

About the National Institute of Urban Affairs (NIUA)

Established in 1976, NIUA, is a premier Institute of the Ministry of Housing and Urban Affairs, Government of India for research and capacity building for urban sector in India. NIUA's broad objective is to bridge the gap between research and practice on issues related to urbanization. For more than 40 years now, NIUA has been the vanguard for contributing to and building the urban narrative for a fast-evolving Urban India. The Institution has been actively working on bringing forth key areas of concern for urban India in order to build the urban discourse at various urban scales. It has utilized its competencies in research, knowledge management, policy advocacy and capacity building to address urban challenges and continuously striving to develop sustainable, inclusive, and productive urban ecosystems in the country. It has emerged as a thought leader and knowledge hub for urban development in India and is sought out by both Indian and International organizations for collaborations and partnerships in India's urban transforming journey. NIUA is committed towards aligning its efforts towards achieving Sustainable Development Goals (SDGs) through all its initiatives and programs.

About NIUA's Water and Environment Vertical

The Water and Environment vertical at NIUA focuses on creating frameworks, mechanisms, and pathways that enable Indian cities to manage their water and environmental sectors sustainably. Aligned with India's Ministry of Housing and Urban Affairs, our efforts are geared towards driving tangible, on-ground change. We collaborate with the Ministry to implement various national Urban Missions and initiatives that impact urban water and environmental management. Additionally, we partner with a wide array of national and international resource organizations with similar goals and mandates.

Our work in urban water and environmental management typically includes:

- Developing national-level strategic frameworks, guidance documents, and advisories to facilitate actionable outcomes across all cities.
- Creating digital tools and instruments to help cities advance their capabilities.
- Conducting action-oriented research on emerging, underexplored topics.
- Supporting the piloting of innovative concepts and technologies through demonstration projects.
- Designing specialized capacity-building modules and certification programs.

Urban River Management Plan for Delhi (Code: URMP-DELHI): The objective of this project is to develop an Urban River Management Plan (URMP) for Delhi based on the URMP framework propounded by NIUA and the National Mission for Clean Ganga. The plan will involve identifying actions (planning, regulatory, institutional, legal, and on-the-ground project interventions) for improving the state of the Yamuna River. The project team will work closely with the different Central and State government agencies in Delhi as well other non-governmental and academic organizations for the development of the Plan.

Title: (Senior) GIS Expert (1 position)

Project Code: URMP-DELHI

Reports to: Team Leader

Core Responsibilities:

1. Collect, compile, and manage spatial datasets related to river morphology, catchment area, flood zones, land use/land cover (LULC), water and used water infrastructure (STPs, drains), and ecological features.
2. Conduct spatial analysis for identifying pollution hotspots, encroachments, buffer zones, vulnerable zones, etc.
3. Use remote sensing techniques to monitor seasonal and long-term changes in river systems.
4. Develop base maps and thematic layers supporting river management objectives (e.g., ecological corridors, green-blue infrastructure, flood risk).
5. Perform hydrological and hydraulic modelling using GIS-integrated tools to simulate urban runoff, drainage patterns, and flooding scenarios.
6. Support integration of spatial data with urban development plans and policy layers.
7. Prepare high-quality cartographic outputs, spatial dashboards, and visualizations to aid decision-making.
8. Collaborate with multidisciplinary teams (urban planners, ecologists, engineers, etc.) to ensure GIS outputs align with broader project goals.

Education Qualifications & Experience

1. Postgraduate degree in Geoinformatics, Geography, Environmental Science, Civil Engineering, Urban Planning, or related field.
2. 7-10 years of professional experience in the creation and management of GIS-databases, spatio-temporal analysis and modelling, preferably in urban water or environmental projects.
3. Strong proficiency in GIS and remote sensing software: ArcGIS, QGIS, ERDAS Imagine, ENVI, Google Earth Engine
4. Working knowledge of modelling software such as HEC-RAS, SWMM, MIKE, MODFLOW or other hydrological tools would be desirable
5. Experience in handling large spatial datasets, satellite imagery, DEMs, LIDAR data, and ground-truthing protocols.
6. Knowledge of spatial data standards, metadata creation, and geodatabase management.
7. Familiarity with Python, R, or SQL for spatial data processing, data visualisation tools will be an added advantage
8. Experience working on river rejuvenation, wetland management, or urban flood modelling, groundwater management projects is desirable.
9. Excellent writing and communication skills in English. Preference will be given to candidates with oral and written communication skills in Hindi and other regional languages as well.

Application Process –

- Interested candidates are required to submit a detailed CV that highlights relevant experience via the NIUA portal. The application deadline is 28 August 2025.

- Because of the urgency of the assignment, applications will be reviewed on a weekly basis and interviews conducted periodically.
- Candidates are encouraged to provide at least two professional references to verify their professional credentials.
- Only shortlisted candidates will be contacted for an interview. Shortlisted candidates may choose to attend the interview online. A link for the interview will be provided by the recruitment team in advance.
- If necessary, the selection committee may invite candidates for a second round of in-person interviews.
- No TA/DA will be provided for attending the interview.