

File No.: 21014/04/2024-LRD-Part(3) (e- 3014254)
भारत सरकार / Government of India
ग्रामीण विकास मंत्रालय / Ministry of Rural Development
भूमि संसाधन विभाग / Department of Land Resources

G Wing, NBO Building
Nirman Bhawan, New Delhi
Dated: 10th January, 2025

To

ACS/Principal Secretary/Secretary - Revenue and Urban Development Departments
All States/UTs

Subject: Suggestive Structure of State Programme Management Unit (SPMU) for "NAtional geospatial Knowledge-based land Survey of urban HABitations (NAKSHA)" under Digital India Land Records Modernization Programme (DILRMP) - reg.

Sir/Madam,

I am directed to refer to the above cited subject and say that Government of India has launched the pilot programme "NAtional geospatial Knowledge-based land Survey of urban HABitations (NAKSHA)" under Digital India Land Records Modernization Programme (DILRMP) vide DoLR's letter No. 21014/04/2024-LRD (e- 3013932) dated 25.09.2024 for the creation of Land Records in Urban Areas in selected cities.

2. This one-year pilot programme will be implemented in more than 150 cities across 29 States/UTs in the country with **Survey of India (SOI)** as the technical partner. Field Survey and Ground Truthing will be carried out by State/UT Governments. Based on the learnings and outcomes of this pilot, a larger programme covering all cities and towns will be launched nationwide.

3. For effective implementation of pilot programme States/UTs are requested to initiate the procedure for establishment of **State Programme Management Units (SPMUs)** for day-to-day coordination and providing technical support. The tentative suggestive structure along with indicative remuneration to be paid to the human resources is attached at **Annexure - I**. However, the States/UTs may modify the number of posts and remuneration as per their need within the overall sanctioned amount for SPMU.

4. This issues with the approval of Secretary DoLR.

Yours Faithfully,

(Shyam Kumar)

Director LR

shymakumar.dad@gov.in

Annexure - I

Large States/UTs (As per DoLR's Letter dated 25.09.2024)

S. No.	Suggestive Designation	Nos. of Post	Suggestive Remuneration (Rs. Per Month)
1.	Project Coordinator	1	1,50,000
2.	Expert (Land Administration)	1	1,50,000
3.	Manager (Geospatial Technology)	1	1,20,000
4.	Manager (Geospatial Technology)	1	1,20,000
5.	Programmer (MIS & GIS Developer)	1	1,00,000
6.	GIS Technical Expert	1	1,00,000
7.	GIS Technical Expert	1	1,00,000
8.	Remote Sensing Analyst	1	80,000
9.	Data Entry Operator	1	45,000
	Total	8	9,65,000

Small States/UTs (As per DoLR's Letter dated 25.09.2024)

S. No.	Suggestive Designation	Nos. of Post	Suggestive Remuneration (Rs. Per Month)
1.	Expert (Land Administration)	1	1,50,000
2.	Manager (Geospatial Technology)	1	1,20,000
3.	Programmer (MIS & GIS Developer)	1	1,00,000
4.	GIS Technical Expert	1	1,00,000
5.	Remote Sensing Analyst	1	85,000
6.	Data Entry Operator	1	45,000
	Total	6	6,00,000

(Note: The above composition of manpower and remuneration is indicative in nature. States/UTs may increase/decrease/modify the posts and remuneration with the overall sanctioned amount, as per their requirement)

Project Coordinator

Key Responsibility Areas

- Ensure effective coordination of activities within the NAKSHA, including liaising with internal teams, external partners and stakeholders to align efforts with program objectives.
- Prepare and deliver presentations, reports and analyses on programme progress, challenges and solutions as required by senior officers, ensuring accuracy, clarity and timeliness in communication.
- Identify and address issues or challenges during programme implementation, developing effective solutions and escalation procedures as needed.
- Identify opportunities for process improvement and optimisation to enhance programme effectiveness and efficiency.
- Respond to additional duties and responsibilities as assigned by senior officials.

Work Experience Required

- A minimum of 5 years' experience in implementing and coordinating projects related to Central/State Government programs or public/private sector schemes.
- Proven track record in data analysis, project management and coordination, demonstrating effective leadership and problem-solving skills in achieving project objectives and ensuring smooth programme operations.

Educational Qualifications Required

- Master's degree in Engineering/Business Administration/ Development Studies/ Social Work, or a Bachelor's degree in Engineering/ Science, or related fields.

Expert (Land Administration)

Key Responsibility Areas

- Handle matters of land administration, revenue, and registration of states/ UTs, including maintaining accurate land records, resolving disputes, and ensuring compliance with legal requirements.
- Manage survey and re-survey works to accurately map land boundaries and ownership rights in urban as well as rural areas.
- Support in legal aspects and state specific requirements for NAKSHA pilot programme
- Facilitate matters related implementation of NAKSHA, coordinating with government agencies, landowners and stakeholders to ensure lawful and transparent processes.
- Respond to additional duties and responsibilities as assigned by senior officials.

Work Experience Required

- Retired Civil Service Officers with a minimum of 10 years of experience in land administration- revenue/ registration/ consolidation/ survey.

Manager (Geospatial Technology)

Key Responsibility Areas

- Identify and define appropriate applications of the system and associated GIS products to meet programme objectives and stakeholder requirements.
- Utilise GIS software to create, update, and maintain maps based on collected survey data, ensuring accuracy and consistency in spatial representations.
- Plan and design analytic procedures and methodologies for performing GIS applications, optimising efficiency and effectiveness in data analysis and interpretation.
- Conduct field training sessions related to GIS mapping and survey techniques, and track project progress to ensure adherence to timelines and quality standards.
- Ensure precision and reliability in spatial data collection.
- Digitise and geo-reference cadastral maps using High-Resolution Satellite Imagery (HRSI) to enhance the accuracy and accessibility of land records.
- Integrate textual and spatial databases to facilitate comprehensive and interconnected data management and analysis.
- Create high-quality cartographic products for publication and presentation, adhering to cartographic principles and design standards.
- Conduct thorough data verification and quality control checks on maps, tables, and reports to ensure consistency, accuracy, and compliance with specifications.
- Supervise and ensure the proper use, care, and operation of GIS equipment.
- Manage GIS data effectively, including data storage, retrieval, manipulation, and analysis, utilizing image processing techniques and 3D mapping capabilities.
- Demonstrate working knowledge of GIS interoperability with various documents, spreadsheets, databases, and image formats to facilitate data exchange and integration.
- Support the implementation of the National Geospatial Policy and assist in framing standards for land parcel data management and dissemination.
- Respond to additional duties and responsibilities as assigned by senior officials.

Work Experience Required

- At least 5 years of experience in managing and execution of GIS-related projects.
- Proficiency in utilising GIS software such as ArcGIS, QGIS and other relevant tools for spatial data processing, mapping and database management.

Educational Qualifications Required

- Bachelor's degree in Engineering/ Technology from a recognised University or Institute in a relevant field such as Civil Engineering, Computer Science, Geomatics Engineering, or related disciplines.
- GATE qualified and certification in GIS/ Data analysis related courses with knowledge of ArcGIS/ QGIS, and other software related to GIS data processing and management is desirable.

Programmer (MIS & GIS Developer)

Key Responsibility Areas

- Design, develop and implement IT solutions for NAKSHA, including defining use cases, preparing wireframes and leveraging open-source technologies to meet program requirements.
- Create and maintain Management Information Systems (MIS) and Geographic Information Systems (GIS) applications tailored to the needs of land records management.
- Assist in conducting User Acceptance Testing (UAT) of IT solutions, collaborating with end-users and stakeholders to identify issues, gather feedback and ensure that systems meet functional and usability requirements prior to deployment.
- Explore, evaluate and integrate open-source technologies and tools into the development process to optimise cost-effectiveness, interoperability and scalability of IT solutions within the programme.
- Document IT solutions, processes and procedures effectively, and provide training and support to end-users and stakeholders to facilitate smooth adoption and utilisation of developed applications.
- Respond to additional duties and responsibilities as assigned by senior officials.

Work Experience Required

- Minimum of 5 years' experience in database administration, encompassing database design, implementation, optimisation and maintenance.
- Proficiency in GIS-based software tool development, with a track record of designing and deploying solutions to meet project requirements.

Educational Qualifications Required

- Bachelor's degree in Engineering or Science, preferably in Computer Science or Information Technology.

GIS Technical Expert

Key Responsibility Areas

- Utilise geo-informatics tools and techniques to understand and interpret trends in spatial data relevant to NAKSHA.
- Collaborate with stakeholders to identify and assess potential issues or challenges in GIS-related areas and develop effective solutions.
- Provide expertise and guidance on GIS-related matters to ensure compliance with standards and regulations, maintaining high-quality deliverables.
- Prepare reports and presentations on GIS trends, progress and solutions for stakeholders, ensuring accuracy and clarity in documentation.
- Respond to additional duties and responsibilities as assigned by senior officials

Work Experience Required

- A minimum of 5 years of experience in the development of GIS-based software tools is preferred.
- Demonstrated proficiency in designing, developing and implementing GIS solutions to meet project requirements and objectives.

Educational Qualifications Required

- Bachelor's degree in Engineering or Master's in Computer Applications/ Geo-informatics or relevant fields.

Remote Sensing Analyst

Key Responsibility Areas

- Collect remote sensing data from satellites, aerial surveys, drones, or other sources.
- Analyze and process raw satellite or aerial imagery using specialized software (e.g., ERDAS, ENVI, ArcGIS).
- Extract meaningful insights by interpreting imagery to identify land features, vegetation types, water bodies, or urban structures.
- Integrate remote sensing data with GIS tools for spatial analysis and mapping purposes.
- Develop and refine algorithms for automated classification, object detection, and change detection.
- Conduct time-series analysis to track environmental changes, land-use patterns, or disaster impacts.
- Support predictive modeling using remote sensing datasets to forecast trends or simulate scenarios.
- Work with land experts, urban planners, and policymakers to provide geospatial insights for decision-making.
- Prepare detailed reports, visualizations, and presentations to communicate findings to stakeholders.
- Ensure the accuracy and reliability of remote sensing data and analyses through rigorous quality checks.
- Train team members or stakeholders in remote sensing techniques and software usage.
- Stay updated on advancements in remote sensing technologies, sensors, and data processing techniques.
- Respond to additional duties and responsibilities as assigned by senior officials

Work Experience Required

- A minimum of 5 years of experience in the maintainibg High Resolution Satellite Imageries and software tools like ERDAS Imagine, LPS, QGIS, ArcGIS is preferred.
- Demonstrated proficiency in Orthorectification, mosaicking, analysis using satellite data to meet project requirements and objectives.

Educational Qualifications Required

- Bachelor's degree in Engineering or Master's in Computer Applications/ Geoinformatics or relevant fields.

Data Entry Operator

Key Responsibility Areas

- Accurately input data into computer systems, databases, or spreadsheets from various sources such as paper documents, digital files, or audio recordings.
- Review and verify data for accuracy and completeness, correcting errors when necessary.
- Update and maintain data in systems, ensuring that records are current and organized.
- Organize and manage both digital and physical files, ensuring easy retrieval when needed.
- Regularly back up data to prevent loss and ensure data security.
- Create and format reports, tables, or summaries as required by supervisors or departments.
- Ensure data handling adheres to organizational policies and data privacy regulations.
- Meet daily, weekly, or monthly data entry quotas and deadlines.
- Identify and flag inconsistencies or discrepancies in data sources.
- Collaborate with team members or supervisors to clarify unclear information or resolve data-related issues.
- Operate office equipment and software such as MS Office, word processors, spreadsheets, and data management systems.
- Maintain strict confidentiality of sensitive information while handling and processing data.

Work Experience Required

- Minimum of 2 years of experience and proficient typing skills are preferred.

Educational Qualifications Required

- Bachelor's degree in any stream
