















## Heat Vulnerability Assessment

Conceptually, urban heat vulnerability is the product of three latent factors

#### **Exposure**

The presence and extent of people, ecosystems, and assets in areas that could be adversely affected by extreme heat

#### Sensitivity

The degree to which people, ecosystems, and assets are affected, either adversely or beneficially, by climate variability or change.

# Adaptive Capacity

The ability of social and ecological systems to adjust to climate change to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

Source: IPCC (2014)

Phase

- Define Vulnerability and its components Exposure, Sensitivity and Adaptive Capacity
- · Selection of 14 variables

Phase 2

- Data Processing Converting Vector values to Raster maps.
- · Assigning weights to all the variables and forming Composites

Phase 3

- Calculate individual maps for Exposure, Sensitivity and Adapting Capacity to calculate ward-wise Risk Scores using ArcGIS.
- · Highlight highly vulnerable wards and conclusion

#### **Parameters**

### **Exposure**

- Land Surface Temperature
- Population Density

### Sensitivity

- Number of Slum households
- Female Population
- Illiteracy rate
- Sites of Labor Chowks
- Landuse
- · Built up area

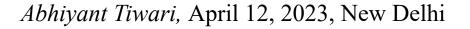
# Adaptive Capacity

- Access to Parks
- Access to Urban Health Centers
- Access to Waterbodies, emphasizing traditional structures Baoris
- Water Index
- Vegetation Index
- Road Density











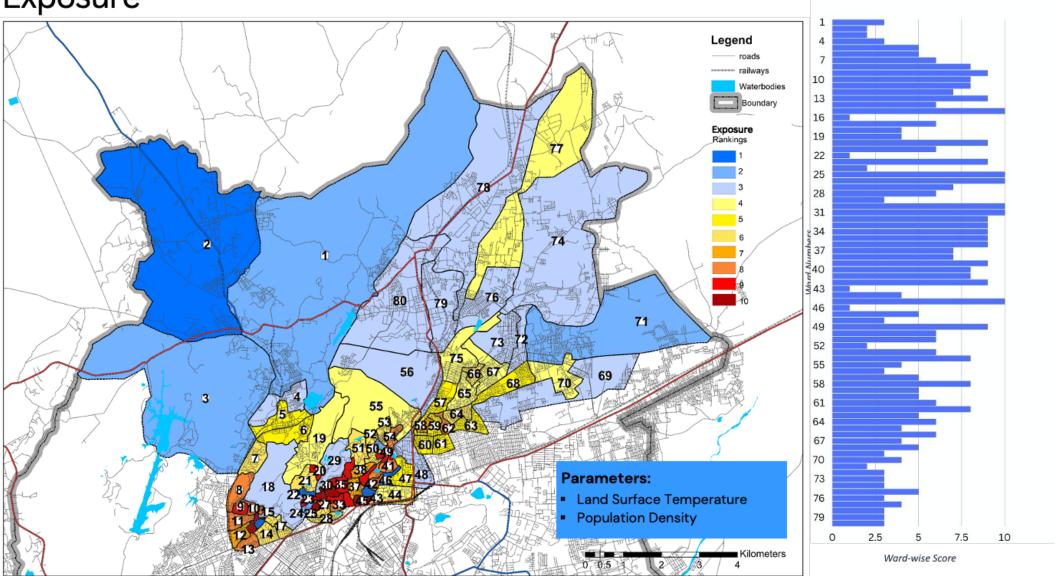






## CRDF AND DEVELOPMENT Developing a Standard Urban Heat Island Effect Mapping Methodology Developing a Standard Urban Heat Island Effect Mapping Methodology

# Exposure













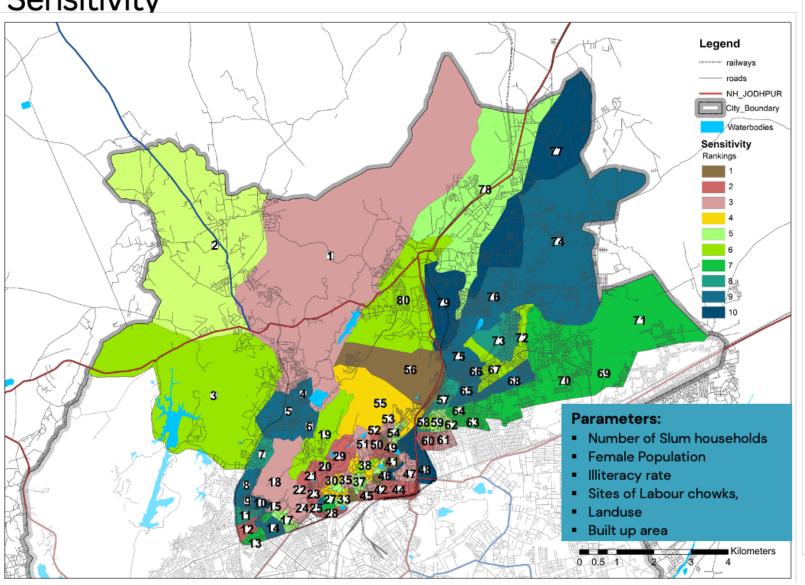


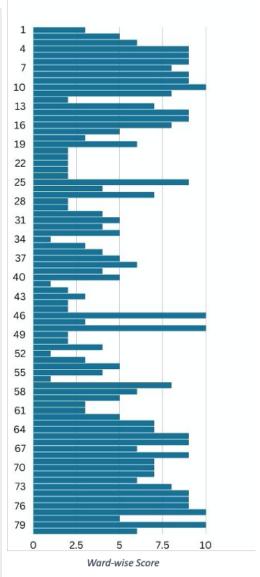




















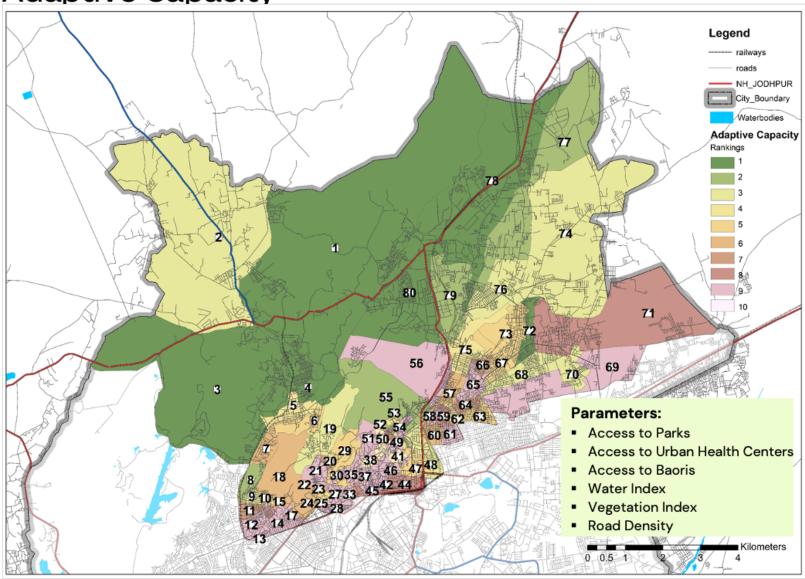


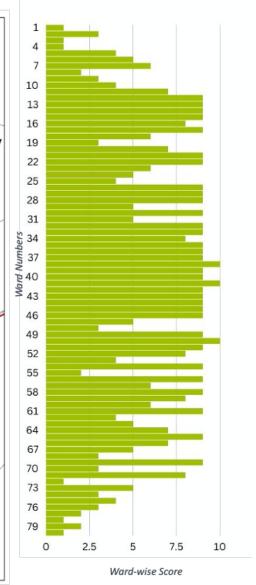




#### **Developing a Standard Urban Heat Island Effect Mapping Methodology**

**Adaptive Capacity** 













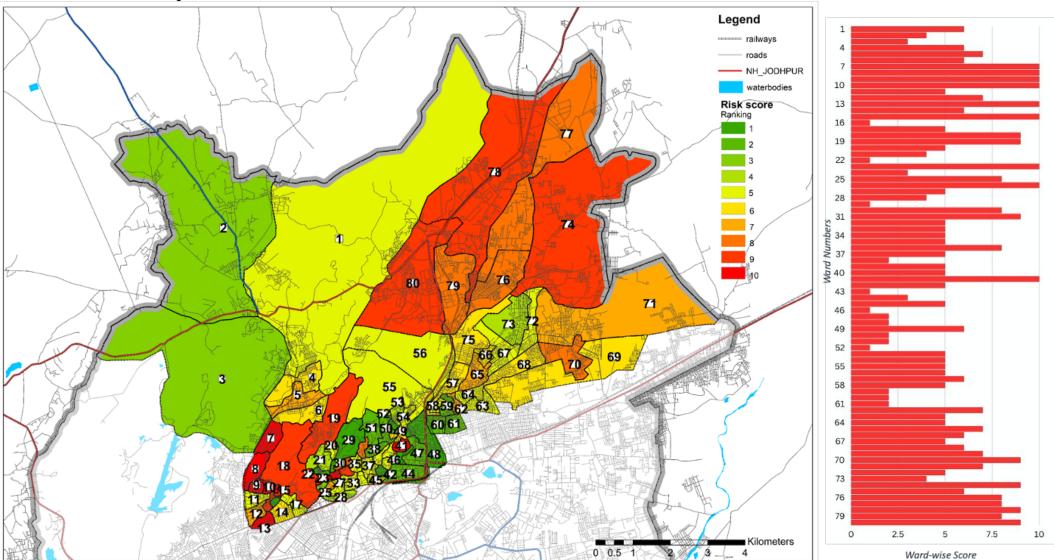










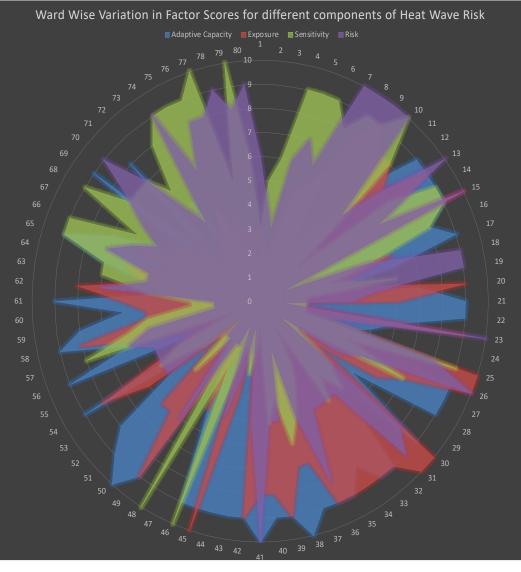












# **Thanks**

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