

## Hurricane Ida

### Hurricane Information

- Hurricane Category
- Category 1 wind speed perimeter (> 74mph)
- Storm surge alert
- Forecast Pathway
- Chance of category 1 wind speeds (> 74mph)

### Power Outages

- > 15% pop. without power

### Wind speeds: 96-110 mph



### VULNERABILITY MOVEMENT INFRASTRUCTURE

% Pop. Density Change (Facebook Mobility Data)

-50%+ -50 to -10% 10 to 50% 50%+

### Movement Trends

Origin Destination To From Off

Places Counties 1 Clear All

New Orleans

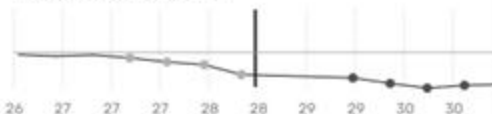
### Demographics New Orleans 1 selected

Total Population 391,249 391,249

Pop. > 65 yrs 57,867 57,867

DME Users N/A N/A

### % Pop. Density Change



### Movement Trends

To New Orleans



From New Orleans

# ReadyMapper

## Vulnerability | Mobility | Health Resources



# Hurricane Ida

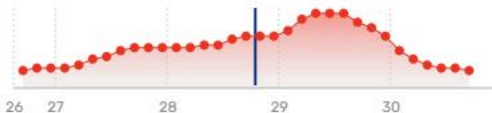
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## Demographics New Orleans 1 selected

Total Population	391,249	391,249
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## % Pop. Density Change



## Movement Trends

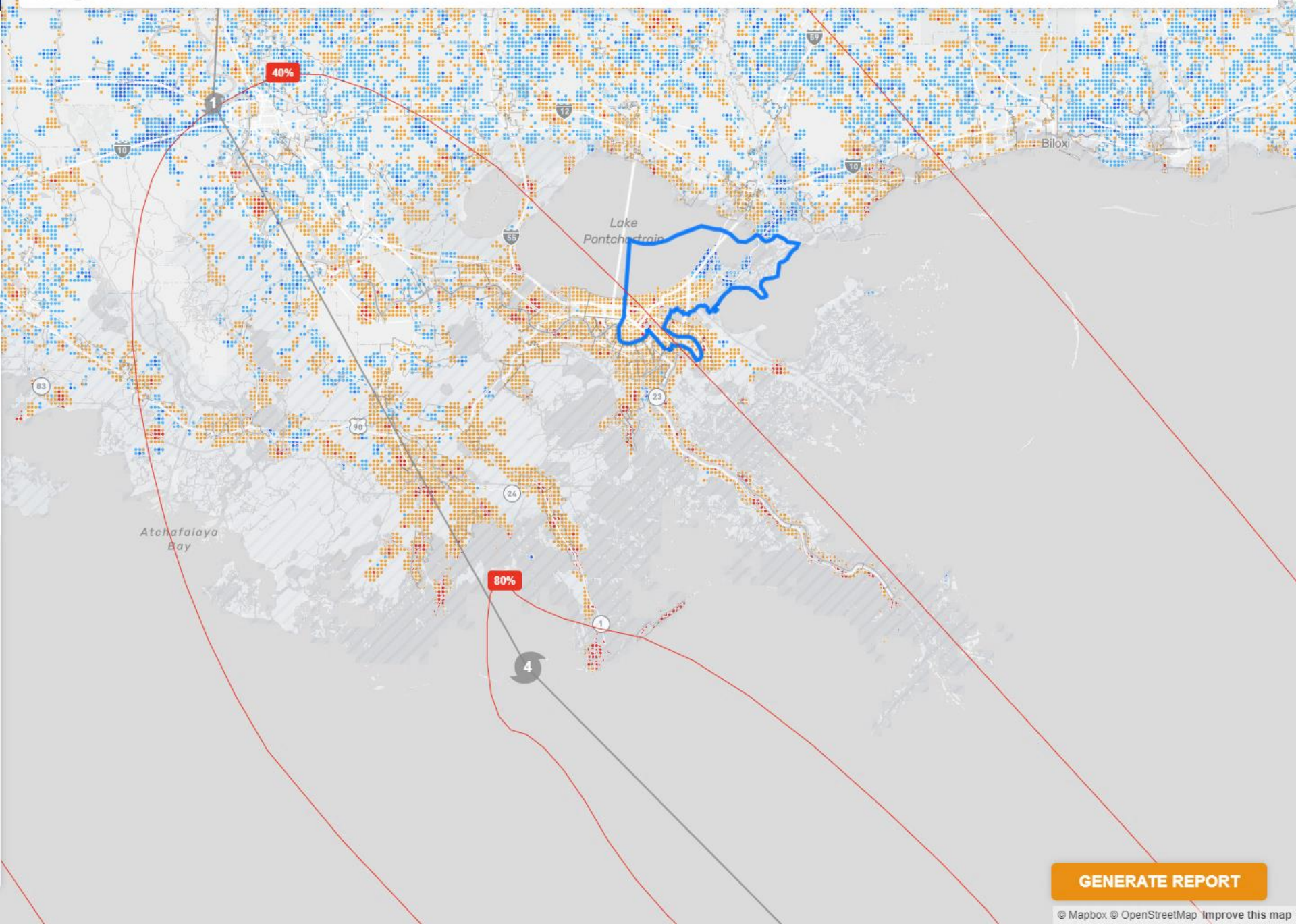
To New Orleans



From New Orleans



Sat, Aug 28, 2021 19:00 EDT



GENERATE REPORT

[Read our COVID-19 research and news.](#)

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## LETTERS



# Aggregated mobility data could help fight COVID-19

Caroline O. Buckee<sup>1,\*</sup>, Satchit Balsari<sup>2</sup>, Jennifer Chan<sup>3,4</sup>, Mercè Crosas<sup>5</sup>, Francesca Dominici<sup>6</sup>, Urs Gasser<sup>7</sup>, Yonatan H. Grad<sup>1</sup>, Bryan...[+ See all authors and affiliations](#)

Science 10 Apr 2020:  
Vol. 368, Issue 6487, pp. 145-146  
DOI: 10.1126/science.abb8021

## Article

## Info &amp; Metrics

## eLetters



As the coronavirus disease 2019 (COVID-19) epidemic worsens, understanding the effectiveness of public messaging and large-scale social distancing interventions is critical. The research and public health response communities can and should use population mobility data collected by private companies, with appropriate legal, organizational, and computational safeguards in place. When aggregated, these data can help refine interventions by providing near real-time information about changes in patterns of human movement.

Research groups and nonprofit humanitarian agencies have refined data use agreements to stipulate clear guidelines that ensure responsible data practices (1). New tools for specifying different levels of privacy for different users and providing privacy-preserving results, such as the OpenDP platform (2), will effectively manage data access, and aggregation steps have been carefully reviewed on a legal and methodological basis to ensure that the analyses follow ethical guidelines for human participants (3). To monitor social distancing interventions, for example, rather than showing individual travel or behavior patterns, information from multiple devices is aggregated in space and time, so that the data reflect an approximation of population-level mobility (4).



## Science

Vol 368, Issue 6487  
10 April 2020

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## EDITORIALS

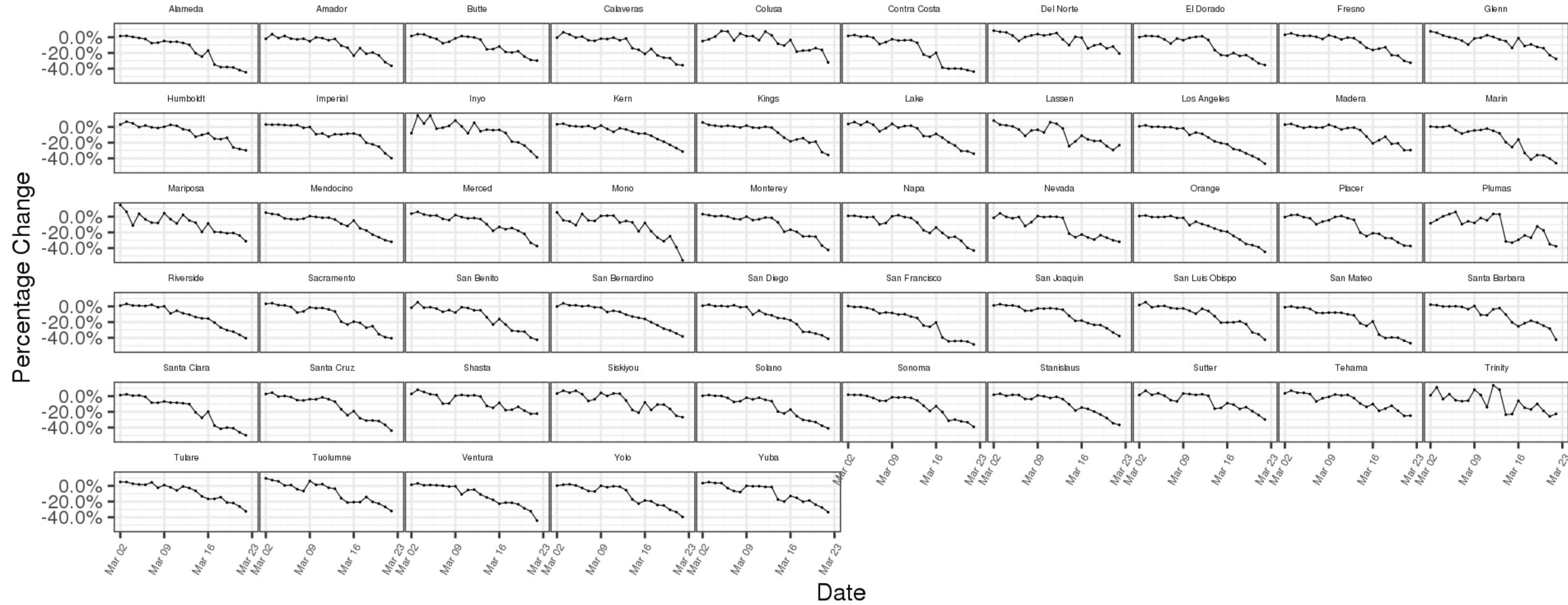
**New coronavirus outbreak: Framing questions for pandemic prevention**

## PERSPECTIVES



# Relative change in mobility\*, California Counties

% changes are with respect to same day-of-week mobility observed during the last two weeks of February.



\*Based on average number of Bing Level 16 tiles visited by location-history-enabled users



*Dr. Mark Ghaly discusses mobility reports from the COVID-19 Mobility Data Network built with Facebook data during a California press conference on April 10, 2020*

“Having access to the publicly available mobility data from Facebook helped inform our thinking around California’s physical distancing efforts.”

**Dr. Mark Ghaly**  
Secretary of the California Department  
of Health and Human Services



## Data Readiness

We help to identify and analyze large scale data required to respond to disasters, prior to crises, so that timely access can be pre-negotiated among data brokers and response agencies.



## Methods Readiness

Data needed during public health emergencies varies widely in origin, representativeness, temporal scales, and spatial granularity. Through our international partnerships we are advancing frameworks for standardized analysis and meaningful interpretation of these disparate data streams.



## Translational Readiness

Even when high quality analyses are available, response agencies often do not have embedded local capacity to drive data driven response. We promote translational readiness through training, strengthening data and tools repositories, supporting communities of practice, and facilitating policy development.

# Readiness

- Data agreements, governance standards, and frameworks
- Data pipelines established
- Key questions identified
- Tested methodologies
- Simulation of workflows

# Key Challenges

- Bias
- Representativeness
- Uncertainty
- Access
- Capacity

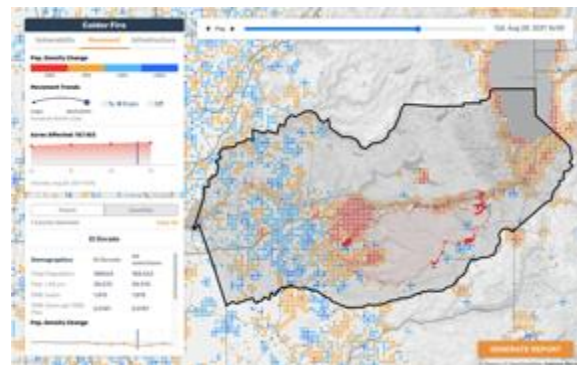


# The ReadyMapper Tool

## Optimizing Health Response With Real-Time, Integrated Data

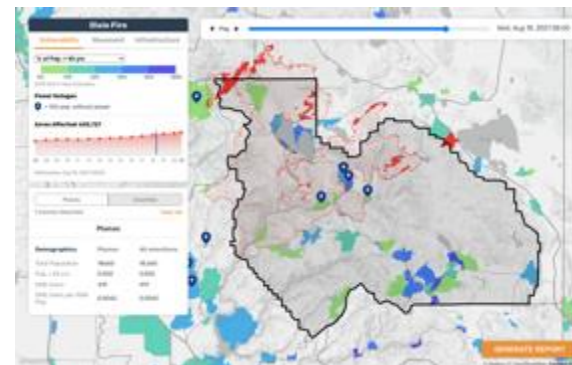
**ReadyMapper** is an interactive, open-source digital platform to help response agencies, hospitals, and communities track mobility and vulnerability to mobilize resources to meet demand during crisis.

The platform enables analysis across three dimensions:



### Movement

Where are people moving from and to?



### Vulnerability

What proportion of the affected community is medically vulnerable?



### Health Infrastructure and Power

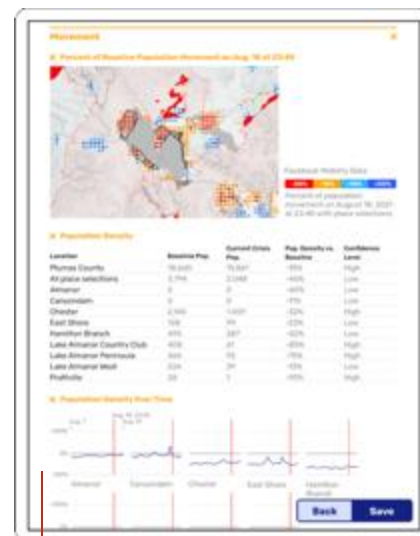
Where are healthcare services and resources available during moments of crisis?

# The ReadyMapper Tool

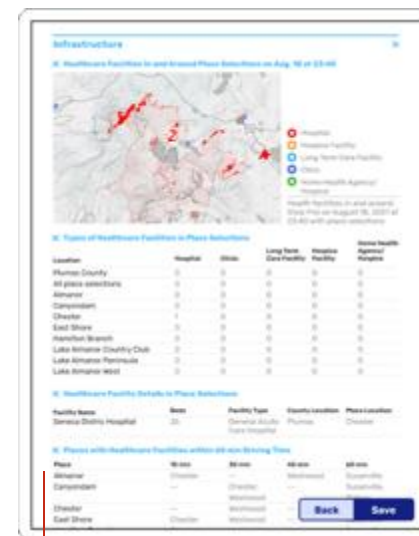
Customizable analytical reports provide specific insights to meet health system resilience needs.



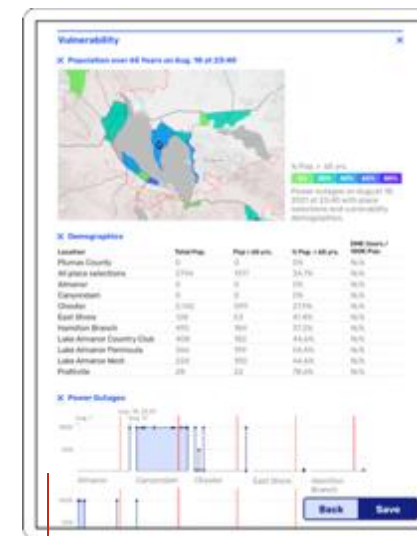
General information about wildfire (perimeter, acres burnt over time), and vulnerabilities.



Changes in population densities and movement patterns during a wildfire event.



Information on healthcare facilities near the location of the wildfire.

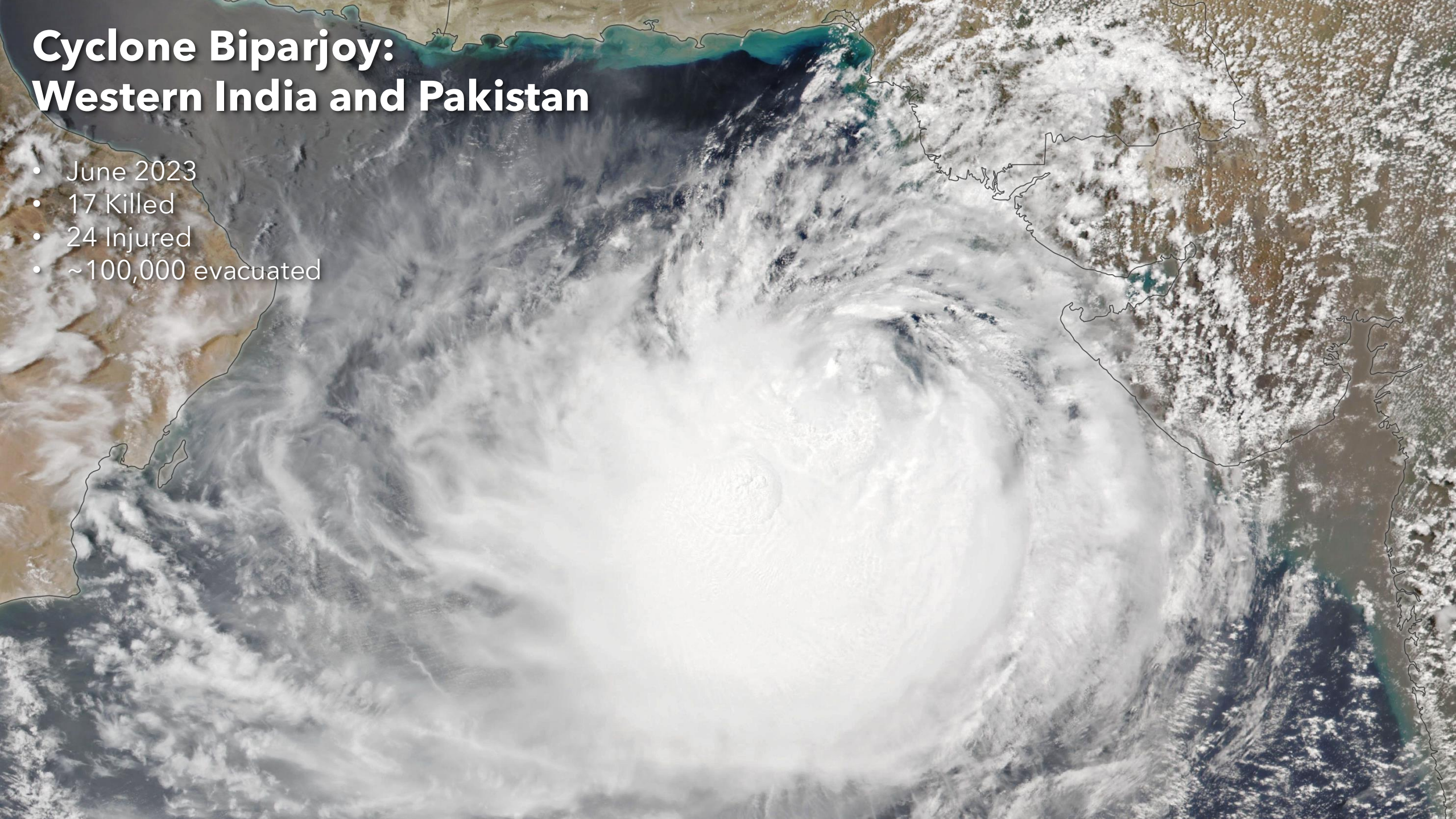


Information on the baseline vulnerabilities of affected populations.



# Cyclone Biparjoy: Western India and Pakistan

- June 2023
- 17 Killed
- 24 Injured
- ~100,000 evacuated





# Cyclone Biparjoy

## Cyclone Information

Storm Category

Forecast Pathway

Category 1 wind speed  
perimeter (> 119kph)

## Power Outages

> 15% pop. without power

Wind speeds: Less than 119 kph



## VULNERABILITY

## MOVEMENT

## INFRASTRUCTURE

% Pop. Density Change (Facebook Mobility Data)

-50%+ -50 to -10% 10 to 50% 50%+

## Movement Trends

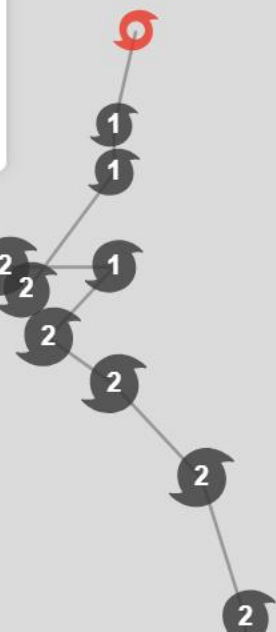
Origin Destination To From Off

Places

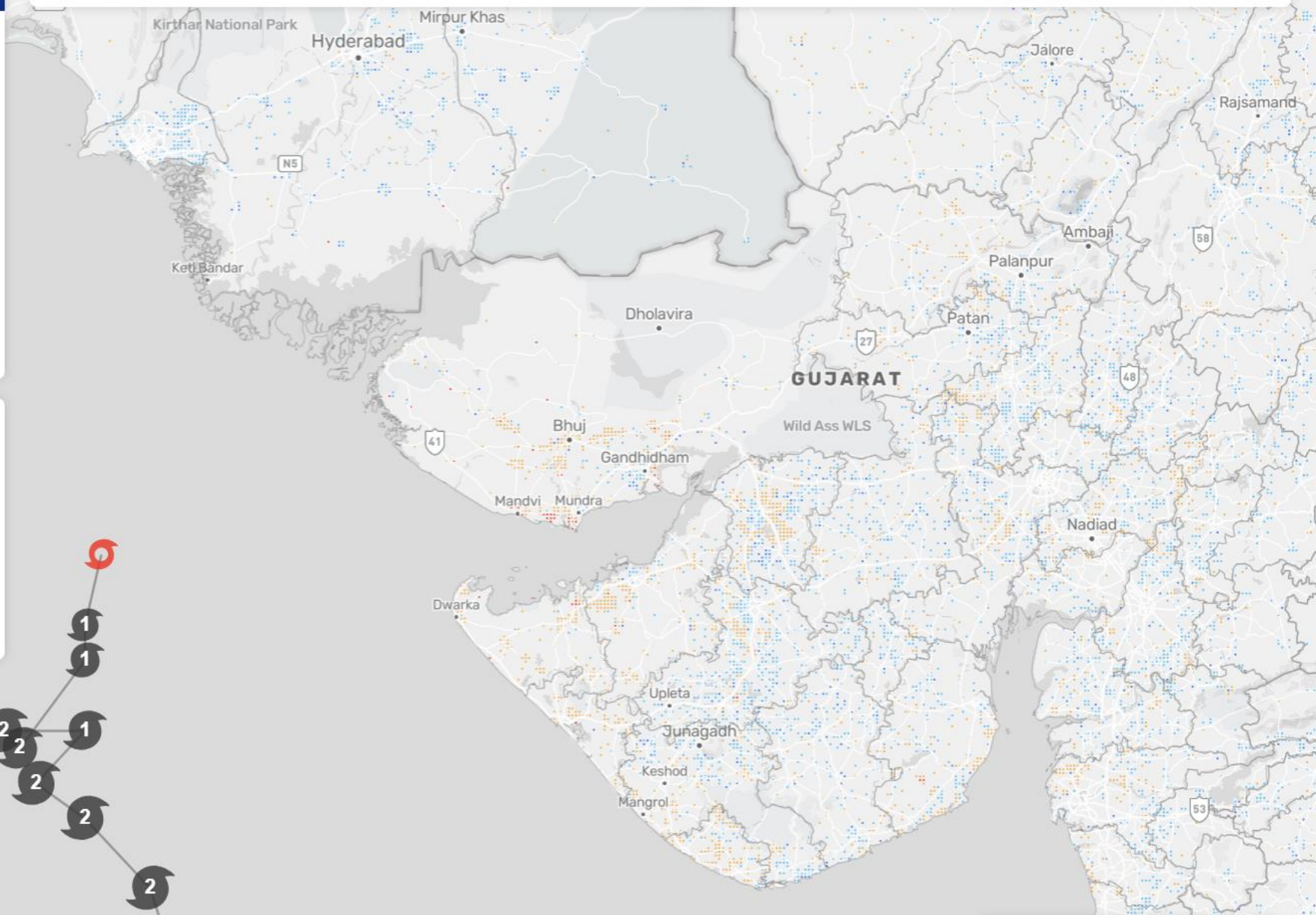
Counties

0

Clear All



Thu, Jun 15, 2023 12:30 GMT+5:30



GENERATE REPORT



# Cyclone Biparjoy

## Cyclone Information

- Storm Category
- Forecast Pathway
- Category 1 wind speed perimeter (> 119kph)

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## VULNERABILITY MOVEMENT INFRASTRUCTURE

% Pop. Density Change (Facebook Mobility Data) ▾



## Movement Trends

Origin Destination ☐ To ☐ From ☒ Off

Places Counties 0 Clear All

Thu, Jun 15, 2023 20:30 GMT+5:30



GENERATE REPORT

# Cyclone Biparjoy

## Cyclone Information

2 Storm Category

Forecast Pathway

Category 1 wind speed perimeter (> 119kph)

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Wind speeds: Less than 119 kph



## VULNERABILITY

## MOVEMENT

## INFRASTRUCTURE

% Pop. Density Change (Facebook Mobility Data)

-50%+ -50 to -10% 10 to 50% 50%+

## Movement Trends

Origin Destination To From Off

Places

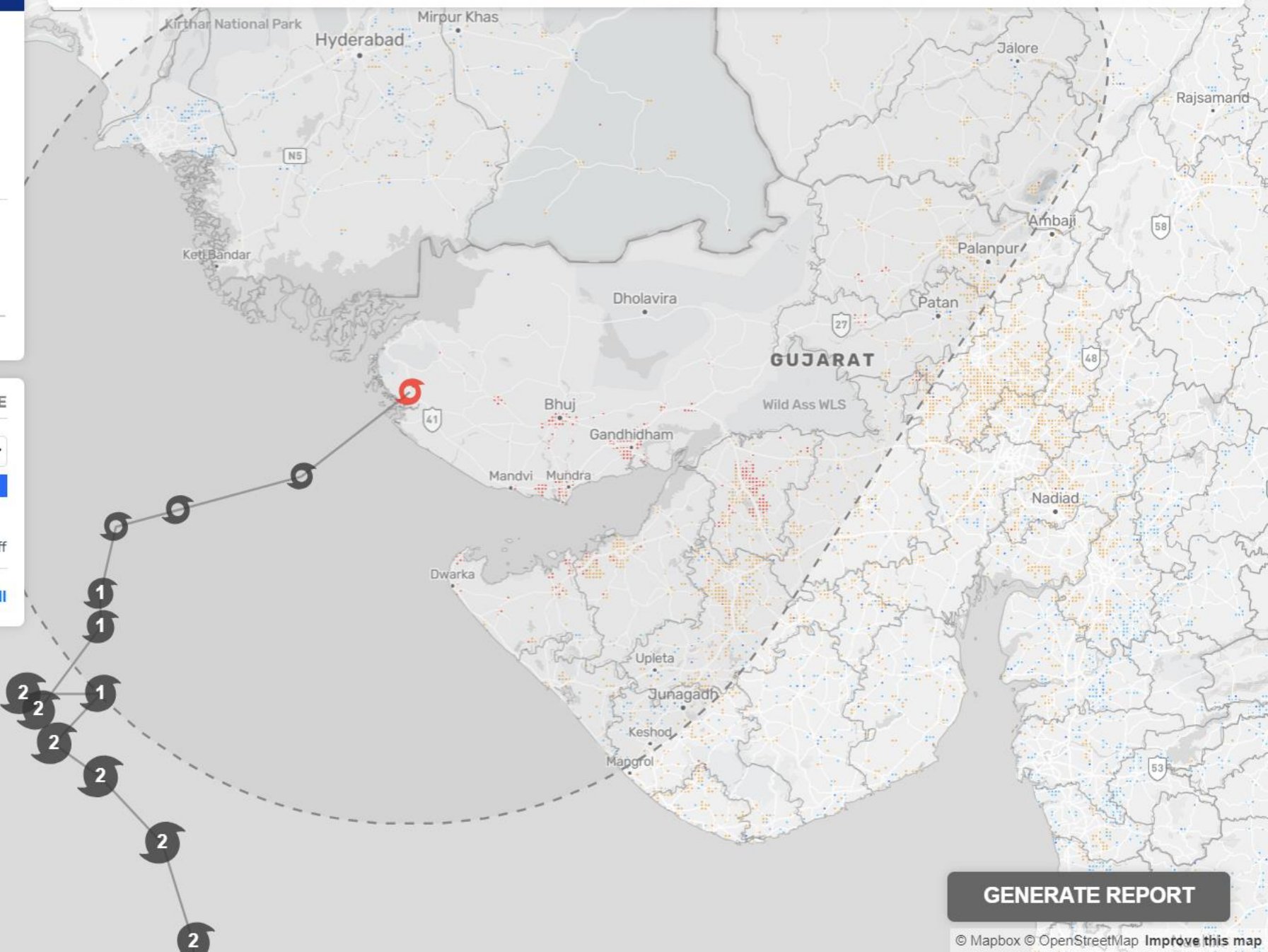
Counties

0

Clear All



Fri, Jun 16, 2023 20:30 GMT+5:30



GENERATE REPORT



# Cyclone Biparjoy

## Cyclone Information

Storm Category

Category 1 wind speed  
perimeter (> 119kph)

Forecast Pathway

## Power Outages

> 15% pop. without power

Wind speeds: Less than 119 kph



## VULNERABILITY

## MOVEMENT

## INFRASTRUCTURE

% Pop. Density Change (Facebook Mobility Data)

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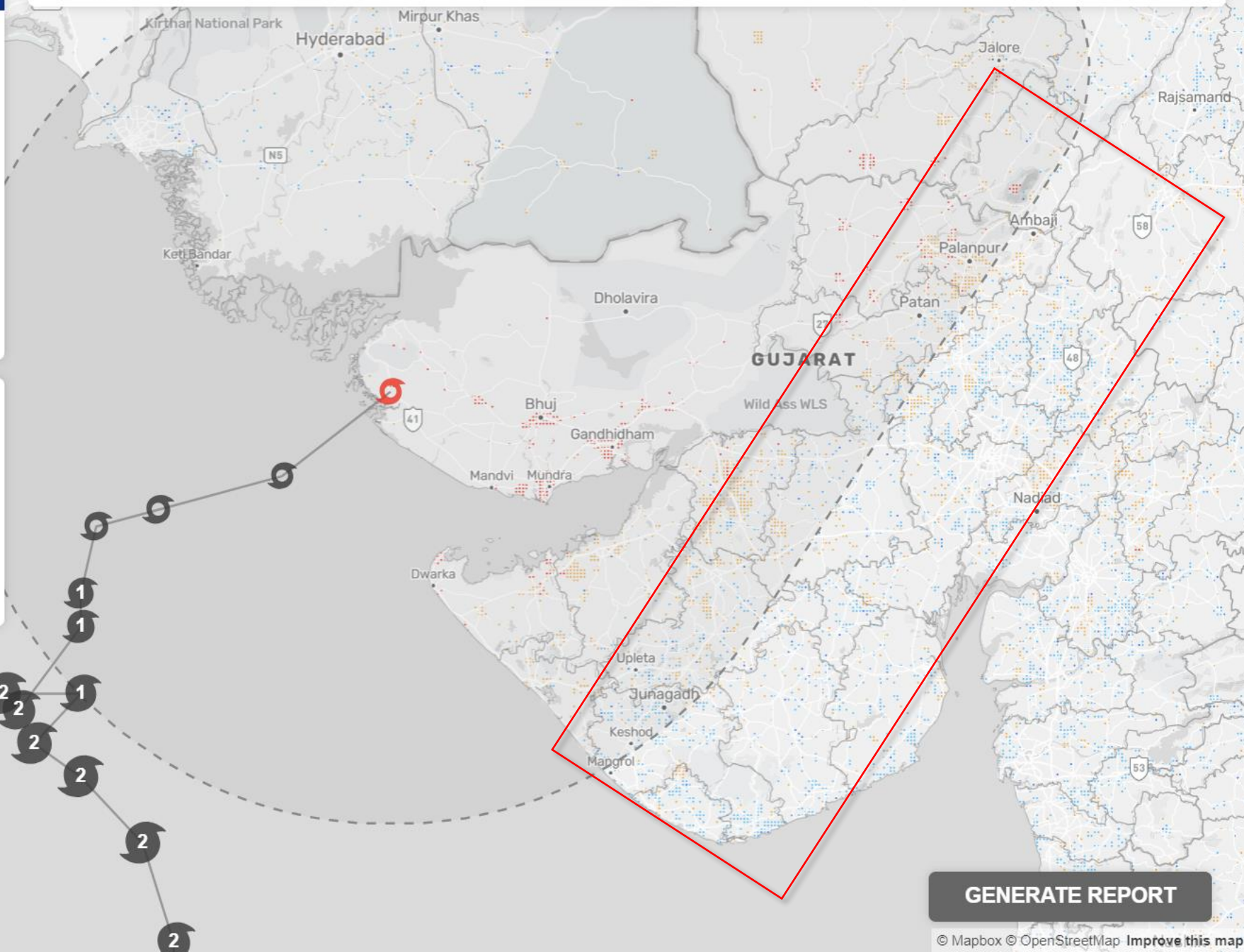
Origin Destination To From Off

Places

Counties

0

Clear All



GENERATE REPORT



# Cyclone Biparjoy

## Cyclone Information

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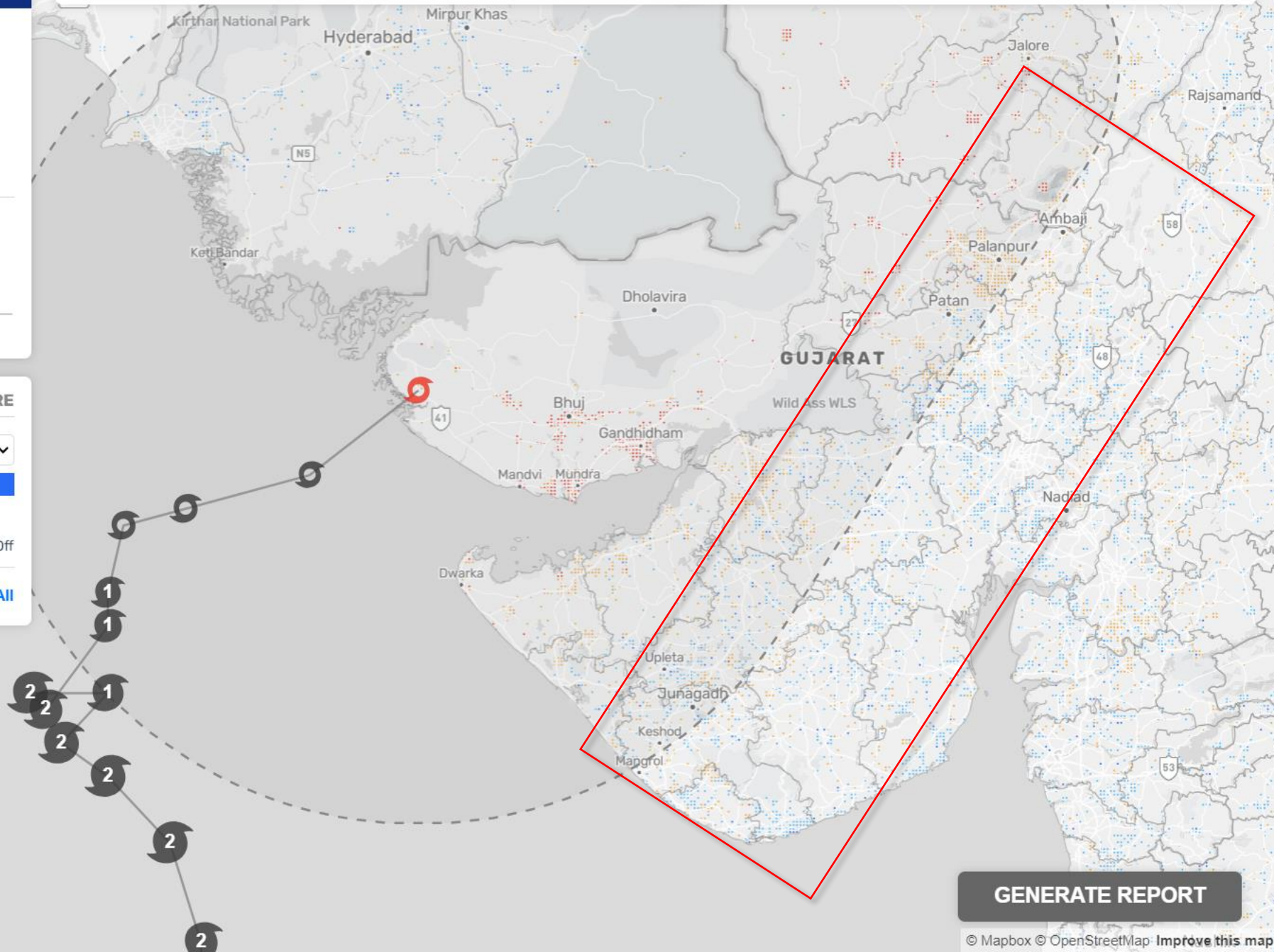


## Movement Trends

Origin Destination To From Off

Places Counties 0 Clear All

Sat, Jun 17, 2023 12:30 GMT+5:30



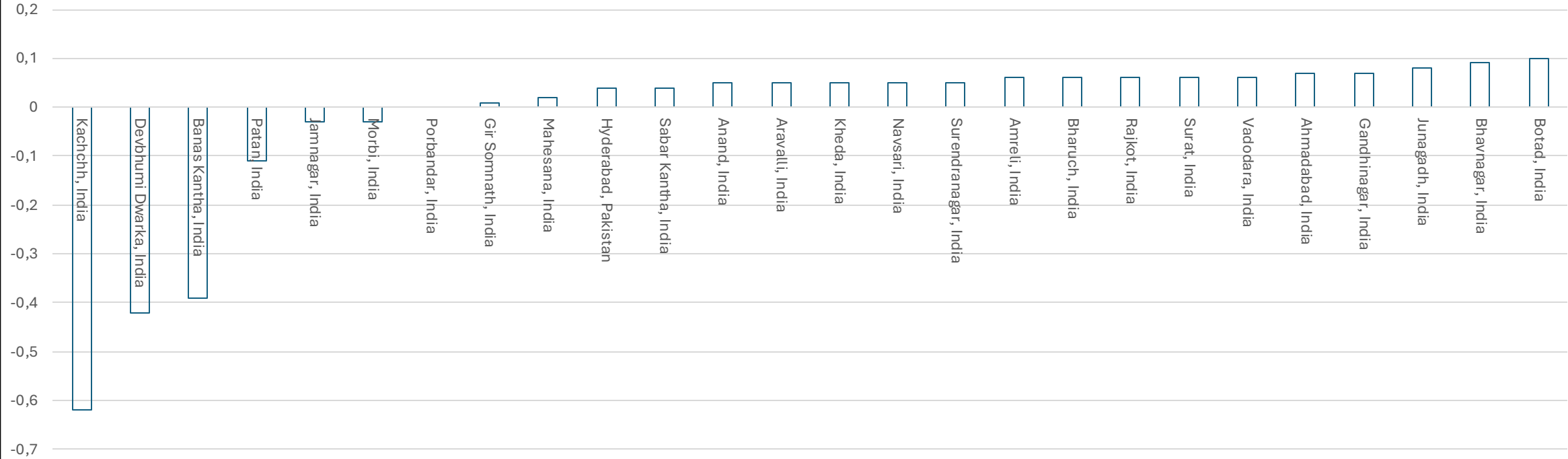
GENERATE REPORT

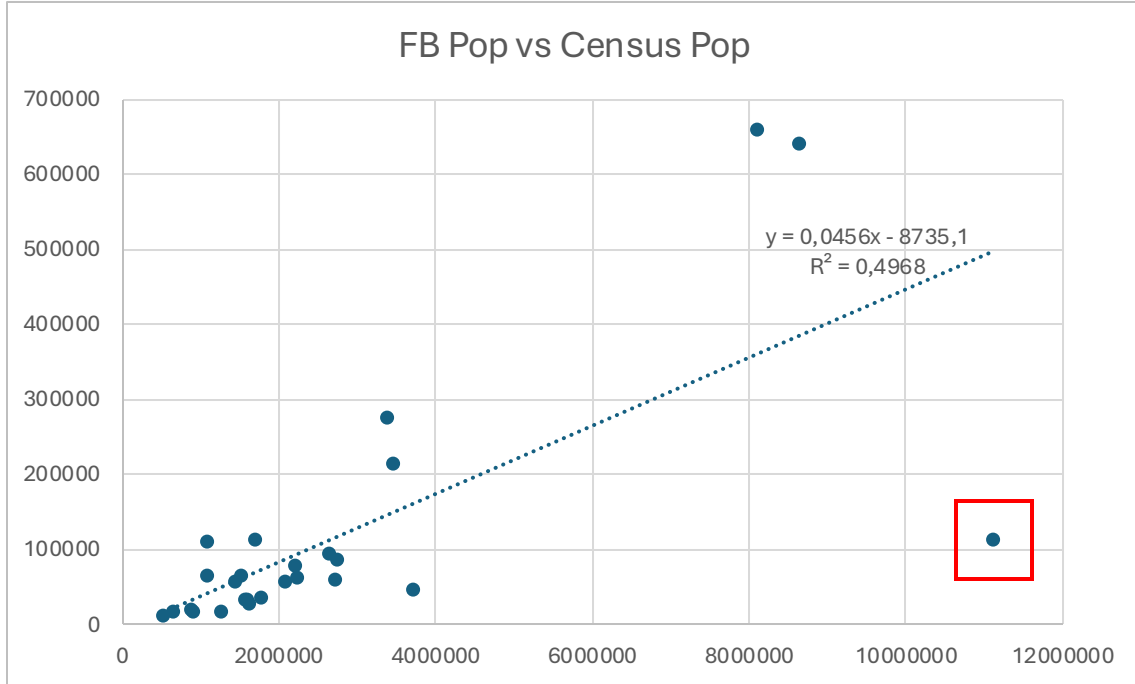


## % Pop. Density Change Over Time

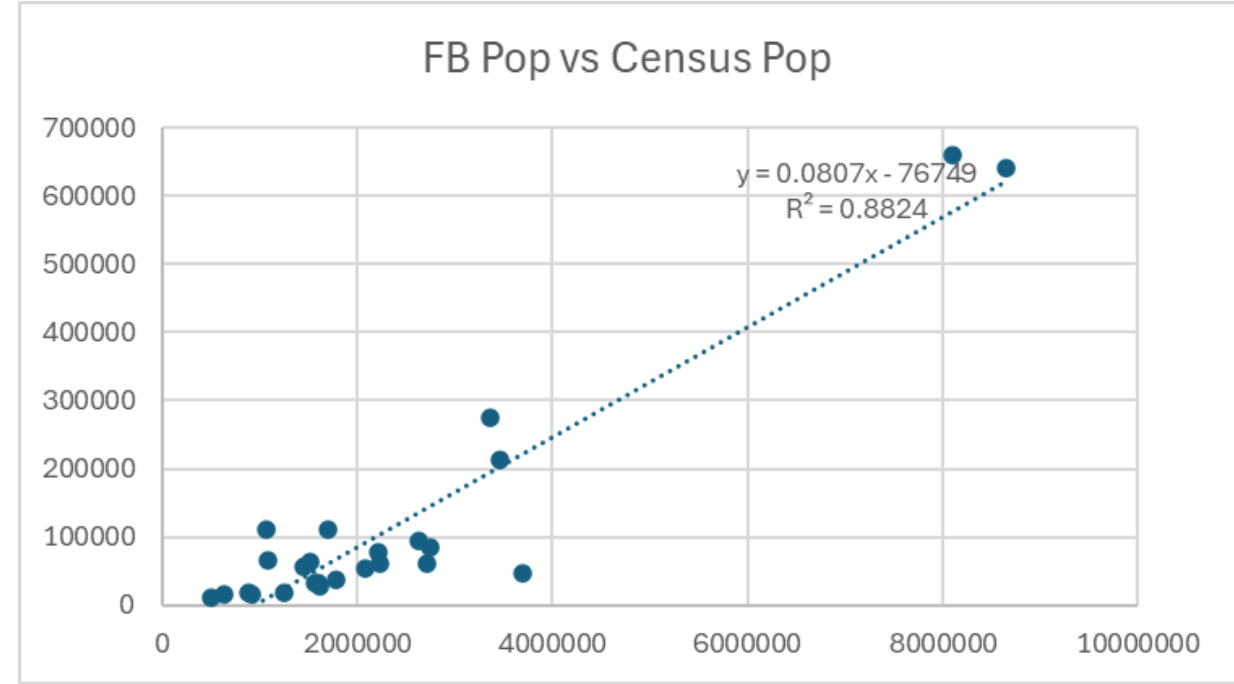


Pop. Density vs. Baseline ▼





All Data R2 = .4968



Minus Hyderabad R2 = .8824

<https://crisisready.io/readymapper>