

Integration of ICT in Teaching-Learning Process

SUBJECT-SPECIFIC TOOLS **SOCIAL SCIENCES** **BHUVAN**

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CIET-NCERT
New Delhi

Introduction

What?


Why?

Whom?

How?



WHAT?

- Purpose
 - Theme/Topic to be covered
 - Conceptualisation
- 

WHY?

- Need/purpose
- Advantage over traditional way of teaching-learning



WHOM?

- Target group
- Target area/subject

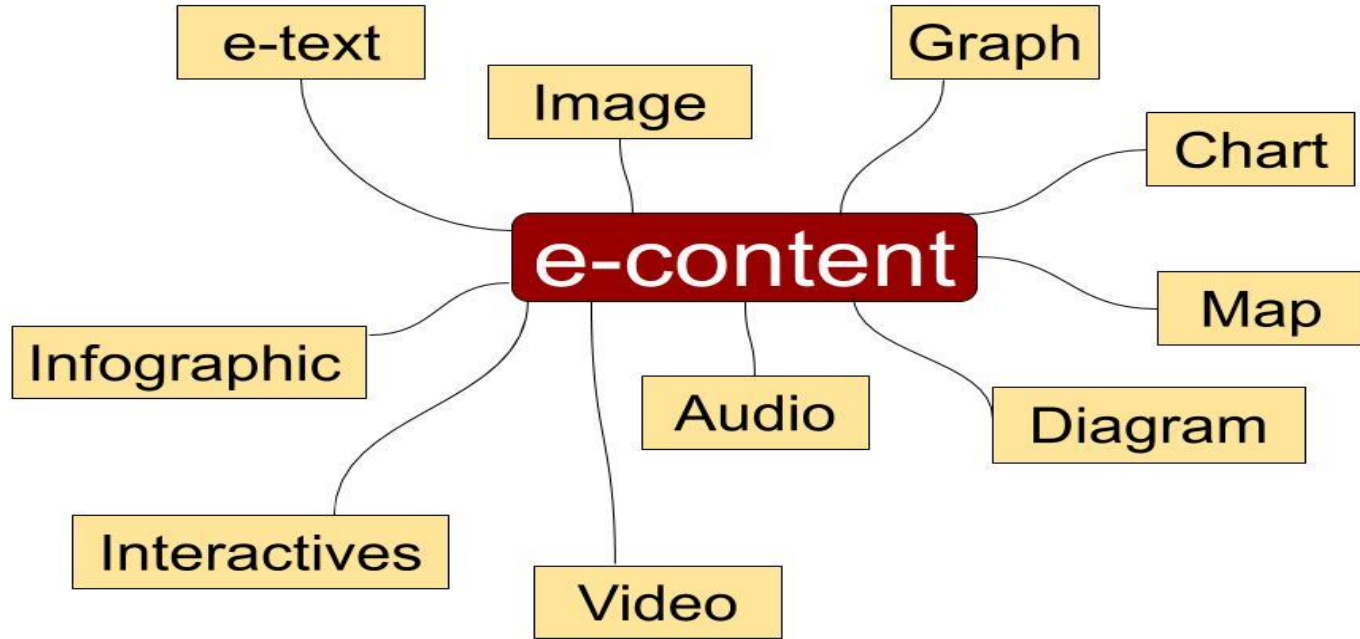


HOW?

- Type of resources/e-content
- Tools used



Types of e-content



Type of e-content



Importance of Himalayas



1

Climatic Influence



2

Source of Rivers and Water



3

Fertile Soil



4

Hydroelectricity



5

Ecology & Forest Wealth



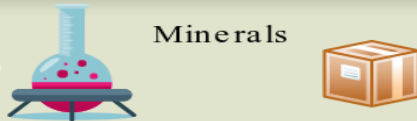
7

Tourism, Pilgrimage

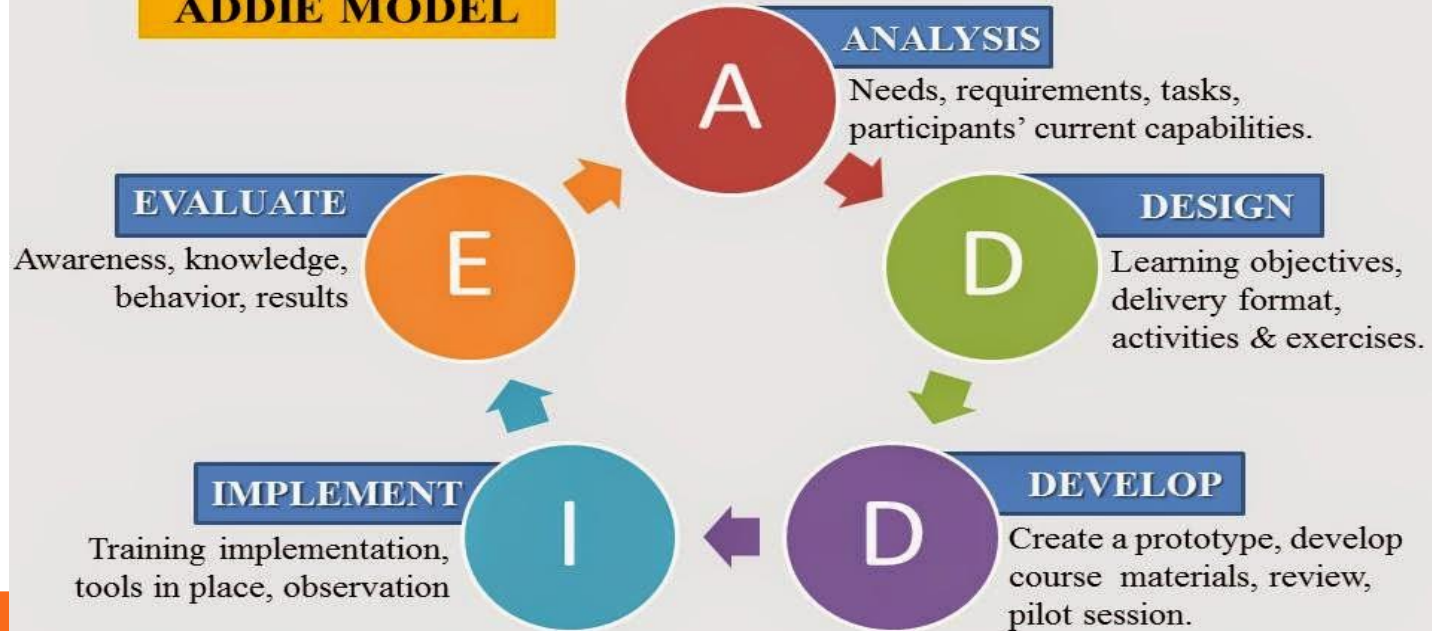


6

Minerals



ADDIE MODEL



Bhuvan

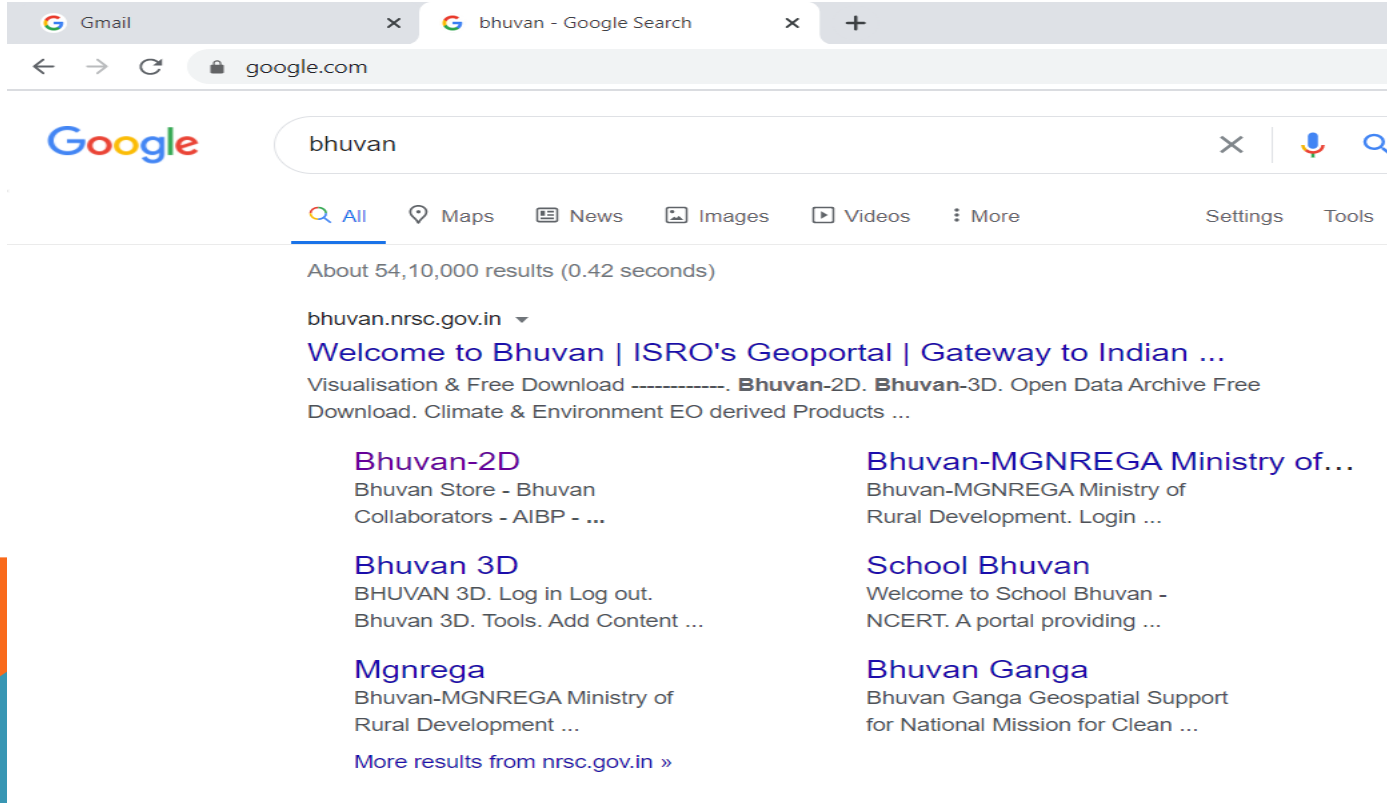


- Indigenously developed
- One stop for various Social Sc. subjects (& Sciences)
- Covers large no. of topics
- Easy to use
- Free to use
- No copyright issue
- Customizable

(https://bhuvan.nrsc.gov.in/bhuvan_links.php)

Bhuvan

Step-1



The image shows a browser window with a Google search for 'bhuvan'. The search results page displays the following information:

- Search results: About 54,10,000 results (0.42 seconds)
- Search results for bhuvan.nrsc.gov.in
- Search results for [Welcome to Bhuvan | ISRO's Geoportal | Gateway to Indian ...](#)
Visualisation & Free Download -----, **Bhuvan-2D**. **Bhuvan-3D**. Open Data Archive Free Download. Climate & Environment EO derived Products ...
- Search results for [Bhuvan-2D](#)
Bhuvan Store - Bhuvan
Collaborators - AIBP - ...
- Search results for [Bhuvan 3D](#)
BHUVAN 3D. Log in Log out.
Bhuvan 3D. Tools. Add Content ...
- Search results for [Mgnrega](#)
Bhuvan-MGNREGA Ministry of Rural Development ...
- Search results for [Bhuvan-MGNREGA Ministry of...](#)
Bhuvan-MGNREGA Ministry of Rural Development. Login ...
- Search results for [School Bhuvan](#)
Welcome to School Bhuvan - NCERT. A portal providing ...
- Search results for [Bhuvan Ganga](#)
Bhuvan Ganga Geospatial Support for National Mission for Clean ...
- More results from nrsc.gov.in »

Step 2

← → ↻ 🔒 bhuvan.nrsc.gov.in/home/index.php

bhuvan
Indian Geo-Platform of ISRO

National Remote Sensing Centre

Home NRSC Application Sectors Bhuvan Collaborators Search Bhuvan Store Contact Us Newsletter **New**

Bhuvan - Yuktdhara

Geospatial Planning Portal for Geo-MGNREGA

Features: Landscape Familiarization | Activity & Area Identification | Map Composition

>> Navigate to Old Website << A- A A+

Latest Updates Lightning Detection Sensor Network Launch of Bhuvan - Yuktdhara by Shri Giriraj Singh, Union Minister of Rural Development & Panchayati Raj on 23

Visualisation & Free Download

Collaborative applications - Platform to share your data and create governance applications

- Bhuvan 2D
- Bhuvan 3D
- Open Data Archive
- Climate & Environment

Application Sectors

Collaborative applications - Platform to share your data and create governance applications

Windows Taskbar: Type here to search, 10°C Mostly sunny, 18-01-2022 10:03



Bhuvan - Yuktdhara

Geospatial Planning Portal for Geo-MGNREGA

Features: Landscape Familiarization | Activity & Area Identification | Map Composition



Latest Updates

Lightning Detection Sensor Network

Launch of **Bhuvan - Yuktdhara** by Shri Giriraj Singh, Union Minister of Rural Development & Panchayati Raj on 23

Visualisation & Free Download

Collaborative applications - Platform to share your data and create governance applications

A row of four application tiles, each with an icon and text, circled in red:

- Bhuvan 2D**
- Bhuvan 3D**
- Open Data Archive**
- Climate & Environment**

Downloads


Application Sectors

Collaborative applications - Platform to share your data and create governance applications




3D View

← → ↻ 🔒 bhuvan-app1.nrsc.gov.in

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BHUVAN 3D

[Log in](#)  

National Remote Sensing Centre

Bhuvan 3D 🔍

[Tools](#) [3D Models](#) [Layers](#) [Forum](#) [Home](#)




Indian Remote Sensing Satellites
Indian Space Research Organisation
Department of Space, Government of India



Activate Windows
Go to Settings to activate Windows. 500 km

3D Models


← → ↻ bhuvan-app1.nrsc.gov.in/globe/3d.php#

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BHUVAN 3D


Log in  


National Remote Sensing Centre

Bhuvan 3D 

Tools **3D Models** Layers Forum Home



3D Models 

Select City 

Remove All

nrsc / ISRO
bhuvan

Visualization Of Geographical Indications All Over India



Latest Updates | [Jal Pradesh - Pre \(12 Jun 2021\) & Post \(14, 15 & 16 Aug 2021\)](#) | [Free Satellite Orthorectified data of AWIFS \(acquired during Apr,May, 2019\) and LISS-](#)

Visualisation & Free Download

Collaborative applications - Platform to share your data and create governance applications

- Bhuvan 2D**
- Bhuvan 3D**
- Open Data Archive**
- Climate & Environment**

Slider

Application Sectors

Collaborative applications - Platform to share your data and create governance applications

- E - Governance**
View the e-governance applications and its resources
- Tourism**
View the tourism applications and its resources
- Urban**
View the urban applications and its resources
- Rural**
View the rural related applications and its resources

Downloads

Maps & OGC Services







State portal

← → ↻ bhuvan.nrsc.gov.in/home/index.php







Maps & OGC Services

Collaborative applications - Platform to share your data and create governance applications

 Thematic Services	 Ocean Services	 Disaster Management Services	 Create a Map My Map My GIS
--	---	---	--

Bhuvan Central Applications


Collaborative applications - Platform to share your data and create governance applications

 Central Ministries	 Special Applications	 G Governance Dashboard	 State Wise Applications
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Applications

Maps & OGC Services


Collaborative applications - Platform to share your data and create governance applications




Thematic Services



Ocean Services



Disaster Management Services




Create a Map
[My Map](#) | [My GIS](#)

Bhuvan Central Applications


Collaborative applications - Platform to share your data and create governance applications



Central Ministries



Special Applications







G Governance Dashboard




State Wise Applications












Applications contd....

← → ↻ bhuvan.nrsc.gov.in/home/stateapp/index.php?type=special_apps    ⋮





 **Indian Geo-Platform of ISRO**

National Remote Sensing Centre 

Home Central Ministries Applications State Applications Special Applications G Governance Dashboard


 Data Discovery	 Image Gallery	 International Disasters	 Multilingual Translation	 Oscat 3D	 Suvidha
 Online Shapefile Creation	 Decision Support Dashboard	 Smart Tracking	 Hydrological Products	 Atmospheric Lightning Product	

Applications


← → ↻ bhuvan.nrsc.gov.in/home/index.php    

Maps & OGC Services


Collaborative applications - Platform to share your data and create governance applications




Thematic Services



Ocean Services




Disaster Management Services




Create a Map
[My Map | My GIS](#)

Bhuvan Central Applications


Collaborative applications - Platform to share your data and create governance applications




Central Ministries



Special Applications



G Governance Dashboard



State Wise Applications

Schemes/Programmes

Satellite map



Thematic Services



Ocean Services



Disaster Management
Services



Create a Map
[My Map](#) | [My GIS](#)

Bhuvan Central Applications

Collaborative applications - Platform to share your data and create governance applications



Central Ministries



Special Applications



G Governance Dashboard



State Wise Applications

Useful Links

[Discussion Forum](#)
[Terms](#)
[Bhuvan User Handbook and Others](#)
[Search](#)

Web Information Manager

Bhuvan Geo Portal & Web Services Group (BGWSG)
National Remote Sensing Centre
Indian Space Research Organisation
Government of India
Hyderabad - 500 037, INDIA.
Email : [bhuvan\[at\]npsc\[dot\]gov\[dot\]in](mailto:bhuvan[at]npsc[dot]gov[dot]in)
Phone : +91-40-2388 4588/89

Bhuvan Satellite Map



RGI Stadium, Hyderabad

Create map



bhuvan.nrsc.gov.in/home/index.php



Maps & OGC Services

Collaborative applications - Platform to share your data and create governance applications



Thematic Services



Ocean Services



Disaster Management
Services



Create a Map

[My Map](#) | [My GIS](#)

Bhuvan Central Applications

Collaborative applications - Platform to share your data and create governance applications



Central Ministries



Special Applications








G Governance Dashboard





State Wise Applications

Create map

← → ↻ bhuvan-app1.nrsc.gov.in/gisviewer/#    

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GIS VIEWER

National Remote Sensing Centre  

Legend ⓘ | Clear Map | Sample-files | Help

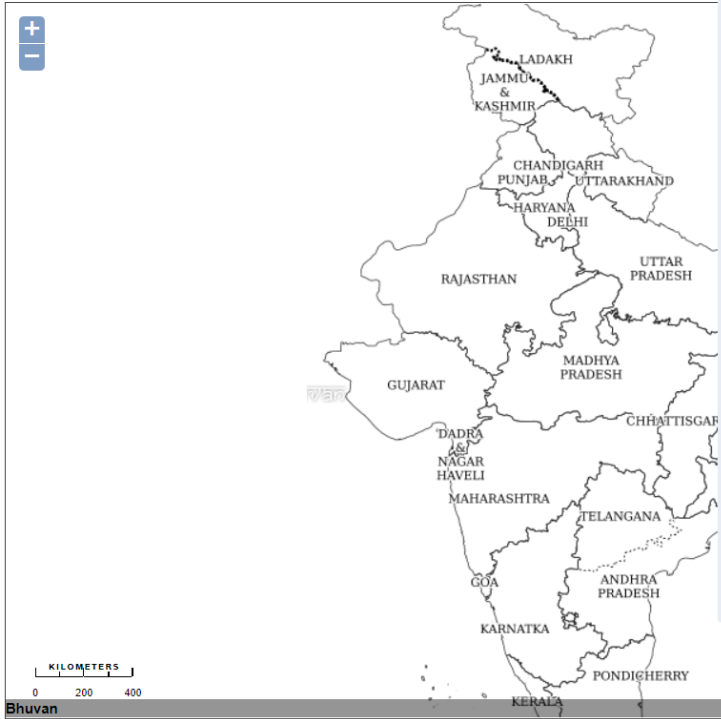
Generate Maps From Text - Select following
Choropleth Maps
Point Map

Layers List
 Base Layer
Choropleth Map layers

Point Layers

Classification

Color-Ramp/Legend/Edit-Range



0 200 400
KILOMETERS

Bhuvan

ANDAMAN AND NICOBAR

58.57178, 30.61768

Help ✕

Create Map from Text (Allowed Delimiters are , ; |)

Point Map (Add XY Data)

1. Text file should contain column names with longitude and latitude
2. If header information is not provided, first two columns should respectively be as longitude and latitude.

Choropleth Maps

1. Maps can be generated for State, District by providing Census 2011 code or Name
2. If Census code is Provided, First column of Text File should be Census code.
3. If Name is provided
 - (i) For State Level, First column should contain State Name
 - (ii) For District Level, First two columns should respectively be District and State name

Generation of Choropleth Maps

1. Select Boundary type and Data Match type options.
2. Download templates and add your data **OR**
Add joining column information in your text file as per above instructions and Upload by clicking on **Text File** option.
3. Dropdownlist containing column names of uploaded file is added to the **Classification** Div.
4. Selection of column name from Dropdownlist will provide options for customizing maps in **Color-Ramp/Legend/Edit-Range** Div
5. Generate Choropleth maps from your data by selecting color ramps OR color parameters and range parameters
6. Choropleth map is added to the Map and corresponding layer is added in **Layers List** div with selected column name and filename.
7. Use Edit-Range option to modify/reclassify corresponding color and range parameters of the map/layer.
8. Click on info ⓘ and Mouse hover on Map to get the attribute information.

SCHOOL BHUVAN

bhuvan-app1.nrsc.gov.in



Ministry of Education
(Department of School Education & Literacy)
School Bhuvan - NCERT

An e-learning portal for the students

About

Level1

Level2

Level3

Bhuvan 3D

GIS Viewer

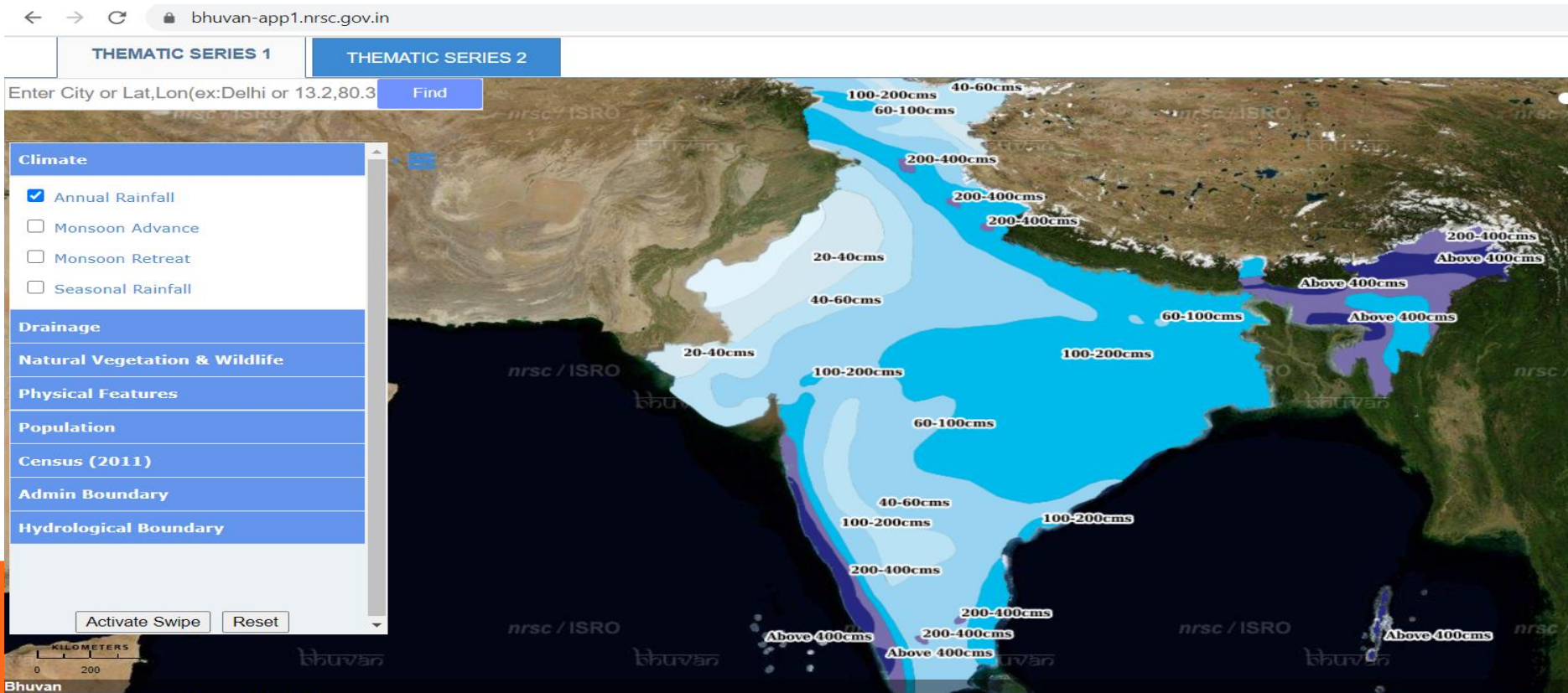
Help

Activate Windows
Go to Settings to activate Windows.

ncert.gov.in/mhrd_ncert/#

Welcome to School Bhuvan - NCERT

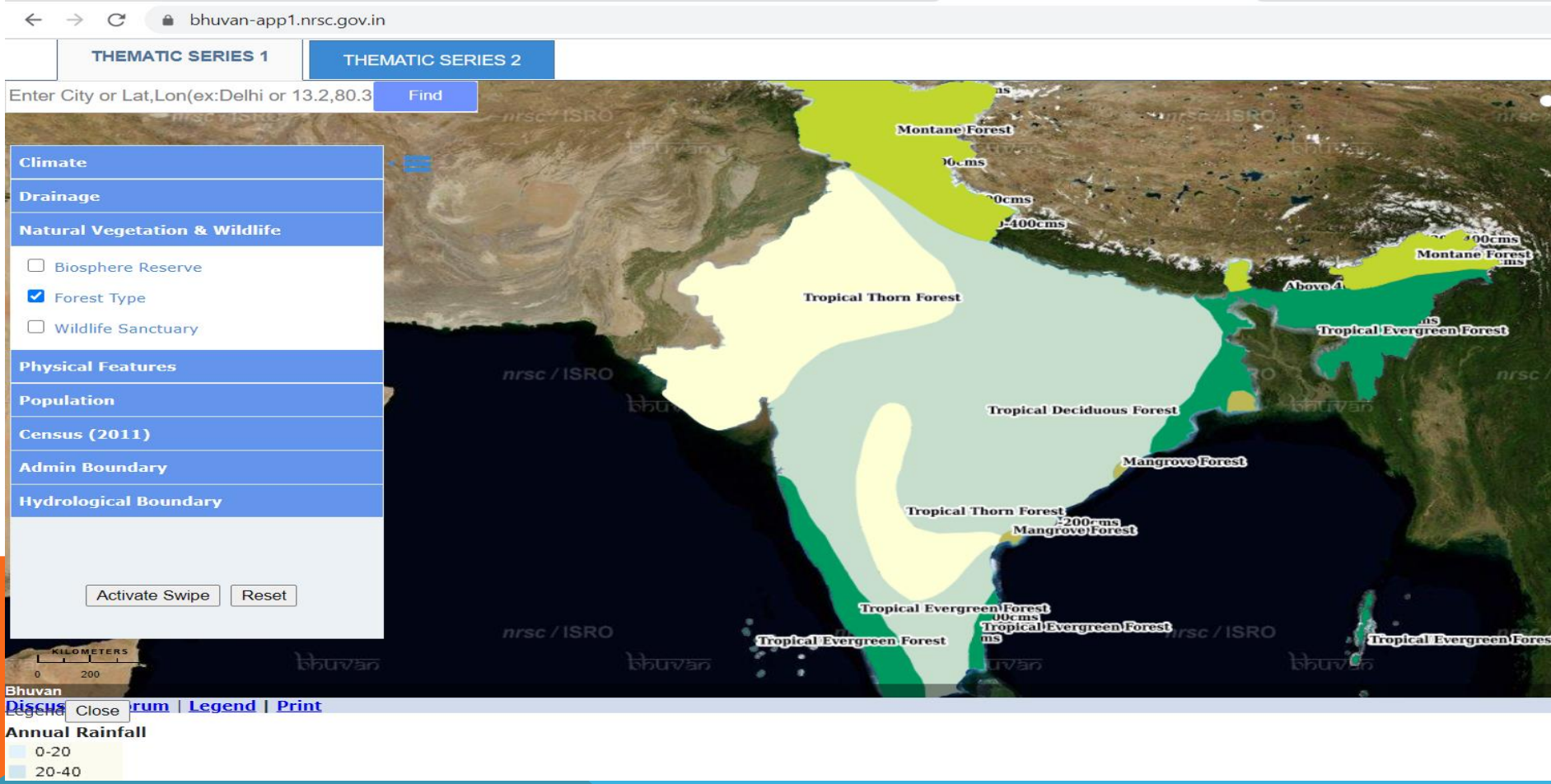
Annual Rainfall



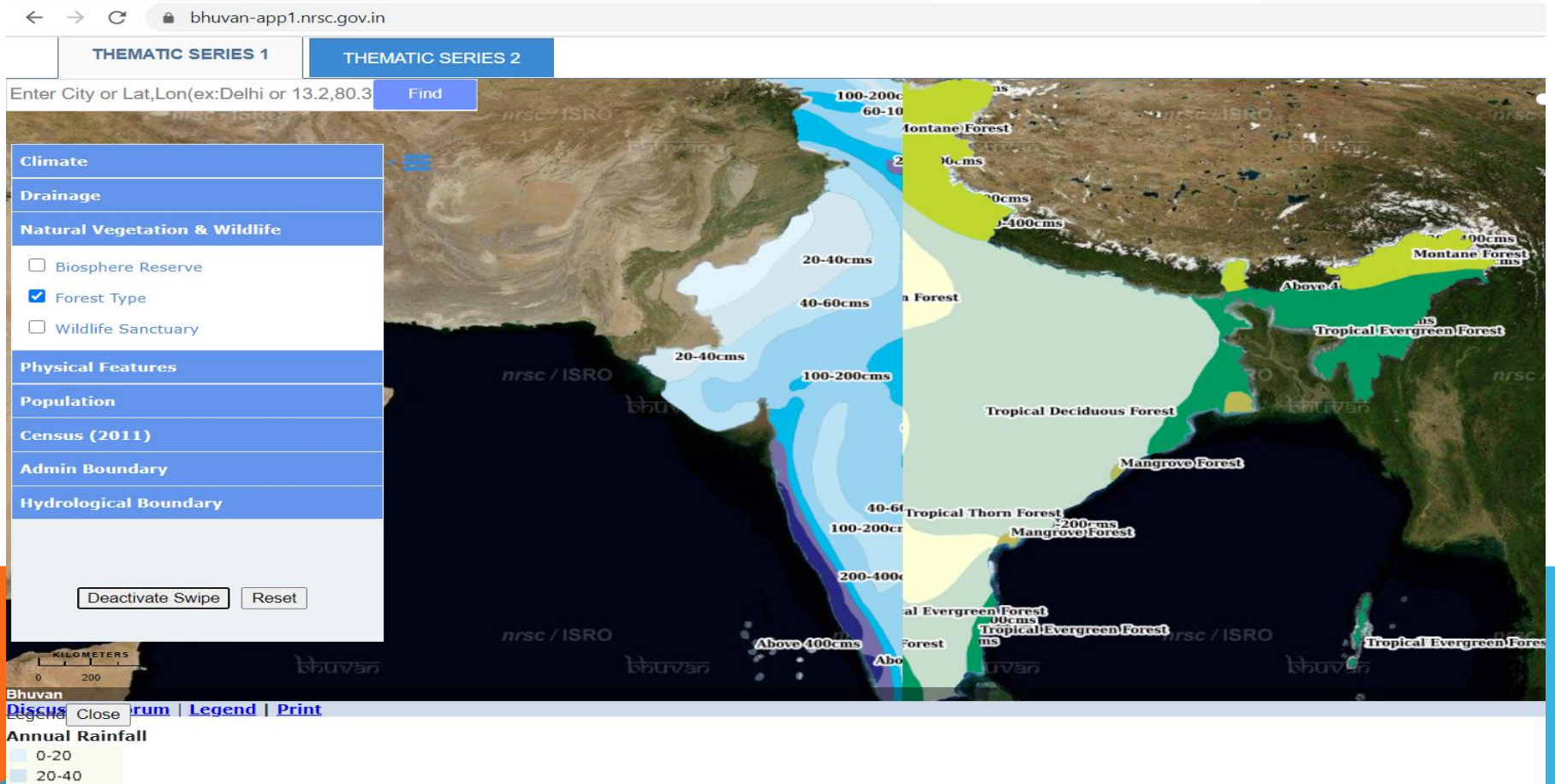
Annual Rainfall

- 0-20
- 20-40

Forest Type



Annual Rainfall & Forest type





bhuvan

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School Bhuvan

THEMATIC SERIES 1

THEMATIC SERIES 2

Enter City or Lat,Lon(ex:Delhi or 13.2,80.3)

Find

Climate

Drainage

Natural Vegetation & Wildlife

Physical Features

Population

Population Density (Persons per sq. Km) - 2001

Population Density (Persons per sq. Km) - 2011

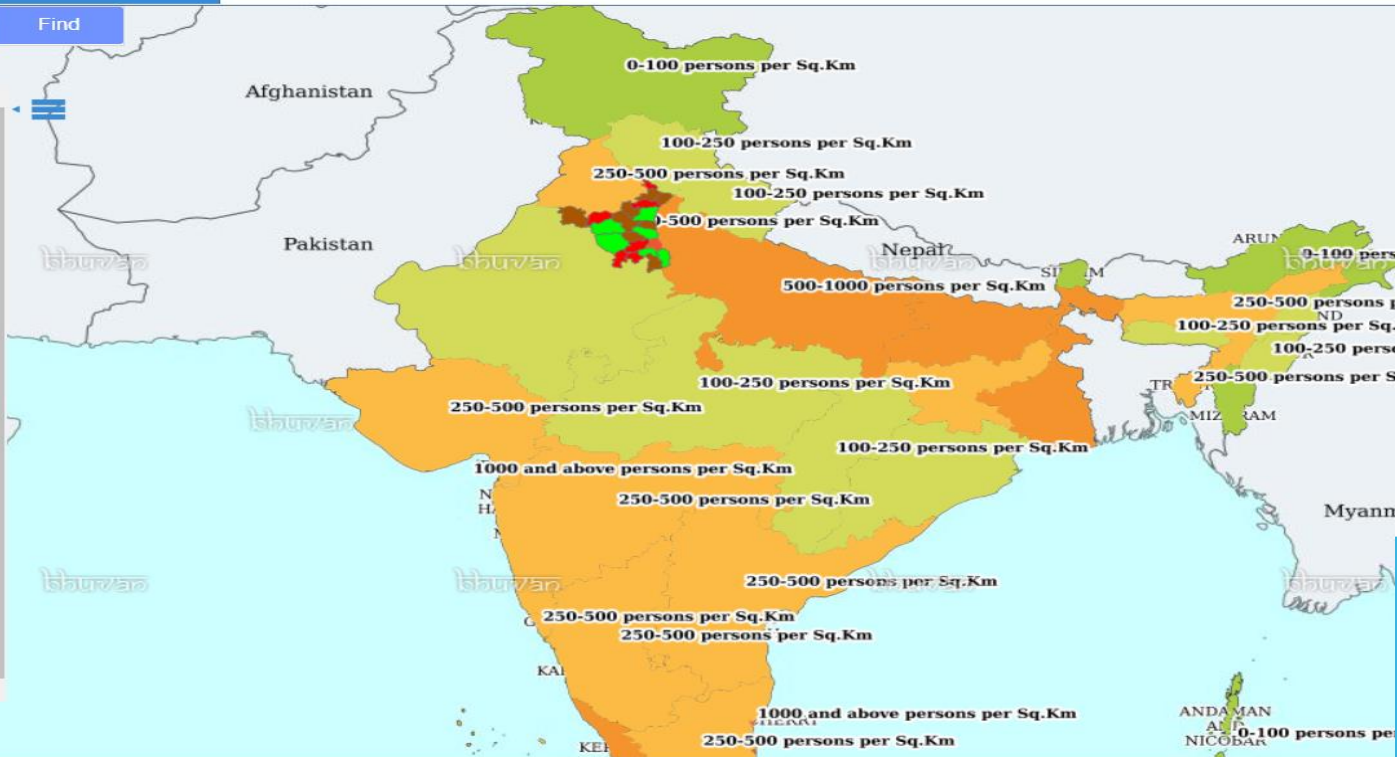
Census (2011)

Admin Boundary


Hydrological Boundary

Activate Swipe

Reset



OTHER SOCIAL SCIENCE TOOLS

- windy.com
 - Marble KDE
 - stellarium.org
 - Google earth
 - Other generic tools
- 

Suggested references

NCERT Official YouTube Channel (Playlist → Webinar ICT tools)

- Bhuvan (English):
<https://www.youtube.com/watch?v=WOUhdHvstHo&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=540>
- Bhuvan (Hindi):
https://www.youtube.com/watch?v=ydgdg_p_vgLIY&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=150
- Marble (English):
<https://www.youtube.com/watch?v=1iFTkLRlhRQ&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=536&t=714s>
- Marble (Hindi):
https://www.youtube.com/watch?v=VDEzx1Z__rc&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=316
- Google Earth (English):
<https://www.youtube.com/watch?v=ioAEesB6XZ8&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=534>
- Google Earth (Hindi):
https://www.youtube.com/watch?v=yEyzimQEf_w&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=218
- QGIS (English):
https://www.youtube.com/watch?v=pr9Jm_Cbtiv&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=538
- QGIS (Hindi):
<https://www.youtube.com/watch?v=UA4BWUMfLQc&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=257>
- NAVIC: <https://www.youtube.com/watch?v=ZHWu0JTCKHE&list=PLUgLcpcnv1YiflIGMIrcqddoB0vRwGgJOi&index=101>

Suggested readings

- NCF 2005 Position papers- Teaching of Social Sciences
(https://ncert.nic.in/pdf/focus-group/social_sciencel.pdf)
- NCF 2005 Position papers- Educational Technology
(https://ncert.nic.in/pdf/focus-group/educational_technology.pdf)
- Strategies to regulate content development and interactivity in the classroom, Isabel Gómez Alemany and Teresa Mauri Majós, European Journal of Psychology of Education, Vol. 15, No. 2 (JUNE 2000), pp. 157-171 (15 pages), Published By: Springer
- Information and Communication Technology (ICT) : Its Origin in India and Pedagogical Integration in the Study of Geography, Nidhi Singh
(<https://imanagerpublications.com/index.php/article/15975>) DOI : <https://doi.org/10.26634/jet.16.1.15975>

Thank you

