

**File No.: 21014/04/2024-LRD (e- 3013932)**  
**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: 25<sup>th</sup> September, 2024

To

1. **The Chief Secretaries/Administrators  
(All States/Union Territories)**
2. **The Surveyor General of India  
Survey of India  
Dehradun, Uttarakhand**

**Subject: Pilot programme for creation of Land Records in Urban Areas “NAtional geospatial Knowledge-based land Survey of urban HABitations (NAKSHA)” under Digital India Land Records Modernization Programme (DILRMP) – reg.**

Madam/Sir,

I am directed to refer to the above-mentioned subject and to say that the Department of Land Resources is launching a new programme “**NAtional geospatial Knowledge-based land Survey of urban HABitations (NAKSHA)**” for creation of Land Records in Urban Areas as a pilot to ensure that urban land records are accurate and up-to-date empowering urban citizens, improving ease of living and enabling better urban planning.

2. The one-year pilot programme **NAKSHA** would be implemented in more than 100 Cities across the country with Survey of India as Technical Partner under Digital India Land Records Modernization Programme (DILRMP). Based on the learnings and outcomes of the pilot, a larger programme covering all the cities and towns would be implemented across the Country.

**Roles and Responsibilities:**

3. The cities where the pilot programme **NAKSHA** would be carried out have been selected by the DoLR based on the proposals submitted by the States and UTs. Survey of India (SoI) would issue an RFP (Request for Proposal) for procurement of Geospatial Services from third-party agencies to undertake Aerial (Manned or Unmanned) Survey in these cities. After receiving the bids, SoI would complete the tendering process. The aerial survey would comprise fixation of boundary for aerial survey of Urban Areas with the help of satellite imagery, establishment of Ground Control Points (GCPs) and check points, acquisition of high resolution imagery, generation of Ortho Rectified Imagery (ORI), Orthomosaic, Digital Elevation Model (DEM) as built and bare earth surface, 3D reality Model , 2D/3D GIS dataset - with one of the following methodologies for different cities depending upon planning, complexity, vertical expansion, slope and terrain of habitations: -

(a) Large-scale Mapping of Urban Areas using 2D Nadir Camera for generation of ORI and DEM and creation of 2D dataset.

(b) Large-scale Mapping of Urban areas using oblique angle cameras (5 cameras) without LiDAR sensor and data acquisition for generation of ORI, DEM, 3D reality Model and creation of 3D GIS dataset.

(c) Large-scale Mapping of Urban areas using oblique angle camera (5 cameras) and LiDAR sensor for generation of ORI, DEM, 3D reality Model and creation of 3D GIS dataset.

Note: In case of cities with high canopy cover, if the aerial survey technologies mentioned above are not effective in generating good ORIs, the State may opt for ETS/DGPS/CORS technique for survey.

4. Generation of 2D/3D GIS dataset through 2D/3D feature extraction including property boundary markers like compound wall, fence etc., buildings, public utilities and other urban features would be done by the SoI's procured third party Aerial Survey agencies in association with States/UTs and under technical supervision of SoI. The detailed scope of work for the vending agencies undertaking aerial survey would include providing images along with attributes, as interpreted from ORI and/or 3D Reality Model, that are useful for preparing urban land records, property tax assessment and urban planning including transportation planning, drainage planning, flood planning, etc. The Component-wise Details of Activities and Responsibilities are at **Annexure-I**. SoI should float an RFP based on the scope of work mentioned in **Annexure – II** and provide the ORI with necessary attributes to the Revenue Department for preparation of urban land records and to ULBs, Development Authorities and other agencies undertaking urban planning for property tax assessment and urban planning, as required.

5. States/UTs should undertake Scanning, Digitization of existing Records & Maps and Integration of Record of Rights (RoRs) including property tax data and other details in the Attributes of the map/vector files generated out of ORI with assistance of SoI. States/UTs should undertake field survey activity with the help of Map 1 (ORI) by formulating sufficient number of survey teams. The survey activity would be undertaken by the team by demarcating all land parcels on the ground using GNSS Rovers and controllers. After the field survey activity, Map 2 would be published by the States/UTs.

6. Based on the published Map 2, dispute and grievance invitation & redressal, data correction and processing after hearing appeals would be carried out as per the States/UTs Revenue Act and Manuals etc. Claim finalization would involve disposal of objections received relating to the ownership, share, area, boundary and shape of land parcel. Culmination of this process would lead to publication of final land records of urban areas which would be published as Map 3.

#### **Financial Outlay:**

7. An amount of **Rs. 193.813 Crore** is sanctioned to conduct the pilot of in more than 100 cities across the country. The detailed component wise Financial Outlay for undertaking the pilot programme is at **Annexure-III**.

8. Survey of India would be provided funds by DoLR for aerial flying, getting ORIs and feature extraction, etc through third party vendors based on the amounts arrived at through bidding process and as per actual expenditure as per Scope of Work and as per financial terms and conditions.

9. The financial sanction would be accorded for the activities to be carried by States/UTs based on the actual expenditure incurred not exceeding the amount indicated in the table at **Annexure-IV**.

(a) The Field Survey teams are envisaged to consist of two permanent staff, one each from Revenue and Urban Development Department of the States/UTs. The cost of one hired field surveyor, one hired helper and one hired vehicle (with driver) per team would be supported under the programme on actual basis subject to a maximum amount given in Annexure -IV. The qualification and hiring cost of this component should be decided by the respective States/UTs subject to this limit.

(b) Funding for Information, Education and Communication (IEC), Training and Documentation would be provided on per Sq. Km. basis of the selected urban areas of the States/UTs. Funding would also be provided for Cloud Space and Storage to the States/UTs.

(c) Financial Support would also be provided for Manpower & State Programme Management Unit (SPMU) establishment including initial Office Establishment cost, depending upon the categorization of States/UTs as large or small (Annexure- IV).

(d) The DoLR would sanction the amount to the States/UTs for procuring Rovers based on the proposal from them based on available Rovers with the Revenue Departments, the current requirement as per selected urban area, number of teams and time frame of the States/UTs.

10. The Development of WebGIS Portal & Dashboard for Integration of Record of Rights (RoRs); Cadastral Maps; ORIs; Property Taxes database; Development Authority Layout plans; Ground Truthing Database, Hosting, National/State level Cloud Storage, Maintenance, Updation and Integration of Data on Web, APIs and Software Development would be supported by DoLR and implemented by the States/UTs.

11. The funds for National Programme Management Unit would be as per **Annexure V**.

12. The list of States/UTs identified for pilot based on proposals submitted by States is at **Annexure- VI**. This list includes cities along with area and population of the ULB. SoI should include in their aerial survey peri-urban areas also around these ULBs. The States should also include peri-urban areas around their ULBs in the land records survey. The list of cities may be amended by DoLR subsequently.

13. Funds will be released by the Programme Division in consultation with the Integrated Finance Division to the State level bank account of Central Nodal Agency (CNA) through Public Financial Management System (PFMS). This will be subject to instructions issued by the Ministry of Finance in this regard from time to time. The utilization reported by the State should tally with the corresponding figures in the Receipt Expenditure Advance Transfer (REAT) module of the PFMS.

#### **Coordination and Oversight Mechanism:**

14. A State Level Committee (SLC) shall be constituted in each State/UT for this programme under the chairpersonship of the Chief Secretary. It is recommended that a representative from the Board of Revenue, Principal Secretary/Secretary of the Departments of Revenue, Registration, Urban Development, Finance, Planning and IT, Survey & Settlement Commissioner/Director of Land Records, any other expert/Institution as decided

by the States/UTs should be its members. The Committee shall monitor and review the progress of implementation of the pilot programme regularly. It is recommended to conduct at least four meetings of the SLC to monitor and review the pilot programme in a year.

15. The Revenue Department of States/UTs would generally be the **Nodal Department** for implementing the pilot programme **NAKSHA** under DILRMP and should work in consultation with Urban Development Departments of the States/UTs. The Nodal Department should put in place a State Programme Management Unit (SPMU) to provide necessary support to the Department concerned for completing this programme.

16. The Nodal Department should approve methodology and funding for field survey activity, training and capacity building plans, IEC and communication plans for the States/UTs including procurement of equipments and manpower. They should submit quarterly progress reports to the Department of Land Resources on proforma to be prescribed. The States/UTs should develop a system of regular checks by the States/UTs level officers through field visits.

17. The concerned officers of Revenue/Urban Development Department of the onboarded States/UTs would work in tandem with Survey of India and DoLR, GoI as well as the selected third-party vending agency to complete the pilot programme **NAKSHA** in the respective Urban Local Bodies (ULBs)/Cities.

18. This issues with the concurrence of IFD vide Dy. No. 115/IFD/LR/2024-25 dated 17.09.2024 and approval of the Competent Authority.

*R Anand* 25/9/24

**(R Anand)**

Additional Secretary to the Government of India

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Copy for Information:

1. PS to Hon'ble Minister of Rural Development, Krishi Bhawan, New Delhi
2. PS to Hon'ble Minister of State, Rural Development, Krishi Bhawan, New Delhi

Copy with request for appropriate action to:

Additional Chief Secretary/Principal Secretary/Secretary – Revenue and Urban Development Departments – All States/UTs

Copy:

PPS to Secretary/Joint Secretary (LR)

**Component-wise Details of Activities and Responsibilities for Pilot Programme  
NAKSHA**

| S.No | Component  | Activity   | Responsibility/<br>Implementation by                              |
|------|--|--|---|
| 1    | Aerial Survey  | Fixation of boundary for aerial survey of Urban Areas - with the help of satellite imagery, Establishment of Ground Control Points (GCPs), Procuring of necessary clearances; Aircraft/Drone Flying, Post Processing generation of Mapping Ortho Rectified Imagery (ORI), Orthomosaic, DEM, DSM, DTM, 3D textured model/3D Reality Model | Survey of India (SoI) through procurement of Third Party agencies |
| 2    | Feature Extraction                                       | Generation of 2D/3D GIS dataset through feature extractions including all Buildings and Public utilities, etc. and generation of Property Layer  | Survey of India (SoI) through procurement of Third Party agencies |
| 3    | Scanning, Digitization & Integration of existing records | Scanning, Digitization of existing Records & Maps and Integration of Record of Rights (RoRs) and other details in Attributes   | States/UTs with assistance of SoI                                 |
| 4    | Field Survey   | Field Survey including ground truthing of all land parcels and properties with two permanent staff per team from Revenue and Urban Development Dept which would be provided by the State/UT. Cost of three hired staff including a surveyor, helper and a driver with vehicle per team will be provided under this programme             | States/UTs  |
| 5    | Quality Check  | Quality checks and Generation of Land Parcel/ Property Layer at the three stages of ORI post flying Ground-Validated data and after inquiry & dispute resolution   | States/UTs with assistance of Survey of India                     |
| 6    | Cloud Space and Storage                                  | Storage and misc. expenditure  | States/UTs  |

|    |  |   |   |
|----|--|---|---|
| 7  | IEC  | Standard Operating Procedure (SOP), Manual Publication & IEC etc.   | States/UTs  |
| 8  | Training   | Training & Capacity Building, Travel, Exposure Visits, Conferences etc.   | Training assistance to the States/UTs will be provided by SoI |
| 9  | Documentation  | Documentation, Evaluation & Monitoring etc.   | States/UTs  |
| 10 | Survey Equipments  | A) Rovers, Controllers, Hand Held Devices and Tablets etc.  | States/UTs in consultation with SoI                           |
|    |  | B) Continuously Operating Reference Stations (CORS)   | SoI in consultation with State s/UTs                          |
| 11 | Software Development   | Development of WebGIS Portal & Dashboard, Integration of Record of Rights (RoRs); Cadastral Maps; ORIs; Property Taxes database; Development Authority Layout plans; Ground Truthing Database, Hosting, Maintenance, Updation and Integration of Data on Web, APIs and Software Development along with National/State level Cloud Storage | DoLR/States/UTs   |
| 12 | National Level IEC, Training, Documentation  |   | DoLR and /or SoI  |
| 13 | National Programme Management Unit (NPMU) & Office Establishment                       |   | DoLR  |
| 14 | State Programme Management Unit (SPMU) & Office Establishment for Large & Small States |   | States/UTs  |
| 15 | Miscellaneous / Incidental Charges   |   | DoLR  |

### Scope of Work for Survey of India for Pilot Programme NAKSHA

1. SoI shall be responsible for the Components mentioned against SoI in Annexure - I, the detailed activities to be performed under respective scope components is given below:

#### Component -1: Aerial Survey

| S. No. | Activity   | Description  |
|--------|--|--|
| 1      | Fixation of boundary for aerial survey of Urban Areas with the help of satellite imagery     | Identifying and demarcating the urban area boundaries using GIS and ground survey techniques.  |
| 2      | Establishment/Augmentation of CORS network/ Ground Control Points (GCPs) as the case may be. | Placing and surveying GCPs to ensure accurate geo-referencing of aerial images.  |
| 3      | Aircraft/Drone Flying  | Acquiring necessary clearances and Conducting aerial surveys using aircraft or drones to capture high-resolution imagery.                  |
| 4      | Post-Processing & Mapping  | Processing the captured data to generate Ortho Rectified Imagery (ORI), Orthomosaic, DEM/DSM/DTM (bare earth) with reference to MSL/Geoid. |
| 5      | Feature Extraction   | Generation of 3D GIS database as per the feature list finalized in consultation with DoLR and ULBs   |
| 6      | 3D Modeling  | Creating a 3D textured model or 3D reality model of the urban area.  |

2. Survey of India (SoI), either by itself or through outsourced agencies under its supervision, will execute aerial survey to generate the large-scale urban geospatial data/maps of selected towns. The large-scale urban survey and mapping work includes generation of geospatial data, maps and creation of GIS database. The detailed scope of work will include:-

- a) Establishment of Continuously Operating Stations (CORS) Network for States/UTs with no CORS infrastructure.
- b) Geoid model development for all states with no geoid model.
- c) Drone data acquisition using Professional survey grade drone/UAV at 5 cm GSD for urban areas, in a way mutually acceptable. Three methodologies of aerial survey are proposed:
  - (i) Nadir Camera Drone/Aerial Flying (2D)
  - (ii) Nadir plus 4 Oblique Camera Drone/Aerial Flying (3D)
  - (iii) Nadir plus 4 Oblique Camera Drone/Aerial Flying with LiDAR (3D+LiDAR)
- d) Processing of Drone/Aircraft captured data will be carried out at Regional Directorate of SoI, which includes generation of Digital Elevation Model (DEM), DSM (Digital Surface Model) and DTM (Digital Terrain Model), Ortho Rectified Image (ORI) and 3D textured Model.
- e) Feature Extraction:
  - i. Extraction of topographical features from ORI generated for urban area covered under survey.
  - ii. Extraction of property boundaries and prepare the digital maps.

- iii. Attribute linkage to the features.
  - iv. Accuracy: Horizontal = +/- 10 cm; Vertical = +/- 20 cm (wrt Geoid Model)
  - v. Numbering of properties and attributes as provided by States/UTs.
  - vi. Ground-Truthing and validation of Land Parcel maps by respective States/UTs.
  - vii. Ground-Truthing and validation of topographical features as derived from Ortho-rectified images shall be carried out by Survey of India
  - viii. Generation of Cadastral maps/Land Parcel maps/Base maps in suitable soft copy formats and in printing formats.
3. To incorporate the consolidated wish list (as defined by Department of Land Resources), GIS ready map/digital database in accordance to GIS deliverables compiled by respective States/UTs. The feature and attributes as defined in the wish list shall be linked with the final Geographical Information System (GIS) ready map once the data/map/blueprint is supplied or shared by respective States/UTs with SoI.
4. The Land Parcel Maps (LPM) product shall comprise of base map overlain by different layers of topographical features, man-made structures, land parcel information, district/tehsil/town/city boundaries etc along with alike attributes as per the requirement of State/Urban Local bodies.
5. Deliver the finalized land parcel dimensions and the land records in formats prescribed by respective States/UTs along with other deliverables. Value addition and Land Parcel Maps (LPM), Generation with integration of textual details (RoR) with finalized land parcel maps in .shp file & other GIS file formats.
6. Training of State/Urban Local bodies staff will be organized by SoI on the operations and usage of various applications, technologies which are to be used in the project. The state line departments will build in house capacity to handle the project.
7. The ORI and vector data products generated will be jointly owned by SoI, DoLR and respective States/UTs.

#### Component -2: Feature Extraction

| S. No. | Activity                         | Description   |
|--------|----------------------------------|---|
| 1      | Image Processing and Enhancement | Processing and enhancing collected imagery for better clarity and detail.   |
| 2      | Feature Extraction –Buildings    | Identifying and extracting building features and public utilities such as roads, parks, utilities, etc. from the imagery to create 2D/3D models |
| 3      | 3D Modelling and Texturing       | Developing 3D textured models for extracted features to enhance realism and detail.   |
| 4      | GIS Data Integration             | Integrating extracted features into GIS platforms for analysis and visualization.   |
| 5      | Property Layer Generation        | Creating property layers with attributes like ownership, area, and other relevant information.  |
| 6      | Property Tax features            | Creating ORI with features for facilitating property tax assessment such as volume, height, dimension & floor area of buildings                 |



## Component - 5: Quality Check

SoI will provide technical assistance to States as and when required in Quality checks and Generation of Land Parcel/ Property Layer at the three stages of ORI post flying Ground-Validated data and after inquiry & dispute resolution.

### 1. Deliverables

An indicative list of deliverables envisaged over the entire course of the project is given below:

- a) CORS Network RTK service of  $\leq 5$ cm horizontal accuracy for five (05) years.
- b) Accurate geo-referenced digital maps using established control survey network based on National spatial reference framework of the country.
- c) Meta data of features, Raw data of the ground survey work
- d) Proper indexed map with proper sheet number on the following scales:
  - i. Vertical Accuracy 0.2 metre for all areas
  - ii. On 1:500 scale, ORI images at 5 cm GSD with  $\pm 5$  cm Horizontal accuracy
- e) Mosaic map of town/city spatial and non-spatial data dictionary with feature codes, feature types (line, points and polygon), feature description and symbols.
- f) 3D GIS database related to property prepared on 1:500 scale on UTM projection and WGS 84 datum.
- g) 3D GIS database of topographical feature (excluding property data) on 1:500 scale on UTM projection and WGS-84 datum for the area covered.
- h) DSM and DTM (Bare earth) of  $\leq 20$  cm vertical accuracy of the area
- i) Hard copy maps on 1:500 scale (04 Nos each) for a town/city on good quality 90 GSM paper along with pdf copy for future printing purposes.
- j) 3D textured GIS data base for hosting on web and also for ground validation.
- k) MAP 1, MAP 2 and MAP 3 after each iteration of ground validation
- l) Template of Property cards to be provided to print Property card in respect of each land parcel/property with the dimensions as per the layout finalized in consultation with the States/UTs. Property card to be printed by the ULBs under the guidance of the States/UTs.
- m) Training courses for technical staff of various levels in States/UTs.

*(The technical specifications of deliverables mentioned above are indicative in nature, however Survey of India shall ensure the best technical product as per requirement of the project.)*

### 2. Roles and Responsibilities

- a) **Survey of India (SoI):**
  - i. Activities listed in the Scope of work by procuring third party agencies under its supervision.
  - ii. Quality checks and Generation of Land Parcel/ Property Layer at the three stages of ORI post flying Ground-Validated data and after inquiry & dispute resolution
  - iii. To provide annual action plan for mapping, Monthly Progress reports, Statement of Expenditure and Utilization certificate to DoLR.
  - iv. Permissions/clearances from other Central Govt agencies for the project, if required.

**b) Department of Land Resources (DoLR):**

- i. To facilitate co-ordination between all stakeholders for execution of various project activities.
- ii. Funding and Monitoring of the program at the Central level.

**c) States/UTs:**

- i. Prioritization of towns/cities for mapping
- ii. Demarcation of Area of Interest (AOI) for Mapping with assistance of Survey of India and providing shape files.
- iii. Providing secondary data/ maps of Utilities; administrative boundaries, required for finalisation geo database
- iv. Cadastral layers and other data.
- v. Activity listed against States/UTs at components of Annexure - I.
- vi. Co-ordinate with SoI, Urban Local Bodies and Line departments.

**d) Joint Responsibility:**

- i. The CORS operation and maintenance would be done by SoI on land that has been provided by the States/UTs.
- ii. All processed data products and final products will be jointly owned by SoI, DoLR and respective States/UTs. All the agencies (SoI, DoLR, other GoI Departments and respective States/UTs) shall have the rights to use the spatial data generated under the project for their internal applications.
- iii. To provide all inputs to other stakeholders as required for the roles & responsibilities.

### **3. Monitoring & Implementation Mechanism**

- a) SoI will establish a separate Project Wing in each state GDC (Regional Geo-spatial Data centre) with one dedicated Nodal Officer exclusively responsible for execution of the project.
- b) DoLR will periodically visit Survey of India and conduct regular review meetings to oversee the progress.
- c) SoI will formulate an internal Project Monitoring, Implementation & Execution mechanism for internal QA/QC.
- d) SoI shall submit Monthly Progress Reports in the prescribed Proforma for physical and financial progress, In case SoI is unable to complete any stage of the job and if the delay is attributable to reasons under control of SoI, this will be treated as breach of the instructions from DoLR, to the extent of the stage not completed in time on the part of SoI. In such circumstances, SoI shall have to refund the amount paid for such stage to DoLR, which is to be calculated proportionately and decided mutually.

### **4. Financial Terms & Conditions**

**a) Cost:**

Total cost of the pilot programme shall be calculated per square kilometer of area of work done (mentioned in Annexure- III) including cost for the CORS Network and cost of the mapping for selected urban areas across the country.

**b) Payment terms Table**

| <b>S. No.</b> | <b>Installment</b> | <b>Payment milestone</b>                                 | <b>Payment Percentage</b> |
|---------------|--------------------|--|---------------------------|
| 1             | First              | Mobilization   | 25%                       |
| 2             | Second             | <b>On Data Acquisition and Processing</b>                | 40%                       |
| 3             | Third              | <b>On Feature extraction to generate GIS layers</b>      | 25%                       |
| 4             | Fourth             | <b>On Reporting, Documentation, and Final Acceptance</b> | 10%                       |

- c) **Accounting:** SoI would open a Civil Deposit Account for this project with Govt. of India and funds released by DoLR would be placed in such deposit account for making all payments towards expenditure incurred in the project.

**Annexure-III****Component wise Details of Amount Sanctioned for Pilot Programme NAKSHA**

| <b>S. No</b> | <b>Component /Activity</b>  | <b>Amount<br/>(In Rs.)</b> |
|--------------|---|----------------------------|
| 1            | Aerial Survey, Feature Extraction, Field Survey, Cloud space, IEC, Training and Documentation   | 76,47,50,000               |
| 2            | Survey Equipments including Rovers & Controllers and CORS   | 62,50,00,000               |
| 3            | Web GIS Software Development for Integration of all Attributes, maps, ORIs including Updation and Maintenance along with National/State level Cloud Storage | 30,00,00,000               |
| 4            | National Level IEC, Training, Documentation   | 2,00,00,000                |
| 5            | Programme Management Units & Office Establishment (National & State level)  | 21,83,80,000               |
| 6            | Miscellaneous / Incidental Charges  | 1,00,00,000                |
| <b>Total</b> |   | <b>1,93,81,30,000</b>      |

## Annexure-IV

## Component Items and Rates for States/UTs for Pilot Programme NAKSHA

| S. No. | Activity  | Rate per Sq. Km<br>(in Rupees) |
|--------|---|--------------------------------|
| 1      | Field Survey  | 1,50,000                       |
| 2      | Cloud Space and Storage   | 3,000                          |
| 3      | IEC- Standard Operating Procedure (SOP), Manual Publication & IEC etc.  | 10,000.                        |
| 4      | Training & Capacity Building, Travel, Exposure Visits, Conferences etc. | 4,000                          |
| 5      | Documentation, Evaluation & Monitoring etc.                             | 1,500                          |

## State Programme Management Unit (SPMU)

| S. No | Activity/Item  | Category                                       | Rate per Month  |
|-------|--|--|-----------------|
| 1     | State Programme Management Unit (SPMU)<br><i>(Large State)</i><br><b>Tentative Composition – 08 Nos.</b><br>Project Manager - 1<br>Expert (Land Administration) – 2<br>Manager (Geospatial Technology) – 2<br>Programmer (MIS & GIS Developer) – 1<br>GIS Technical Expert - 2 | Manpower                                       | <b>9,65,000</b> |
|       |  | Office Establishment<br><i>(one time cost)</i> | <b>8,00,000</b> |
| 2     | State Programme Management Unit (SPMU)<br><i>(Small State and UTs)</i><br><b>Tentative Composition – 04 Nos.</b><br>Expert (Land Administration) – 1<br>Manager (Geospatial Technology) – 1<br>Programmer (MIS & GIS Developer) – 1<br>GIS Technical Expert - 1                | Manpower                                       | <b>6,00,000</b> |
|       |  | Office Establishment<br><i>(one time cost)</i> | <b>5,00,000</b> |

## Categorization of States SPMU

States have been categorized into two groups A & B as indicated below based on their area, population, status of land records and existing gaps.

| <b>Category</b>                    | <b>States</b>   |
|------------------------------------|---|
| <b>A</b><br>(Large States)         | Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, West Bengal (18 States)   |
| <b>B</b><br>(Small States and UTs) | Arunachal Pradesh, Goa, Himachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Uttarakhand (10 States)<br>Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, Lakshadweep, Delhi, Puducherry, Jammu and Kashmir, Ladakh (8 UTs) |

## National Programme Management Unit (NPMU)

| S. No | Activity/Item   | Category  | Rate per Month |
|-------|---|---|----------------|
| 1     | National Programme Management Unit (NPMU)   | Manpower  | 13,40,000      |
|       | <b>Tentative Composition – 12 Nos.</b><br>Project Manager – 1<br>Expert (Land Administration) - 2<br>Manager (Geospatial Technology) – 3<br>Coordinator – 1<br>Programmer (MIS & GIS Developer) - 2<br>GIS Technical Expert - 3 | Office<br>Establishment<br><i>(one time cost)</i> | 15,00,000      |

## Annexure- VI

## State/UT wise List of Cities/ULBs Identified for Pilot Programme NAKSHA

| S.No | Name of State/ UT | District           | Name of ULB/Municipal Corp/Other            | Area (sq. Km) | Population |
|------|-------------------|--------------------|---|---------------|------------|
| 1    | Andhra Pradesh    | Chittoor           | Kuppam                                      | 34.550        | 46,598     |
|      |                   | Guntur             | Mangalagiri-Tadepalli                       | 191.220       | 2,53,546   |
|      |                   | Guntur             | Guntur                                      | 141.520       | 7,43,880   |
|      |                   | Prakasam           | Ongole                                      | 127.290       | 2,51,175   |
|      |                   | Eluru              | Eluru                                       | 65.160        | 2,83,631   |
|      |                   | Kakinada           | Kakinada                                    | 32.270        | 3,25,855   |
|      |                   | Tirupati           | Tirupati                                    | 30.010        | 3,74,260   |
|      |                   | Ananthapur         | Anantapuramu                                | 16.310        | 2,61,004   |
| 2    | Arunachal Pradesh | Namsai             | Namsai                                      | 10.000        | 20,000     |
| 3    | Assam             | Barpeta            | Barpeta Road                                | 4.090         | 35,571     |
|      |                   | Bongaigaon         | Bongaigaon                                  | 11.890        | 67,322     |
|      |                   | Nalbari            | Nalbari MB                                  | 13.590        | 27,839     |
|      |                   | Sonitpur           | Dhekiajuli MB                               | 4.350         | 21,579     |
|      |                   | Hojai              | Hojai MB                                    | 4.770         | 36,638     |
|      |                   | Nagaon             | Nagaon MB                                   | 12.560        | 1,17,722   |
|      |                   | Golaghat           | Golaghat MB                                 | 14.330        | 41,989     |
|      |                   | Sivsagar           | Sivsagar MB                                 | 7.300         | 50,781     |
| 4    | Bihar             | Bhojpur            | Aara Nagar Nigam                            | 30.970        | 3,69,000   |
|      |                   | Muzaffarpur        | Muzaffarpur Nagar Nigam                     | 32.000        | 3,54,462   |
|      |                   | Vaishali           | Hajipur Nagar Nigam                         | 19.640        | 1,47,688   |
| 5    | Chandigarh        | Chandigarh         | Sarangpur, Burail, Kajheri, Palsora, Attawa | 16.520        | 71,030     |
| 6    | Chhattisgarh      | Dhamtari           | Nagar Palik Nigam Dhamtari                  | 23.400        | 89,860     |
|      |                   | Jagdalpur (Bastar) | Nagar Palik Nigam Jagdalpur (Bastar)        | 50.490        | 1,77,000   |
|      |                   | Sarguja            | Nagar Nigam Ambikapur                       | 35.360        | 1,25,392   |
| 7    | Goa               | North Goa          | Corporation of the City of Panaji           | 37.86         | 1,31,431   |
|      |                   | South Goa          | Margao M.Cl                                 | 54.68         | 1,45,078   |
|      |                   | South Goa          | Cuncolim M.Cl                               | 33.57         | 19,476     |
| 8    | Haryana           | Panchkula          | Panchkula                                   | 96.210        | 3,00,000   |
|      |                   | Narnaul            | Narnaul                                     | 63.360        | 2,00,000   |
|      |                   | Gurugram           | Manesar                                     | 138.180       | 3,00,000   |
| 9    | Himachal Pradesh  | Solan              | Solan MC                                    | 11.620        | 47,418     |
|      |                   | Mandi              | Mandi MC                                    | 28.660        | 41,375     |
|      |                   | Kangra             | Palampur MC                                 | 31.580        | 40,385     |
| 10   | Jammu and         | Pulwama            | Awantipora                                  | 3.000         | 12,647     |



| S.No | Name of State/<br>UT | District           | Name of<br>ULB/Municipal<br>Corp/Other       | Area<br>(sq. Km) | Population |
|------|----------------------|--------------------|--|------------------|------------|
|      | Kashmir              | Reasi              | Katra  | 4.150            | 9,008      |
|      |                      | Jammu              | Bishnah                                      | 2.050            | 10,719     |
| 11   | Jharkhand            | Lohardaga          | Lohardaga Nagar<br>Parishad                  | 32.200           | 57,411     |
|      |                      | Simdega            | Simdega Nagar<br>Parishad                    | 36.000           | 42,944     |
|      |                      | Palamu             | Vishrampur Nagar<br>Parishad                 | 40.000           | 42,925     |
| 12   | Karnataka            | Kolar              | Kolar Municipal<br>Corporation (MC)          | 38.600           | 1,89,000   |
|      |                      | Chikkamagaluru     | Chikkamagaluru<br>MC                         | 35.500           | 1,75,000   |
|      |                      | Basavakalyan       | Basavakalyan MC                              | 36.000           | 1,61,000   |
|      |                      | Gokaka             | Gokaka MC                                    | 32.050           | 79,121     |
|      |                      | Siraguppa          | Siraguppa MC                                 | 31.140           | 52,492     |
|      |                      | Bagalkote          | Bagalkote MC                                 | 61.000           | 1,11,000   |
|      |                      | Bhagyanagara       | Bhagyanagara<br>Town Panchayat<br>(TP)       | 35.000           | 18,988     |
|      |                      | Anavatti           | Anavatti TP                                  | 35.020           | 19,664     |
| 13   | Kerala               | Thiruvananthapuram | Neyyattinkara                                | 29.500           | 70,850     |
|      |                      | Malappuram         | Ponnani                                      | 24.820           | 90,491     |
|      |                      | Kannur             | Thalassery                                   | 23.960           | 92,558     |
|      |                      | Kozhikode          | Vadakara                                     | 23.330           | 75,295     |
|      |                      | Kasaragod          | Kasaragod                                    | 16.700           | 54,172     |
|      |                      | Thiruvananthapuram | Attingal                                     | 16.870           | 37,648     |
|      |                      | Kollam             | Punalur                                      | 34.350           | 46,702     |
|      |                      | Alappuzha          | Harippad                                     | 19.240           | 30,977     |
| 14   | Madhya<br>Pradesh    | Harda              | Harda Nagar<br>Palika                        | 35.220           | 74,000     |
|      |                      | Vidisha            | Vidhisha Nagar<br>Palika                     | 28.67            | 1,56,000   |
|      |                      | Mandsaur           | Mandsaur Nagar<br>Palika                     | 34.500           | 1,42,000   |
|      |                      | Sehore             | Shahganj Nagar<br>Parishad                   | 6.420            | 9,000      |
|      |                      | Khandwa            | Channera (Naya<br>Harsood) Nagar<br>Parishad | 16.710           | 22,000     |
|      |                      | Chhatarpur         | Chhatarpur Nagar<br>Palika                   | 39.450           | 1,42,000   |
|      |                      | Alirajpur          | Alirajpur Nagar<br>Palika                    | 15.440           | 28,000     |
|      |                      | Indore             | Depalpur Nagar<br>Palika                     | 3.190            | 17,000     |
| 15   | Maharashtra          | Solapur            | Pandhapur                                    | 19.380           | 1,22,000   |
|      |                      | Pune               | Baramati                                     | 54.930           | 1,24,375   |
|      |                      | Buldhana           | Buldhana                                     | 9.600            | 91,000     |
|      |                      | Ahmednagar         | Shirdi (Tq. Rahata)                          | 12.640           | 45,000     |
|      |                      | Jalgaon            | Varanganv (Tq.                               | 23.300           | 33,000     |

| S.No | Name of State/<br>UT | District               | Name of<br>ULB/Municipal<br>Corp/Other | Area<br>(sq. Km) | Population |
|------|----------------------|------------------------|--|------------------|------------|
|      |                      |                        | Bhusaval)                              |                  |            |
|      |                      | Thane                  | Kulgaon Badalapur<br>(Tq. Ambarnath)   | 30.590           | 1,79,000   |
|      |                      | Chh.Sambhajinagar      | Kannad                                 | 4.560            | 46,864     |
|      |                      | Chandrapur             | Ghuggus (Tq.<br>Chandrapur)            | 12.250           | 57,150     |
| 16   | Meghalaya            | East Khasi Hills       | Shillong                               | 10.230           | 1,43,229   |
| 17   | Mizoram              | Aizwal North           | Aizwal MC 11-19                        | 72.480           | 1,78,000   |
| 18   | Odisha               | Mayurbhanj             | Baripada<br>Municipality               | 45.150           | 1,09,743   |
|      |                      | Jharsuguda             | Jharsuguda<br>Municipality             | 74.870           | 97,730     |
|      |                      | Khorda                 | Khorda<br>Municipality                 | 25.840           | 46,205     |
|      |                      | Khordha                | Jatni Municipality                     | 17.010           | 55,925     |
| 19   | Puducherry           | Puducherry             | Murungapakkam                          | 4.870            | 25,209     |
| 20   | Punjab               | Barnala                | Barnala                                | 37.000           | 1,16,449   |
|      |                      | Ludhiana               | Khanna                                 | 27.380           | 1,28,137   |
|      |                      | Patiala                | Rajpura                                | 21.290           | 92,301     |
|      |                      | SAS Nagar              | SAS Nagar                              | 32.150           | 1,66,864   |
|      |                      | SAS Nagar              | Derabassi                              | 45.400           | 26,295     |
|      |                      | SAS Nagar              | Banur                                  | 22.690           | 18,775     |
| 21   | Rajasthan            | Kotputali- Behror      | Behror                                 | 48.000           | 41,000     |
|      |                      | Beawar                 | Beawar                                 | 48.640           | 1,92,000   |
|      |                      | Jaipur Rural           | Bagru                                  | 30.370           | 47,826     |
| 22   | Sikkim               | Sikkim (East)          | Gangtok Municipal<br>Corporation       | 19.016           | 1,00,000   |
| 23   | Tamil Nadu           | Chengalpattu           | Maraimalai Nagar                       | 58.080           | 1,10,592   |
|      |                      | Kanchipuram            | Kanchipuram                            | 36.140           | 2,89,484   |
|      |                      | Tiruvannamalai         | Tiruvannamalai                         | 13.640           | 1,65,025   |
|      |                      | Thanjavur              | Thanjavur                              | 36.310           | 2,45,795   |
|      |                      | Dindigul               | Dindigul                               | 14.010           | 2,26,294   |
|      |                      | Sivagangai             | Karaikudi                              | 13.750           | 1,22,714   |
|      |                      | Virudhunagar           | Virudhunagar                           | 6.600            | 72,468     |
|      |                      | Coimbatore             | Coimbatore (7<br>Wards)                | 10.440           | 1,23,314   |
| 24   | Telangana            | Nalgonda               | Miryalguda                             | 28.000           | 1,08,781   |
|      |                      | Warangal Rural         | Wardhannapet                           | 41.430           | 13,732     |
|      |                      | Vikarabad              | Kodangal                               | 36.020           | 14,294     |
|      |                      | Jagityal               | Jagityal                               | 29.550           | 1,05,735   |
|      |                      | Mahabubnagar           | Jacherla                               | 35.240           | 52,128     |
|      |                      | Bhadradi<br>Kothagudem | Manuguru                               | 24.860           | 32,091     |
|      |                      | Siddipet               | Husnabad                               | 25.000           | 22,082     |
|      |                      | Mahabubabad            | Mahabubabad                            | 45.000           | 69,288     |
| 25   | Tripura              | West                   | Agartala Municipal<br>Corporation (MC) | 90.214           | 5,81,698   |
| 26   | Uttarakhand          | Udham Singh Nagar      | Nagar Palika<br>Kitcha                 | 28.960           | 74,357     |
|      |                      | Almora                 | Nagar Palika                           | 9.250            | 39,627     |

| S.No | Name of State/<br>UT | District          | Name of<br>ULB/Municipal<br>Corp/Other              | Area<br>(sq. Km) | Population |
|------|----------------------|-------------------|---|------------------|------------|
|      |                      |                   | Almora  |                  |            |
|      |                      | Haridwar          | Nagar Palika<br>Bhagwanpur                          | 2.690            | 17,179     |
|      |                      | Tehri Garhwal     | Nagar Palika<br>Narendra Nagar                      | 13.360           | 6,613      |
| 27   | Uttar Pradesh        | Gorakhpur         | Gorakhpur   | 223.61           | 7,70,772   |
|      |                      | Jhansi            | Jhansi  | 169.50           | 5,05,693   |
|      |                      | Hardoi            | Hardoi  | 11.05            | 1,26,851   |
|      |                      | Barabanki         | Nawabganj   | 30.30            | 1,79,468   |
|      |                      | Chitrakoot        | Chitrakoot Dham                                     | 21.47            | 87,612     |
|      |                      | Bulandshar        | Anupshahr   | 10.03            | 42,000     |
|      |                      | Mirzapur          | Chunar  | 14.00            | 37,185     |
|      |                      | Pilibhit          | Puranpur  | 4.00             | 40,007     |
| 28   | West Bengal          | North 24 Parganas | New Town Kolkata<br>Development<br>Authority (NKDA) | 28.330           | 1,00,000   |
|      |                      | Hooghly           | Chandannagar<br>Municipal<br>Corporation            | 22.030           | 1,66,867   |
|      |                      | North 24 Parganas | Ashokenagar<br>Kalyangarh<br>Municipality           | 20.500           | 1,21,592   |

Note: In Cities/ULBs with larger population / area, the survey may be restricted to area about 35 Sq. Km and/or population upto 2 Lakh.