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Bangalore Mirror

A bunch of Bengalureans are working overtime to map the city's problems

By Barkha Kumari, Bangalore Mirror Bureau | Nov 26, 2018, 06.00 AM IST

In 2016, citizen forums and OSM community mapped 900 garbage dumpyards in the city

Mapping is a serious hobby and these citizens have mapped everything from defunct streetlights to garbage dumps. So why aren't we using their data?

Fed up with the poor lighting along Outer Ring Road, Anindita Nayak decided to map the reality. Quite literally. With pen, paper and her phone, she set out to survey streetlights along Marathahalli-Silk Board, Sarjapur Road, and HSR Layout in May this year. The product manager ended up with more grey dots than orange ones on her map, that is 655 defunct lights and 401 functional ones, respectively. She then complained at the BBMP portal and tweeted to the city mayor. "No one took action," she recalls, "but I also didn't follow up," she admits. Citizen groups, however, continue to cite her work, cleverly called The Silence of the Lamps.

Nayak, 27, is one among a million people around the world who are using their hobby of mapping to navigate better, to aid civic agencies, research projects, and relief efforts, and to tell stories. Nothing is too small or insignificant for them. From maps on areas under glaciers or malarial attack to the number of garbage dumpsites in a locality or plates in a restaurant (a popular joke in Germany!) – These and more have been plotted by citizens in between their jobs by doing field surveys and using existing data, satellite images, GIS devices, drones, and other apps. Many conduct mapping workshops too.

Over the past weekend, 280 mappers, from 12 Asian countries, gathered at IIM Bangalore for State Of The Map Asia 2018 conference. It also marked the 10 years of 'open street mapping' in the country, which is what these participants do.

By you, for you

So what is OpenStreetMap, or OSM? It is a free, editable map of the world made entirely by citizens, unlike Google Maps that is run and owned by an American company. Basically, it is the Wikipedia of maps – open and crowdsourced. And everybody from tech giants like Facebook, Apple, and Uber to governments in the US, Germany, and Argentina are using the community data in varying degrees. Why, because, it is free, it is constantly updated, and yes, it is a goldmine of local information. That 'variety' was on full display at the conference, ranging from maps that saved lives during the Kerala floods to maps that illustrate the use of Yamuna river in Delhi, maps for biodiversity conservation, maps about travel, and how Siddharth Mathur's company is using open data to determine the patterns of mobile Internet connectivity.

City connect

Bengaluru has close to 120 mappers. Jinal Foflia, 25, is one of them. "I have been mapping road network in the city since 2015, things like turn restrictions, lanes, sidewalks, junctions. I have also mapped amenities like restaurants, gardens, hospitals and added notes about their timings, cuisines, floors. Since I am also an OSM editor, I verify changes made on the maps. Last year, when Church Street was temporarily closed for renovation, we put the tag of 'Highway=Construction' against it. But since a lot of friends were still using it, we removed the tag," shares Foflia, who is part of the communication working group of OSM Foundations, and is an editor of weeklyOSM, a newsletter.

Yogesh KS has been mapping roads too for the past four years, but all over Karnataka. "I have mapped roads connecting more than 2,000 villages to state and national highways. I did that by biking around, by studying the data of Karnataka Public Works Department, and by building on the work of a map contributor." But his map of 1,000km is a work-in-progress. "A map is never complete because the world around us is always changing and will," says Yogesh, who works as a technical associate with a not-for-profit company. Also to his credit is a map in Kannada language, which he made in 2015 even before Google did.

Then Sajjad Anwar, a cartographer and developer, has studied and plotted the bus routes in Bengaluru as well as the network of Indian Railways. "According to BMTC, we have 2,300 bus stops in the city. The ground reality is different. We probably have over 7,000 bus stops," informs Anwar. Then Chetan Gowda and two OSMers have mapped the 385 banyan trees planted along the highway between Hulikal and Kudur in the state.

You see, collaboration is key. So, in 2016, citizen forums and OSMers got together to locate 900 garbage dumps in Bengaluru for the Blackspot Mapping Project. And last year, they joined a citizen science initiative to count more than 7,000 trees in the city.

What next?

I have mapped roads connecting more than 2,000 villages to highways in Karnataka. I did that by biking around, by studying the data of PWD, and by building on the work of a map contributor

– Yogesh KS

Surely these maps are valuable, but who's using them? Why is everybody chanting Google Maps instead?

Arun Ganesh, a cartographer who's been contributing to OSM for over 11 years, admits, "For now, it's mostly the OSM community. We'd like the general

public to use it too but that's often the challenge with open source projects. It can grow only as big as its community can."

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The lack of governmental support in India hasn't helped either. He recalls: "My friends and I had made a map of bus routes in Chennai when I used to stay there in 2009, because there was no such data on the website of Metropolitan Transport Corporation (MTC). Next, we went to meet the MTC officials, only to be told why we don't work with their website vendor and build a map from scratch instead. Cut to the present. The MTC website is still under construction. Clearly, nothing has moved!"

Similarly, Yogesh remembers how the head of the revenue department at Yadgir laughed at his 'road map' and sent him back. "There seems to be a lack of trust in the citizen-generated data. But the government should know it can save crores of money by using open source software, as Prof Rahul De of IIM Bangalore had found in a study."

Mapping is serious business, and Anwar, a long-time OSMer, can testify to that. He was one among 6,000-plus OSM members from all over the world who coordinated relief efforts for the Nepal earthquake in 2015. It is said that the OSMers scoured a whole lot of satellites images, located 13,199 miles of roads, 1,10,681 buildings and football fields in Nepal and added them to the OSM site, which were then used by the Nepal government, United Nations and Red Cross to find routes to send relief materials into inaccessible villages. "Thanks to trekkers who use OSM, a lot of lesser-known trekking routes, huts and sheds were already mapped," recollects Anwar. Crisis mapping had come handy during the 2010 Haiti earthquake too, as it had during the Ebola outbreak in Africa in 2014.

But there's no point cribbing. "We need to rethink how we approach government agencies and how to build a rapport with them. Our policy around the use of geospatial data is vague, that's another problem," Anwar has realised. Alternatively, forming a single body to promote OSM projects can help, feels Ganesh.

Things are looking up though – Talks to introduce an OSM module at the CEPT University in Ahmedabad have begun; In Delhi, the Ministry of Petroleum and Natural Gas has partnered with Social Cops to find the best locations for 10,000 new LPG centres; In Kerala, Jaisen Nedumpa's map of an unsurveyed village has been accepted by the state; and Indian firms like Zomato, Justdial, and Zippr have joined the OSM bandwagon.

"The amount of effort and money that a private company has to spend to build a map for itself is not sustainable. Open source is the future," a hopeful Anwar signs off.