

# Dengue Epidemic Control using Geospatial Analysis

**BlueBottle**

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# Geospatial analytics is...

Combining geographic information systems with Business intelligence data to gain new insights that can guide in decision making and uncover trends and patterns.



# Business Intelligence

## Data we have

- Dengue affected area
- Number of people infected

## Data we need

- Where next?



# Geographic Information Systems

- **Interactive Map API** Visualize data on a map
- **Driving Distance Matrix API** Distance between locations
- **Distance Matrix with Predictive ETA** Estimated travel time based on traffic history
- **GeoAnalytics - MapmyIndia JS** Display overlays and layers
- **GeoAnalytics - Listing APIs** List of places and their attributes

# Geospatial Analytics

- Driving Distance Matrix API
- Distance Matrix with Predictive ETA



**Know most people movement happened; thus that place is more vulnerable**

- GeoAnalytics - MapmyIndia JS
- GeoAnalytics - Listing API



**Get details of administrative level to act upon**

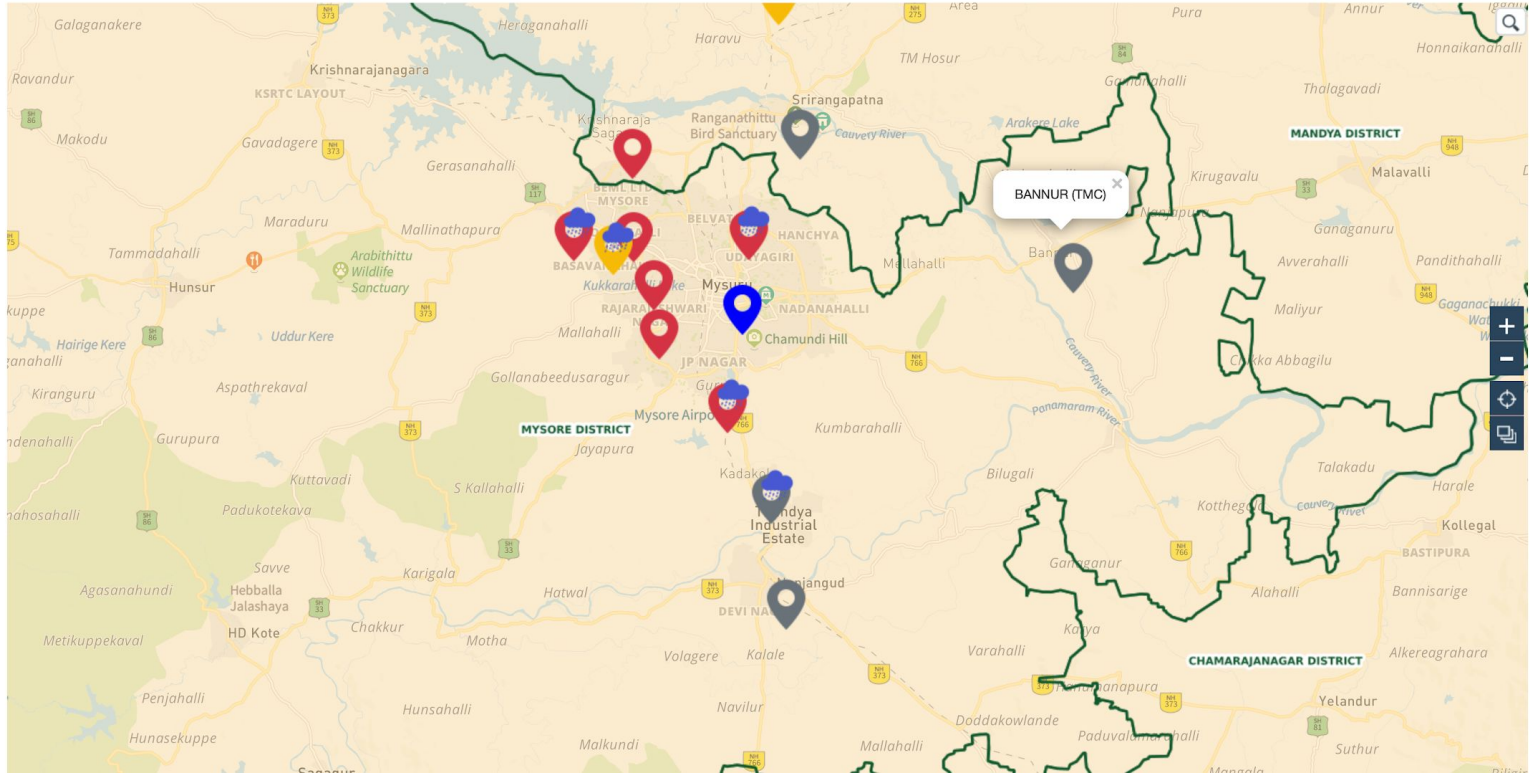
Add Dist

Add SubDist

Add Block

Analyse

MYSORE ▾

Near by Cities  
13Red Alerted Cities  
7Secondary level Cities  
2Safe cities  
4

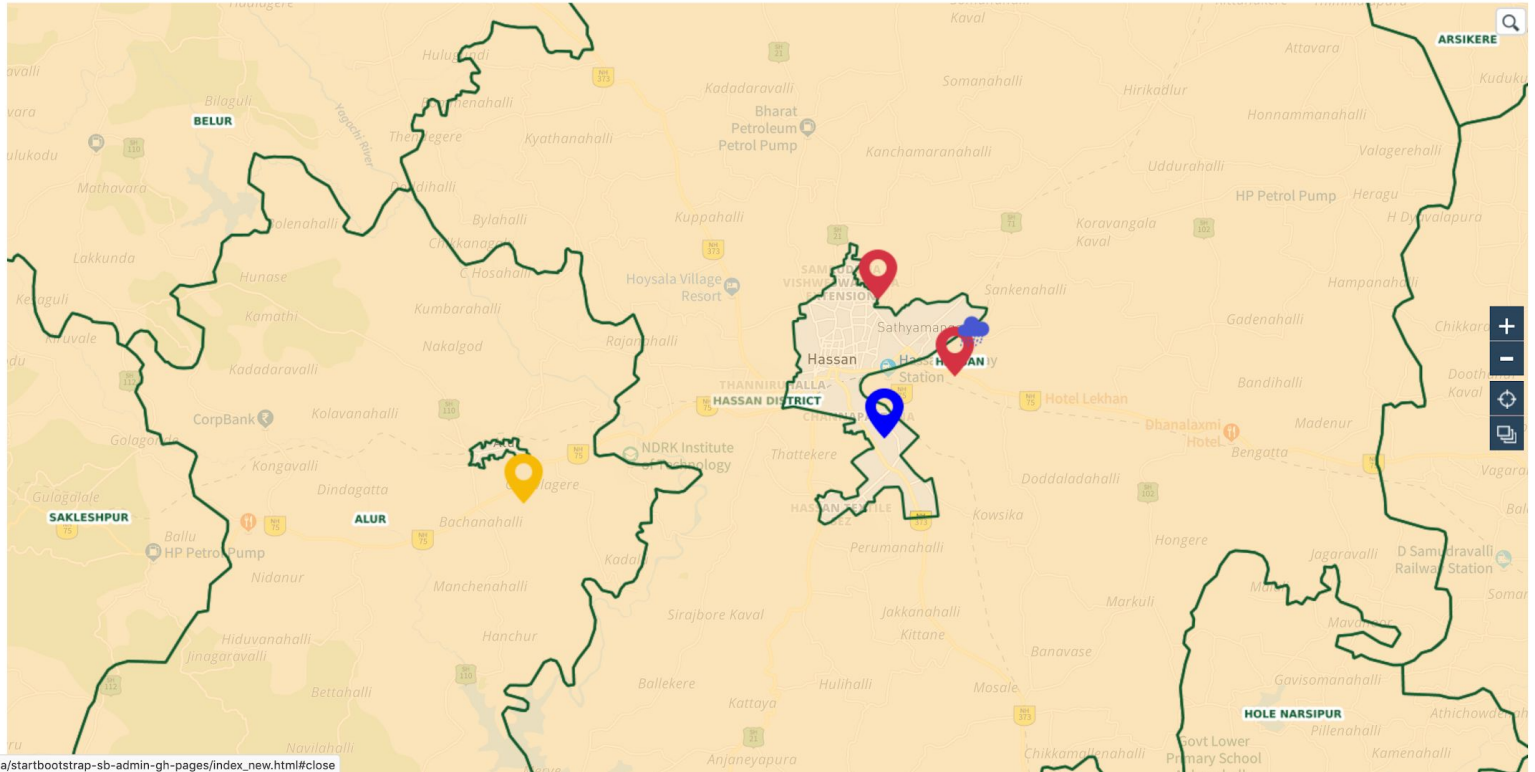
Add Dist

Add SubDist

Add Block

Analyse

HASSAN ▾

Near by Cities  
3Red Alerted Cities  
2Secondary level Cities  
1Safe cities  
0

# DEMO





# Target Audiences

- **Governments & NGOs**
  - State and central governments
- **Researchers**
  - Mosquito borne disease researchers
- **FMCG Industry**
  - E.g. Goodnight, Allout
  - Mosquito Repellent Market is expected to garner \$4.8 billion by 2022 in world-wide - CAGR 7.7%

# Singapore breeds Mosquito!

<https://www.nea.gov.sg/media/news/news/index/project-wolbachia---singapore-progresses-to-phase-3-field-study-at-two-extended-sites-in-february-2019>



# Project Premonition

**Harris County Mosquito Control Surveillance Trap Routes**

Operational Areas  
Harris County Boundary

0 2.25 4.5 9 13.5 15 Miles

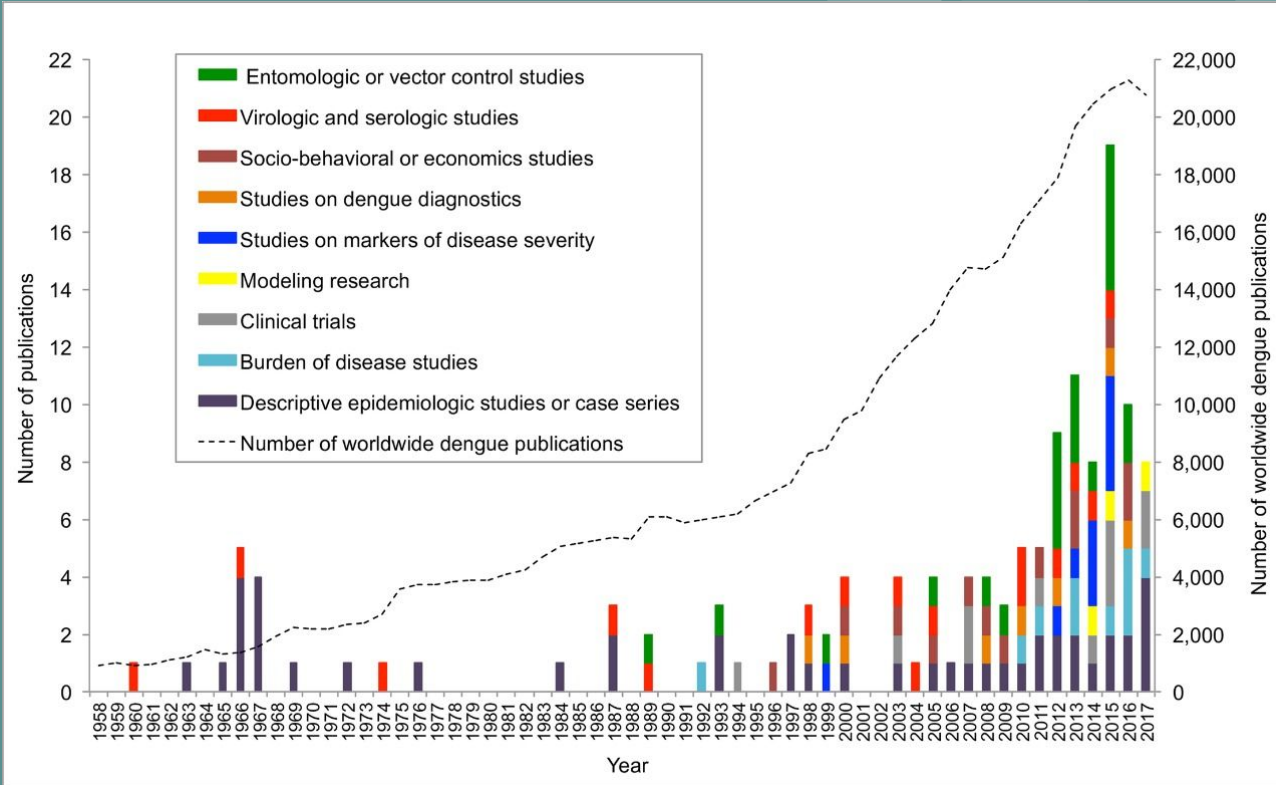
Source: Eric HEDIN, Data Analyst, Geospatial Services Division, Harris County Mosquito Control, 2010

# Google vs Mosquitoes

[https://www.bloomber.com/news/features/2018-11-28/how-to-kill-mosquitoes-google-and-verily-have-a-plan](https://www.bloomberg.com/news/features/2018-11-28/how-to-kill-mosquitoes-google-and-verily-have-a-plan)

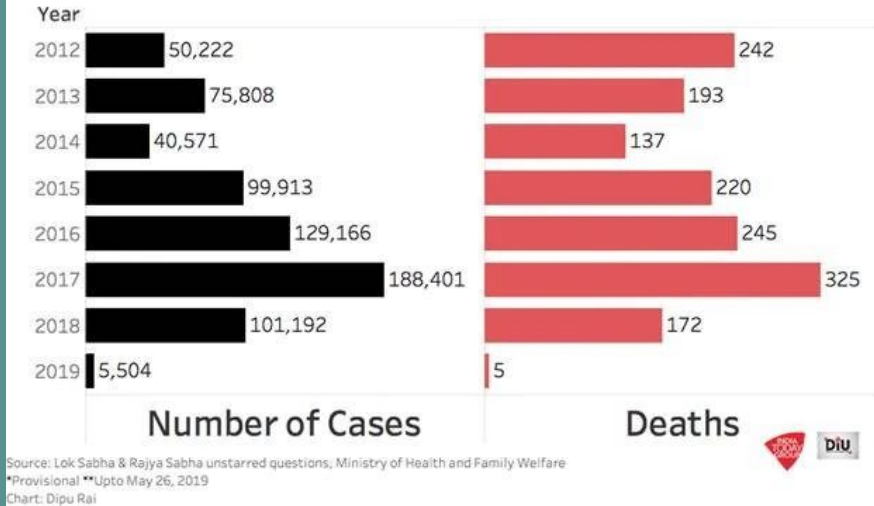


# Number of Dengue related researches

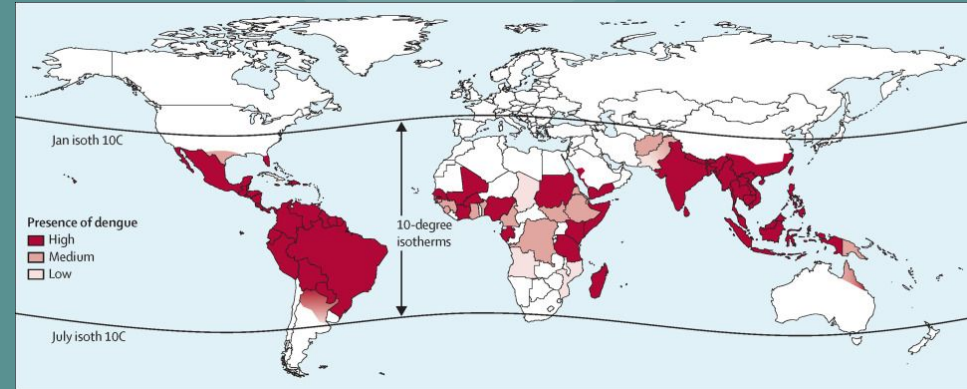
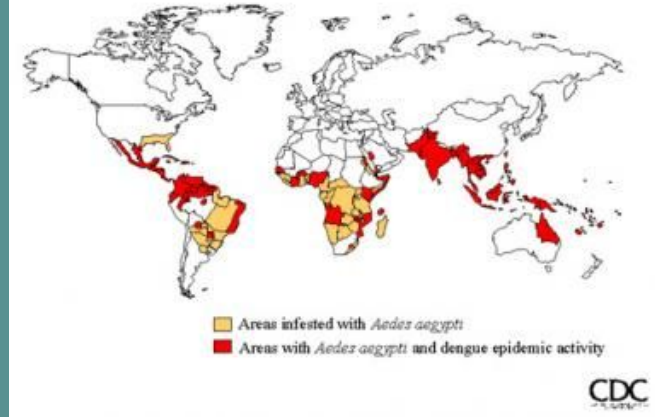


# Facts

## India: Deadliest year for dengue fever



## World Distribution of Dengue - 2000



WHO listed dengue as a potential threat among ten diseases for 2019

# Thank you

Special thanks to MapmyIndia API support team

- Team BlueBottle