



# Portfolio for GeoVisualization and GeoCommunication Track

By Tooba Iftikhar

# Portfolio Website

<https://analysttooba.github.io/profile/>

## ZOOMING IN ON MY GIS JOURNEY

It's all about what's known and what's not. This website showcases my journey, projects, and ongoing work in planning, mapping etc.

work in planning, mapping etc



## Projects

## Research



## Abstract

Urbanization and climate change present significant challenges for cities worldwide, such developing world cities being highly prone. Future seats in population growth, land changes, environmental degradation, and increased vulnerability to climate related hazards contribute to the sustainability of these cities. This study focuses on Lahore as a case study and aims to develop an Urban Spatial Scenario Design Model (USSDM) for climate resilient urban planning under climate effects. By using a range of methods, the research aims to identify the challenges and opportunities associated with climate change and opportunities associated with climate development. The development process includes (a) data collection, (b) spatial design, (c) representation in geographic Information Systems (GIS), software, (d) validation, (e) spatial analysis, and (f) interpretation of results. This initiative not only aims to address decision makers but also to promote climate resilience through its application in Pakistan cities, making it a sustainable model for other cities.

## Conceptual Framework



## Skills

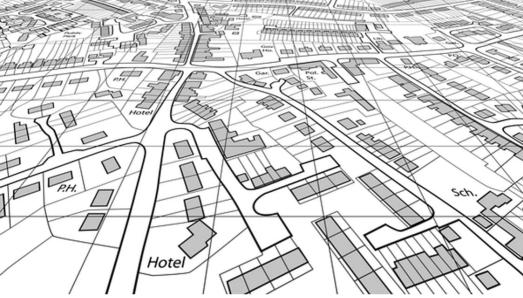
## Socials



## DEVELOPED USING:



Learning from YouTube, I created my portfolio website one year ago and shared the project on LinkedIn, where it was acknowledged by the official EM CDE page.



INFORMATION AGAINST  
EACH PROPERTY

**Plot 102**

Scheme: NAWAB TOWN (NWT)

Block: B

Plot Area: 1 Kanal

Total Amount: 1126469

Paid (2024): 0

Paid (2025): 1126469

Pending Dues: 0

Payment Status: FULL PAYMENT

Ground Status: Constructed Residential

Category: ILLEGAL

AD: MUHAMMAD IJAZ

## Tools & Technologies

### Geospatial Stack:



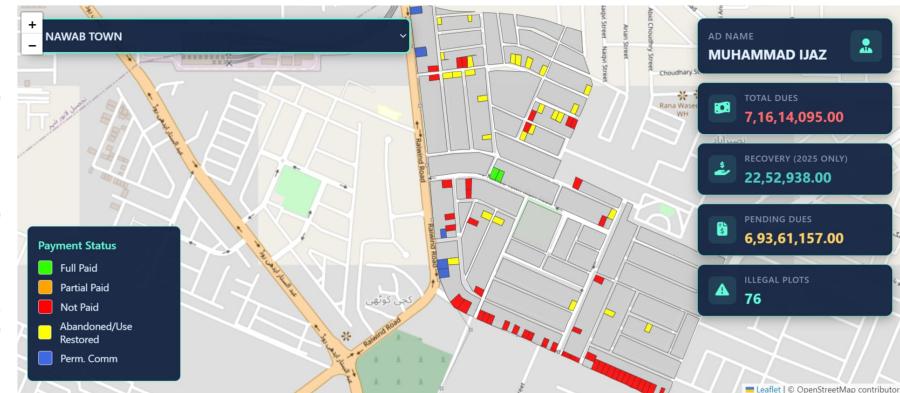
### Development Stack:



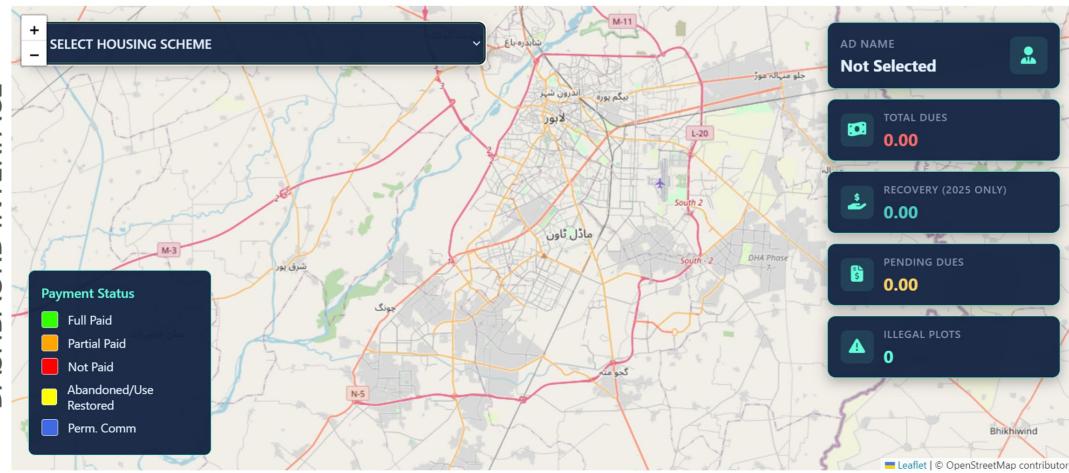
# Housing Scheme Analytics

<https://analysttooba.github.io/ZONE4/>

GEOCODING FOR  
44 SCHEMES IN LAHORE

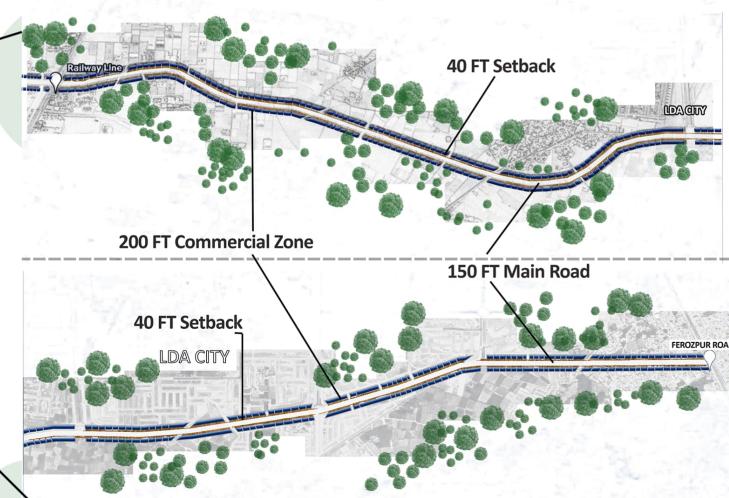
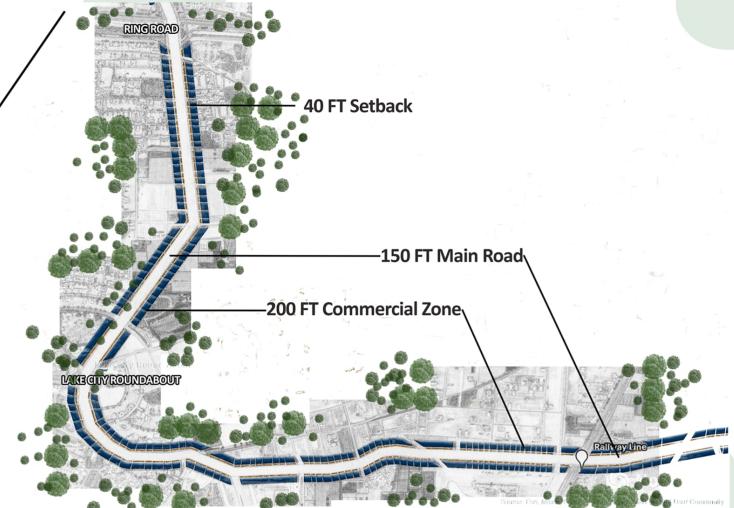
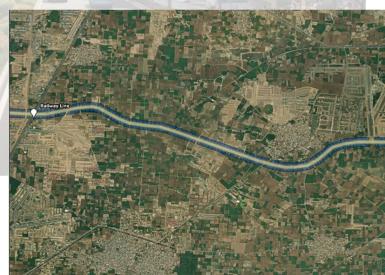


DASHBOARD INTERFACE



# Development of Pine Avenue Corridor

Multi-scale spatial analysis of the Pine Avenue corridor using satellite imagery, GIS-based land suitability modeling, mobility network optimization, and scenario-driven master plan visualizations.



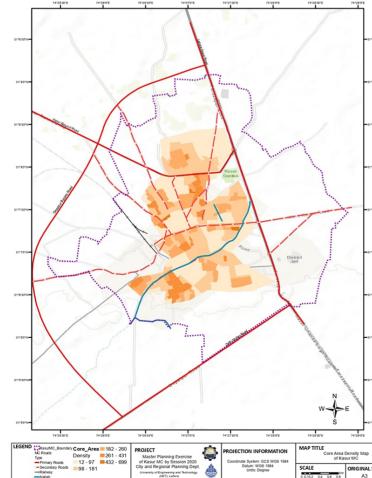
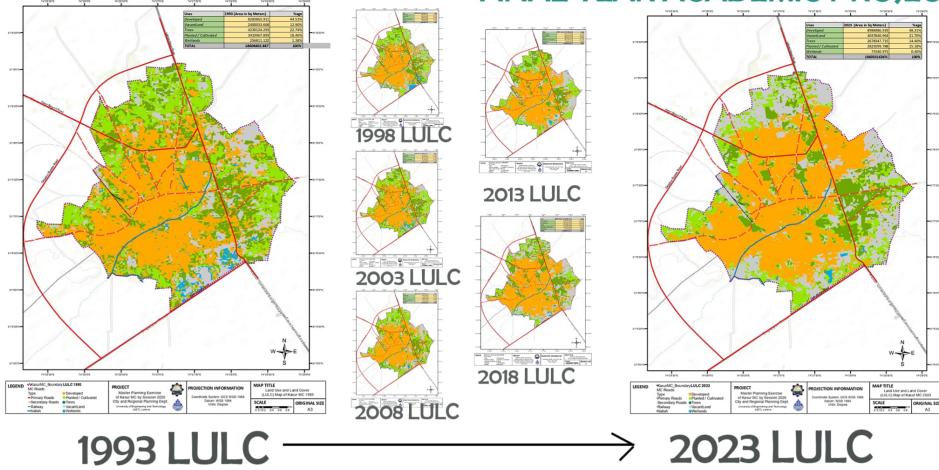
## Tools Used:



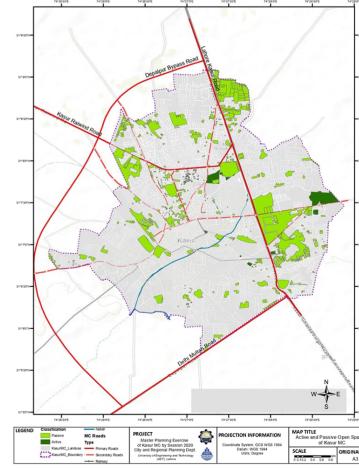
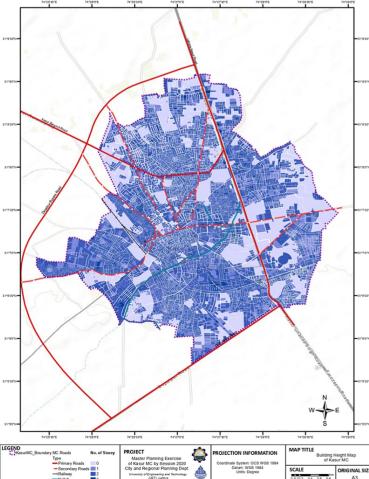
# Master Planning of Kasur

"Kasur is envisioned to be a vibrant, inclusive, and sustainable and climate-resilient city that offers a high quality of life for all its residents."

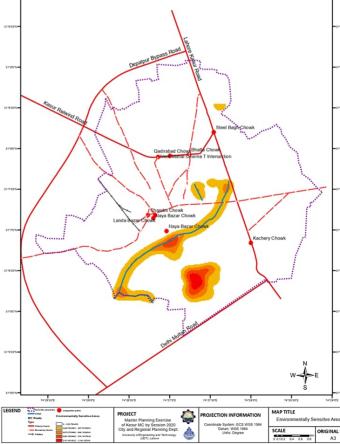
## Tools Used:



## HEIGHT ZONE MAPPING



## ACTIVE AND PASSIVE SPACES

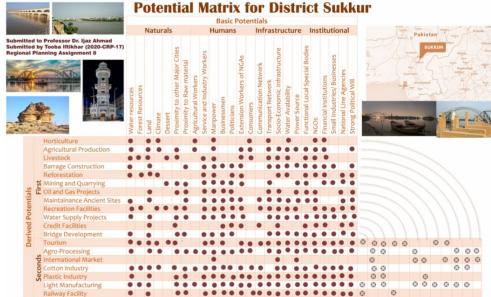


## CORE AREA DENSITY MAP

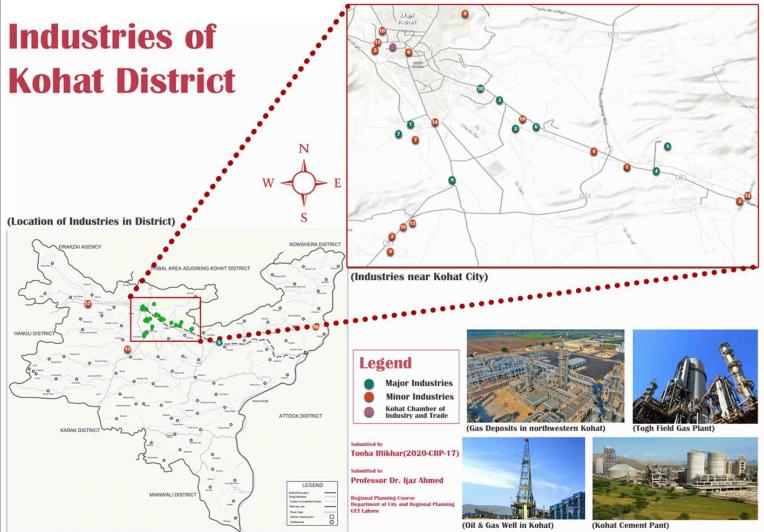
# ACADEMIC PROJECT

## Regional Planning Projects

Satellite- and GIS-based mapping of industries across Pakistan, including Kohat and Mardan, with identification of key propulsive sectors to inform data-driven spatial planning and scenario-based master plan visualizations.



## **Industries of Kohat District**



## **District Mardan: Classification of Non-Basic and Basic Industries**

## **Basic Industries**

<b>Industries</b>	
Saleemsons Oil Industries	1
Bharat Marble Industry	2
Khatkar marble industry	3
Mardon packages	4
Balkar plastic and pvc industry Mardon	5
Pak Marble Industry	6
Sander Marble Industry	7
Shah Marble Industry	8
Lodi Marble factory	9
Taji Marble factory	10
Shabbir Marble Industry Kallang	11
Yash Chokhi Marble Industries (Pvt) Ltd	12
Reyesbach Glassware kallang mardon	13
Kallang Construction Company	14
Shahid Steel Industries LTD	15
UMLI GULS AND SUNS MUSTARD OIL	16
Rustam Steel Corporation	17
Shahid Steel Industries LTD	18
Lotus Paints And Chemical industries	19
Mudassar Shah factory	20
Shabbir Marble Industry	21
Tobacco Company Plant	22
Jazzans points and Tatti Shahil	23
Shah Plastic Industries	24
Shah Plastic Factory	25
New Harchir Concrete Tatti Shahil	26



### **Non-Basic Industries**

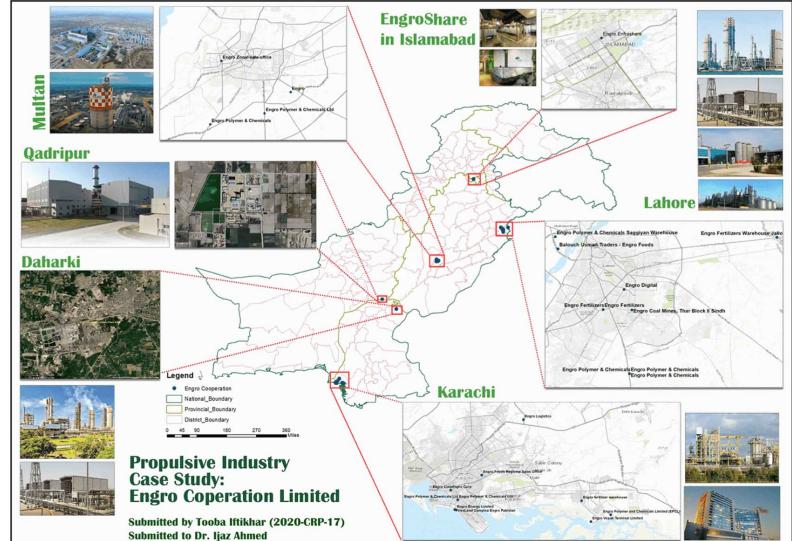
<b>Business</b>	<b>No.</b>
Anting & Wager Marble Industry	1
Baq Marble Industry	2
CENTILLE Industries	3
Carani Body Parts & Decorations Center	4
Central Hardware & Paint Shop Karlang	5
Gey Factory	6
Iqbal Muhammed engineering works	7
Iqbal Muhammed Electric Engineering Works	8
Jah Nails & Wire Industry	9
Kew All Industries engineering, Co (Pvt) Ltd	10
Lahore Industries	11
Mahbub Electronics	12
Sohha Electric Stone	13



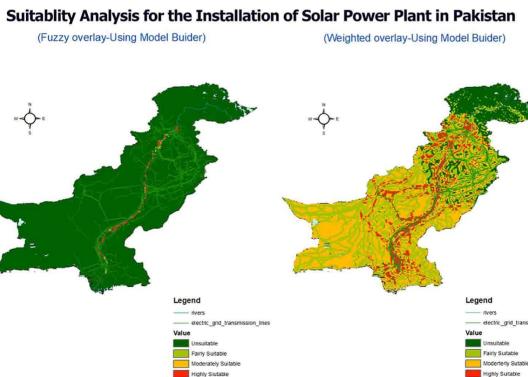
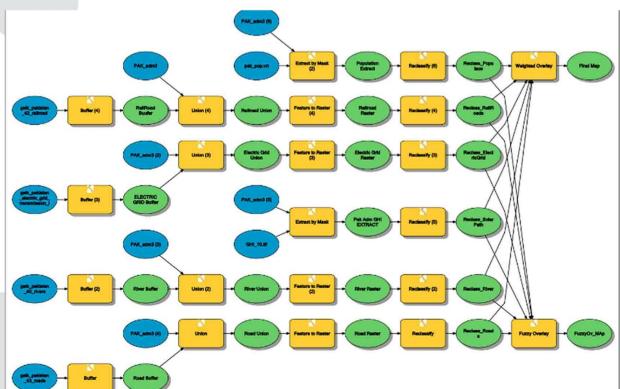
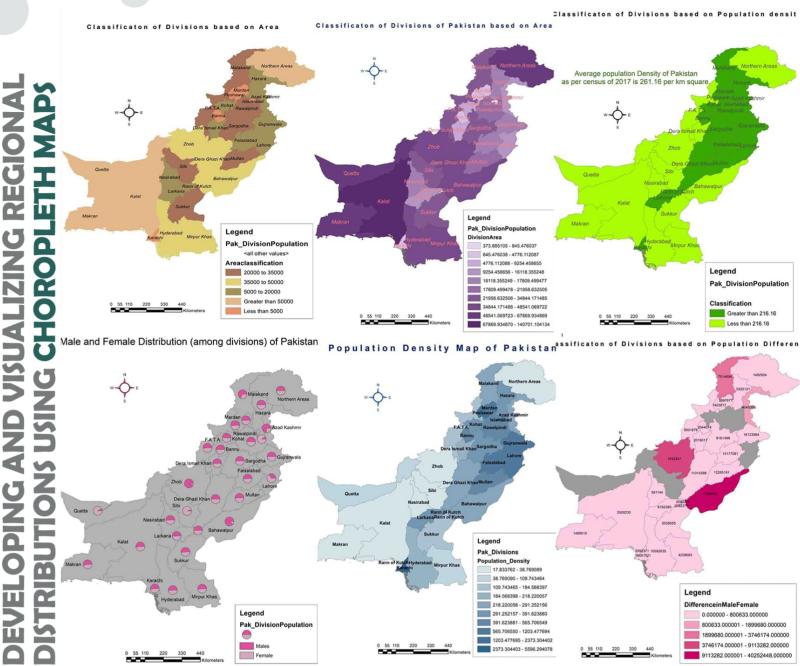
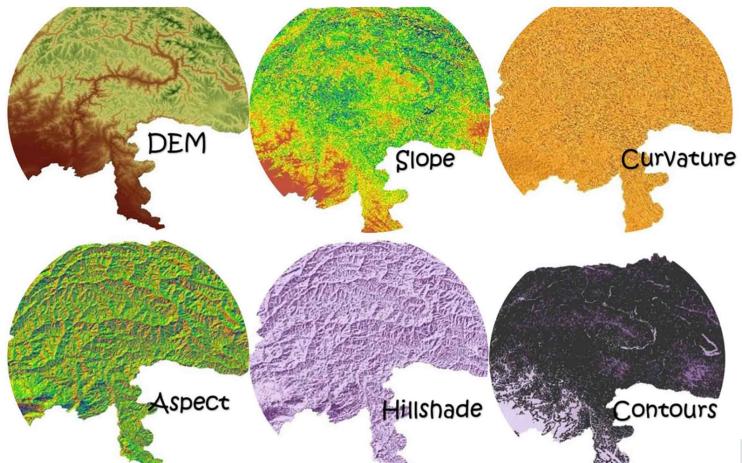
Mardan City

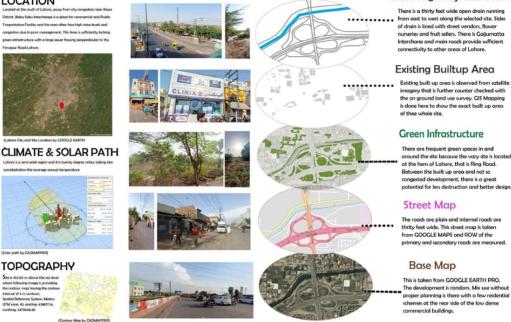


**District Mardan**



# Projects From BSc GIS Lab



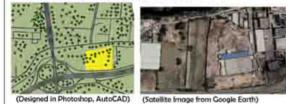
**SITE ANALYSIS****SITE COMPONENTS IN LAYERS AND PRESENT STATUS****LANDSCAPE**

# Urban Design Project

I led a team of four in reimagining a 30-foot-wide open Hudaira drain in Lahore's industrial area, transforming it into a livable urban space. Through sustainable design, green corridors, and pedestrian-friendly interventions, we aimed to enhance urban resilience.

**Tools Used**

## UZ BLOCK

**EXISTING CONDITION**

The existing area is under utilized, having mainly its usage for parking purposes of trucks and other HVs. There is random development there and much of the space is vacant, even regarding flora and fauna. There are frequent green spaces and the overall site is under utilized.

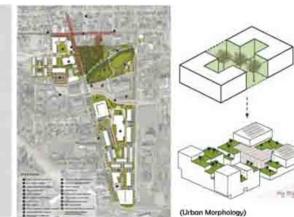


The site is located within the immediate vicinity of the major road. There are just abandoned factories and only one textile factory is in operation that will be displaced soon. There were few structures, that seemed to be going under some type of construction. As far as the proposed plan of the site is concerned, it has been tried to keep up the potential of the site, as the site is a part of T.O.D of Green Line metro bus, having a nearest station of gajju motta interchange station (at an easy walking distance of 300m) so the development plan has been proposed accordingly.

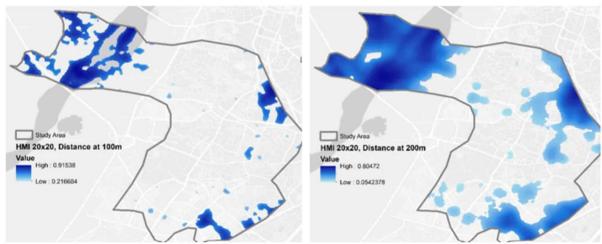
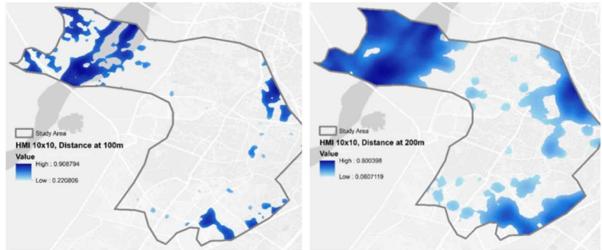
**CASE STUDIES AND DESIGN INSPIRATIONS****Design Inspiration**

Design inspiration is taken from the existing mixed used models practised around the world. The open space surrounded by double or triple storey buildings, will give a sense of enclosure, a principle widely studied in Urban Design. These mixed used models will have commercial shops operating at the ground floor and there will be no parking. Upper floors can be utilized for offices or residential or retail requirements. It will be a medium density development and some models are followed with minor modifications in the layouts.

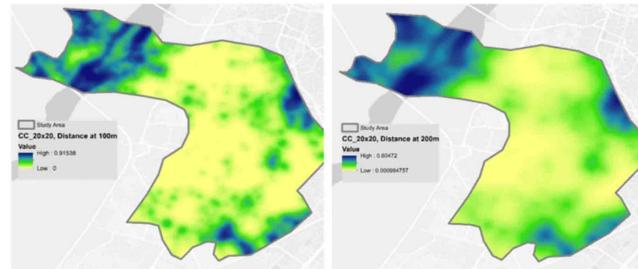
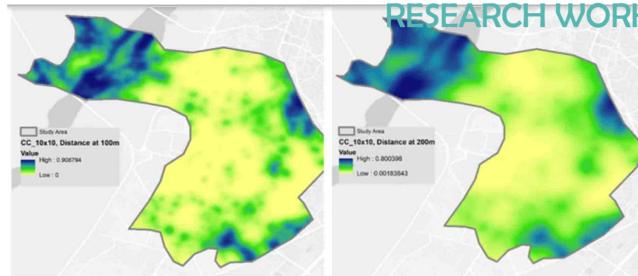
For further beautification, stepped terraces will be created to create a sense of place and these edges will serve the needs of green spaces.

**PROPOSED 2D LAYOUT****Proposed glass buildings for office use**

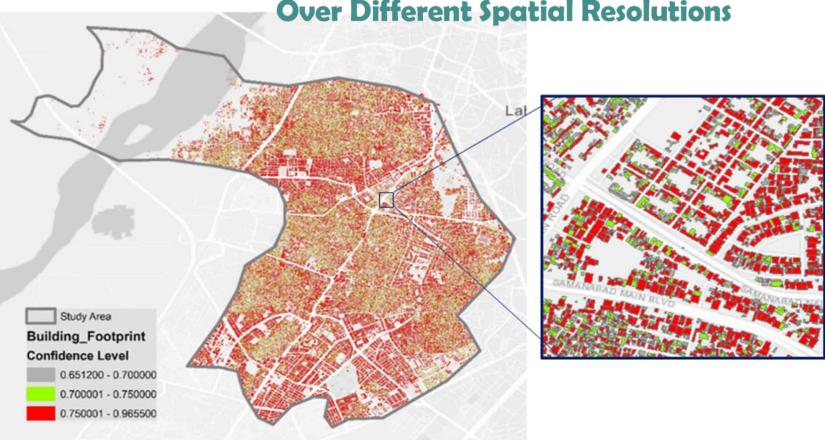
# Thesis Title: Assessing Heat Mitigation Capacity of Urban Green Spaces Using The Invest Model: A Scenario Analysis of Samanabad Town, Lahore

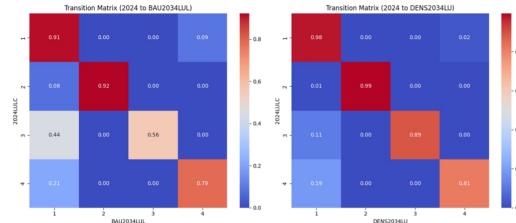


## HEAT MITIGATION INDEX Over Different Spatial Resolutions



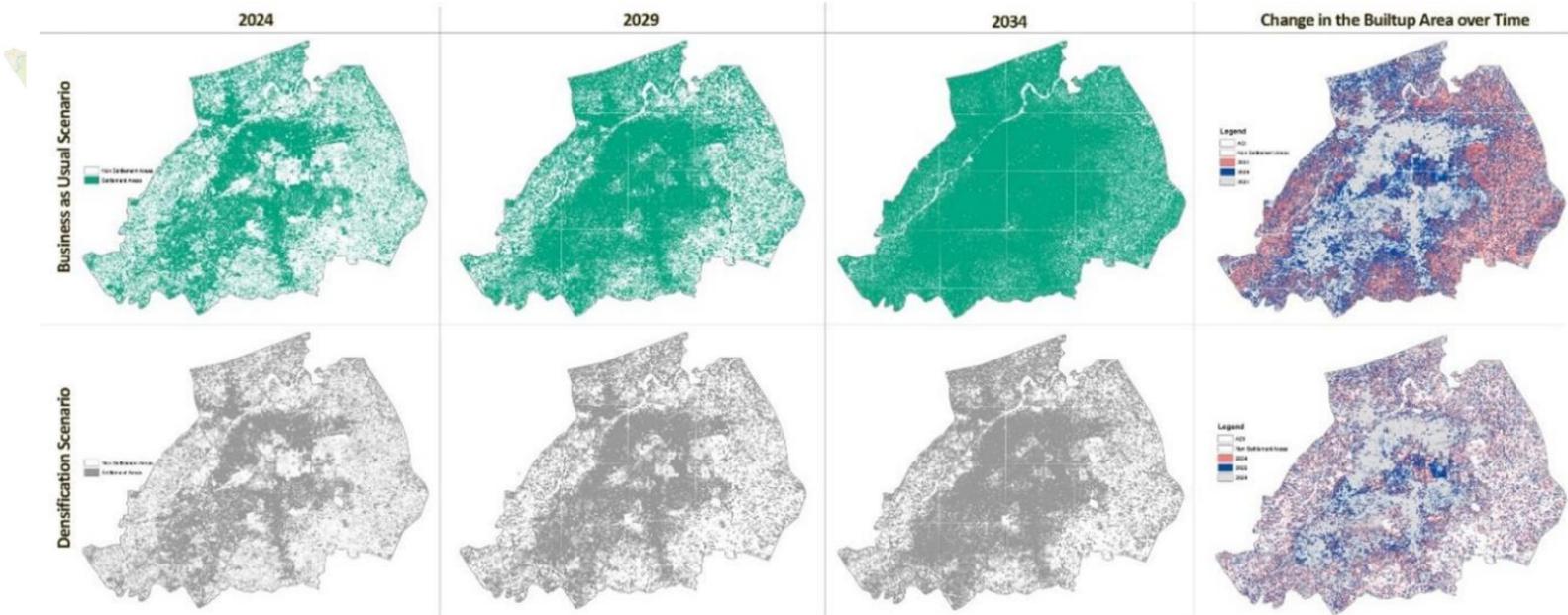
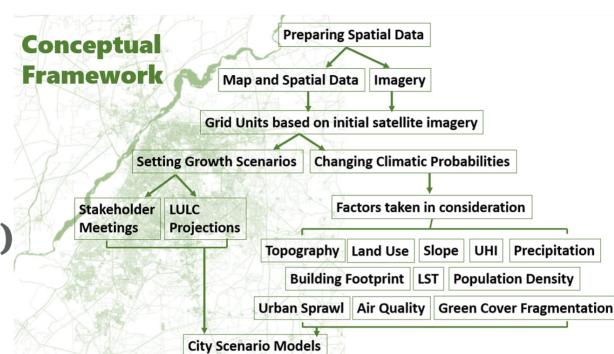
## COOLING CAPACITY Over Different Spatial Resolutions





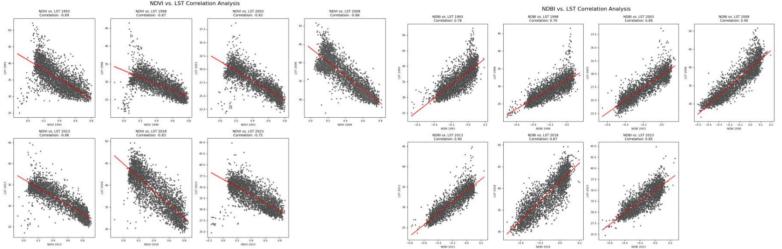
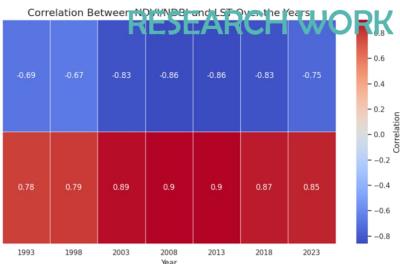
## Development of an Urban Spatial Scenario Design Model (USSDM) for Climate-Resilient Urban Planning in Lahore, Pakistan

Part of Research Fellowship with PLANADES, Philippines

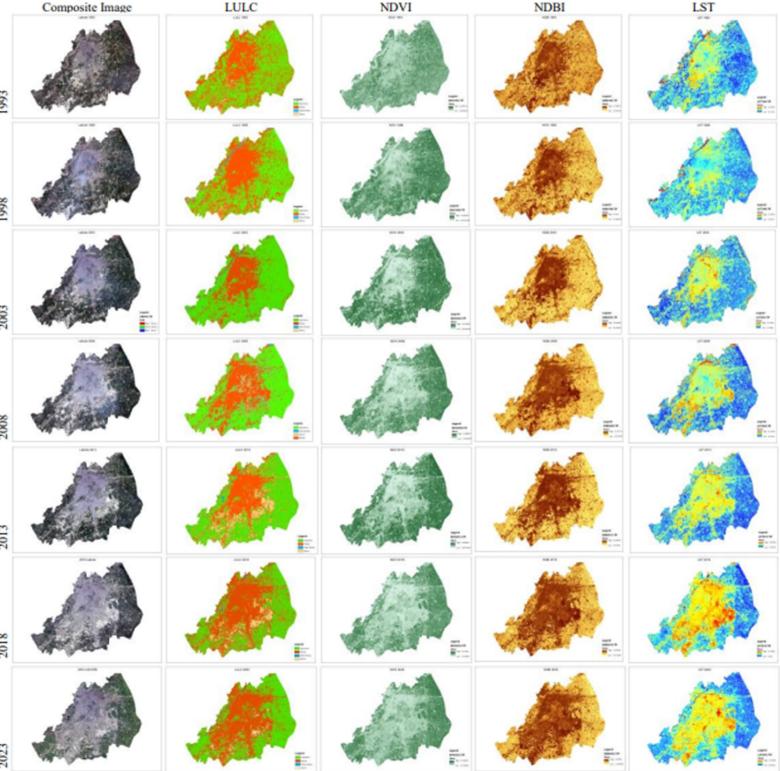


# Tracing Lahore's Carbon Sequestration Pathway: Integrating Remote Sensing, GIS and Local Perspective for Urban Ecological Renewal

Part of the Research for German Summer School



## LULC, NDBI, NDVI AND LST FOR LAHORE (1993-2023)



### Potential Locations for Carbon Sink within Lahore

