OSM India

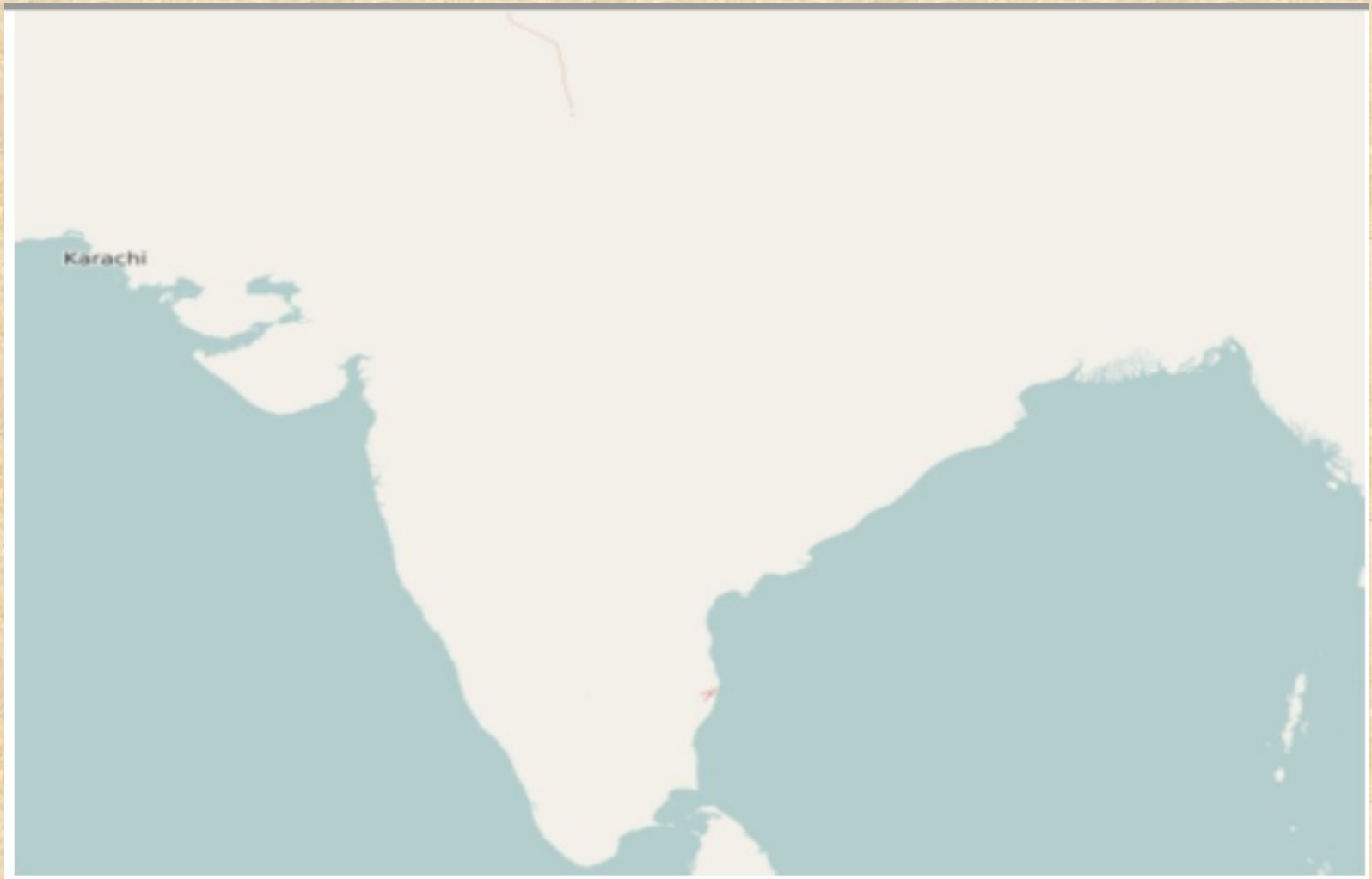
Naveen Francis

OSM Volunteer (osm username : naveenpf)
Founding Member, OpendataKerala

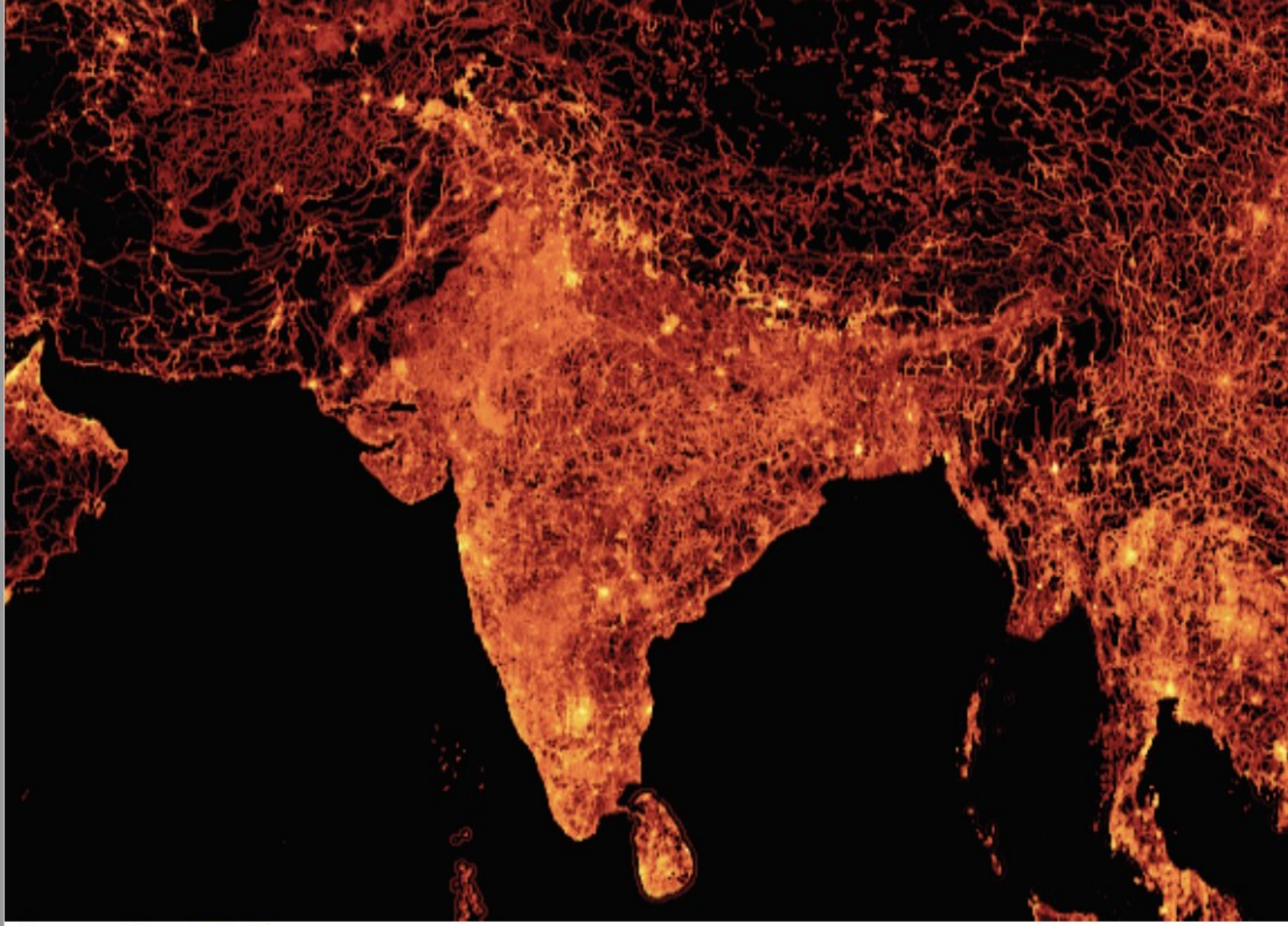
Puzzle:

1.How many districts in India are not connected with Indian Railways ?
2. Which are the taluks in Rajasthan without hospital ?

The Map

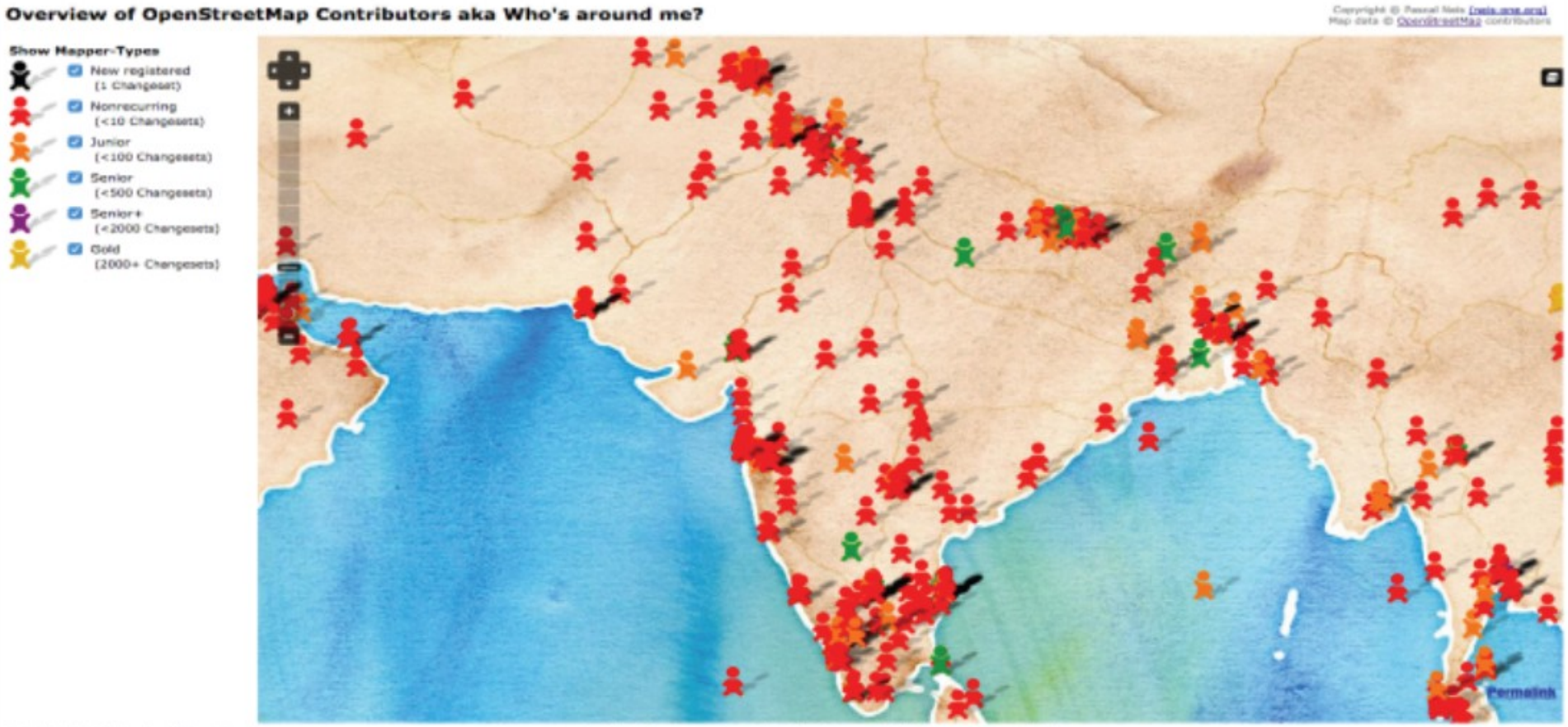


India - 2007



Source: Martin Reifer

OSM



Community!

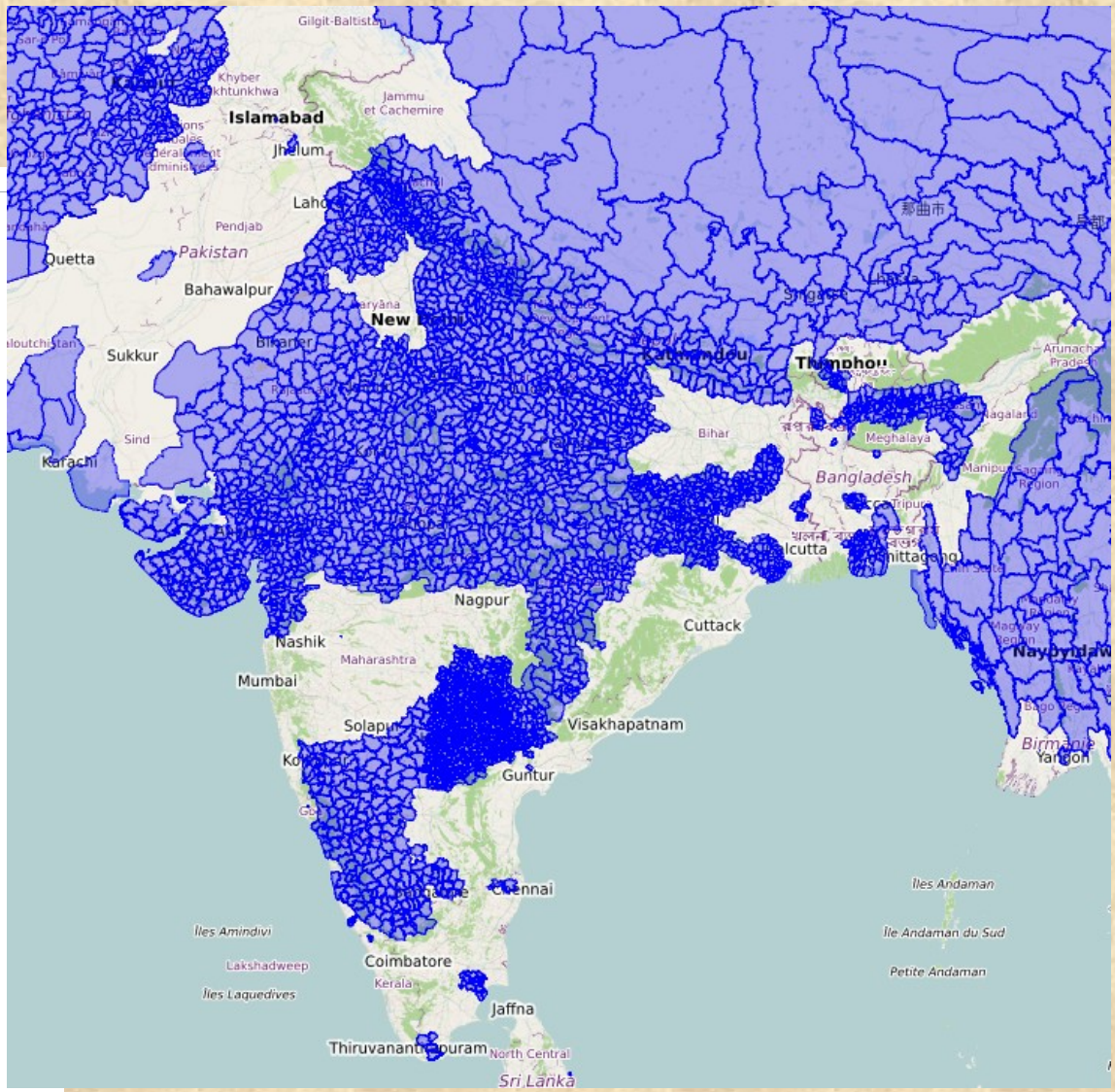
Districts in India

2024 → 785 districts,
2011 → Census of India 640
2001 → Census of India 593

https://wiki.openstreetmap.org/wiki/Districts_in_India

Sub-Districts in India

7129 taluks
6490 mapped till now



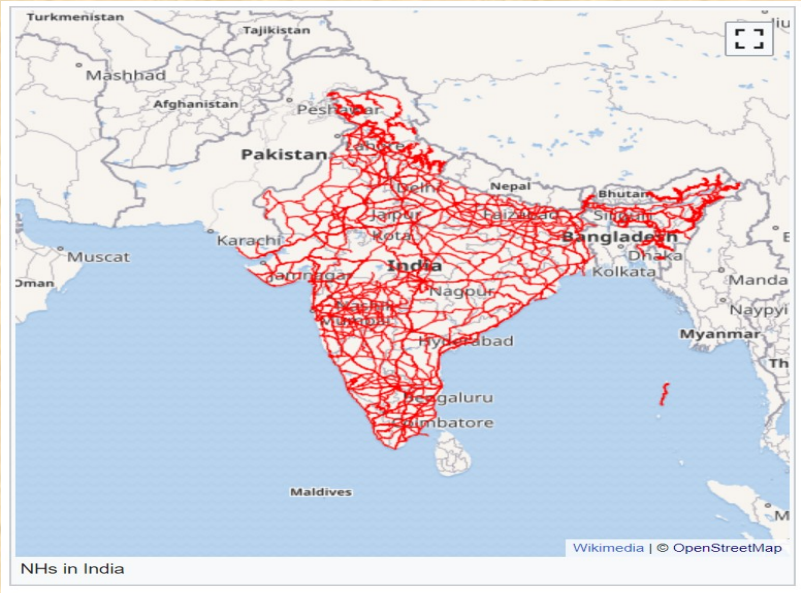
Subdistricts of India by state [edit | edit source]

As of now, there are a total of 6,532 subdistricts, up from the 5,564 in the 2011 Census of India. States use varying names for their subdistricts. Detailed information is as follows:

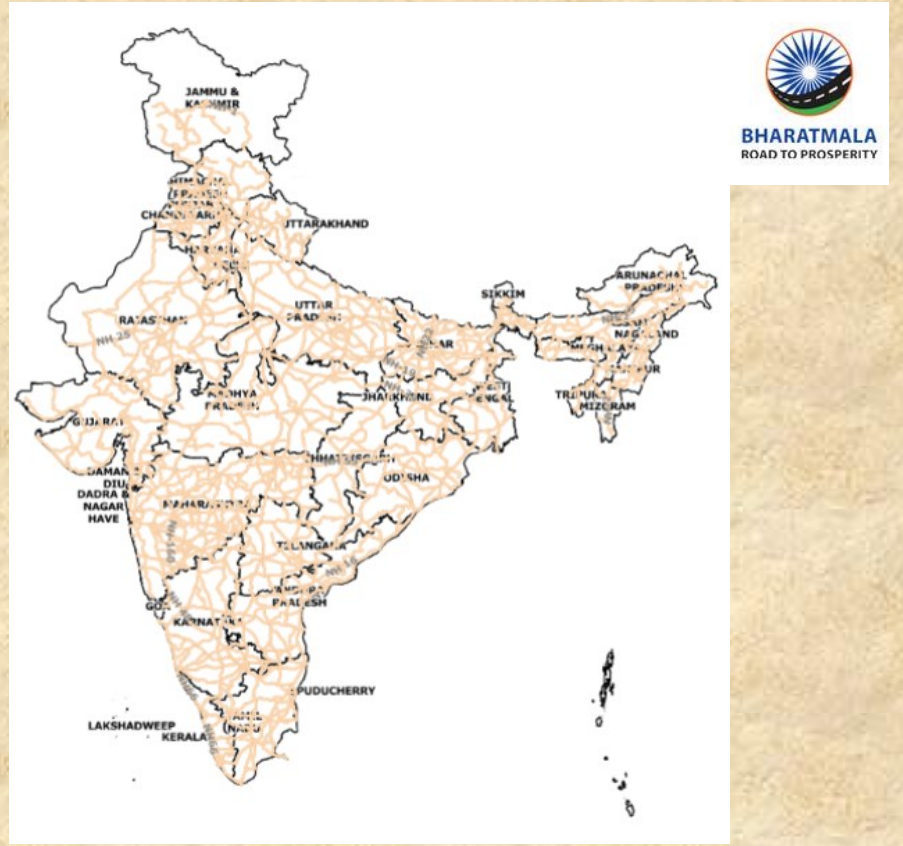
State (◊) or Union Territory (•)		Subdistricts			
Map key	Name	Count	Title[1]	Status	Notes
1	◊ Andhra Pradesh	mandal	661	✗	
2	◊ Arunachal Pradesh	circle	149	✗	
3	◊ Assam	sub-division	78	✗	
4	◊ Bihar	sub-division	101	✗	
5	◊ Chhattisgarh	tehsil	150	✗	1 not mapped
6	◊ Goa	taluka	12	✗	
7	◊ Gujarat	taluka	264	✗	10 not mapped
8	◊ Haryana	tehsil	67	✗	
9	◊ Himachal Pradesh	tehsil	117	✓	
10	◊ Jammu and Kashmir	tehsil	59	✗	
11	◊ Jharkhand	sub-division	264	✗	5 not mapped
12	◊ Karnataka	taluka	176	✗	8 not mapped
13	◊ Kerala	taluk	75	✗	
14	◊ Madhya Pradesh	tehsil	359	✗	16 not mapped
15	◊ Maharashtra	taluka	353	✗	
16	◊ Manipur	sub-division	38	✗	
17	◊ Meghalaya	sub-division	46	✗	
18	◊ Mizoram	sub-division	26	✗	
19	◊ Nagaland	circle	93	✗	
20	◊ Odisha	tehsil	317	✗	
21	◊ Punjab	tehsil	81	✓	
22	◊ Rajasthan	tehsil	304	✗	52 not mapped
23	◊ Sikkim	sub-division	9	✗	
24	◊ Tamil Nadu	taluka	201	✗	
29	◊ Telangana	mandal	589	✗	5 new not mapped
25	◊ Tripura	sub-division	78	✗	
26	◊ Uttar Pradesh	tehsil	327	✗	14 not mapped
27	◊ Uttarakhand	tehsil	84	✗	78 mapped
28	◊ West Bengal	sub-division	62	✗	
A	• Andaman and Nicobar Islands	tehsil	7	✗	
B	• Chandigarh	—	1	✓	
C	• Dadra and Nagar Haveli	—	1	✓	
D	• Daman and Diu	taluka	2	✗	
E	• Delhi	tehsil	27	✗	
F	• Lakshadweep	sub-division	4	✗	
G	• Puducherry	commune panchayat	10	✗	
36	Total for India		6532	3829	

https://wiki.openstreetmap.org/wiki/Subdistricts_in_India

National Highway Mapping



NHs in India



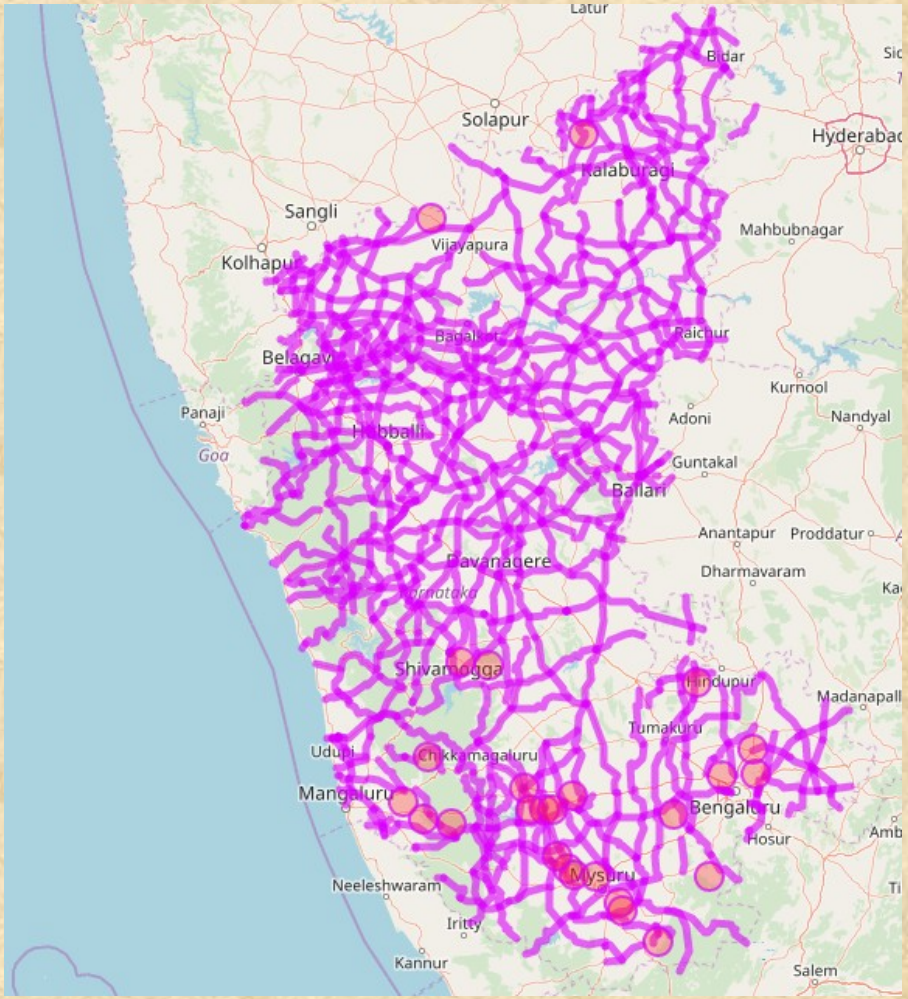
MORTH Website:- 1,44,995 km
In OSM :- 1,36,023 km

https://wiki.openstreetmap.org/wiki/India/National_Highways_(statewise)

State Highway Mapping

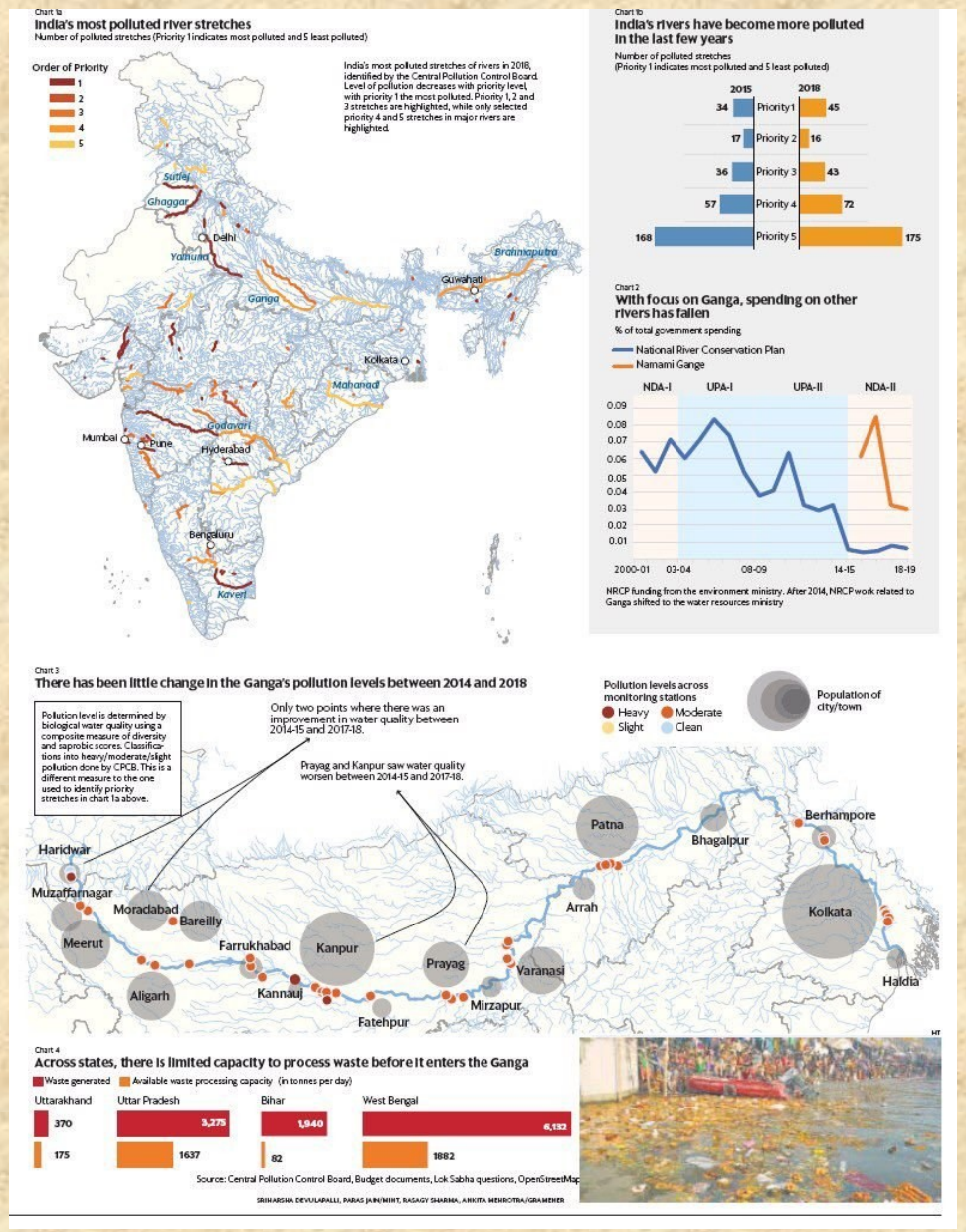
State highways [edit | edit source]

No	State	Network tag	Length official	Length in OSM	Next Task
1	Andhra Pradesh-SH	IN:SH:AP	6485		Mapping can be started
2	Arunachal Pradesh-SH	IN:SH:AR	8123		Data not available, no separate SH and MDR
3	Assam-SH	IN:SH:AS	3134	2232	unmapped 142km
4	Bihar-SH	IN:SH:BR	4253	2695.9	Mapping complete
5	Chhattisgarh-SH	IN:SH:CT	4462	2270	Mapping Complete
6	Goa-SH	IN:SH:GA	279		Data not available
7	Gujarat-SH	IN:SH:GJ	17201	13983	unmapped :354km
8	Haryana-SH	IN:SH:HR	1816	1569	Mapping Complete
9	Himachal Pradesh-SH	IN:SH:HP	1466	1038.5	Mapping Almost Complete
10	Jammu and Kashmir-SH	IN:SH:JK	130		Data not available
11	Jharkhand-SH	IN:SH:JH	1296		Data not available
12	Karnataka-SH	IN:SH:KA	19578	20930.3	Mapping Almost Complete
13	Kerala-SH	IN:SH:KL	4342	4036	Mapping Complete
14	Madhya Pradesh-SH	IN:SH:MP	11389	10087	unmapped:342km
15	Maharashtra-SH	IN:SH:MH	39000	17594	unmapped : 70km
16	Manipur-SH	IN:SH:MN	715		Data not available
17	Meghalaya-SH	IN:SH:ML	772		Data not available
18	Mizoram-SH	IN:SH:MZ	170	636.9	Mapping almost complete
19	Nagaland-SH	IN:SH:NL	722		Data not available
20	Odisha-SH	IN:SH:OR	4187	3427	unmapped = 250km
21	Punjab-SH	IN:SH:PB	1133	880.8	unmapped : 9km
22	Rajasthan-SH	IN:SH:RJ	15437.85	14820	unmapped:102km
23	Sikkim-SH	IN:SH:SK	701		Data not available
24	Tamil Nadu-SH	IN:SH:TN	11752		Mapping can be started
25	Telangana-SH	IN:SH:TG	2731	1616	Mapping Almost Complete
26	Tripura-SH	IN:SH:TR	329		Data not available
27	Uttar Pradesh-SH	IN:SH:UP	8432	4396	unmapped:5km
28	Uttarakhand-SH	IN:SH:UK	4521		Data not available
29	West Bengal-SH	IN:SH:WB	3612	3237.5	Mapping Complete
30	Andaman and Nicobar Islands-SH	IN:SH:AN	266		Data not available
31	Chandigarh-SH	IN:SH:CH	200		Data not available
32	Dadra and Nagar-SH	IN:SH:DN	28		Data not available
33	Daman and Diu-SH	IN:SH:DD	22		Data not available
34	Delhi-SH	IN:SH:DL	0		NA
35	Lakshadweep-SH	IN:SH:LD	0		NA
36	Puducherry-SH	IN:SH:PY	89		Mapping can be started
			176166	105449	



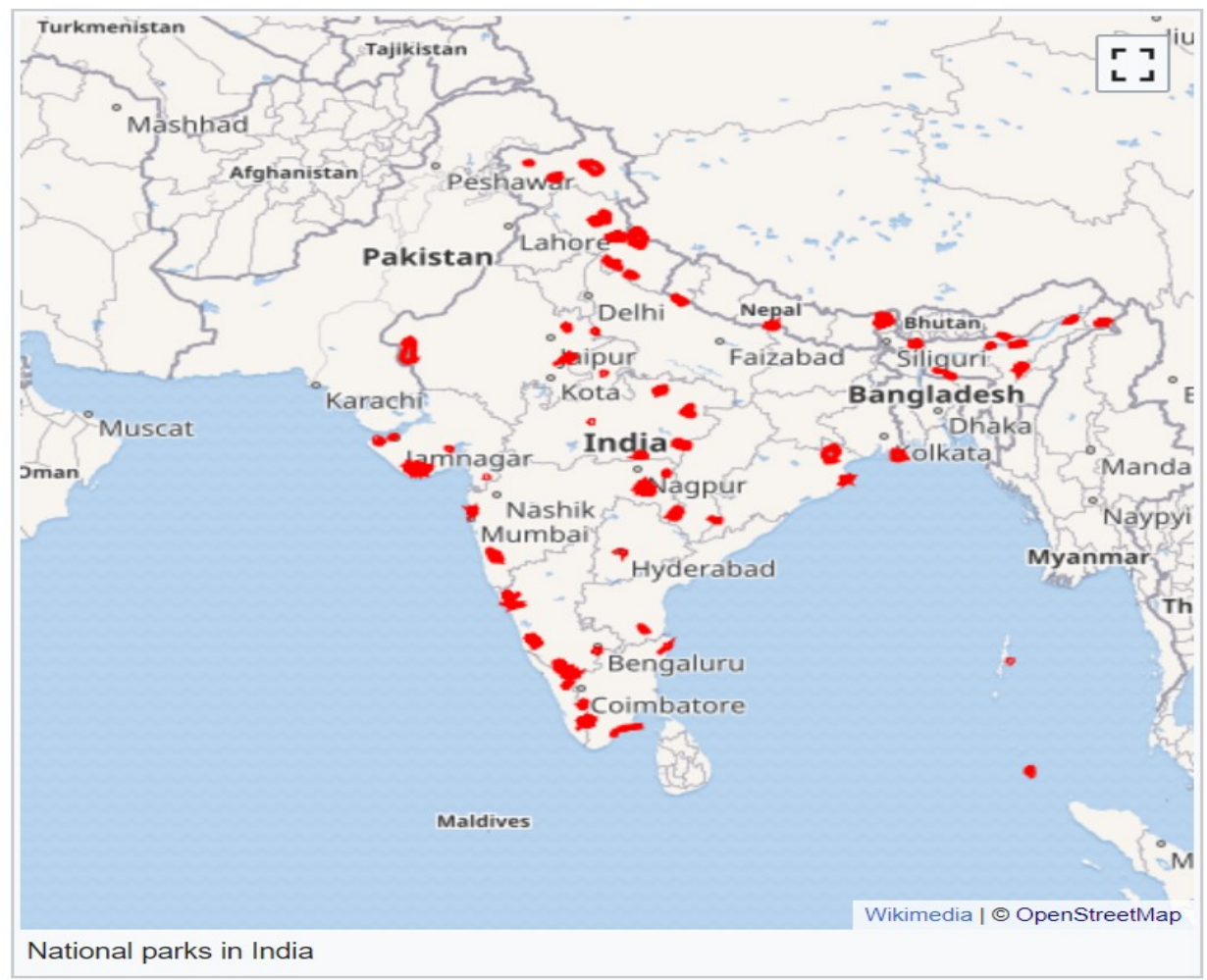
https://wiki.openstreetmap.org/wiki/India/Roads#State_highways

Water resources



National Parks in India

104 national parks
IUCN category II
protected areas

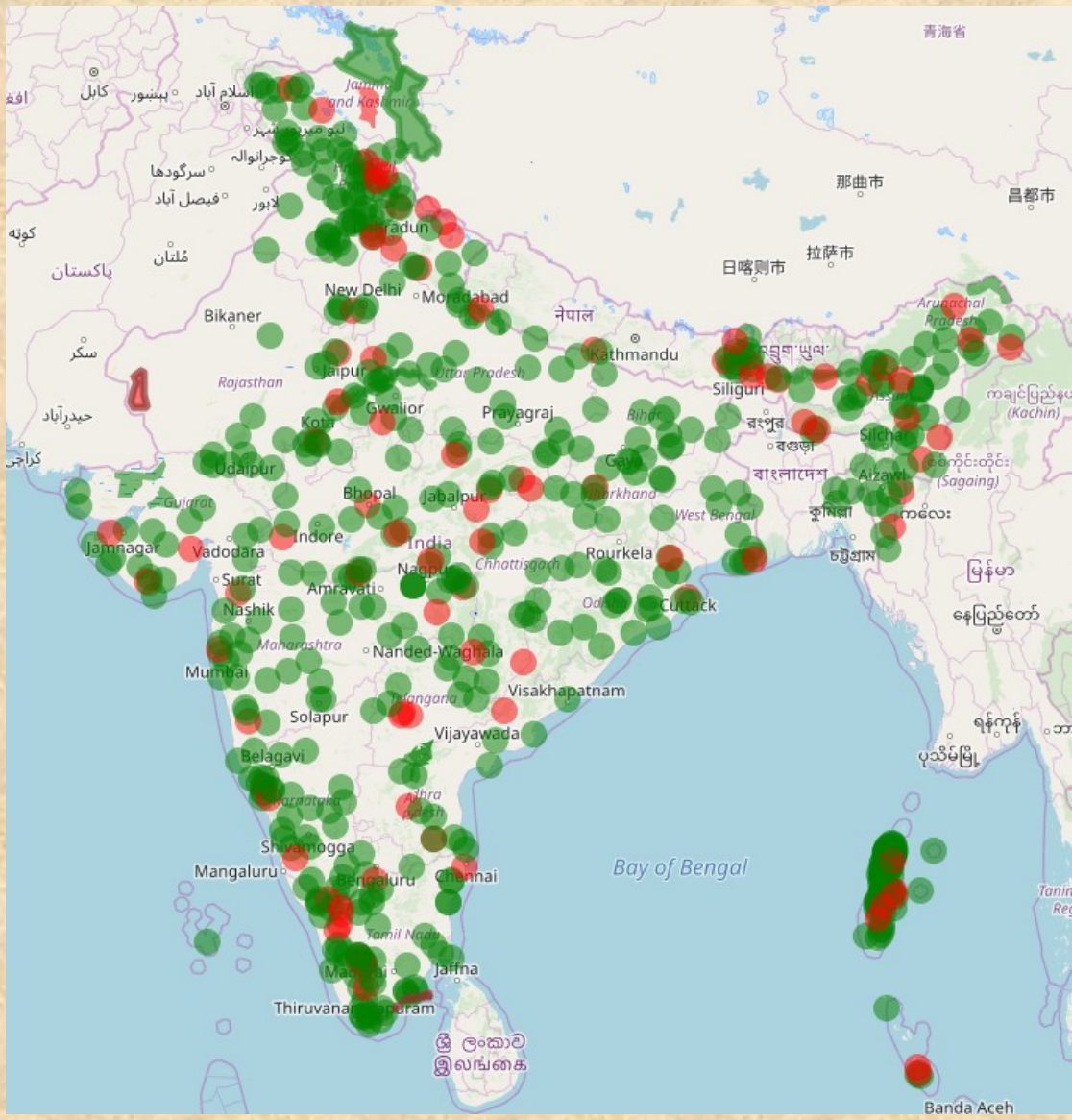


National parks in India

https://en.wikipedia.org/wiki/List_of_national_parks_of_India

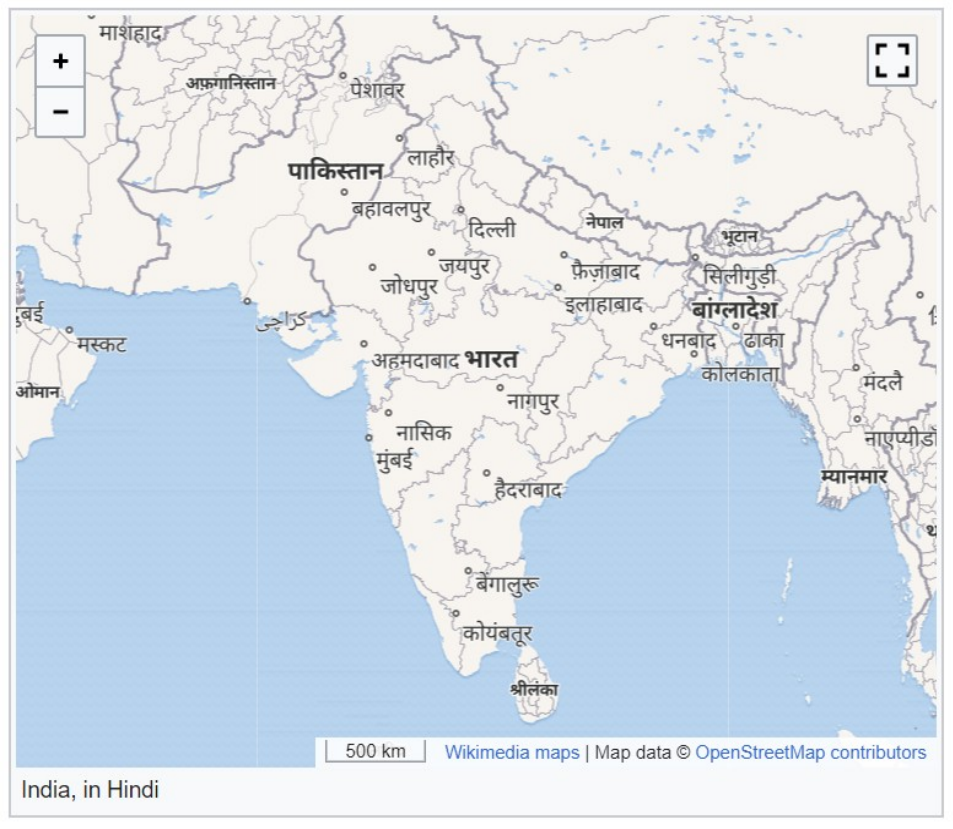
Wildlife sanctuaries in India

- **IUCN category IV protected areas**
- **543 wildlife sanctuaries referred to as wildlife sanctuaries category IV protected areas.**

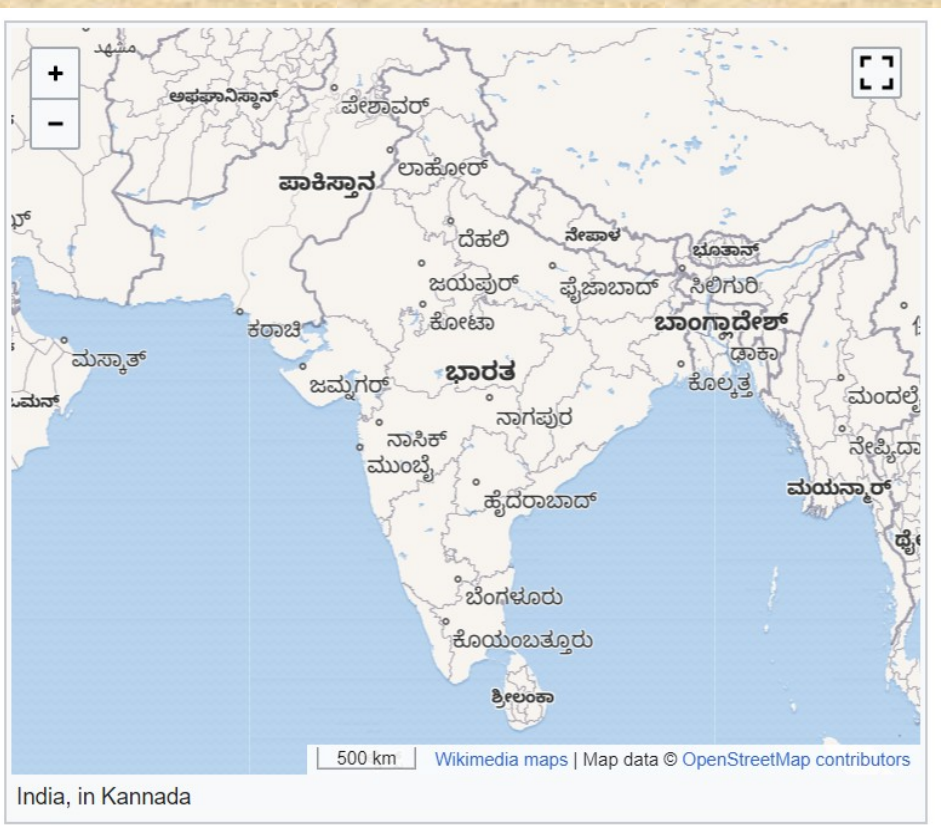


https://en.wikipedia.org/wiki/List_of_national_parks_of_India

Map internationalization



India, in Hindi



India, in Kannada

<mapframe latitude="21" longitude="78" zoom="5" text="India, in Hindi" zoom="4" width="500" height="400" align="left" lang="hi" />

276 Wikipedias !!!

Wikimedia Maps

- OSM powers WMF's **Kartotherian** map tile service, which is used by the **Kartographer MediaWiki extension** and almost all other interactive maps on Wikimedia projects.
- Map internationalization launched everywhere—and embedded maps now live on 276 Wikipedias

Linked Open data (LOD)

Tim Berners-Lee, the inventor of the World Wide Web and initiator of the W3C Linked Data project, suggested a 5 star deployment scheme for Linked Open Data.

1. On the Web
2. Machine-readable
3. Open data format
4. In RDF (use IRIs)
5. Linked to other datasets

List of urban local bodies in Kerala [edit | edit source]

1 language

Article Talk | Read Edit Edit source View history Page Tools TW

A stub-class article from Wikipedia, the free encyclopedia

(Redirected from Municipalities of Kerala)
Wikidata: Municipalities of Kerala (Q1749047), *no description given*
Aliases: None

Kerala has an urbanisation rate of 47.42%, as compared to the national rate of 31.16%, making it the 2nd most urbanised major state in India. Within Kerala, the rate of urbanisation varied from 3.9% in Wayanad district to 68.1% in Ernakulam district.[1] Municipalities are the urban local governments that deal with civic functions and local development functions in the municipal area. The state of Kerala has 87 municipalities and six municipal corporations.[2] With 13 municipalities, the district of Ernakulam has the most municipalities in the state.

History [edit | edit source]

The urban councils of Kerala date back to the 17th century when the Dutch Malabar established the municipality of Fort Kochi. In 1664, the municipality of Fort Kochi was established by Dutch Malabar, making it the first municipality in Indian subcontinent, which got dissolved when the Dutch authority got weaker in 18th century.[3] However, the first modern kind of municipalities were formed in the state in 1866 in Malabar District. In 1866, Fort Kochi municipality was reestablished. Kannur, Thalassery, Kozhikode, Palakkad, and Fort Kochi, which were parts of Malabar District until 1956, were made the first modern municipalities of Kerala on 1 November 1866, according to the Madras Act 10 of 1865 (Amendment of the Improvements in Towns act 1850)[4][5][6][7] of the British Indian Empire.

Enactment of the 74th Constitutional Amendment Act, 1992 [edit | edit source]

The 74th Constitutional Amendment Act, 1992 provided for a national framework for municipal governance in the country, and Kerala has been following that pattern since 1994. Consequent to this amendment, several changes have occurred in the functions, powers, and responsibilities of the municipalities, and the states had to make necessary amendments to the legislation on the local governments in the respective states. The Kerala Municipalities Act of 1994,[8] enacted as per the constitutional amendment, governs the pattern, functions and services of the municipalities in Kerala. The act, which was integrated for the municipalities and corporations in the state, laid out the constitution of the town panchayats, municipal councils, and municipal corporations.[*citation needed*]

Prior to this, the urban areas of Kerala were governed by the following acts, which were repealed when the Kerala Municipality Act, 1994 was introduced:[9]

- Kerala Municipalities Act, 1960
- Kerala Municipal Corporations Act, 1961
- Guruvayur Township Act, 1960

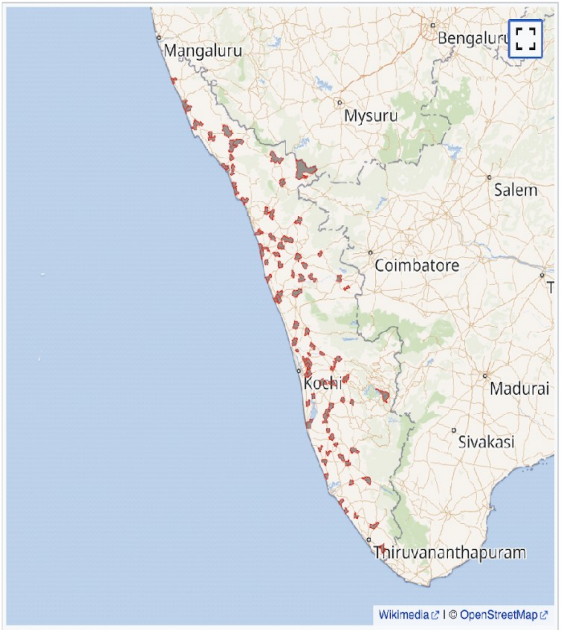
Hence, instead of having separate acts for municipal corporations and other types of municipal bodies, from 1994 Kerala has the same act to govern all its municipal bodies. Since then, the structure of municipal bodies has essentially remained the same, even though the urban areas have multiplied. The 74th amendment[10] to the Constitution of India resulted in increased roles for the municipalities in every state in India, where they have been perceived to be great contributors to the social and economic development of the country, as they are the level of government that is closest to the citizens.[*citation needed*]

Structure [edit | edit source]

The Kerala Municipality Act 1994 envisage creation of three kinds of urban local governments

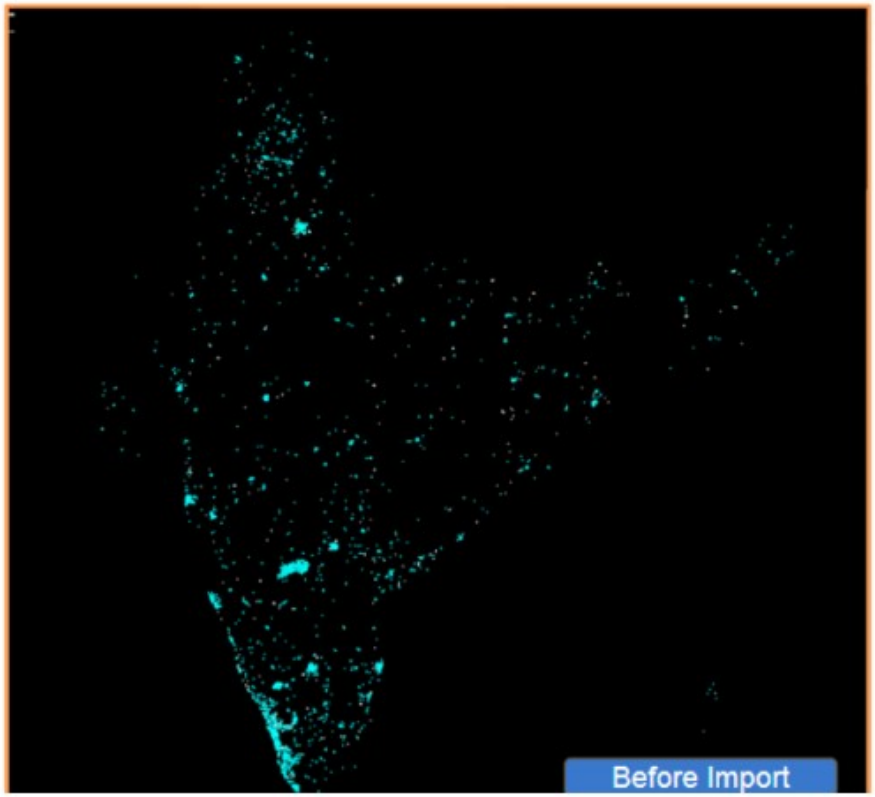
- Town panchayats for transitional areas.
- Municipalities for less urbanised areas and
- Municipal corporations for more urbanised areas.

Kerala has not created any town panchayats so far.



Municipalities in Kerala

Health Facilities Import



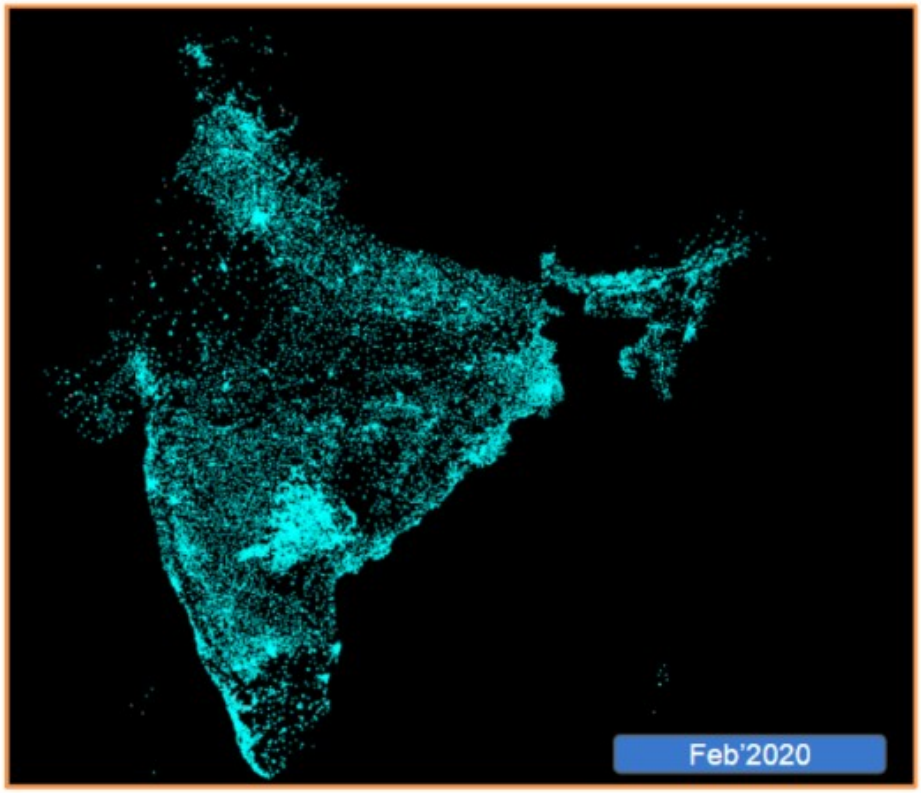
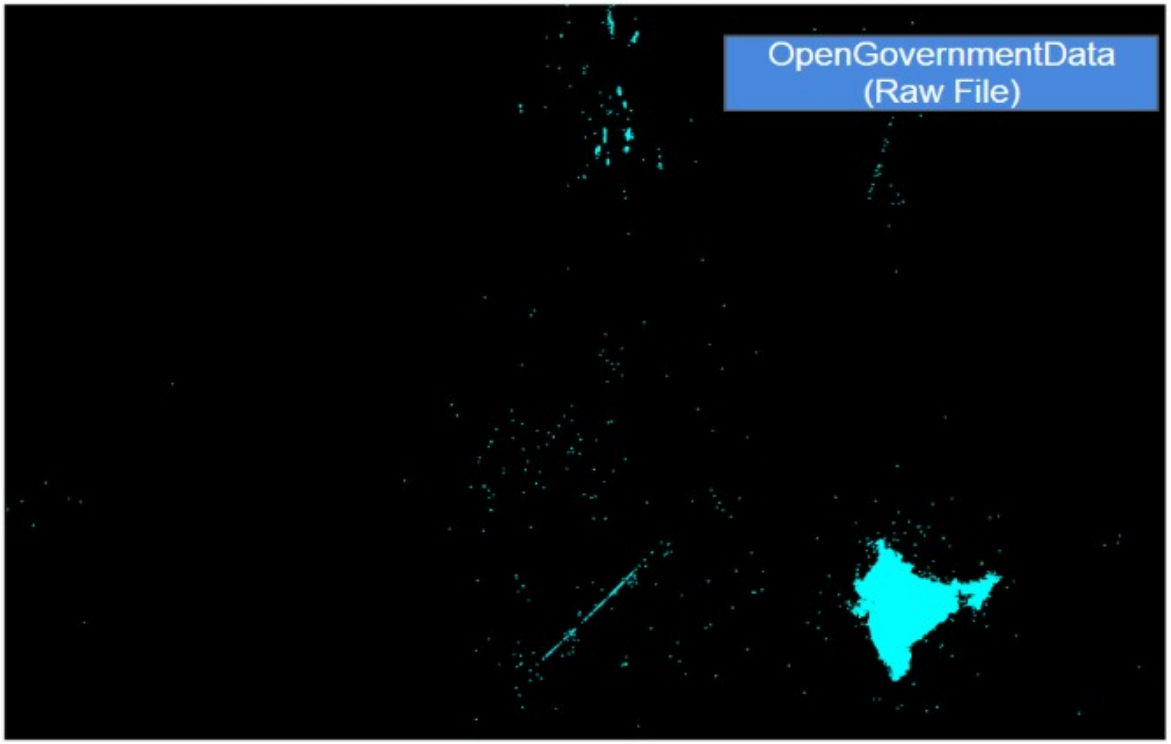


Fig13: Showing the before import and Current data of the health facilities in India

https://www.openstreetmap.org/user/OSM_RMSI/diary/392364

Challenges



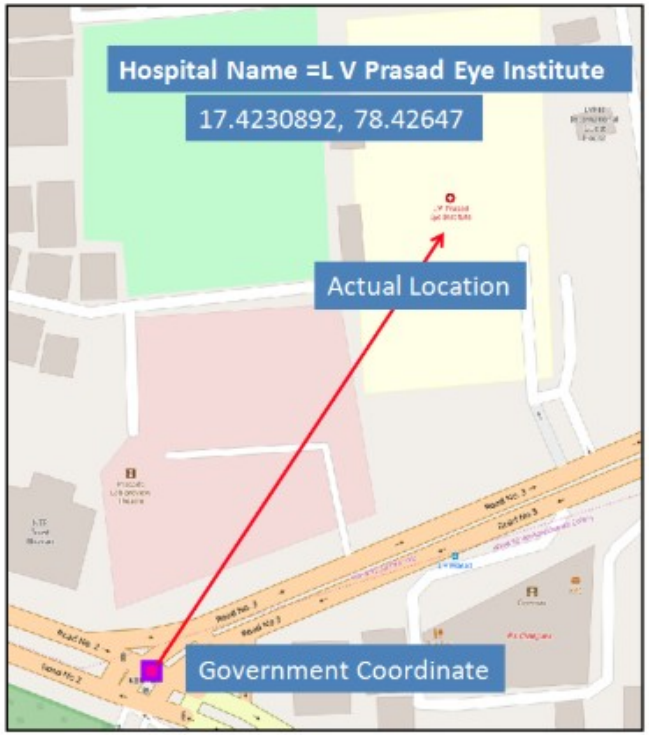


Fig1: The raw OGD data and positional accuracy

Mapathon Kerala

- It is being coordinated by the Kerala State IT Mission, with the concept of Let Us Make Our Map.
- Through the Mapathon Keralam, the Government of Kerala aims to create extensive local maps of Kerala including physical infrastructure natural resources and other information that are useful for planning and other developments.
- The project is being led by the Kerala State Spatial Data Infrastructure (KSDI) under the Kerala State IT Mission and supported by other institutions
- OSM Kerala community members urgued the need of improvement of OSM data in Kerala post floods in 2018.
- Community members sumbitted the proposal to release important datasets in Opendata license.

https://mapathonkeralam.in/

Mapathon Kerala

MAJOR ACTIVITIES

- Promotional Material Development
- Technical Infrastructure Development
- Training/ Workshops
- Recognitions and rewards
- Pilot Projects
- Panchayath Mapping sessions
- Municipality Mapping sessions
- Corporation Mapping sessions

Trainings

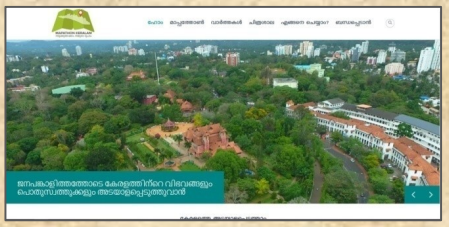
Master Training for NSS – (109 Nos)
Geography/Geology Trainers - (128 Nos)
Government Departments – (517 Nos) Other
Trainer Training – (129 Nos)
NSS MK Campaign training – 7 Nos (1101 Nos)
Internship Training programs – (280 Nos)

Recent updates in OSM

+55,150 Buildings
+38,100 Km Stream/Rivers
+1308,000 Km Road
+94,800 Amenities
+10,600 Schools
+1,375 Quarries
+27,000 Ponds
+2,706 Akshaya Centers/Sub-centers
+950 Police Stations
+1,151 Public Health institutions
+5,500 New Mappers in OSM.

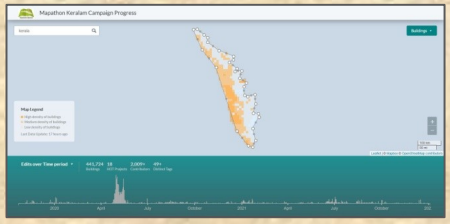
Mapathon Kerala - Major Tools Developed

- Mapathon Keralam Webportal
- Mapathon Keralam Tasking Manager
- Mapathon Keralam Analytics - Campaign Progress Tracking System
- Mapathon Keralam PoI Data Capture System
- Geo-spatial Survey Application
- Mapathon Keralam Leader Board
- OpenStreetMap Tile Server

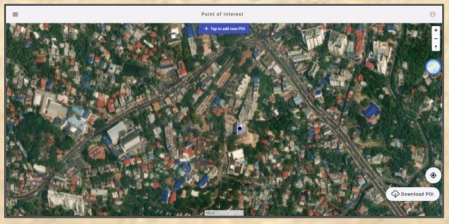


MK Webportal

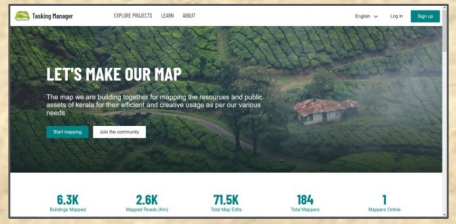
OSM Tile Server



MK Analytics



MK PoI Mapper

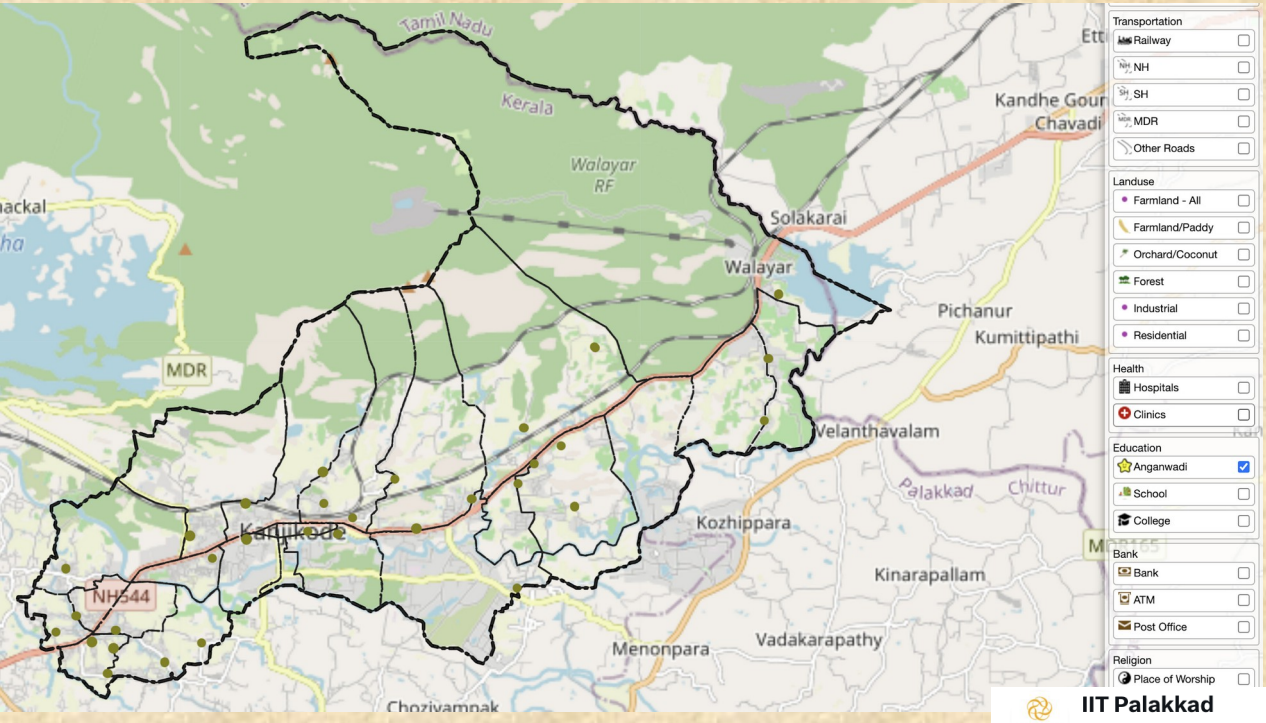


MK Tasking Manager

Pudussery Panchayat Mapping

IIT PALAKKAD

- Creation of selected geo-spatial open data set for Pudussery Grama Panchayat using Community Participatory Mapping



https://ogd.iitpkd.ac.in/pudussery/

IIT Palakkad
@PalakkadIIT

IIT Palakkad Unnat Bharat Abhiyan, in collaboration with Open Data Kerala, has recently organized a Community-driven mapping project for Pudussery Gram Panchayat using Open Mapping GIS Technologies.

For more details, check out ogd.iitpkd.ac.in.

2:30 PM · Aug 18, 2022

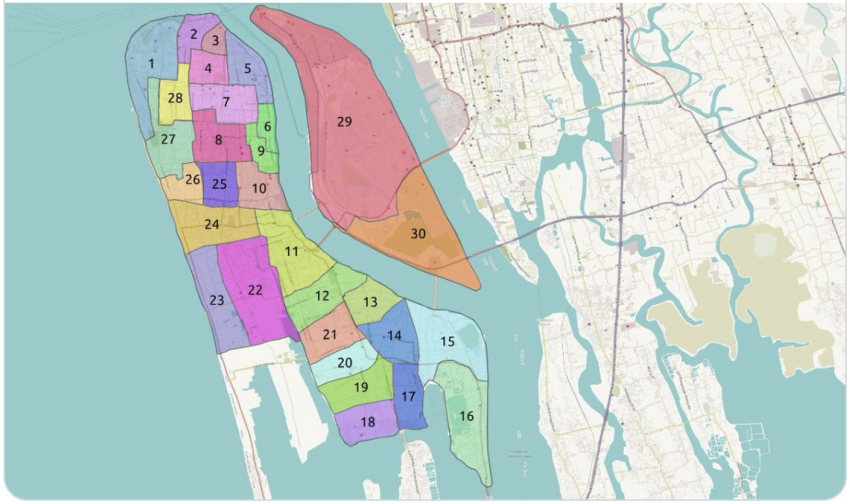
Data used

- Kerala Rescue – Flood 2018
- Covid19Kerala
- CoronaSafe Network
- Kerala Local body elections 2020

Snehil Kumar Singh
@snehil0802

Community participation for creating tools for better decision making. Hoping to see the final result soon, so as to use it. Possible integration with hotspots.coronasafe.network #kochi #map #kerala

> **Manoj Karingamadathil** @manojkmohan · Aug 7, 2020
> After release our hotmap of Kerala LSG at covid19kerala.info there is high community requirements in ward level data visualization. My experiment with @openstreetmap in Kochi Corporation for hotspots.coronasafe.network with @naveenpf #covid19kerala #covid19india #osmkerala



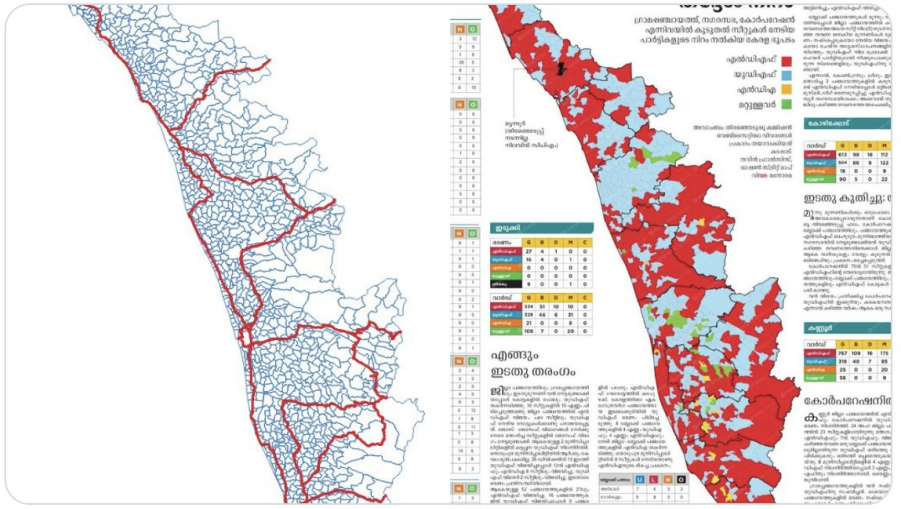
10:42 AM · Aug 7, 2020 from Kanayannur, India

Anivar Aravind
@anivar

@opendatakerala Community built Kerala LSG boundary maps prior to Election and released Datasets

opendatakerala.org/post/2020/10/3...
Today Manorama Published a result map based on this boundary data
public.flourish.studio/visualisation/...

#OpenStreetMapKerala



11:18 AM · Dec 17, 2020

Companies working from India

data.gov.in

Open Government Data (OGD) Platform India

Topics of the most popular open datasets

1		**Police and crime:** Police incidents; jail bookings; police station locations; crime statistics
2		**Transportation:** Taxi licenses; transit data; traffic counts; road infrastructure data; parking data
3		**Emergency calls:** Police, fire, and EMS responses; 911 calls; response times; incident reports
4		**Development:** Commercial developments; housing developments; property data; housing affordability
5		**Building safety:** Building permits; safety permits; certificates of occupancy
6		**Finance:** Revenue; spending; employee salaries; capital budgets; payments
7		**Elections:** Election results; polling locations; campaign finance reports
8		**Businesses and licenses:** Business licenses; liquor licenses; vendor, contract, and procurement data
9		**Inspections and service requests:** Restaurant health inspections; 311 requests; code violations
10		**Education:** Schools information; student health data; after-school programs; library locations

https://data.gov.in/

data.gov.in

Open Government Data (OGD) Platform India

- Admin Boundaries:- Districts,Taluk,Village
- Political Boundaries:- Lokshaba Constituency, Assembly Constituency, Local Government Boundaries.
- Schools Locations
- PIN boundaries
- Fire and Rescue station's locations
- Police stations boundaries
- Financial Insitutions – Banks, ATM location

data.gov.in

Open Government Data (OGD) Platform India

- Building Opendata communities like datameet, opendatakerala.
- Celebrating Opendata Day
- Enaging Opendata Volunteers during disaster management and building resilient comunities.
- Opendata State Ranking.
- Pushing state governments and local bodies to incorparate opendata policy.

OSM India

Website:- http://openstreetmap.in

Facebook:- OSM India Facebook group

Twitter:- https://twitter.com/osm_in

Forum:- Indian OpenStreetMap Forum

Github:- https://github.com/osm-in

Public Mailing List:- https://lists.openstreetmap.org/pipermail/talk-in/

Thank you

Sundar Pichai
@sundarpichai

To help those working to combat #COVID19, we're making a hosted repository of public datasets including those from @JohnsHopkins, @WorldBank & @OpenStreetMap, free to access and query through the COVID-19 Public Datasets Program.
console.cloud.google.com/marketplace/de...

From cloud.google.com

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Puzzle Answers

- Taluks in India without hospital - https://overpass-turbo.eu/s/Xe5
- How many districts in India are not connected with Indian Railways? - https://overpass-turbo.eu/s/Xg4

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