

RAVINDRA SINGH

PhD Candidate in Geography · Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi

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RESEARCH PROFILE

Delhi is officially one of India's greenest cities. It is also a city where millions of residents in informal and unauthorised settlements live without meaningful access to green space, cooling shade, or clean urban environments. This paradox is the starting point of my doctoral research. Spatial justice is the organising framework — asking not just whether environmental resources are distributed fairly (*distributive justice*), but who participates in decisions about urban environments (*procedural justice*), and whose communities and claims are recognised as legitimate within planning systems (*recognition justice*). My central argument is that misrecognition is foundational: when planning frameworks refuse to acknowledge informal settlements as legitimate urban communities, procedural exclusion and distributive deprivation follow structurally. Through geospatial modelling, critical master plan analysis (1962 to 2041), and governance fieldwork in urban villages and unauthorised colonies, I examine how Delhi's greening agenda concentrates ecological benefits in planned areas while displacing environmental costs onto the urban poor.

EDUCATION

PhD in Geography

2021 – Present

Centre for the Study of Regional Development (CSRD), Jawaharlal Nehru University, New Delhi

Dissertation: Socio-economic Embeddedness of Urban Green Spaces in Delhi: A Spatial Justice Framework

Supervisor: Professor Milap Punia

M.A. in Geography

2016 – 2018

Central University of Punjab, India

Specialisation: Urban and Environmental Geography; GIS and Remote Sensing

Dissertation: Mapping of Industrial Waste of Granite and Marble Slurry in Rajasthan

Consultant — Shahjahanpur City Heat Action Plan 2026

2025 – 2026

District Disaster Management Authority, Shahjahanpur, Uttar Pradesh

Commissioned to lead spatial heat risk assessment and vulnerability mapping underpinning the full municipal Climate Adaptation Plan. Produced Chapter 2 (Geospatial Heat Risk Assessment), developing a composite Heat Risk Index using Geospatial data. Provided substantive policy inputs across Guiding Principles, Early Warning Systems, Operational Heat Action Strategy, and department-wise Standard Operating Procedures. One of the few instances of doctoral research directly shaping a published city-level policy instrument in India. [Published plan: shahjahanpur.nic.in/dmp/](https://shahjahanpur.nic.in/dmp/)

Senior Research Fellow — UGC Fellowship

2021 – Present

Centre for the Study of Regional Development, Jawaharlal Nehru University

- Designing and conducting mixed-method research integrating geospatial modelling, critical master plan analysis (1962–2041), and field-based governance inquiry.
- Running the InVEST Urban Cooling Model to quantify distribution of heat mitigation benefits across settlement typologies; key finding: multiple times cooling deficit in informal settlements relative to planned settlements.
- Developing spatial justice indices through raster-based modelling, proximity analysis, weighted overlay techniques, spatial regression, and Gi* hotspot analysis to assess environmental inequality.
- Examining distributive, governance, and cultural dimensions of urban green infrastructure governance in Delhi using Roberto Rocco's spatial justice framework.
- Conducting community-level fieldwork in Delhi's urban villages in collaboration with independent researcher Puneet Singh Singhal (Dilli Dehat Project).

Urban Fellowship Award

2018 – 2019

Indian Institute for Human Settlements (IIHS), Bangalore (*Diploma*)

Nine-month fully residential, interdisciplinary fellowship at India's only nationally recognised urban practice training institution. Curriculum combined classroom instruction, site-based applied learning, and live project work across governance, ecology, infrastructure, and spatial planning. Developed foundational skills in translating complex urban research into practice-oriented governance interventions, working across the full spectrum of urban themes, including water, sanitation, commons, planning, and identity. IIHS draws faculty from India's leading urban institutions and international partners.

Intern

2019

Indo Global Social Service Society (IGSSS), New Delhi

Contributed to the Urban Agenda 2041 initiative, including climate justice analysis and policy manifesto preparation addressing environmental inequality in Delhi.

FELLOWSHIPS & SCHOLARSHIPS

UFS Futuring Summer School — Futuring for Democracy

July 2026

Utrecht University, Netherlands · Competitive grant of EUR 2,000 (fee waiver, travel, accommodation, and meals)

Amsterdam Complexity School on Climate Change — Travel Grant

Apr – May 2026

UvA Institute for Advanced Study, Amsterdam, Netherlands · Competitive travel grant (EUR 800) plus full accommodation and meals

Austrian Student Union Travel Grant

2025

Vienna Doctoral School, Austria · EUR 800 for Urban Space, Financialisation, and the Right to the City

Indo-German Centre for Sustainability Fellowship — Regenerative Urban Futures

2024

IGCS, RWTH Aachen, Germany · Fully funded fellowship (EUR 2,000) — Circular Economies and Societies

TU Delft Summer School Scholarship — Planning and Design for the Just City

2024

Centre for the Just City, Faculty of Architecture and Built Environment, TU Delft, Netherlands · EUR 500 scholarship plus fees and accommodation

University Grants Commission Junior Research Fellowship

2021 – Present

Government of India · Nationally competitive fellowship funding full PhD research at JNU; selection via national-level NET examination

PUBLICATIONS & POLICY REPORTS

- Jasrotia, G., Agarwal, O., Singh, R., Choudhary, R.S., and Athar, T. (*Forthcoming 2026*). A Manifesto for a Waste-Just Delhi: How Delhi Produces Waste Injustice and How We Must End It. In R. Rocco et al. (Eds.), *A Manifesto for the Just City* (Vol. 5). TU Delft Open Publishing.
- Singh, R. (2026). Geospatial Heat Risk Assessment and Spatial Analysis [Chapter 2, Technical Expert]. In *Shahjahanpur City Heat Action Plan: A Heatwave Management Guide for 2026*. District Disaster Management Authority, Shahjahanpur, Uttar Pradesh.
- Jasrotia, G., Punia, M., Singh, K.K., and Singh, R. (2025). A manifesto for environmental justice in Delhi. In R. Rocco, C. Newton, and J. Goncalves (Eds.), *A Manifesto for the Just City* (Vol. 4, pp. 380–389). TU Delft Open Publishing. <https://doi.org/10.59490/mg.142>

CONFERENCE PRESENTATIONS

LivedHeat Symposium 2026

May 2026

IIT Delhi and TU Delft, New Delhi

Who Gets to Stay Cool? Spatial Inequality in Urban Heat Mitigation across Delhi.

Spatial Planning in Practice International Conference

2023

TU Delft, Netherlands

Assessment of Socio-economic Embeddedness of Urban Green Spaces in Delhi.

43rd INCA International Congress

2023

Indian National Cartographic Association, hosted by NRSC, ISRO

Geospatial Assessment of Quality, Quantity and Accessibility of Urban Green Spaces in Delhi.

TRAINING & WORKSHOPS

School of Climate Change Certificate Course

Jan–Mar 2026

Oxford Climate Society

Eleventh Annual PhD Workshop

2023

IIHS, Bangalore — academic writing, research communication

NGP-DST Winter School on Geospatial Techniques

Dec 2021

Bharati Vidyapeeth University, Pune — 21-day Level 2 programme; Forest Landscape Analysis for Uttarakhand

Summer Training in RS, GIS, and GPS

May–Jun 2018

Punjab Remote Sensing Centre (PRSC), Ludhiana — cadastral mapping, remote sensing, GIS, GPS

Exploring Sustainability in the Indian Context

Apr–Jul 2022

Azim Premji University, India

SERVICE & PROFESSIONAL RESPONSIBILITIES

Rapporteur

Jan 2022

UN-GGIM Pre-event, CSRD, JNU, New Delhi — multiple sessions at the United Nations Global Geospatial Information Management pre-event

Rapporteur

Aug 2023

International Conference on Sustainable and Inclusive Urban Development in the Global South, New Delhi — organised by IHD, NITI Aayog, University of Florida, CSRD-JNU, and National Institute of Urban Affairs

Student Representative, Board of Studies

2017 – 2018

Centre for Geography and Geology, School of Environment and Earth Science, Central University of Punjab

METHODOLOGICAL EXPERTISE

My research integrates three methodological registers: **geospatial modelling and remote sensing** (ArcGIS Pro, QGIS, Google Earth Engine, InVEST) to quantify how environmental benefits are distributed across settlement typologies; **spatial statistics** including regression, hotspot analysis, and Lorenz curves to identify structural patterns of inequality; and **governance fieldwork and master plan analysis** to trace how planning decisions produce exclusion on the ground. Numbers identify the pattern. Fieldwork explains the mechanism.

Research Methods: Mixed-method research design, critical master plan analysis, qualitative governance fieldwork, community interviews, participatory mapping, institutional analysis, policy document analysis.

LANGUAGES

Rajasthani Mother tongue

Hindi Excellent

English Excellent