


# Yale Center for Geospatial Solutions



Our mission is to create geospatial knowledge that solves humanity's most pressing challenges.

Jennifer Marlon, Ph.D.  
Executive Director

## Mission

Enabling transformative research

Convening uncommon connections among individuals, organizations, and networks

Empowering action to create positive outcomes for people and the planet

# Research: Bihar, India – extreme flooding on September 24, 2024

**Layers** Live

- NDWI
- NDWI Building Change Probability
- NDWI Change Detection

Base Image Date: May 31, 2023  
Comparison Image Date: July 20, 2023

High Damage Count: 0.00  
Total Building Count: 416.00  
High Damage Percent Range: 50,100  
Total Damaged Building Count: 0.00

0.00 11.11 22.22 33.33 44.44 55.56 66.67 77.78  
88.89 100.00

**Compare Images**

Base Image: 16 August, 2024

Comparison Image: 20 September, 2024

**Advanced Analysis Algorithms**

Buildings Impacted  Buildings

Population Impacted  Population

**Change Detection**

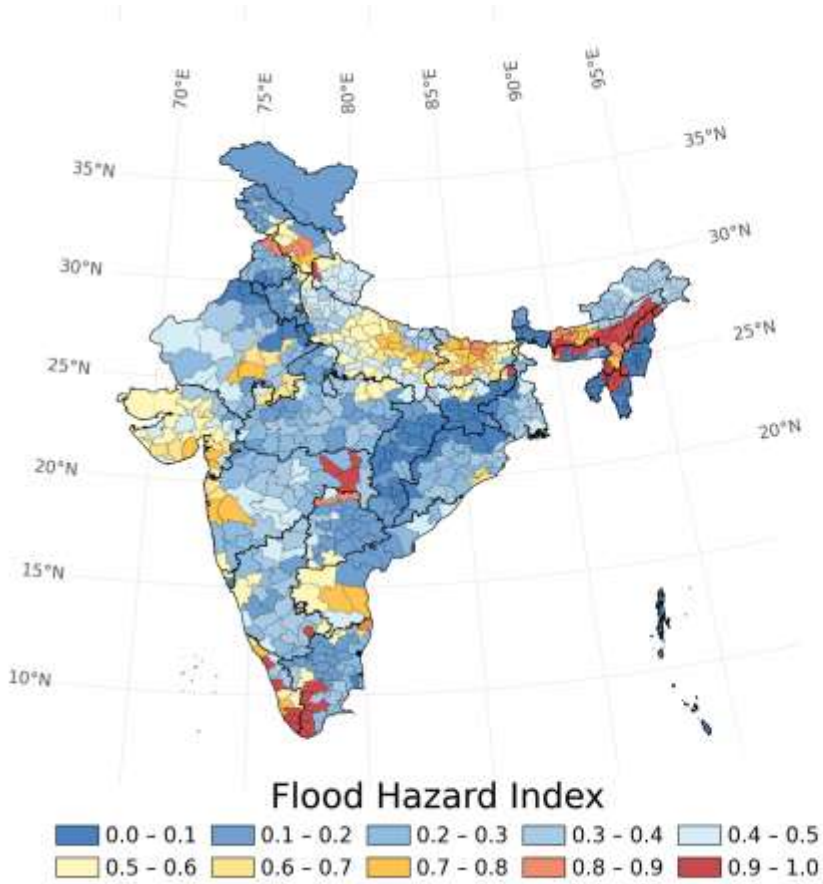
True Color  
Captured: 16 August, 2024

True Color  
Captured: 20 September, 2024  
37%

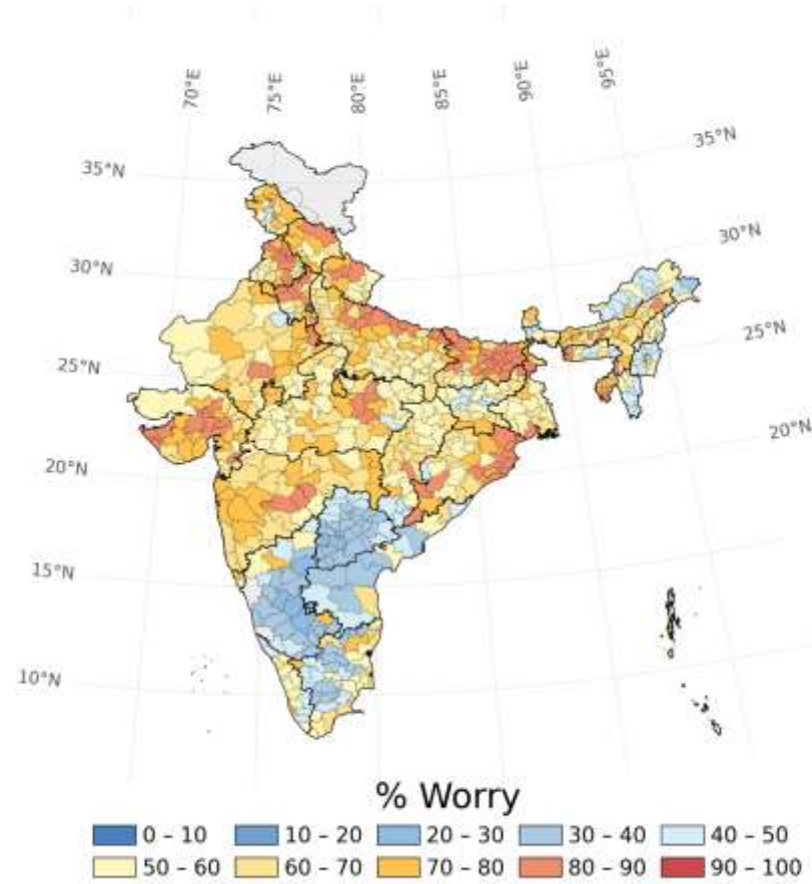
True Color  
Captured: 20 September, 2024  
33%

**Add Data**

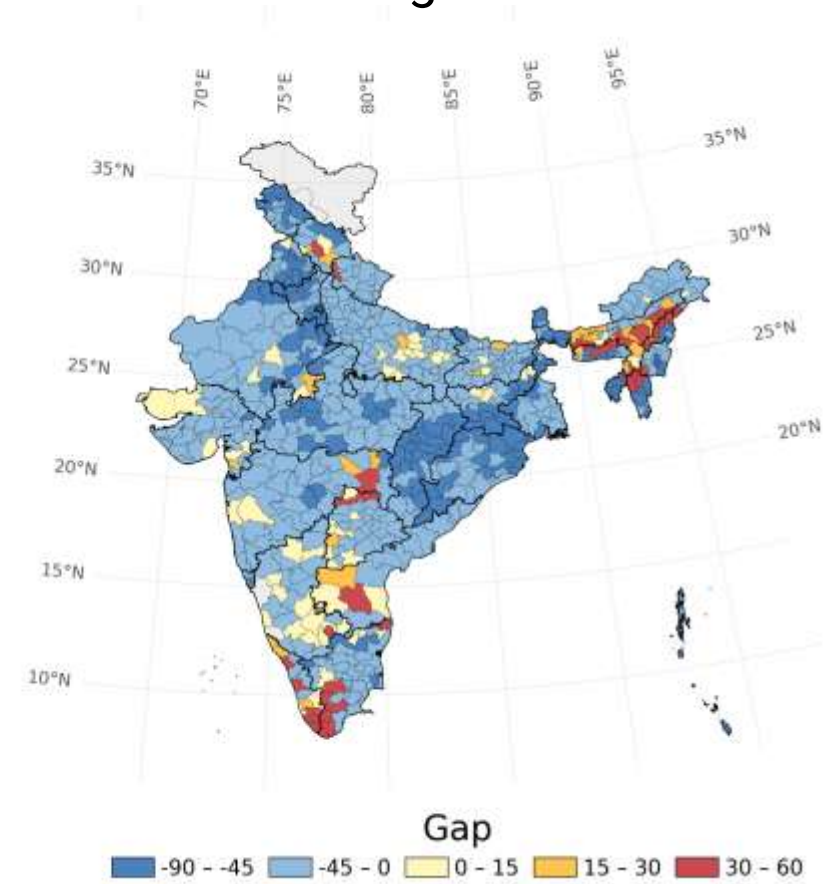
Expert assessment of flood risk



% of adults who think flooding will harm their local area



Gap between expert assessment and perceived risk of flooding

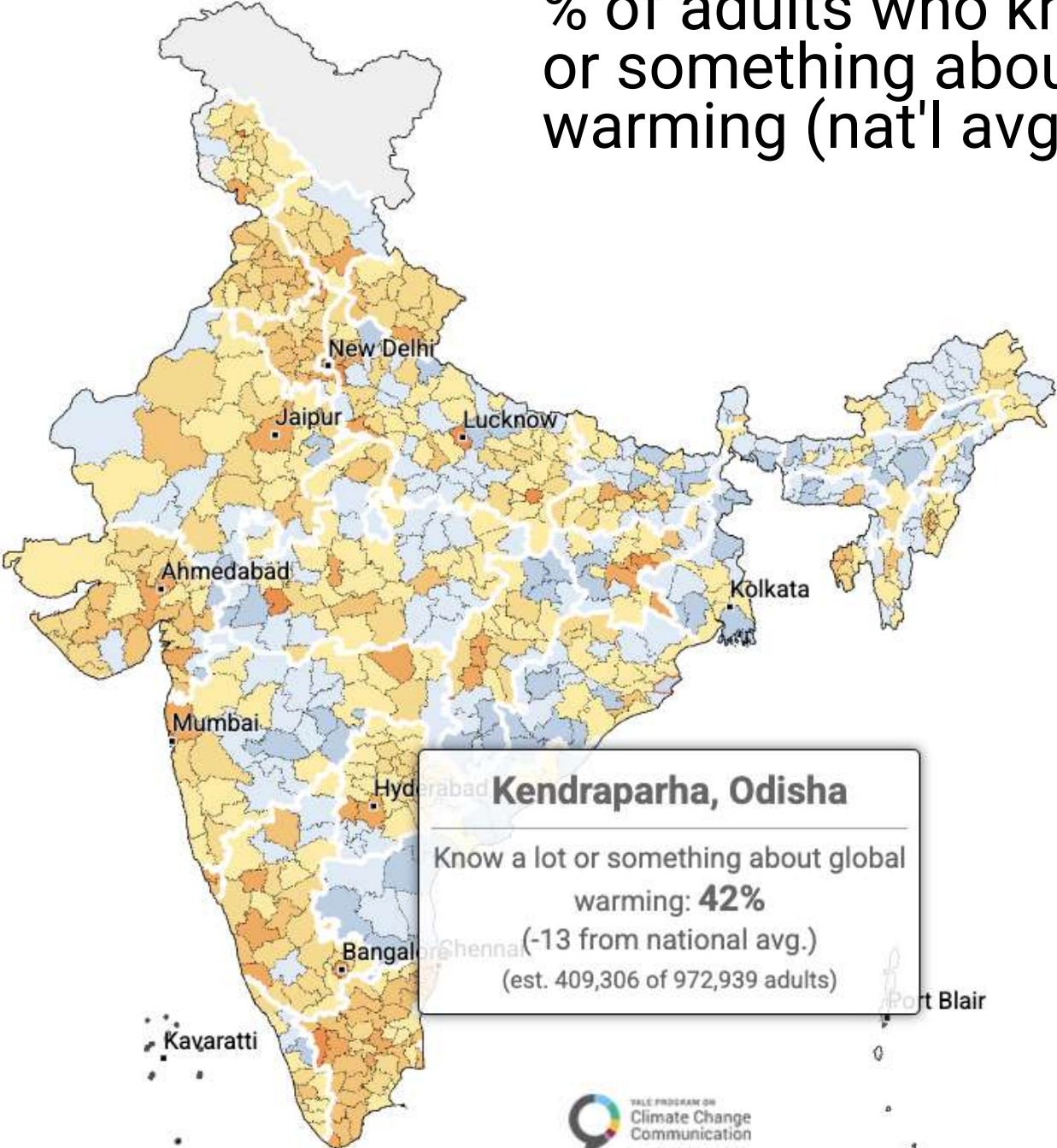


# Opinions about climate change

Survey respondents across India (N= 19,644)



% of adults who know a lot or something about global warming (nat'l avg. = 55%)



**Kendraparha, Odisha**  
Know a lot or something about global warming: **42%**  
(-13 from national avg.)  
(est. 409,306 of 972,939 adults)