Elevating Geographic insights : Harnessing Citizen Science Through OpenStreetMap

Akhil Krishnan S

OpenData

Data - Everywhere and all the time

Accessible, exploitable, editable and Interoperable

"Data belongs to the human race".

Data.gov, Data.gov.uk and Data.gov.in

Geographical data

Data that is associated with a specific location on Earth's surface

Coordinates (latitude and longitude), addresses, place names, boundaries, elevation, land use, transportation networks

Urban planning, environmental management, transportation, agriculture, and emergency response.

OpenSteetMap

Wikistyle approach on geodata

2004 - Steve Coast

Ordnance Survey data was expensive

Everybody can contribute

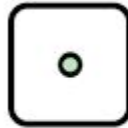Open Data Commons Open Database License (ODbL)

Statistics

- 11 million registered users (2023-09)
- 7.4 billion nodes (2022-01-10)
- ≈4 million map changes/day

Basics

Nodes, Paths, Relations

Data Models - Data described through tags

Node   Way   Relation

Case Studies

OSM Kerala Mapathon during Kerala floods in 2018

Open Street Maps help tackle disasters: Experts

DC CORRESPONDENT
BENGALURU, NOV. 20

Maps come in handy when you have lost your way, but they can also be great tools during natural disasters, like the recent, unprecedented floods in Kerala. During the disaster, 2,200 mapping volunteers from around the world added 4,00,000 data points to the Open Street Map, helping the government reach relief fast to the affected, said Manoj Karingamadathil.

On Tuesday, over 300 mappers from 12 countries got together in the city to discuss and present innovative solutions to mobilise, sustain and grow more inclusive open mapping communities. The event, hosted at the Indian Institute of Management-Bangalore, deliberated on how mapping is being used for disaster management in Asia, the role of local languages in tagging places, methods to sustain the community and others.

Speakers showed how participatory maps were used to bring to light lapses in delivery of civic services. The maps, used both in rural and urban areas, brought out issues at the neighbourhood, city, state and national levels.

For instance, Anindita Nayak explored safety in public spaces in Bengaluru by mapping lack of streetlights. Ankit Bhargava presented how Open Street Maps led to a participatory design process to create a very detailed and informative public map of Cubbon Park. Jaisen Nedumpala, a panchayat officer from Koorachundu in Kerala, used open source tools and community participation to fix land record boundaries for the village. Harry Mahardhika Machmud shared his experience on how citizen-led surveys in Indonesian cities helped the government prepare disaster response maps.

Dr Anita Patil-Deshmukh, the first keynote speaker, said that official maps did not account for the majority of under-served communities in Mumbai. These people felt empowered through community-based mapping and it helped them engage better with stakeholders for effective delivery of services.
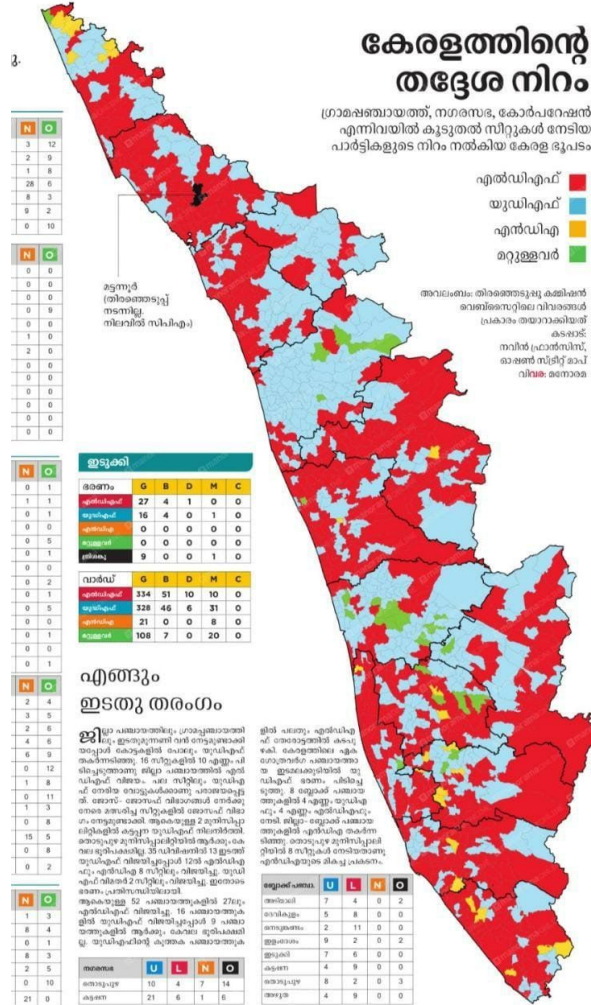
Other speakers supported Dr Patil-Deshmukh's call to create more capacity within grassroots communities. Airin Akter stressed on the importance of maps in local languages for effective dissemination of public information in Bangladesh.

Pradip Khatiwada spoke about the need to create innovative training and internship programmes, digital activism, and demonstrated how maps have been used successfully in Nepal. Siddharth Hande, the closing keynote speaker, affirmed the need to empower communities through data-driven initiatives in his engagement with cyclical waste management economies.

Jointly organised by the Centre for Public Policy and the Centre for Software and IT Management (CSITM) of IIMB, Open Street Map (OSM) India, and Centre for Internet and Society, the inauguration of the event itself added meaning to the purpose as Prof. Abhoy K. Ojha, Dean of Academic Programmes at IIMB, contributed to the OSM project by adding the name of the building where the conference was hosted.

Case Studies

Kerala Local Body Elections 2020

Case Studies

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Case Studies

Koorachundu Village Panchayat Mapping Party by the community

Case Studies
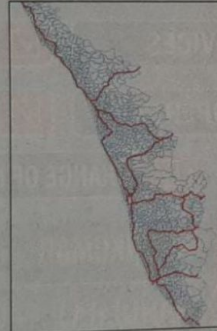
Map Kerala -

https://map.opendatakerala.org
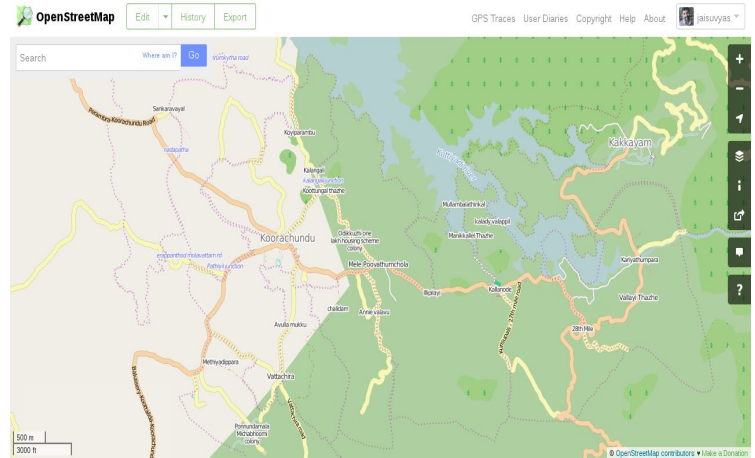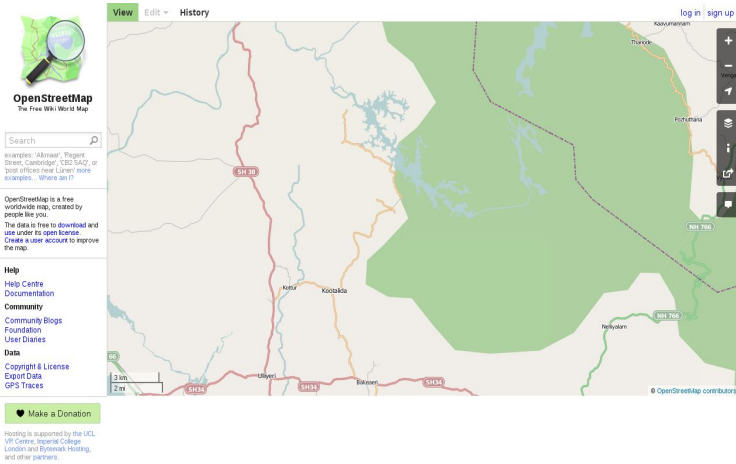
Open data maps of local bodies created

TIMES NEWS NETWORK

Kochi: Open street mapping (OSM) community in Kerala has created geospatial open data maps of all local bodies in the state numbering over 1200. The maps would be released as a public repository on Kerala Piravi on Sunday.

The maps are useful in presenting spatial or geographic data as interactive maps and infographics that tells stories and reveals patterns.

While institutions like Information Kerala Mission (IKM) and Kerala State Remote Sensing and Environment Centre (KSRSEC) had prepared local-body boundary maps up to ward levels, their non-availability on public domain and their unwillingness to share them with other departments had caused much difficulties.

Interestingly, most of the mapping using publicly available documents was carried out by a German national, Heinz Vieth, who volunteered to help the community.

"The mapping exercise took around four months. We launched the initiative as open maps for layering data related to Covid-19 as it was not publicly available," said Naveen Francis, one of the key volunteers for the project.

While the maps were created by Francis, Manoj Karingamadathil and Heinz Vieth, OSM volunteers in the state helped in naming and tagging.

"Kerala and Rajasthan were the most awesome regions in India. I am helping to map India as a sign of gratitude," said Vieth.

Once ward-level layers are added, such maps would also be useful during local-body elections. "Volunteers have already created ward-level digital maps for Kan-hangad municipality and Kochi corporation and ward-level maps would be available soon," said Karingamadathil. The vector maps are also being added to Wikipedia pages of panchayats in the state.

The community had been requesting authorities to release such maps in machine readable format under open data licence since long but this was never done. The maps generated by the community would be available for download under Open Database Licence (ODbL) on websites openstreetmap.org and opendatakerala.org.

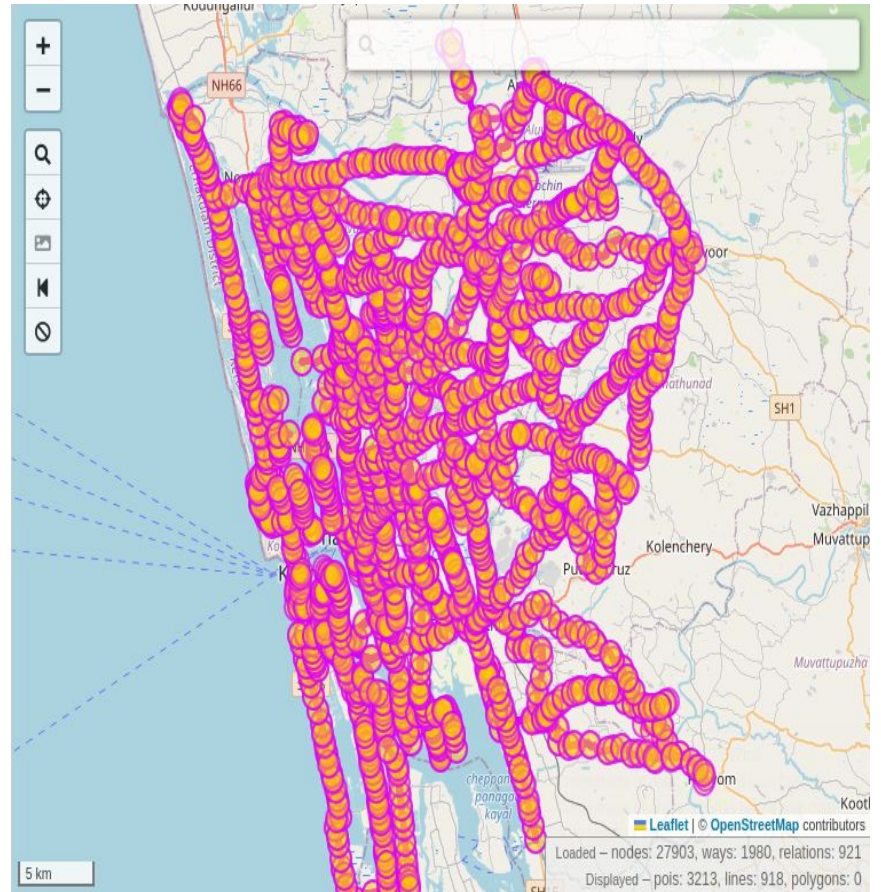*The maps would be released as a public repository today*

Case Studies

Kochi Public Transport

Bus, Ferry, Metro

10,400 KM

2782 Busstops

442 Busroutes

Ongoing

Major District Roads (MDR) network of Kerala

27,470 km of MDR road network that consists of 5784 number of stretches roads of Kerala

Mapping Ramsar Sites of Kerala

1600 sq.km data

Public Transport Data Generation in Trivandrum

Editors

Desktop
    iD
    Potlatch
    JOSM

Mobile
    Vespucci
    StreetMap

Community

http://kerala.openstreetmap.in/

https://opendatakerala.org/

https://wikimediakerala.in

https://t.me/osmkerala

WIKIMEDIANS OF **KERALA** USER GROUP

OpenDataKerala

OpenStreetMap Kerala