

The NEWS Minute

(/)

Floods

Bengaluru gets inundated with overnight showers, how can it handle floods like Chennai 2015?

Thanks to rapid urbanization, the city is losing its green cover, and water bodies are being encroached recklessly.



TNM Staff (/author-articles/TNM-Staff) | Saturday, July 30, 2016 - 19:56

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On July 29, when Bengalureans woke up looking forward to end the week and head into a relaxed weekend, they did not expect to spend Friday morning battling water inside their homes, blocked roads and overflowing, frothing lakes. After all, the showers the previous night were not that heavy.

And yet, Bengaluru was a mess.

According (<http://epaperbeta.timesofindia.com/Article.aspx?eid=31806&articlexml=Motorists-Held-Up-For-Hours--People-Stuck-3007201600101>) to the Karnataka State Natural Disaster Monitoring Committee, the rains were heavy across the city of Bengaluru on Thursday night. Varthur recorded the highest rainfall 104mm and the IMD station in HAL Airport marked 70mm of rain. TOI further reports that several areas like RR Nagar, Arakere, BTM Layout, Konanakunte, Gottigere and Kumaraswamy Layout saw over 70mm of rainfall. IMD's Palace Road station at the centre of the city recorded 70.2mm.

This was in no way 'light' rainfall, but imagine, if this is what happened to Bengaluru overnight, what would happen to the city if it gets the kind of rainfall Chennai got during the December 2015 floods?

To give you a sense of proportion, on December 1 and 2 alone, Chennai received more than 340mm of rainfall, and this was after one of the wettest Novembers ever, with the city getting more than 1200mm rainfall that month.

Weatherblogger Pradeep John has put up a comprehensive list (<https://www.facebook.com/tamilnaduweatherman/photos/a.1611217492438862.1073741828.1471936623033617/1883386155221993/?type=3&theater>) of recorded rainfall in different parts of Bengaluru and Chennai, in July 2016 and December 2015, respectively.

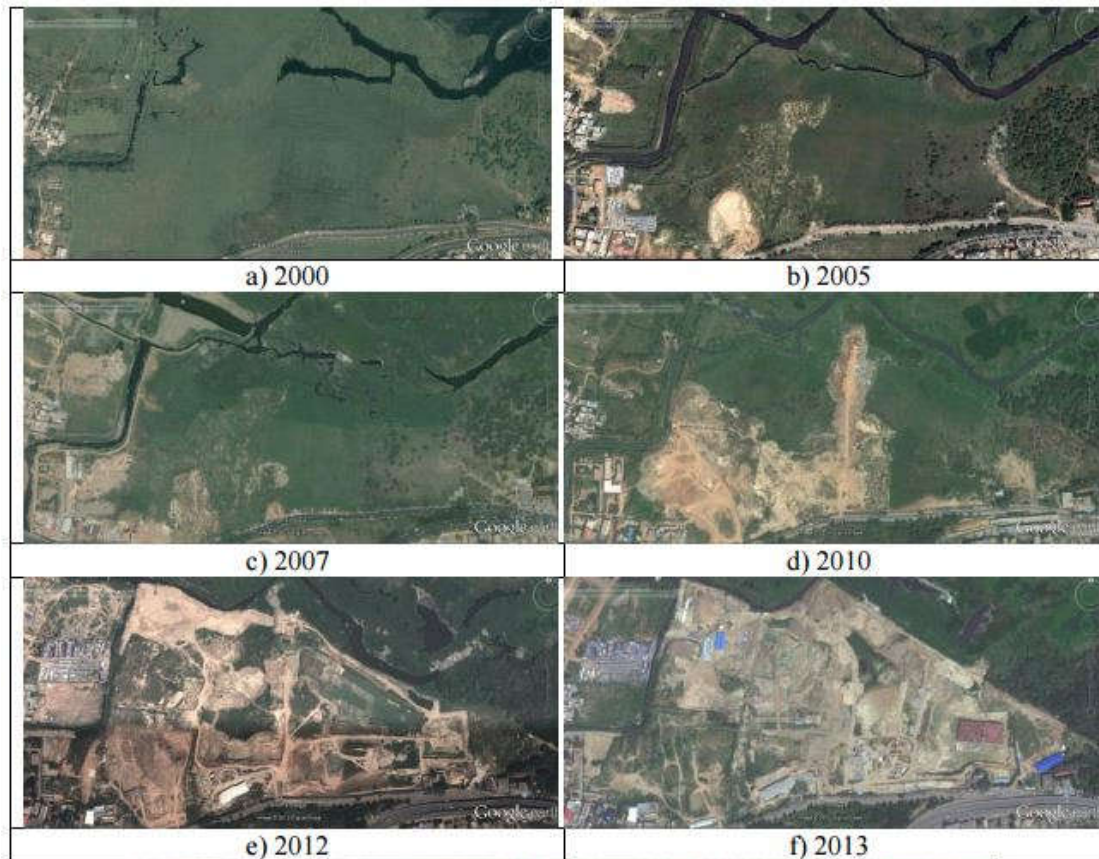
Chennai and Bengaluru Floods					
S.No.	Chennai & Suburban	Rainfall in mm ending 8.30 am on 02.12.2015	S.No.	Bengaluru & Suburban	Rainfall in mm ending 8.30 am on 29.07.2016
1	Tambaram	494	1	Doddathoguru	120
2	Chembarabakkam	475	2	Konappanaagrahara	116
3	Kattankolathur	445	3	Varthuru	103
4	Katupakkam	429	4	Singasandra	98
5	Ponneri	331	5	Arakere	94
6	Thiruporur	348	6	Bilekhalli	94
7	Chennai AP	345	7	Kumaraswamy Layout	94
8	Thirukalukundram	339	8	Vidyapeeta	92
9	Chengalpattu	338	9	Bommanahalli	86
10	Korattur Anaicut	336	10	Sarakki	86
11	Puzhal Agro	325	11	Begur	85
12	Redhills	320	12	Gottigere	81
13	Anna University	319	13	BTM Layout	79
14	Kolapakkam	310	14	Rajarajeshwarinagar	78
15	Taramani	300	15	Nayandahalli	78
16	Puzhal	294	16	Halanayakanahalli	77
17	Chennai City	294	17	Bellandur	77
18	Cholavaram	293	18	Konanakunte	77
19	Ambattur	292	19	Kaggalipura	77
20	Poonamalle	292	20	Somanahalli	76
21	Cheyyur	289	21	Tharalu	74
22	Palavedu	284	22	Uttarahalli	74
23	Tamaraipakkam	281	23	Kodathi	73
24	Avadi HVF	271	24	Anjanapura	72
25	Hindustan University	260	25	Bengaluru Hal AP	71
26	Avadi	258	26	Hagadur	71
27	Madhavaram	257	27	Basavanagudi	71
28	Gumidipoondi	235	28	Gopalnagar	69
29	Minjur	231	29	Marathahalli	67
30	Ennore	231	30	Konena	63
31	Uthukottai	226	31	Galianjaneya Temple	62
32	Tiruvallur	224	32	Bengaluru City	42

As in Chennai, the two main reasons why there is increased flooding in Bengaluru: thanks to rapid urbanization, the city is losing its green cover, and water bodies are being encroached recklessly.

An extensive study on land use dynamics in Bengaluru, carried out using remote sensing data from Landsat satellites, by Dr.T V Ramachandra from Indian Institute of Science (IISc) and his colleague Dr. Bharath H Aithal shows that things are worsening for Bengaluru.

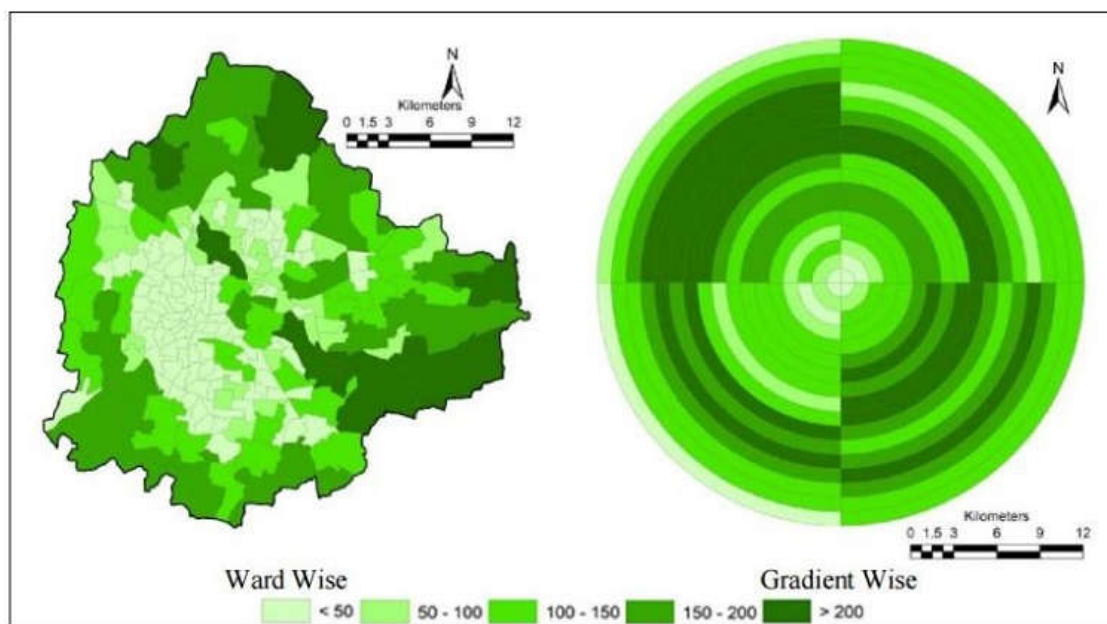
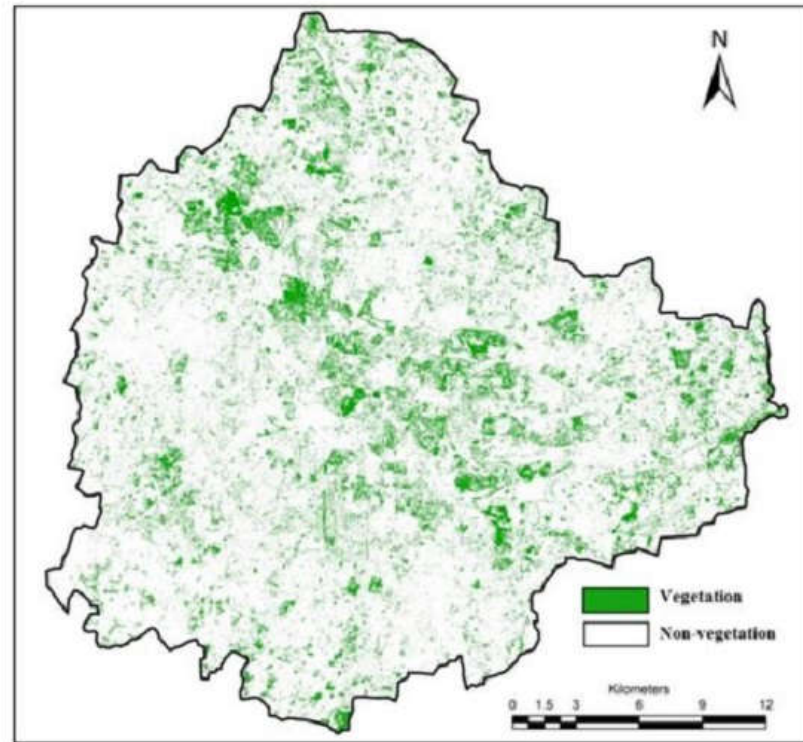
From 2000 to 2014, India's Silicon Valley is rapidly

losing its green cover with urbanisation having risen by 125 percent. The two charts in this series show the changes in landscape of the Agara-Bellandur wetlands from 2000-2015. Less than one percent of Bengaluru is covered by water bodies, and research shows that 54 per cent of lakes have encroached buildings already.



g) 2015

Encroachment of natural drains, topography change caused by constructions, decrease in green cover, depletion of wetlands are the prime reasons for frequent flooding even during normal rainfall in the city. This map shows how sparsely vegetation is distributed across Bengaluru.



And there are other factors too.

In an analysis of floods in Bengaluru, T. V. Ramachandra and Pradeep P. Mujumdar write (http://wgbis.ces.iisc.ernet.in/energy/water/paper/urbanfloods_bangalore/floods_city.htm), “The lack of planning and enforcement has resulted in significant narrowing of the waterways and filling in of the floodplain by illegal developments. This has subsequently caused flooding to other properties that have not previously been flooded, new properties in the flood plain built below the high flood marks (designated flood levels), these being frequently flooded and restriction of options for future flood mitigation including widening of waterways.”

Naturalist Ullash Kumar, who is working on a documentary on rain and climate change, told The News Minute that officials really did not understand Bengaluru’s inter-connected lake system. “If all the lakes are encroached, where will the water go?”

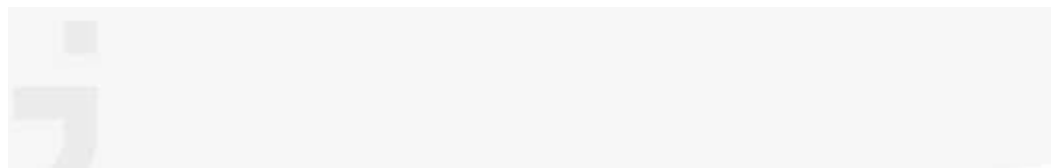
In the past five years, the number of rainy days in Bengaluru – as in other places – has decreased. “Instead, the rains we got over 2-3 days are now occurring in 2-3 hours. The city’s storm water drains which are already clogged with waste, are simply not equipped to handle the water accumulated in a span of three-four hours.”

He added: “The flooding we are seeing now is nothing. If

Bengaluru were to get the same amount of rainfall as Chennai did last December, Bengaluru would be dead. The whole city will be clogged and will claim many lives.”

He said that Bengaluru is already a hygiene nightmare. E.Coli levels in the Cauvery are 54% higher and in the groundwater it is 50% higher than permissible levels.

He said that these changes were being brought about by climate change and that things would worsen by 2040. “When people think about climate change, they imagine ice caps melting. But it is also about rainfall, floods and droughts.”



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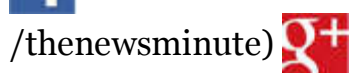
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