BhuvanPOI_v1.1 is an android app which allows mapping the Neighborhood in an easy and intuitive Manner using smart phones.

Steps to map and upload the data on Bhuvan:

1. Download the apk (Android app ~ 734 KB) file and install the application [Download](#)
2. To open BhuvanPOI app, collect and Send:
BhuvanPOI icon >> Collect Field Data >> Pick Point >> Take Photo >> select Point of Interest Category >> About POI >> Save >> Send.
3. In Case - Send Later:
Collect Field Data >> Pick Point >> Take Photo >> select Point of Interest Category >> About POI >> Save >> Send Later.
4. To send already collected data:
Send Already Collected Data >> Upload Send Later Samples >> Select any one observation >> Send.
5. To send failed:
Send Already Collected Data >> Upload Send Failed Samples >> Select any one observation >> Send.
6. To add your profile:
Adding profile is mandate for the first time and it is one time registration.
Application Config Settings >> Enter DeviceID, Observer name, Device Mobile number and Organisation >> Save Changes.

Note: Smart Phone models tested are 'Samsung Galaxy Y, Galaxy Ace, Galaxy SIII/ SIII, Galaxy Grand, HTC running Android OS version 2.3 or above' as on 28 Nov 2013 12:42 PM.

For further Queries Contact [bhuvan\[at\]nrsc\[dot\]gov\[dot\]in](mailto:bhuvan[at]nrsc[dot]gov[dot]in)

www.nrsc.gov.in

www.bhuvan.nrsc.gov.in

Map Satellite Hybrid

Uttaraun

Garwar

Niwari

Uphar

Sorka

Indian People Saving Soils

70.28 30.20

Sl.No	5343
themename:	MANU
profilename:	BhuvanPOI
observername:	Meenakshi, Yashoda, Shagufta
org:	Kumaun University
creationtime:	2013-10-24 23:41:6
Ponit of Interest Category:	Others:-Police Chouki
About POI:	Police Chouki,Langasu. Tehsil- kamaprayag, distt. Chamoli,Uttarakhand. Police Chouki located at the left side of NH 58.

Right Click in Bhuvan – ‘Add Content & Suggestion’

Crowd Sourcing in Bhuvan


The screenshot displays the Bhuvan web application interface. The browser address bar shows the URL `bhuvan3.nrsc.gov.in/bhuvan/bhuvan/bhuvan2d.php#`. The page header includes the Bhuvan logo, a search bar with the text "variyankaval", and navigation links for "En | Hi | Ta | Te". Below the header, there are service icons for Land, Weather, Ocean, and Disaster Services, along with "Tools" and "WMS" options.

The main content area is dominated by the "Add Content" dialog box, which is titled "Add Point by Clicking on Terrain at desired Location". The dialog contains a form for "Add Point Data" with the following fields:

- Latitude:
- Longitude:
- User Name:
- Category *:
- Subject *:
- Remarks *:
- Image: No file selected.

At the bottom of the dialog, there is a "Submit" button and a message: "Content is Submitted and it will be available after Validation." A "Close" button is located at the bottom center of the dialog.

On the right side of the dialog, a satellite map shows the location "variyankaval" marked with a red pin. A message notification box is overlaid on the map, containing the following text:

Message
Educational Institute
This information is posted by arul1

Date of Creation: 2013-07-23
18:34:00.64
Information : Govt Higher Sec School
in E Variyankaval

The left sidebar of the application shows a tree view of "Bhuvan Layers" including "Base Layers", "Administrative Layers" (State, District, Taluk, None), and "Village" (Andhra Pradesh, Assam, Chattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh).

Vijayawada GIS – ‘5 Students’

The image shows a screenshot of the Bhuvan GIS web application. At the top, the header reads "Tourism : Vijayawada". The navigation bar includes "Welcome Bhuvanite" and menu items: "Visit", "Stay", "Food Hubs", "Services", "Travel", "Economic", and "Religious". On the left, there is a "See the City" dropdown menu set to "Vijayawada, AP" and a list of landmarks: "Prakasam Barrage", "Raghaviah Park", "Gandhi Hill", and "Sri Kanaka Durga Temple". The main area displays a satellite map of Vijayawada with a red outline of the city. A popup window titled "Prakasam Barrage" is open, showing a photograph of the dam and the text: "Prakasam Barrage is a 1223.5 m long structure across the Krishna River, which connects Krishna and Guntur districts." The bottom left corner has a "Legend" section with links for "Contact Us", "Disclaimer", and "Feedback", and a small image of the Sri Kanaka Durga Temple. The bottom right corner shows the "Main Canal" label on the map.

Looking for the volunteers in the areas of

- Language
- Data providers
- Validation
- Developers etc.

*If you wish to collaborate with Bhuvan,
please feel free to write to us*

bhuvan@nrsc.gov.in

For Bhuvan related queries and suggestions visit :

<http://www.bhuvan-forum.nrsc.gov.in>

The screenshot shows the Bhuvan Discussion Forum website. At the top, there is a header with the Bhuvan logo (Beta Gateway to Indian Earth Observation), the title "Bhuvan Discussion Forum", and the Indian national emblem. Below the header is a navigation bar with a search box, "Advanced search", and user controls like "User: Control Panel", "0 new messages", "View your posts", "FAQ", "Members", and "Logout [sonal]". A status bar indicates the current date and time: "It is currently Mon Jan 30, 2012 2:07 pm" and "Last visit was: Mon Jan 30, 2012 9:26 am".

The main content area features a table of forum categories:

FORUM	TOPICS	POSTS	LAST POST
Bhuvan updates	5	9	by bhuvan Sat Jan 21, 2012 12:08 pm
Bhuvan Usability This sub-forum allows bhuvanites to share their Bhuvan usability experience with other users. You can use this forum to ask your queries on "How to use Bhuvan". Here you can find links to Bhuvan help and interactive videos too.	6	14	by sonal Wed Jan 25, 2012 10:24 pm
Bhuvan 3D This sub-forum is dedicated to 3-Dimensional Bhuvan. You can post your queries on Bhuvan 3d here and have discussion with others.	1	1	by arul Tue Aug 02, 2011 2:00 pm
Bhuvan 2D This sub-forum is dedicated to 2-Dimensional Bhuvan. You can post your queries on Bhuvan 2D here and have discussion with others.	2	3	by sonal Tue Sep 13, 2011 3:55 pm
Pocket Bhuvan This sub-forum is dedicated to all the queries related to mobile version of Bhuvan.	1	1	by aryabhaskara Sat Aug 13, 2011 10:15 am
Developers Section This sub-forum is dedicated to Bhuvanites who wish to develop their applications using Bhuvan API.	2	4	by aryabhaskara Wed Dec 21, 2011 8:59 am
Bhuvan Wish-list This sub-forum is dedicated to all Bhuvanites who wish to give their valuable suggestions for the continuous improvement of Bhuvan. You can post your wish-list here as what you expect from Bhuvan.	0	0	No posts
Bhuvan success stories Bhuvan welcomes all Bhuvanites to share their successful applications/usage which utilises Bhuvan features.	0	0	No posts

Below the forum table, there is a "WHO IS ONLINE" section showing "In total there is 1 user online :: 1 registered, 0 hidden and 0 guests (based on users active over the past 5 minutes)". It also lists "Registered users: sonal" and a legend for "Administrators" and "Global moderators".

A "STATISTICS" section shows "Total posts 32 • Total topics 17 • Total members 146 • Our newest member ritesh_sangam".

The footer contains a "Board index" link, "The team", "Delete all board cookies", "All times are UTC + 5:30 hours", and "Powered by phpBB".



Thank you!!

For feedback and queries write to us at

[*bhuvan@nrsc.gov.in*](mailto:bhuvan@nrsc.gov.in)