

USER'S GUIDE

NFHS-5 GIS INDIA



Riddhi Management Services Pvt. Ltd.

<http://www.riddhi.org/>

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1. Introduction

A **Geographic Information System (GIS)** captures, stores, analyzes, manages and presents data that are linked to various location(s), viz. States, Districts, Sub-Districts, Revenue Villages etc., in a digital map. GIS can be used across multiple industries to understand trends and relationships with respect to a geographic context. This understanding aids management and decision making.

GIS is “Visualization of information geographically”

The **National Family Health Survey (NFHS)** was first conducted in 1992-93. The survey provides state and national information for India on fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services.

NFHS is a large-scale, multi-round survey conducted in a representative sample of households throughout India

NFHS-5 (2015-16) for the first time, provides district-level estimates for many important indicators. It is the fourth in the NFHS series.

2. About NHFS-5 GIS India

The **NHFS-5 GIS India** website had been created by [Riddhi](#) with the vision of facilitating spatial analysis of the valuable NFHS datasets for better policy and programme implementation. The interactive nature of the website allows users to set their own indicator values and identify clusters (states/districts) that require further attention with respect to policy planning and developmental interventions.

NFHS-5 GIS India website is an interactive thematic presentation of NFHS-5 Data on Maps. This website has been developed for Planners, Administrators, Policy Makers, Enthusiasts and Researchers at all levels.

3. Using NFHS-5 GIS India

To use the NFHS-5 GIS India website, these steps need to be followed-

1. Open the desired internet browser

The NFHS-5 GIS India website is supported across Google Chrome, Safari, Internet Explorer etc.

2. Type the URL: nfhs5.indiagis.org

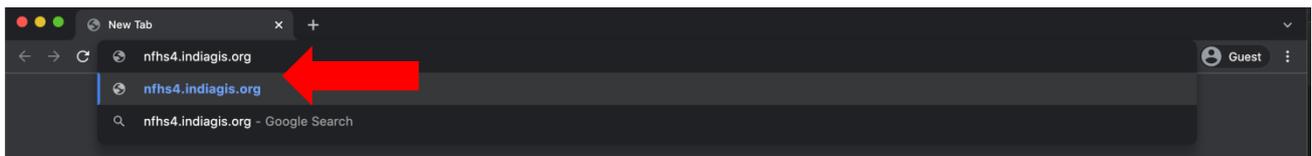


Figure 1

3. The following screen will appear



Introduction

The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India. The survey provides state and national information for India on fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services. Riddhi's endeavor is to facilitate spatial analysis of these valuable datasets for better policy and programme implementation.

Maps : India / States
(Click to View Map)

India	States			
	Andaman and Nicobar	Andhra Pradesh	Assam	Bihar
	Chhattisgarh	Daman & Diu	Goa	Gujarat
	Haryana	Himachal Pradesh	Jammu and Kashmir	Jharkhand
	Karnataka	Kerala	Madhya Pradesh	Maharashtra
	Manipur	Meghalaya	Mizoram	NCT of Delhi
	Odisha	Puducherry	Punjab	Rajasthan
	Sikkim	Tamil Nadu	Telangana	Tripura
	Uttarakhand	Uttar Pradesh	West Bengal	

Riddhi's endeavor is to facilitate spatial analysis of these valuable datasets for better policy and programme implementation.

Figure 2

4. Click on any name (India or the name of any State/UT) to open the NFHS-5 GIS portal

Here we are selecting 'India'

Maps : India / States
(Click to View Map)

India	States			
	Andaman and Nicobar	Andhra Pradesh	Assam	Bihar
	Chhattisgarh	Daman & Diu	Goa	Gujarat
	Haryana	Himachal Pradesh	Jammu and Kashmir	Jharkhand
	Karnataka	Kerala	Madhya Pradesh	Maharashtra
	Manipur	Meghalaya	Mizoram	NCT of Delhi
	Odisha	Puducherry	Punjab	Rajasthan
	Sikkim	Tamil Nadu	Telangana	Tripura
	Uttarakhand	Uttar Pradesh	West Bengal	

Riddhi's endeavor is to facilitate spatial analysis of these valuable datasets for better policy and programme implementation.

Figure 3

5. Two situations might arise, which are discussed below

Case a) The browser shows that “Pop-up blocked”.

On selecting ‘India’ the browser shows “Pop-up blocked”

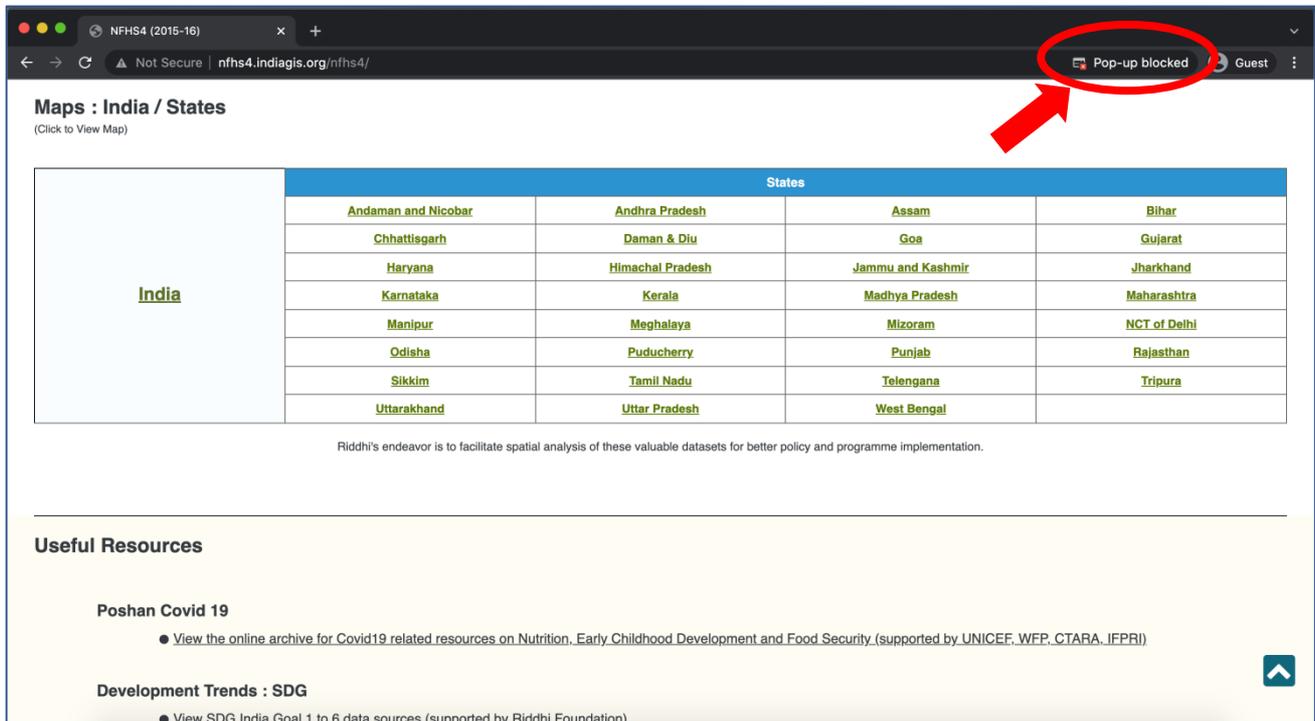


Figure 4

Click on “Pop-up blocked” -----> Select “Always allow pop-ups and redirects from <http://nfhs5.indiagis.org>-----> Click on “Done”

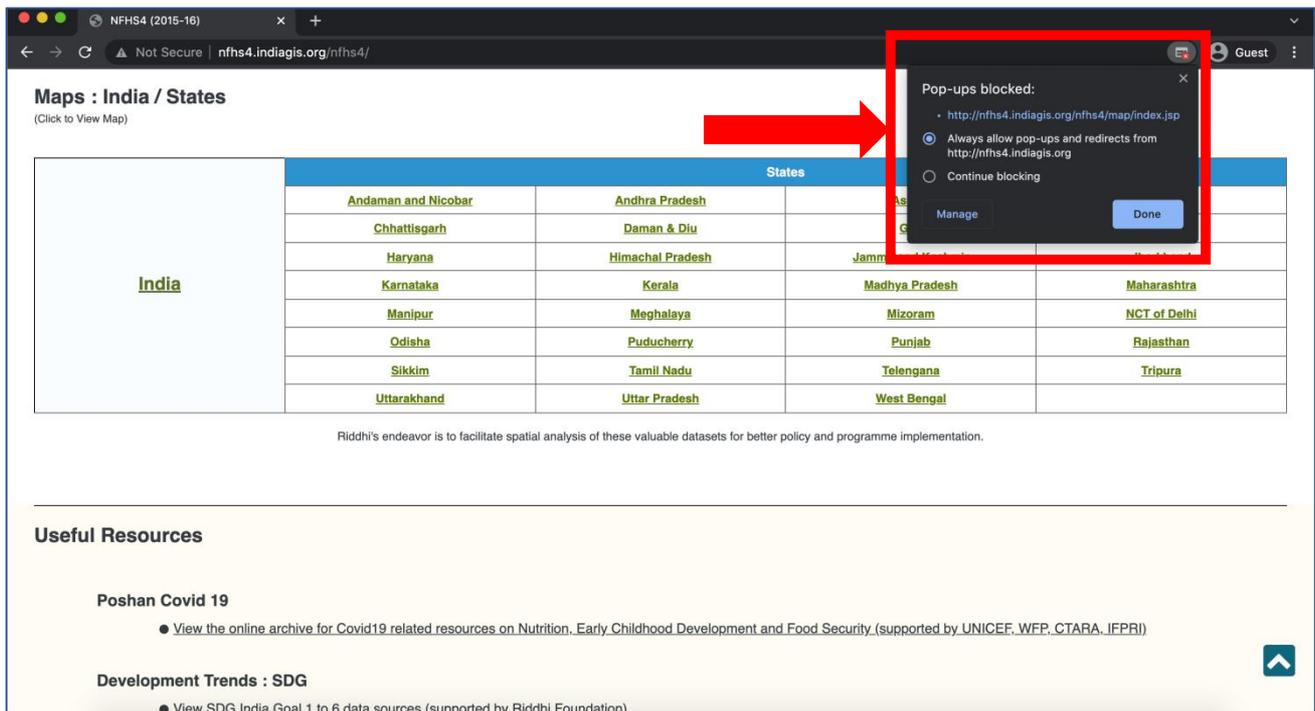


Figure 5

Now on clicking India or the name of any State/UT from the list the desired map and navigation bar will open up. (Figure 6)

Case b) The respective map and navigation bar directly opens up

On selecting 'India' the following webpage with a map of India shows-up on screen

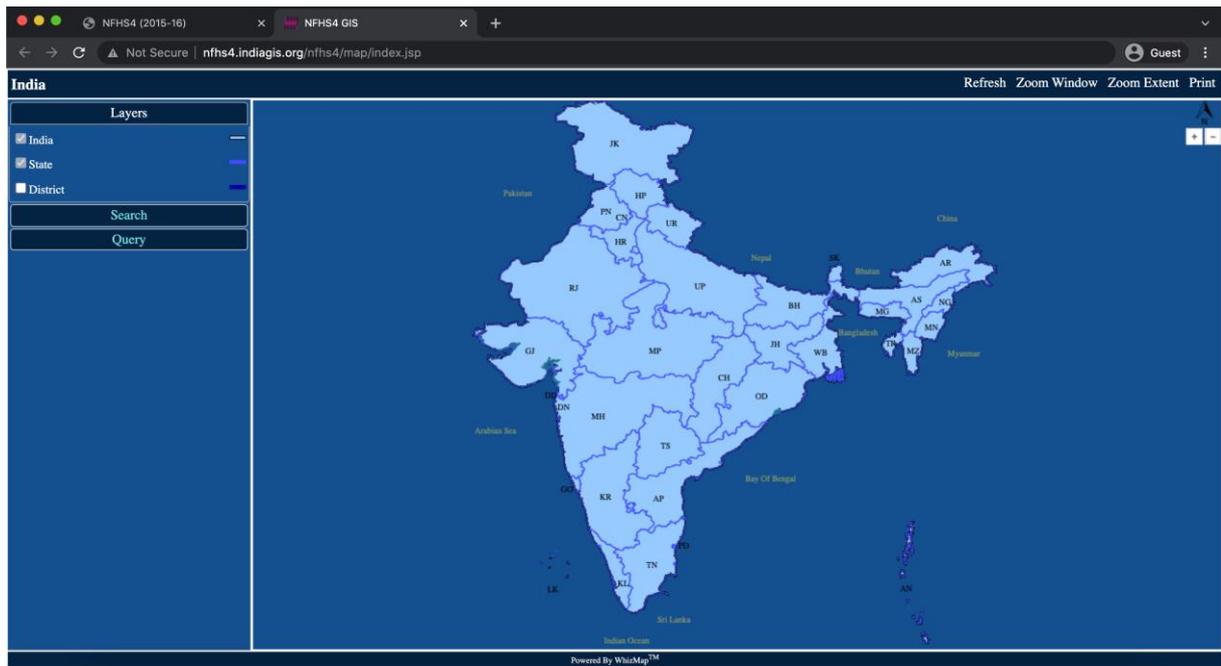


Figure 6

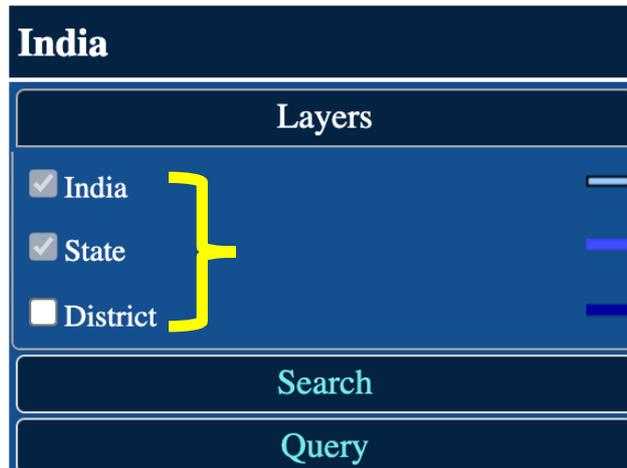


Figure 8

4.1.1 Viewing State Boundaries

In Figure 8, both the checkboxes of India and State are ticked. Therefore, the map shows the boundaries of not only India but also the different states and union territories (Figure 9). The contents, layers and boundaries of the maps used in the website are not to scale.

On hovering the cursor over a region, the name of the region is shown. This helps in getting familiarized with the map.

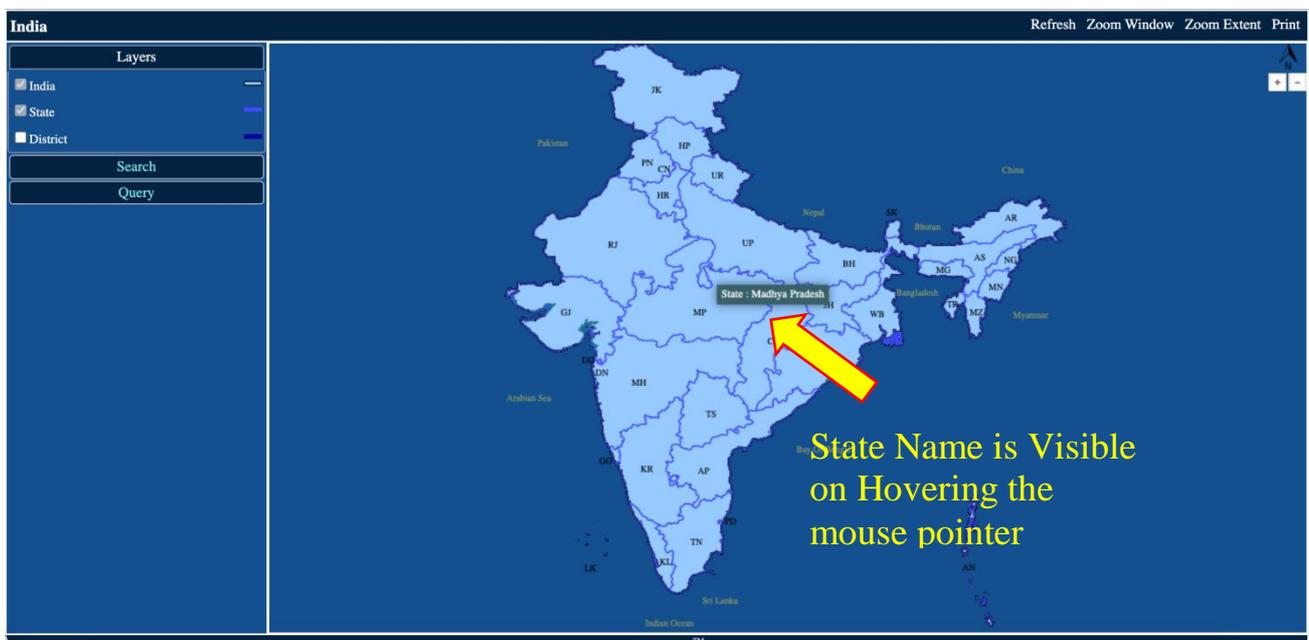


Figure 9

4.1.2 Viewing District Boundaries

If the user wants to view the District-boundaries then the 'District' check-box needs to be selected

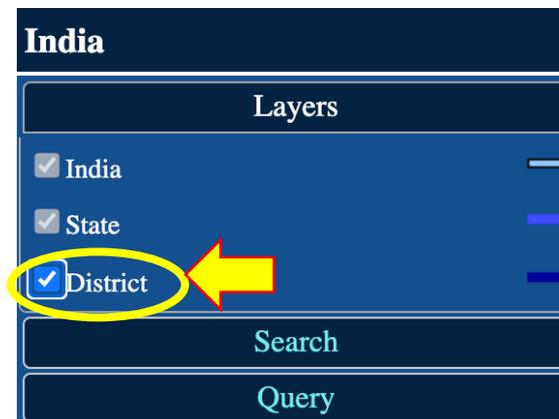


Figure 10

On performing the above action, the district boundaries become visible in the map, along with India and the state boundaries (since the checkboxes of "India" and "State" are ticked as well)

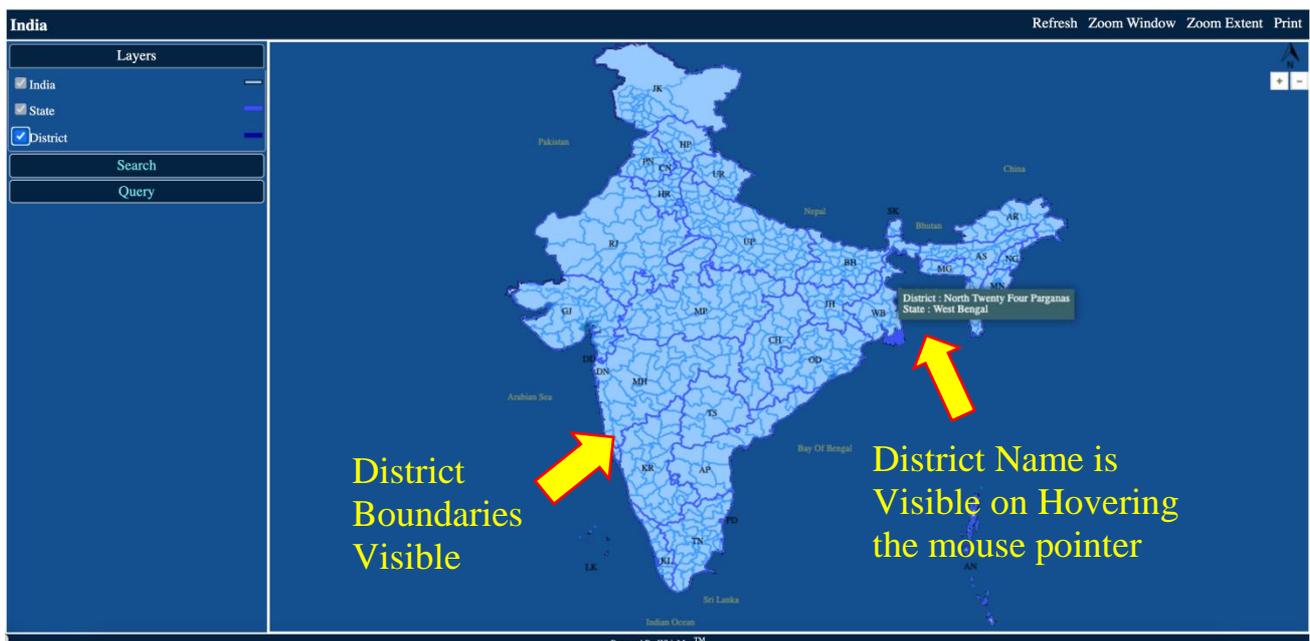


Figure 11

4.2 Search

The “Search” menu is available below the “Layers” menu. It enables the user to search any location (within India) quickly, without having to hover the mouse pointer over the entire map region.



Figure 12

The “Search” menu has two options available- Layer and Name. Both of these options have a drop-down menu from which the user can select the desired location.

4.2.1 Searching Locations- States

1. In the “Layers” menu ‘India’ and ‘State’ check-boxes are ticked by default. Click on “Search” menu → Layer → Click on the drop-down menu (move your mouse cursor to the scroll icon beside the box, to find the names). The only option available is ‘State’.

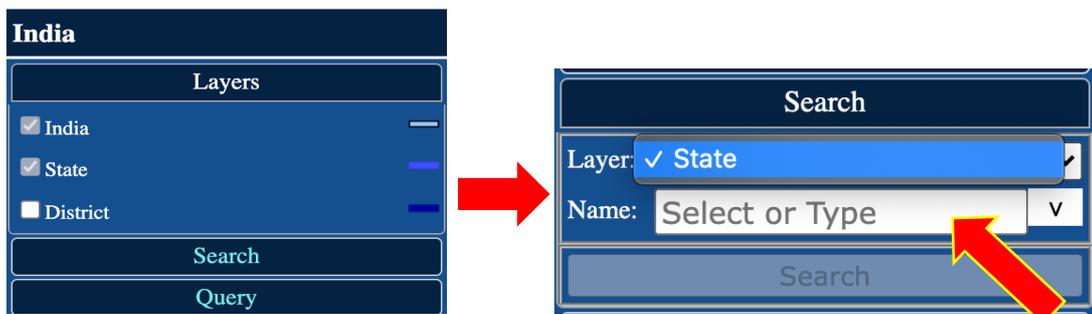


Figure 13

2. Select the Name of the State from the drop-down menu and click on “Search” button.

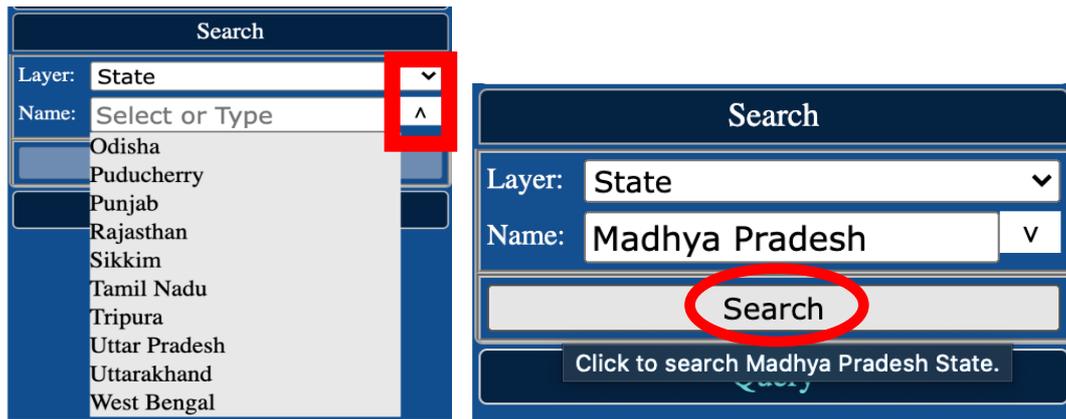


Figure 14

3. The searched location will be highlighted in the map in Red Colour

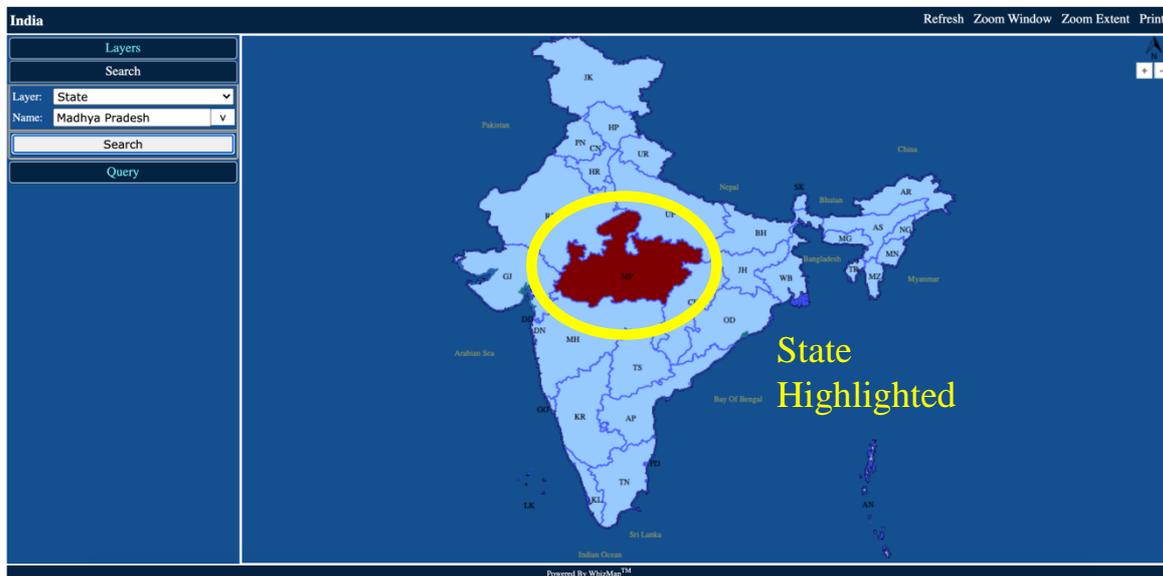


Figure 15

4.2.2 Searching Locations- Districts

1. In the “Layers” menu tick the ‘District’ check-box. Then Click on “Search” menu → Layer → Click on the drop-down menu (move your mouse cursor to the scroll icon beside the box, to find the names). The options available are ‘State’ and ‘District’.

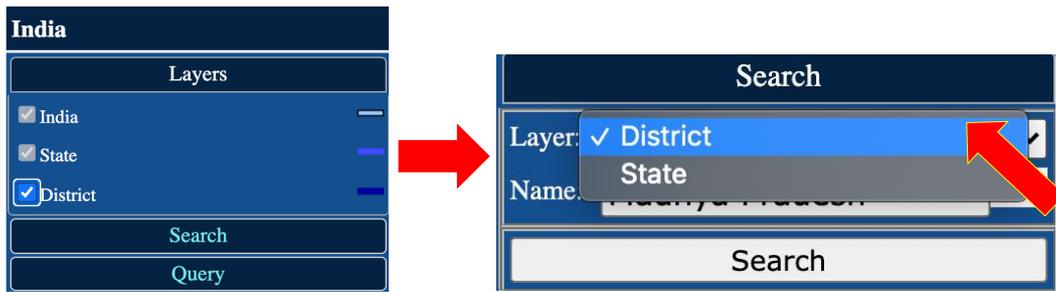


Figure 16

2. Select the Name of the District from the drop-down menu and click on “Search” button.



Figure 17

3. The searched location will be highlighted in the map in Red Colour



Figure 18

4.3 Query

The “Query” menu is located below the “Search” menu. It can be used to prepare thematic maps with NFHS-5 indicators. On clicking the “Query” menu the following options were available- 1. Layer, 2. Group, 3. Category, 4. Indicator and 5. Range Query. Figure 19 shows the various sub-menus and operations available via the “Query” menu.

1. Drop-down menu of the different “Query” options (*To access the names click on the arrows highlighted*)

2. Data Range shows the maximum and minimum values for the selected Queries

3. Select operators, as required

4. Refer to the Data Range and enter the desired value to visualize clusters/patterns on the map

5. On clicking the three dots, list of data values shows up on the screen. These values are the field values of the indicator selected.

6. Click on it to change color of the

7. Click on the button to view

Figure 19

The NFHS-5 GIS India website provides two types of Queries operations-

- 1. Simple Query:** Simple Queries can be made by specifying 'Layer', 'Group', 'Category', 'Indicator' sub-menus and then clicking on 'Execute Query' option.
- 2. Range Query:** The Range Query has a separate button in the Navigation Menu.

These actions are elaborated in the following sections of the document.

4.3.1 Layer

Case a: From the "Layers" menu only 'India' and 'State' check-boxes are ticked

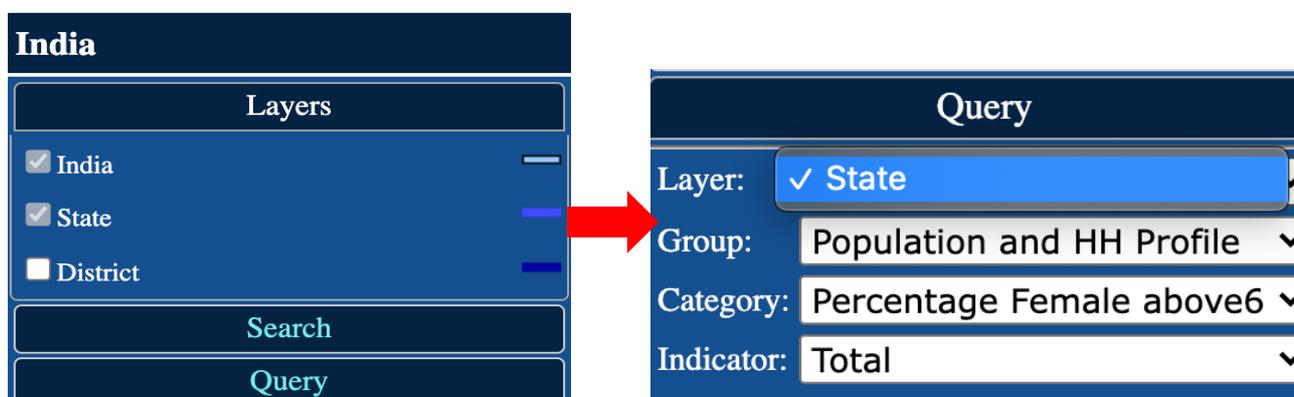


Figure 20

From the 'Layer' dropdown the only option available is State. On selecting it, the chosen indicator values will be visualized with respect to the States/UTs.

Case b: From the "Layers" menu 'India', 'State' and 'District' check-boxes are ticked

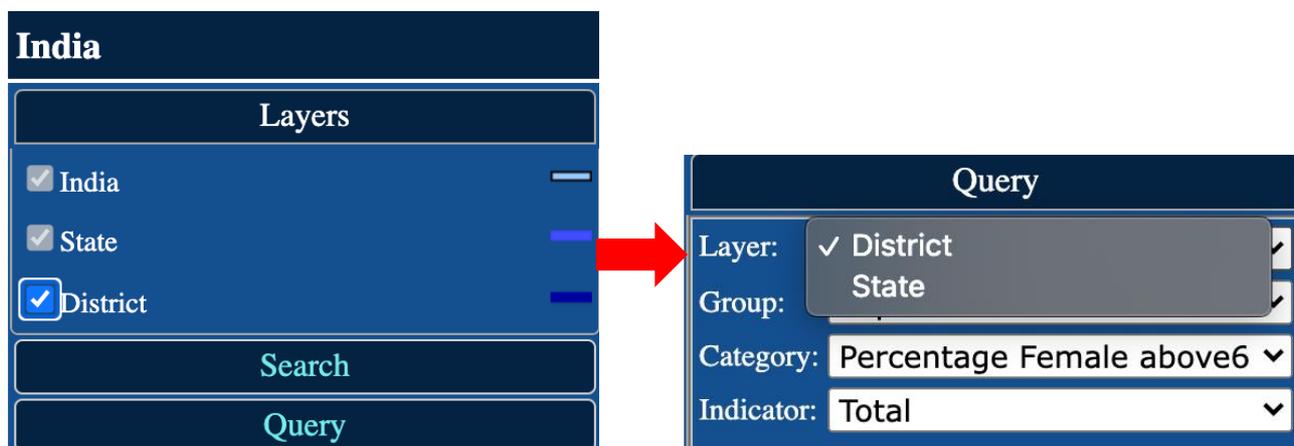


Figure 21

From the 'Layer' dropdown the available options are State and District.

4.3.2 Group

The 'Group' sub-menu has the following dropdowns, as shown in [Figure 22](#):

- 1) Population and HH Profile
- 2) Adults (15-49) Characteristic
- 3) Marriage and Fertility
- 4) Family Planning (Women of age 15-49 years)
- 5) Unmet need for Family Planning (Women of age 15-49 years)
- 6) Quality of Family Planning Services
- 7) MCH Maternity Care (last birth)
- 8) Delivery Care (5yrs before survey)
- 9) Child Immunisation and Vitamin A supplementation
- 10) IYCF and Nutritional Status
- 11) Nutritional Status Adults (15-49 years)
- 12) Anaemia- Children and Adults
- 13) Blood Sugar (15-49 years) Women
- 14) Blood Sugar (15-49 years) Men
- 15) Hypertension (15-49 years) Women
- 16) Hypertension (15-49 years) Men
- 17) Women (15-49 years) who undergone Exam

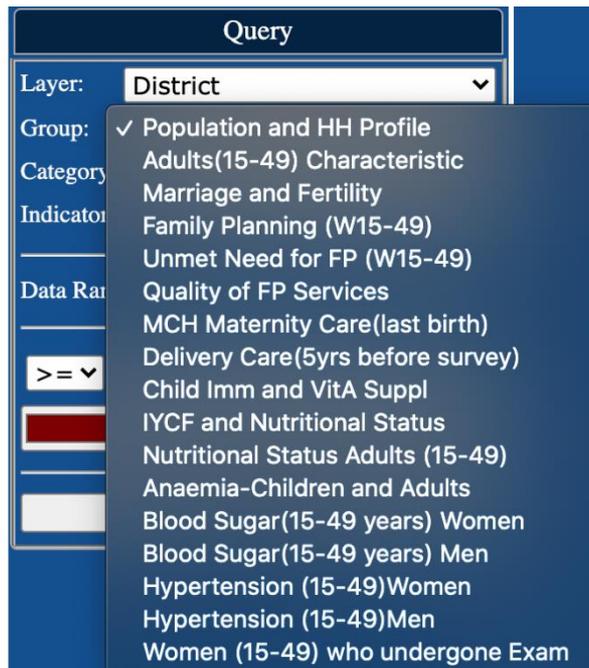


Figure 22

4.3.3 Category

Select the desired 'Group' → Click on 'Category' drop-down → Select Category from the list

The drop-down options for 'Category' changes as per the 'Group' selected (Refer to [Section 4.3.5](#))

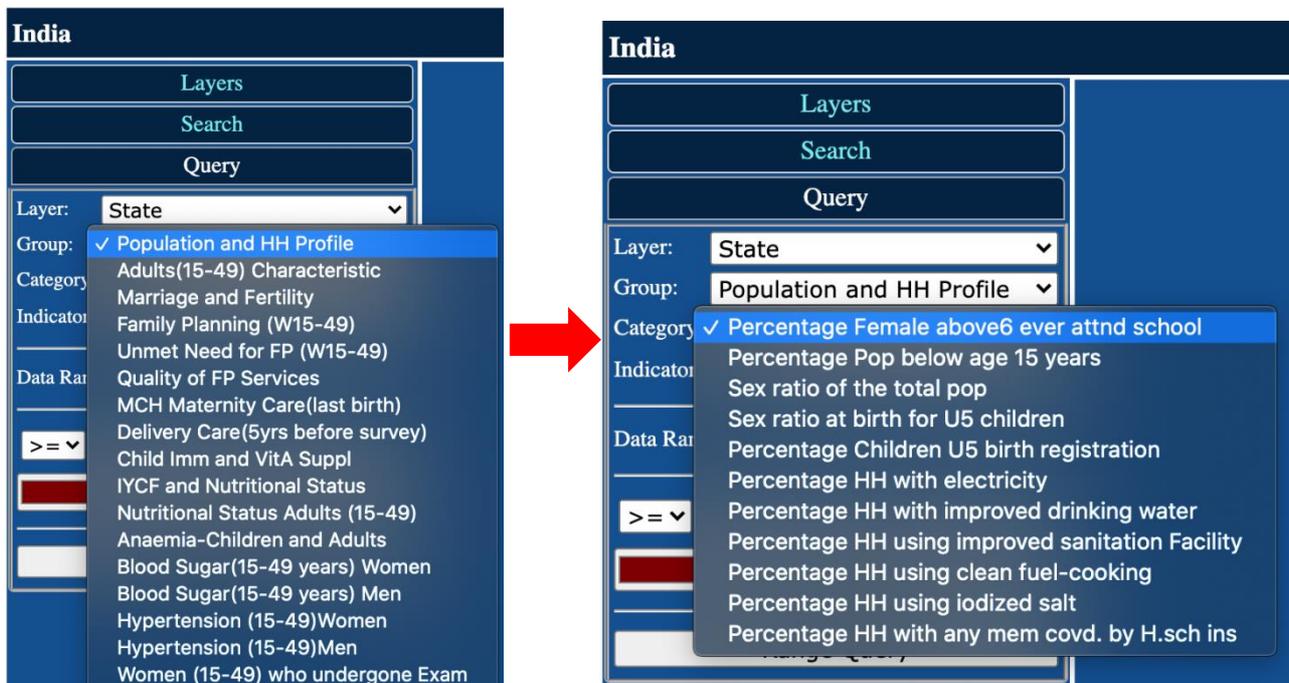
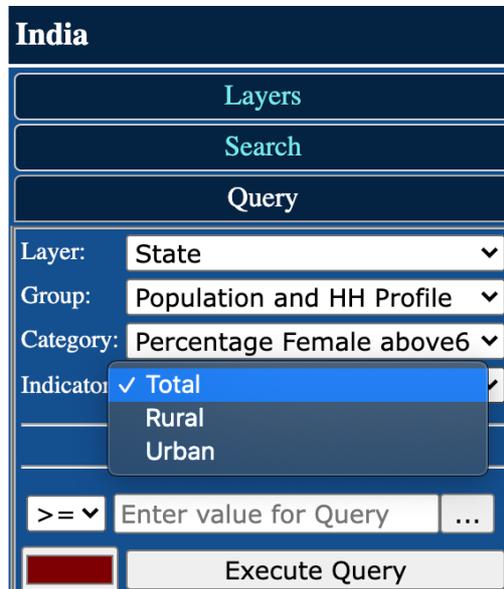


Figure 23

4.3.4 Indicator

Select the desired 'Group' and 'Category' → Click on 'Indicator' drop-down → Select Indicator from the list. The 3 available Indicators are 1) **Total**, 2) **Rural** and 3) **Urban**.



The screenshot shows a web interface for India. At the top, there is a dark blue header with the word "India" in white. Below the header are three buttons: "Layers", "Search", and "Query". The "Query" section contains several dropdown menus: "Layer:" with "State" selected, "Group:" with "Population and HH Profile" selected, and "Category:" with "Percentage Female above6" selected. The "Indicator:" dropdown is open, showing three options: "Total" (checked), "Rural", and "Urban". Below the dropdowns is a query builder section with a comparison operator ">=" and a text input field "Enter value for Query" followed by an ellipsis "...". At the bottom of the query section is a red button and a grey button labeled "Execute Query".

Figure 24

4.3.5 Groups and Categories available on NFHS-5 GIS India website

20

Group	Category
1) Population and HH Profile	1) Percentage female above 6 yrs ever attend school, 2) Percentage population below age 15 years, 3) Sex ratio of the total population, 4) Sex ratio at birth for U5 children, 5) Percentage children U5 birth registration, 6) Percentage HH with electricity, 7) Percentage HH using improved drinking water, 8) Percentage HH using improved sanitation facility, 9) Percentage HH using clean fuel-cooking, 10) Percentage HH using Iodized salt, 11) Percentage HH with any member covered by health insurance schemes
2) Adults (15-49) Characteristic	1) Percentage women who are literate, 2) Percentage men who are literate, 3) Percentage women (10 or more years of schooling)

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4.4 Simple Query- Examples

The above section explained what features are available in the “Query” sub-menu and how to use them. This section will explain it with some Examples. Refer to [Section 4.3.5](#) to know the Groups and the corresponding Categories.

4.4.1 How to make the query “State-wise Percentage of rural Households with Improved drinking water” ?

1. To get a thematic map of “State-wise Percentage of rural Households with Improved drinking water” , we need to select ‘State’ option in “Layers” and then click on the “Query” menu

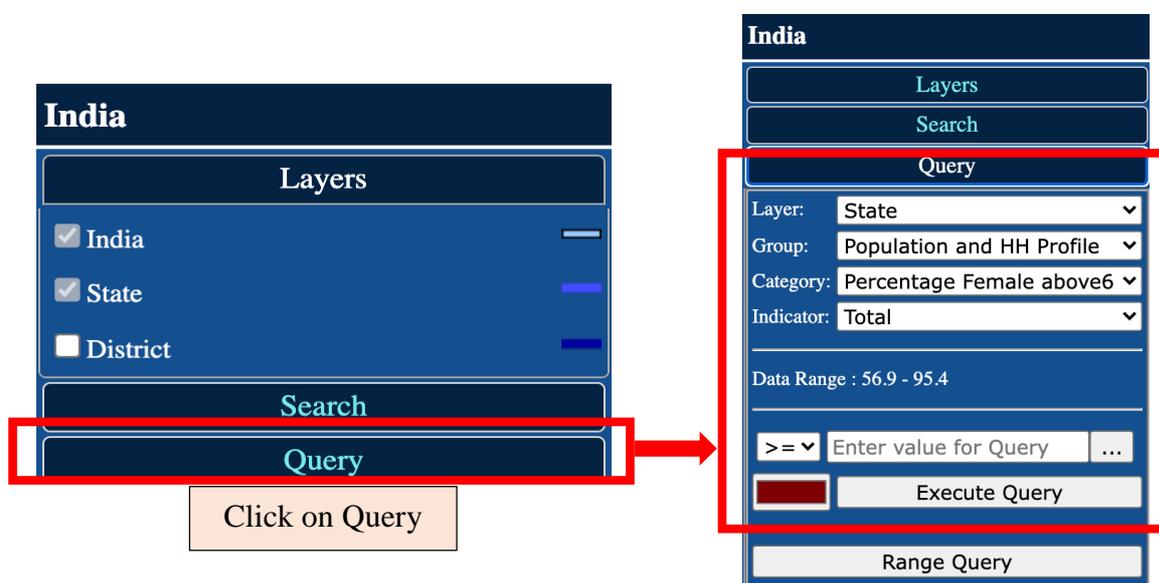


Figure 25

2. Select the desired ‘Layer’, ‘Category’, ‘Indicator’, colour, operator, value from the “Query” menu (Check [Figure 19](#) for reference).

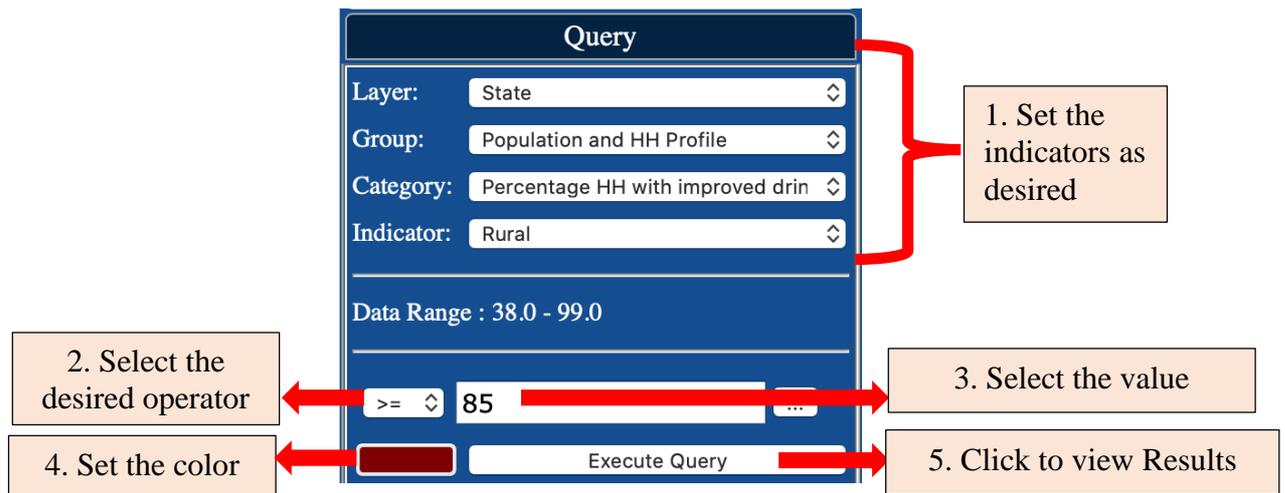
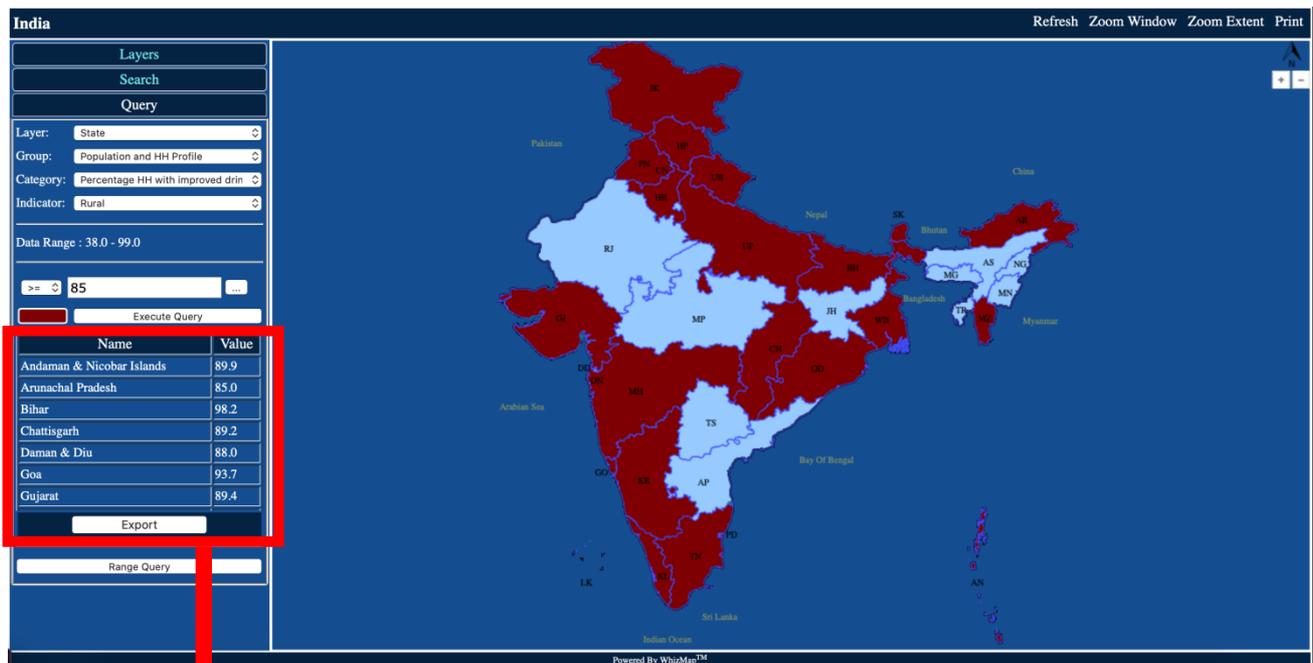


Figure 26

3. On clicking 'Execute Query' the Thematic map can be viewed as desired.

The regions, as per the criterion given by the user, will be highlighted in the map.



On executing query, a report containing names and respective values gets generated as per user-specified criterion.

Figure 27

How to download the generated data?

Name	Value
Andaman & Nicobar Islands	89.9
Arunachal Pradesh	85.0
Bihar	98.2
Chattisgarh	89.2
Daman & Diu	88.0
Goa	93.7
Gujarat	89.4

Export

Click on export, a new window will open containing the data in table format

State	Rural
Andaman & Nicobar Islands	89.9
Arunachal Pradesh	85
Bihar	98.2
Chattisgarh	89.2
Daman & Diu	88
Goa	93.7
Gujarat	89.4
Haryana	94.3
Himachal Pradesh	94.9
Jammu & Kashmir	85
Karnataka	88.9
Kerala	93
Lakshadweep	97.1
Maharashtra	85.6
Mizoram	87.8
Odisha	87.5
Puducherry	99
Punjab	99
Sikkim	96.8
Tamil Nadu	94.5
Uttar Pradesh	97.8
Uttarakhand	89.5
West Bengal	95.1

- Back
- Reload Page
- Save Page As...
- Print Page...

Left click on the page and select 'Print' to print the data

Figure 28

4.4.2 How to prepare a Thematic Map on “District-wise Percentage of severely waste children under 5 years of age” ?

1. Select the desired option in “Layers”. To get a thematic map of “Percentage of Tribal Population at District level”, we need to select ‘District’ option and then click on the “Query” menu. Select the desired ‘Layer’, ‘Category’, ‘Indicator’, colour, operator and value.

Figure 29

2. On clicking 'Execute Query' the Thematic map can be viewed as desired. Download the data by clicking on 'Export' button.

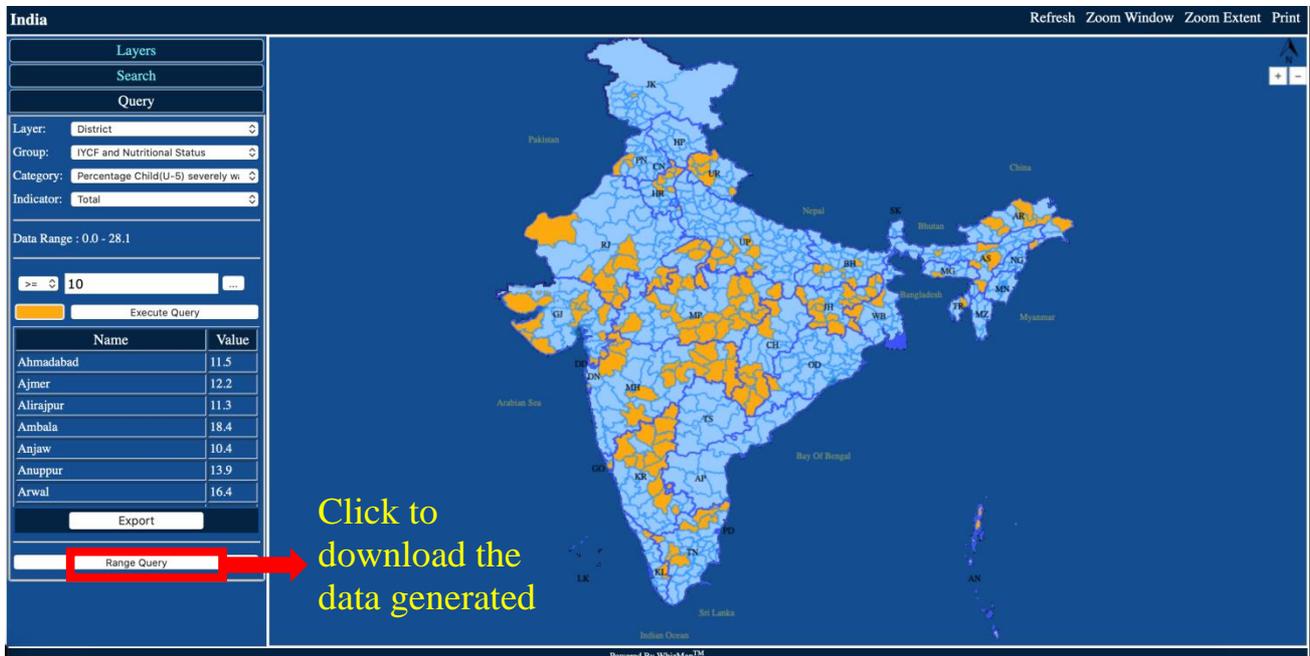


Figure 30

4.5 Range Query

The 'Range Query' is another important menu to help in better NFHS-5 data visualization. With the help of range query the user can divide the data sets into 2 to 5 divisions.

Query

Layer: State

Group: Population and HH Profile

Category: Percentage Female above6 ever a

Indicator: Total

Data Range : 56.9 - 95.4

>= Enter value for Query ...

Execute Query

Range Query

1. Select the desired Queries

2. Click on the "Range Query" button after selecting Queries and a dialogue box will open

Please enter range query division..
 Note: Value must be within 2 & 5

3. Enter number of range divisions (between 2 to 5)

4. Click here after selection of range division

Cancel OK

5. After clicking on 'OK', a 'Legend' screen appears
 (Bottom of Navigation Pane, below 'Range Query' button.)

Query

Layer: State

Group: Population and HH Profile

Category: Percentage Female above6

Indicator: Total

Data Range : 56.9 - 95.4

Enter value for Query ...

Execute Query

Range Query

Legend

6. Click on the boxes to edit values of the Legends.

8. Click here for the final result.

Figure 31

69.74	82.57
82.58	95.40
Execute Range Query	

After clicking on ‘Execute Range Query’ the following map appears on the screen as desired by User.

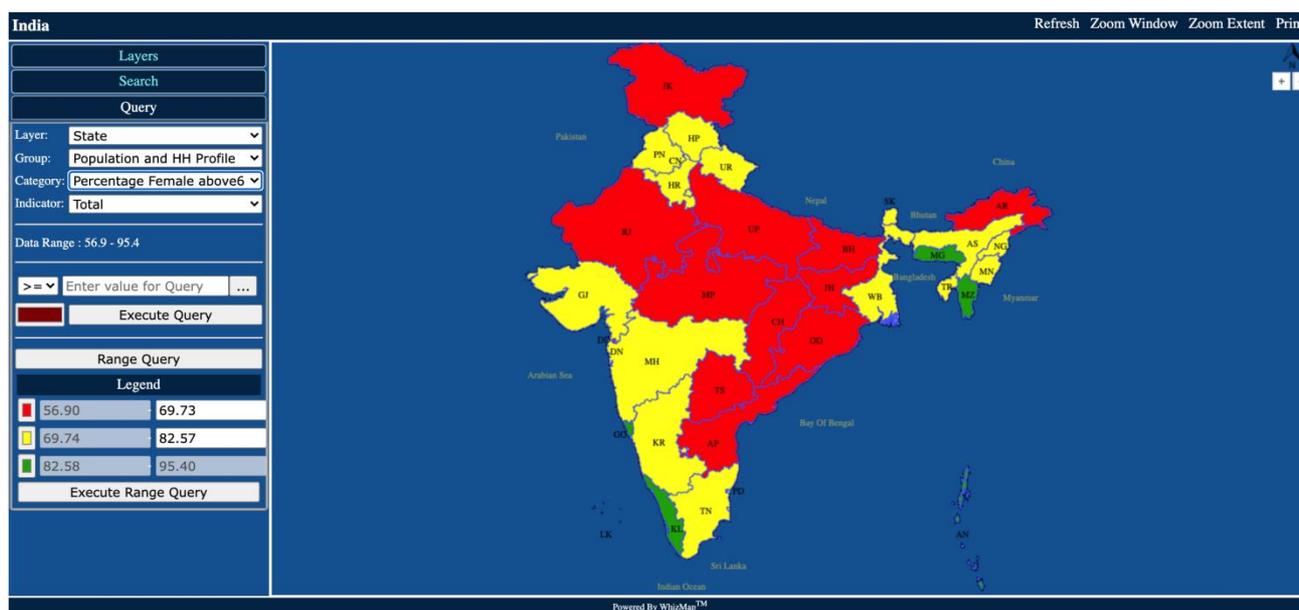


Figure 32

4.6 Range Query- Examples

The above section explained what is the “Range Query” feature. This section will explain it with some Examples.

4.6.1 How to make range queries on “Total Percentage of mothers who had at least 4 ANC Visits” at the state-level?

1. Select the ‘State’ in “Layers”. Select desired dropdowns from “Query”.

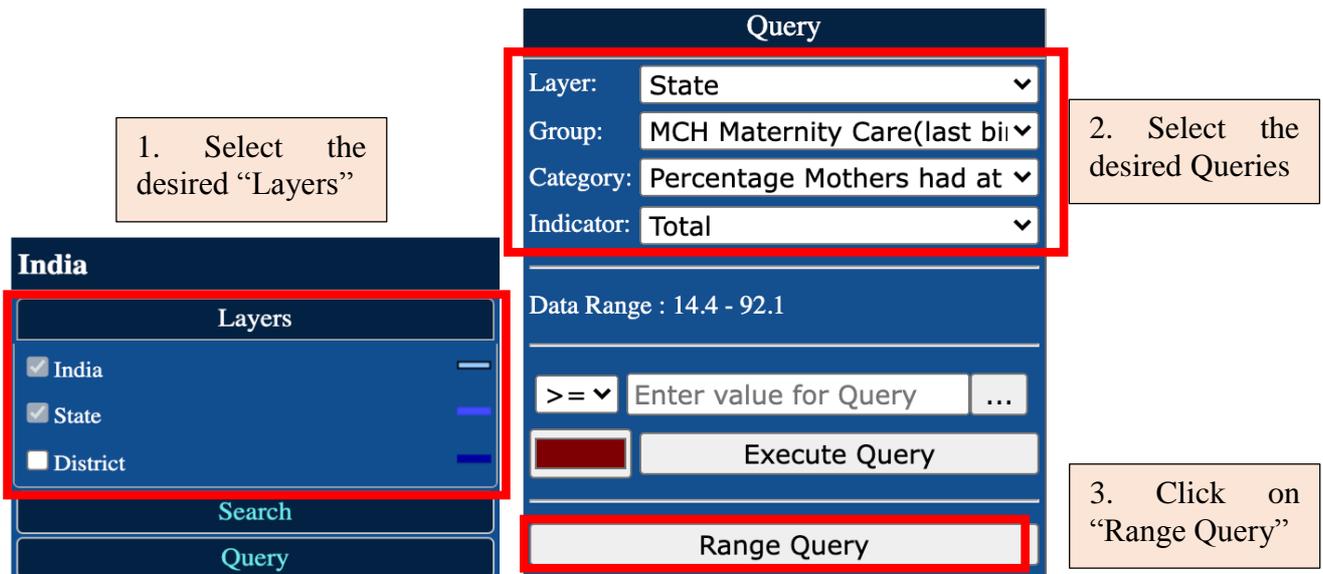


Figure 33

2. Click on "Range Query", enter range query division value in the dialog box that opens and click 'Ok'. From the 'Legend', change colours and values of Legend as required.

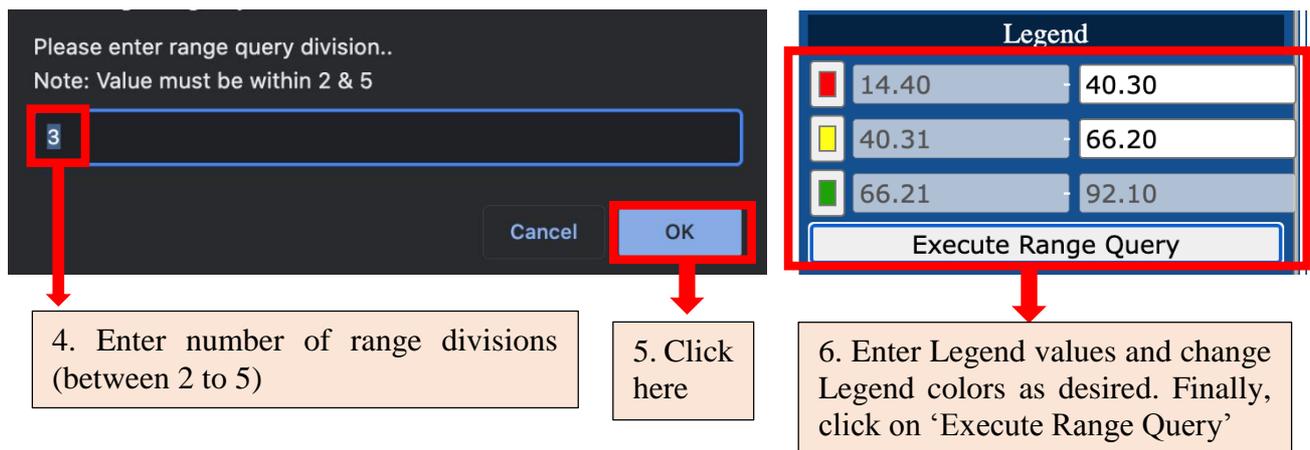


Figure 34

3. After clicking on 'Execute Range Query' the following map appears on the screen as desired by User. The map shows the total Percentage of mothers who had at least 4 ANC Visits.

The states where "Total Percentage of mothers who had at least 4 ANC Visits" is less than or equal to 40.30 percent are marked in Red in the map. On the other hand, states more than 66.20 percent mothers who received 4 ANC check-ups are marked in Green in the map.

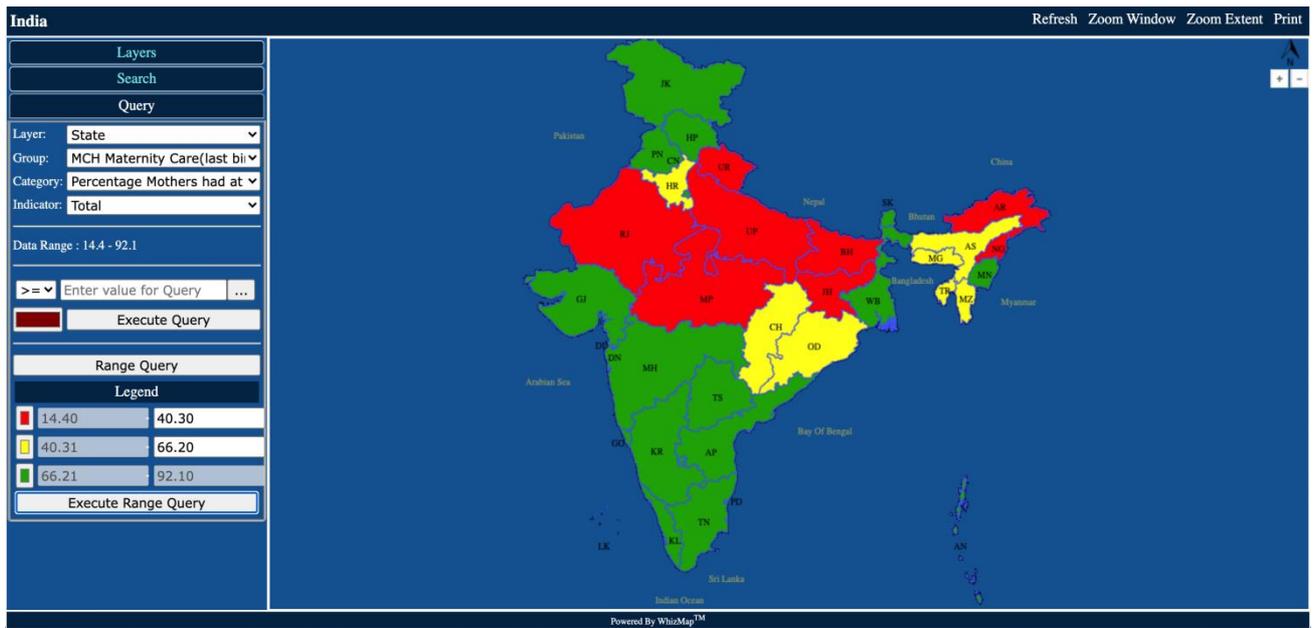


Figure 35

4.6.2 How to make range queries on “Total Percentage of mothers who had at least 4 ANC Visits” at the District-Level ?

1. Select ‘District’ in “Layers”. Select desired dropdowns from “Query”. Click on “Range Query”

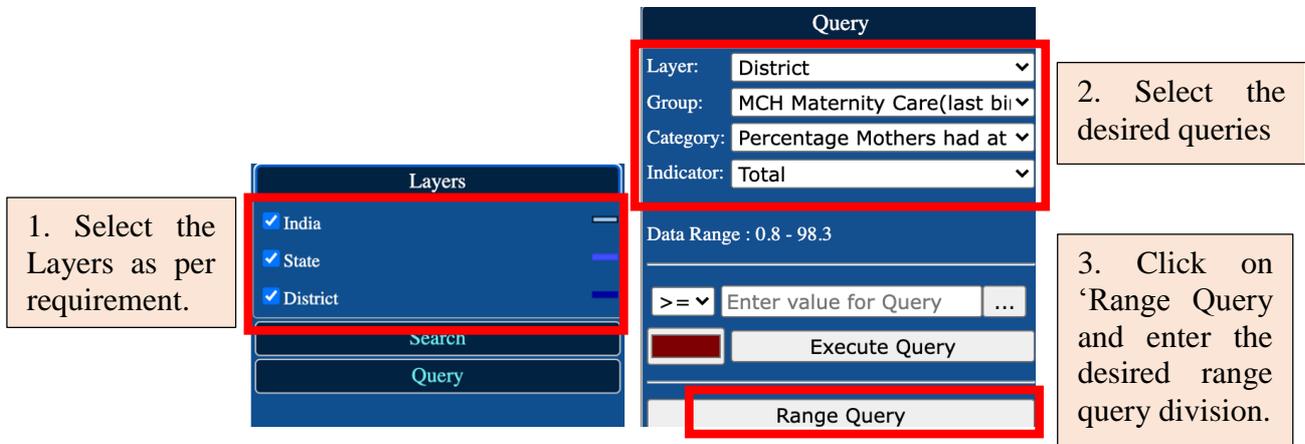


Figure 36

2. Enter desired ‘Range Query Division’. Click ‘OK’. Set ‘Legends’ as per requirement

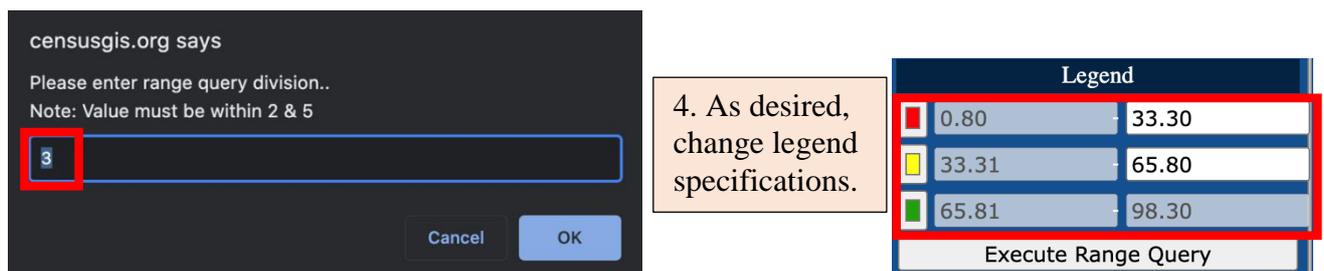


Figure 37

3. After clicking on ‘Execute Range Query’ the following map appears on the screen as desired.

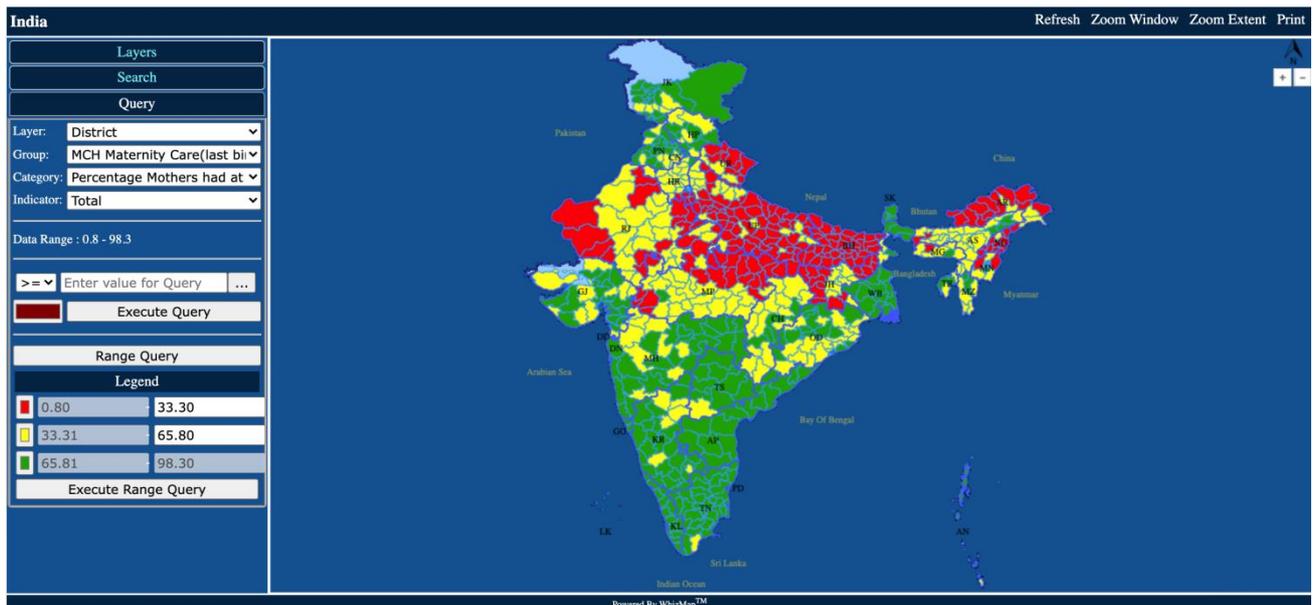


Figure 38

4.7 Location wise Data

Users can also view Location wise data on the NFHS-5 GIS India website. Using this function, users will be able to view the value of indicators of selected categories for a specific location.

4.7.1 Viewing State-level Data

1. After selecting the necessary Queries from the “Query” menu, click on any location on the map

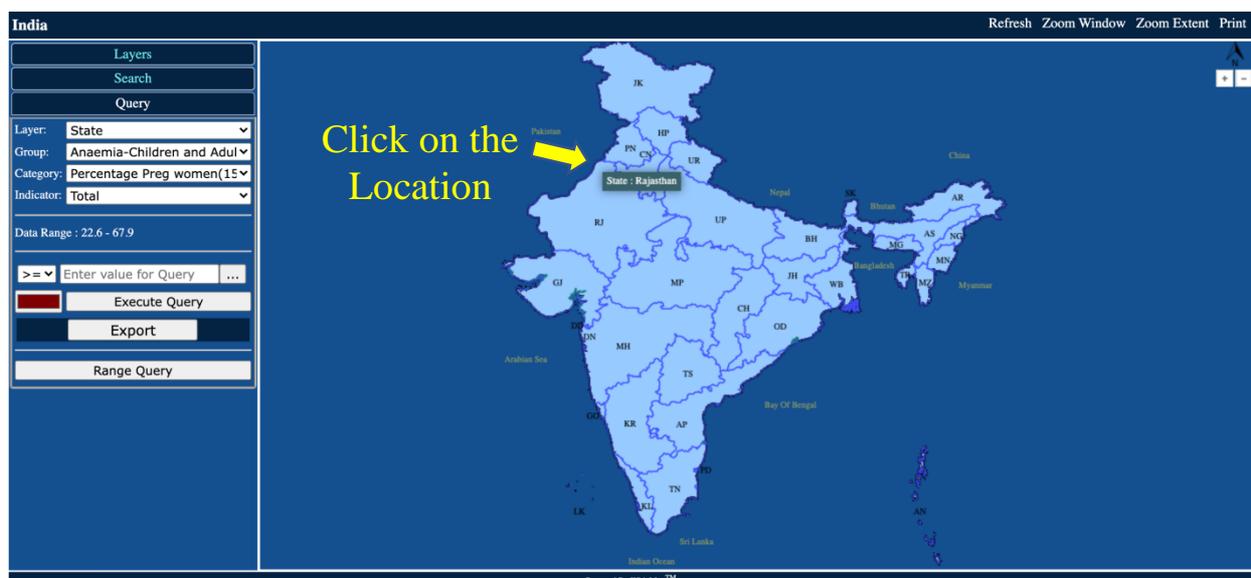


Figure 39

2. An information box appears in the Navigation panel, below the Query menu. It shows the value of all indicators under the selected category for the given State/UT.



Figure 40

4.7.2 Viewing District-level Data

1. Select 'District' from "Layers" menu. Then select the necessary Queries from the "Query" menu.



Figure 41

2. Click on any location on the map. An information box appears in the Navigation panel, below the Query menu.



District : Nashik

Indicator	Value
Total	52.8
Rural	38.9
Urban	64.1

Export

This table shows the value of all indicators under the selected category for the given District.
Here, the value of the indicators for the 'District: Nashik, Maharashtra' are shown for the 'Category: Percentage HH using Improved Sanitation Facility'

Click on "Export" to print the data.

Figure 42

4.8 Zooming and Panning Facilities

The Zooming and Panning facilities allows the User to resize and move the map so that every part of the map can be viewed, as desired. These buttons are located on the top right hand corner of the screen.



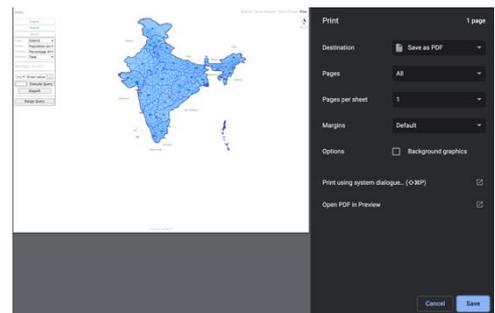
Refresh Zoom Window Zoom Extent Print

Click on this button to reset the map and to cancel all current operations

Click on the “Zoom Window” button. Click and drag the portion of the map which needs to be magnified.

Alternately,  Can be used to zoom in or zoom out

Click on this button to print the map, the following window



Click on this button to bring the map to the default size and position

PAN
Click and drag the mouse cursor to the direction, where the map needs to be shifted

Figure 43

5. Individual State Maps

1. Open the NFHS-4 GIS India homepage and click on the name of the desired State/UT.

Maps : India / States
(Click to View Map)

	States			
India	Andaman and Nicobar	Andhra Pradesh	Assam	Bihar
	Chhattisgarh	Daman & Diu	Goa	Gujarat
	Haryana	Himachal Pradesh	Jammu and Kashmir	Jharkhand
	Karnataka	Kerala	Madhya Pradesh	Maharashtra
	Manipur	Meghalaya	Mizoram <small>View Map of Madhya Pradesh</small>	NCT of Delhi
	Odisha	Puducherry	Punjab	Rajasthan
	Sikkim	Tamil Nadu	Telengana	Tripura
	Uttarakhand	Uttar Pradesh	West Bengal	

Riddhi's endeavor is to facilitate spatial analysis of these valuable datasets for better policy and programme implementation.

Useful Resources

Poshan Covid 19

Figure 44

2. The selected state/UT map will appear with District boundaries.

Madhya Pradesh Refresh Zoom Window Zoom Extent Print

Layers

State

District

Search

Query

Powered By WhizMap™

Figure 45

Follow instructions provided in [Section 4.2.2](#) to Search Locations, [Section 4.4](#) to make Simple Query and [Section 4.6](#) to make Range Query.

6. Other Useful Resources

1. POSHAN COVID-19 <https://poshancovid19.in>

Online archive for Covid-19 related resources on Nutrition, Early Childhood Development and Food Security (Supported by UNICEF, WFP, CTARA, IFPRI)

2. Development Trends : SDG <http://sdg.indiagis.org/sdgindia/home.jsp>

View SDG India Goal 1 to 16 data sources (supported by Riddhi Foundation)

3. CENSUS GIS India <http://www.censusgis.org/india/>

View Census Data on maps and compare Census data of 2001 and 2011 on set parameters.

4. NFHS-5 GIS India <http://www.nfhs5.indiagis.org/nfhs5/>

View an interactive thematic presentation of NFHS-5 Data on Maps.

7. Contact Us

Please feel free to contact us for further assistance.

Helpline support from Kolkata

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