ANALYSIS OF URBAN HEAT ISLAN AND URBAN SPRAWLING OF DHAKA USING REMOTE SENSING

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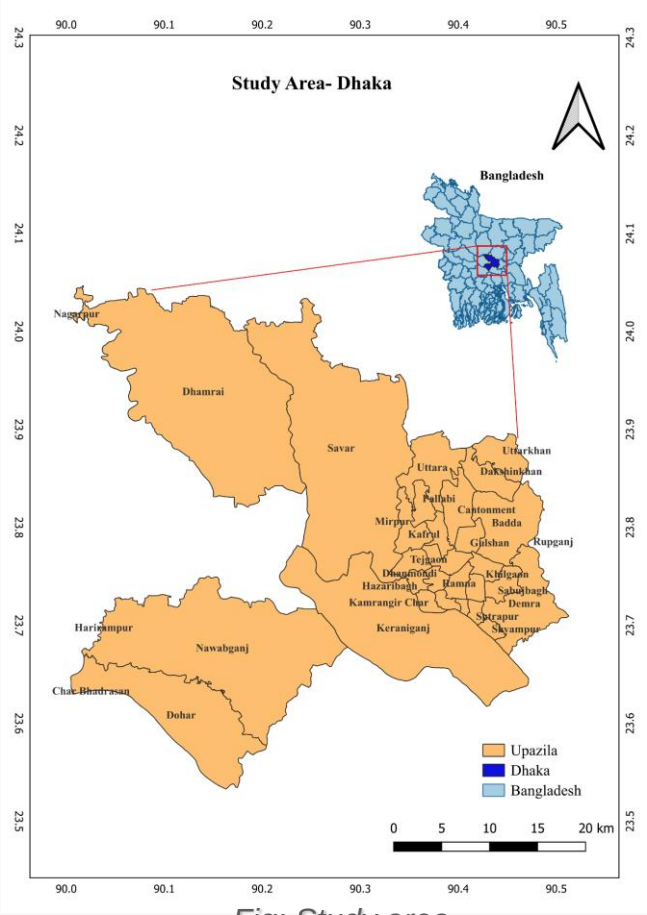


Fig: Study area

STUDY AREA

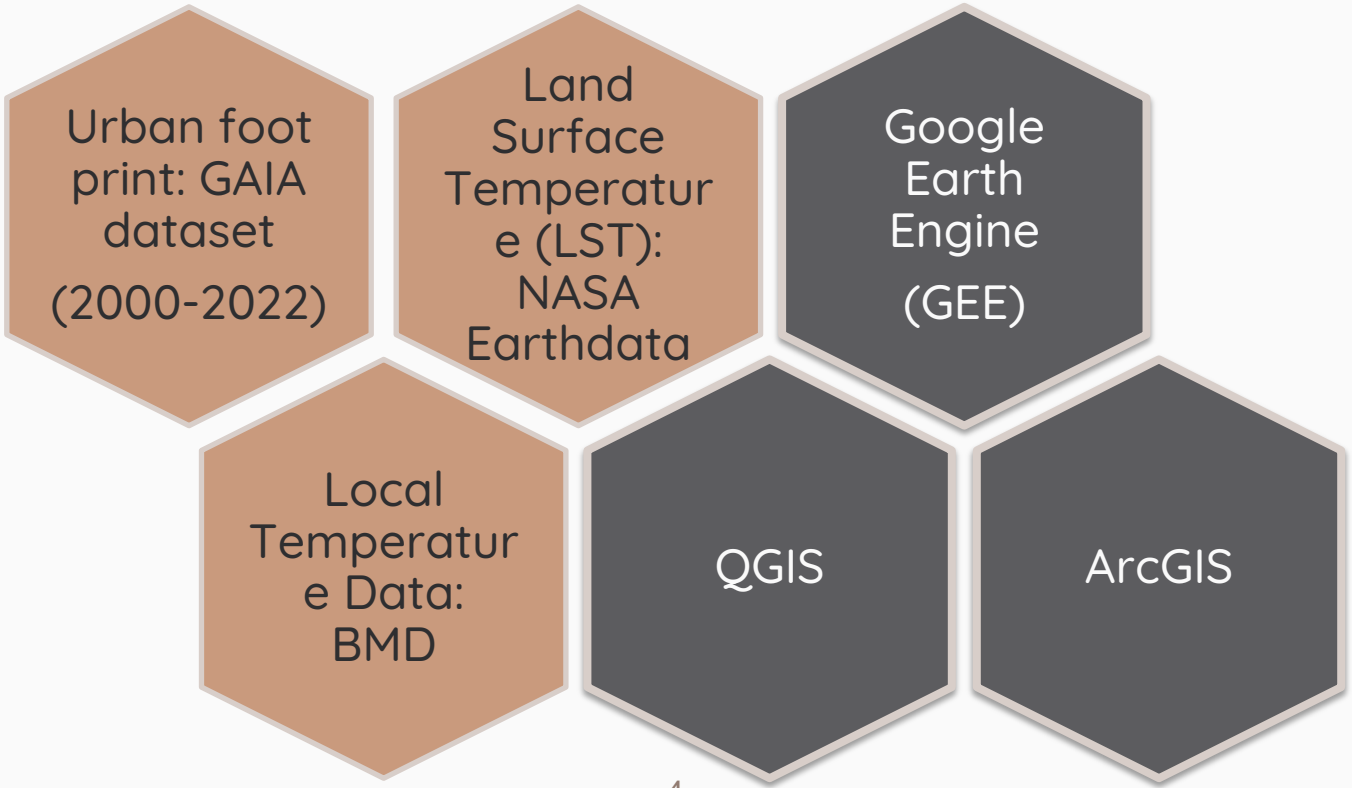
DHAKA

Rapid Urbanization and Unplanned Development

Urban Heat Effects are intensifying

METHODOLOGY

Data Source & tools



Process Review

Explain Urban Sprawl and LST Trends

Validate Open Data with Local Dataset

FINDINGS & ANALYSIS

Savar, Keraniganj, Demra, Uttara, Badda

Dahar, Nawabganj

481.956 Km²

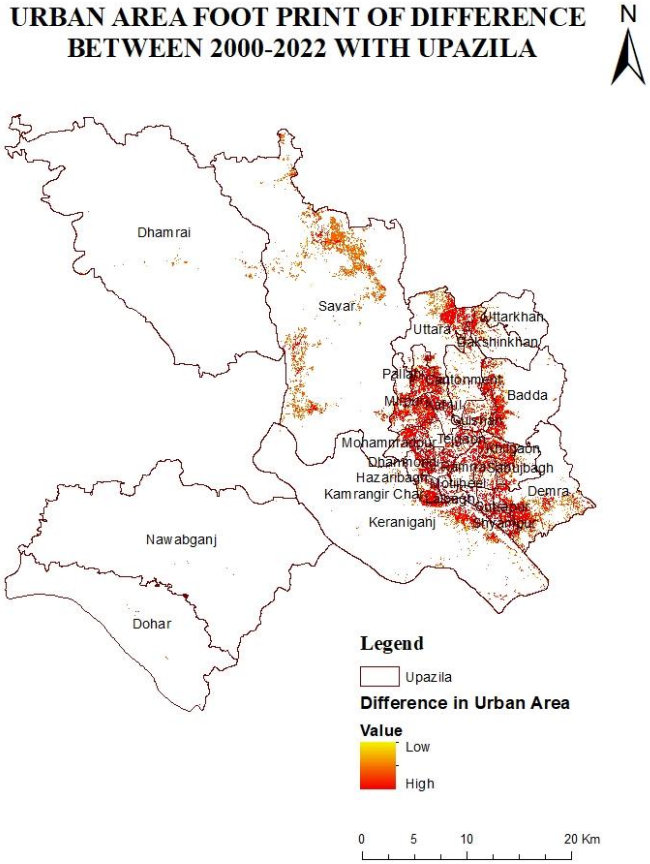


Fig : Urban footprint difference from 2000-2022

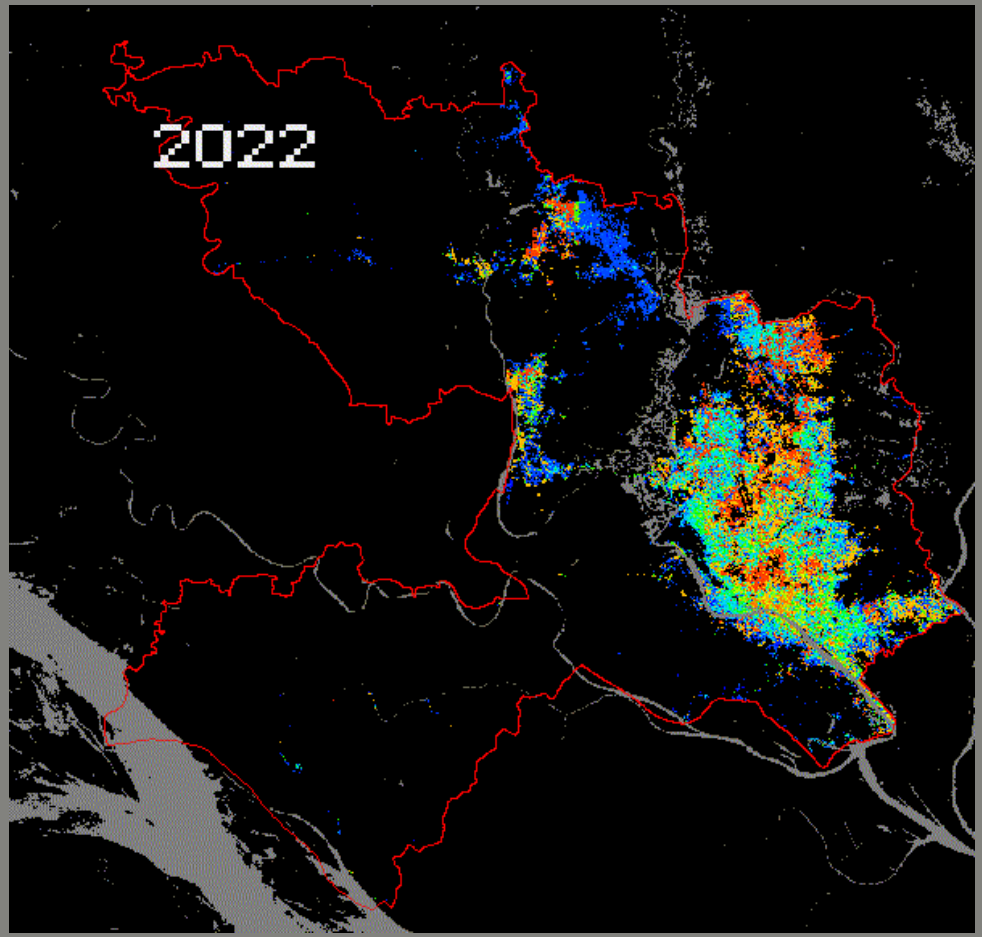


Fig : Urban footprint and urban sprawling

Urban Sprawling towards **NORTH**

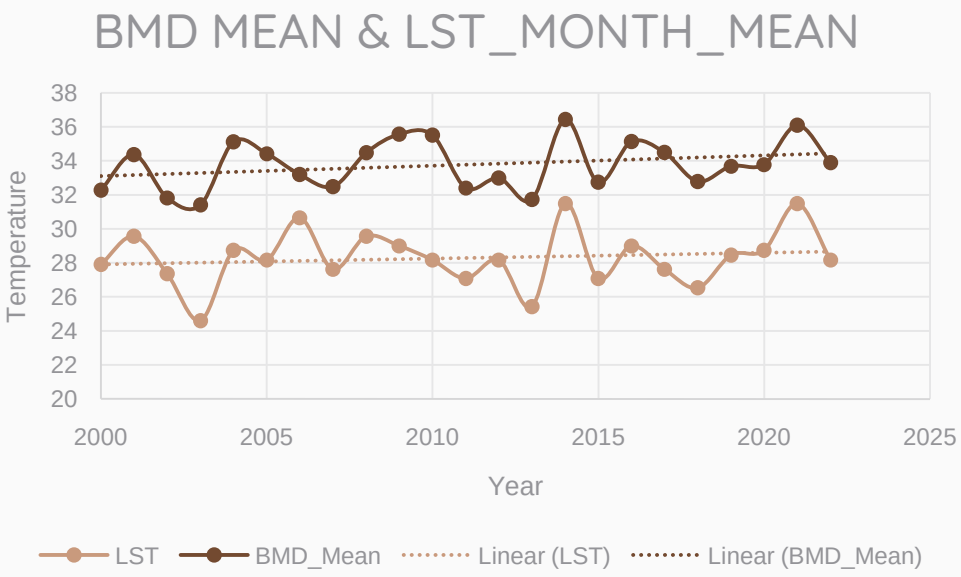


Fig : BMD mean and LST mean

Upward Trend

Open LST data shows a consistent 5°C lower mean temperature than BMD data.

In the **EASTERN, NORTHERN** side of Dhaka, the temperature is rising more. Correlation is 0.13

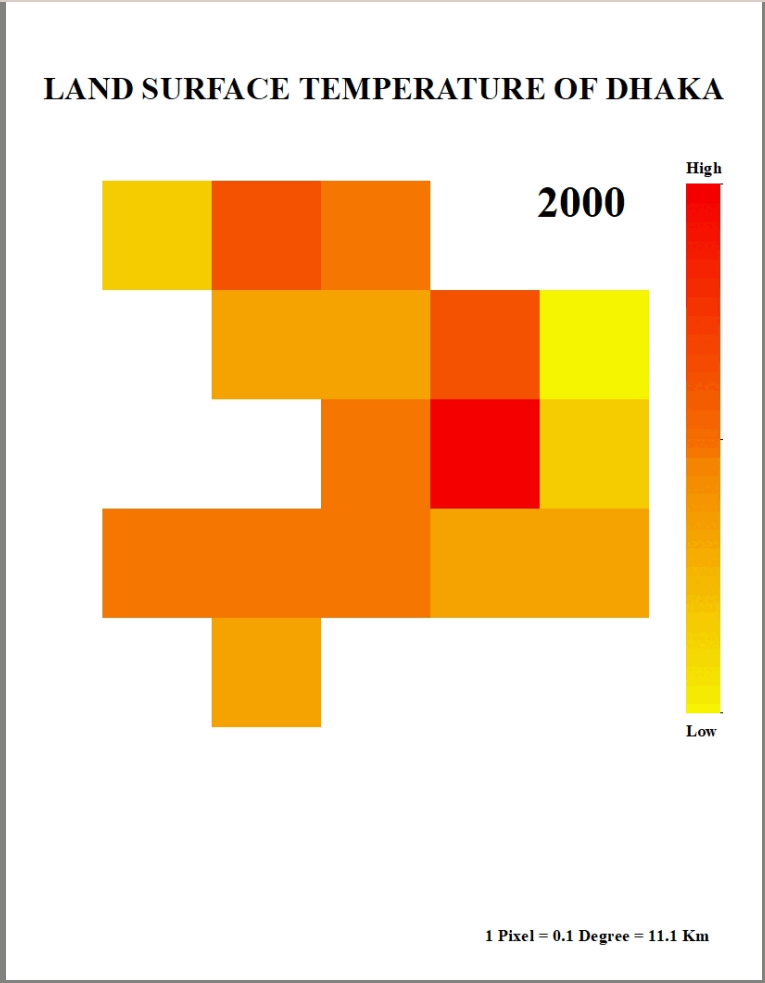


Fig : LST map

IMPLICATION

- Data discrepancy could undermine climate resilience planning.
- Open data calibration with local datasets is crucial.
- Decisions based solely on open data may misrepresent UHI severity.

RECOMMENDATION AND CONCLUSION

Recommendations:

- Collaborate with local agencies
- Integrate green spaces

Conclusions:

- Reliable, validated data is key for effective urban planning and climate resilience.

THANK YOU