xiii(क).	भूविज्ञान	खान मंत्रालय (भारतीय भूवैज्ञानिक सर्वेक्षण)
xiii(ख).	मिट्टी	कृषि अनुसंधान और शिक्षा विभाग (राष्ट्रीय मृदा संरक्षण एवं भूमि उपयोग नियोजन ब्यूरो)
xiv.	जनसंख्या विस्तार	गृह मंत्रालय (महापंजीयक और जनगणना आयुक्त का कार्यालय, भारत)
2.	नवोन्मेष	विज्ञान और प्रौद्योगिकी विभाग
3.	एनजीडीआर और यूजीआई	विज्ञान और प्रौद्योगिकी विभाग (भारतीय सर्वेक्षण) इलेक्ट्रॉनिक्स और सूचना प्रौद्योगिकी मंत्रालय (बीआईएसएजी-एन)
4.	उपग्रह से संबंधित भू प्रेक्षण अवसंरचना	अंतरिक्ष विभाग
5.	उप-सतह अवसंरचना	आवासन और शहरी कार्य मंत्रालय
6.	नेशनल डिजिटल ट्विन	आवासन और शहरी कार्य मंत्रालय
7.	पीएनटी अवसंरचना	अंतरिक्ष विभाग (भारतीय क्षेत्रीय नेविगेशन सैटेलाइट सिस्टम (आईआरएनएसएस)) विज्ञान और प्रौद्योगिकी विभाग (सतत परिचालन संदर्भ स्टेशन (सीओआरएस)) (भारतीय सर्वेक्षण)
8	भू-स्थानिक शिक्षा और कौशल विकास	कौशल विकास और उद्यमिता मंत्रालय
9	भू-स्थानिक उद्यम	उद्योग और आंतरिक व्यापार संवर्धन विभाग

MINISTRY OF SCIENCE AND TECHNOLOGY

(Department of Science and Technology)

NOTIFICATION

New Delhi, the 28th December, 2022

S.O. 6095(E).—The Union Cabinet, in its meeting held on 16.12.2022, approved the National Geospatial Policy, 2022 (enclosed at Annexure-A).

2. Accordingly, the National Geospatial Policy 2022 is hereby notified for implementation with immediate effect.

[No. SM/25/07/2021 (E-33381)]

SUNIL KUMAR, Jt. Secy.

ANNEXURE-A

NATIONAL GEOSPATIAL POLICY, 2022

1. Preamble

1.1. Geospatial technology has applications in almost every domain of the economy ranging from agriculture to industries, development of urban or rural infrastructure, administration of land, economic activities of banking and finance, resources, mining, water, disaster management, social planning, delivery services, etc. Geospatial data is now widely accepted as a critical national infrastructure and information resource with proven societal, economic and environmental value that enables government systems and services, and sustainable national development initiatives, to be integrated using ‘location’ as a common and underpinning reference frame.

1.2. The National Geospatial Policy, 2022 (the Policy) is a citizen-centric policy that seeks to strengthen the Geospatial sector to support national development, economic prosperity and a thriving information economy. The Policy builds on conducive environment generated by the "Guidelines for acquiring and producing Geospatial Data and Geospatial Data Services including Maps" dated 15.02.2021 (the Guidelines), issued by Department of Science and Technology (DST), Government of India (GoI). While the Guidelines deregulated the Geospatial sector by liberalizing Geospatial data acquisition/production/ access, the Policy takes it further by laying down an overarching framework for holistic development of the Geospatial ecosystem. It spells out the vision, goals for the Geospatial sector and outlines the strategies for achieving them. It seeks to develop Geospatial infrastructures, Geospatial skill and knowledge, standards, Geospatial businesses, promote innovation and strengthen the national and sub-national arrangements for generation and management of Geospatial information. The Geospatial data acquisition/production/access will continue to be governed by the Guidelines in its present form or as stipulated by DST from time to time with an aim to promote private sector participation through continued enhancements of Ease of Doing Business in the sector.

2. Vision and Goals

2.1.1. To make India a World Leader in Global Geospatial space with the best in the class ecosystem for innovation.

2.1.2. To develop a coherent national framework in the country and leverage it to move towards digital economy and improve services to citizens.

2.1.3. To enable easy availability of valuable Geospatial data collected utilizing public funds, to businesses and general public.

2.1.4. To have a thriving Geospatial industry in the country involving private enterprise.

2.2. Following are the milestones in the journey towards realization of the aforesaid vision:

Year 2025

2.2.1. Put in place an enabling policy and legal framework that supports liberalization of Geospatial sector and democratization of data for enhanced commercialization with Value Added Services.

2.2.2. Improve availability of and access to better location data across organizations and sectors to enable innovations and encourage enterprise.

2.2.3. Establish and strengthen an integrative interface for all digital data having location dimension collected or developed utilizing public funds, for easy access, sharing, use and reuse.

2.2.4. Redefinition of National Geodetic Framework using modern positioning technologies and provision of online access.

2.2.5. High accuracy Geoid for the entire country.

2.2.6. Develop and strengthen national and sub-national arrangements in Geospatial information management and related infrastructures with participation of government, industry, private sector, academia and civil society.

Year 2030

2.2.7. High resolution topographical survey & mapping (5-10 cm for urban & rural areas and 50 cm-100 cm for forests & wastelands).

2.2.8. High accuracy Digital Elevation Model (DEM) for entire country (25 cm for plain, 1-3 metre for hilly and mountainous areas).

2.2.9. Develop a Geospatial Knowledge Infrastructure (GKI) underpinned by Integrated Data and Information Framework.

2.2.10. Enhance capabilities, skills and awareness to meet the future needs of the country.

Year 2035

2.2.11. High resolution/accuracy Bathymetric Geospatial Data of inland waters and sea surface topography of shallow/deep seas - to support Blue Economy.

2.2.12. Survey and mapping of sub-surface infrastructure in major cities and towns.

2.2.13. National Digital Twin of major cities and towns.

3. Strategy and Approach

3.1. The focus of the Policy is to make Geospatial technology and data as agents of transformation for achieving the Sustainable Development Goals (SDGs), bringing efficiency in all sectors of economy and instilling accountability and transparency at all levels of governance.

3.2. Atmanirbhar Bharat: The Policy recognizes the importance of locally available and locally relevant Maps and Geospatial Data in improved planning and management of resources and better serving the specific needs of the Indian population. The Policy aims to create an enabling ecosystem thereby providing a conducive environment to Indian Companies that will enable them to make India self-reliant in producing and using their own Geospatial data /information as also compete with foreign companies in the global space.

3.3. Integrated Geospatial Information Framework (IGIF): The Policy seeks to draw on international best practices, such those of United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) including the IGIF, to strengthen national-level spatial information management arrangements across our country.

3.4. Data and Information & Communications Technology (ICT) Infrastructure: Building on the existing Data Holdings and ICT Infrastructure, the Policy will promote establishment of a Geospatial data infrastructure, which through well-defined custodianship model and data supply chain, will enable best practices in collection and management of Geospatial data/information and availability of quality, real /near-real time data/information that will be appropriate to ensure cross sector and multidisciplinary collaboration involving all stakeholders.

3.5. Innovation: The Policy will enable and support innovation, creation and incubation of ideas and start-up initiatives in the Geospatial sector that will enable leapfrogging from outdated regulations, technologies and processes, bridging the Geospatial digital divide and capitalizing on the opportunities arising out of continually evolving Technology.

3.6. Standards: The Policy will encourage open standards, open data and platforms. It will promote establishment and adoption of best practice standards and compliance mechanisms for enabling data and technology interoperability to deliver integrated Geospatial information and location-based knowledge creation.

3.7. Capacity Development: The Policy will encourage enduring capacity development and education programs so that the value and benefits of integrated Geospatial information management is sustained in the long term. It will also aim at the spread of Geospatial thinking and education to the young minds from school level onwards wherein there would be standardization and certification of courses and skill sets in line with the global best practices.

3.8. Ease of Doing Business: Continued liberalization in line with the Guidelines will be carried out and supported.

3.9. Democratization of Data: The Survey of India (SoI) topographic data and other Geospatial Data produced using public funds would be treated as common good and be made easily available.

4. Institutional Framework

4.1. The Government shall constitute a Geospatial Data Promotion and Development Committee (GDPDC) at the national level which shall be the apex body for formulating and implementing appropriate guidelines, strategies and programs for promotion of activities related to Geospatial sector. GDPDC shall drive the overall development of the Geospatial ecosystem. GDPDC would replace and subsume the functions and powers of National Spatial Data Committee (NSDC) constituted through GoI Resolution dated 13.06.2006 and Geospatial Data Promotion and Development Committee constituted vide DST Office Memorandum dated 04.03.2021. The composition and functions of GDPDC are given at **Annexure-I**. DST, with the approval of Minister-in-charge, would be empowered to modify the composition and functions of GDPDC to make it more effective in tune with advancements in the Geospatial sector.

4.2. GDPDC will appropriately modify the concept and functioning of National Spatial Data Infrastructure (NSDI), constituted vide GoI Resolution dated 13.06.2006, in order to make the NSDI mechanism more robust, efficient and effective. The composition, powers and functions of existing NSDI Executive Committee constituted vide GoI Resolution dated 13.06.2006 will be realigned accordingly.

4.3. DST shall continue to be the nodal Department of the Government and GDPDC shall make suitable recommendations to DST in the discharge of its functions relating to the Geospatial regime. DST shall provide secretarial assistance to GDPDC. DST may constitute additional Sub-committee/s and/or Working Groups to aid and support GDPDC on specific issues. The Sub-committees/Working Groups may have appropriate representation from industry.

5. Strengthening Geospatial Infrastructures

5.1. Geospatial Data Infrastructure

5.1.1. UN-GGIM recognizes 14 Global Fundamental Geospatial Data Themes considered fundamental to development of a country's Integrated Geospatial Information Infrastructure and supporting the Sustainable Development Goals. GDPDC will adopt and develop these Data Themes as National Fundamental Geospatial Data Themes (given at **Annexure-II)** in line with national priorities. It will also develop Sectoral Geospatial Data Themes for various sectors like Environment, Forest, Disaster Management, Mines & Minerals, Oceanography, Coastal & Marine, Agriculture, Health & Diseases etc. Geospatial Data Themes would evolve in tune with modern concepts and also through private sector, in line with global best practices. It will designate one or more Central or State Level Partnering Agencies as Lead Agencies for each identified Fundamental or Sectoral Geospatial Data Theme. Duties and responsibilities of Lead Partnering Agencies and other operational aspects shall be developed and periodically reviewed by GDPDC.

5.1.2. Provisions for efficient access to the National Fundamental and Sectoral Geospatial Data by all stakeholders in the country will be made through operationalization of a National Geospatial Data Registry (NGDR) which will be a commonly accessible set of registers/ catalogue of data sets and services.

5.1.3. Unified Geospatial Interface (UGI), an electronic data querying and processing service, will be operationalized for provision of consumer-oriented products, applications, services and solutions using the Geospatial data and metadata contained in the NGDR and utilizing the data supply chains from the Central and State Level Partnering Agency Data Nodes. Core of Gatishakti developed by Bhaskaracharya National Institute for Space Applications and Geo-informatics (BISAG-N) and various efforts by National Informatics Centre (NIC), National Remote Sensing Centre (NRSC), NSDI, etc would be studied/leveraged to guide/support/facilitate the Partnering Agencies in setting up fit-for-future ICT Infrastructure for housing their data, connecting to the Central Node/UGI and sharing them through NGDR - as per stipulated standards and service mechanisms. The UGI will include access to all open Geospatial data directly or indirectly collected by the Central and State Level Partnering Agencies on terms to be determined by GDPDC. Access to a volunteered source of Geospatial Data from a non-Partnering Agency, academia, industry or citizenry through NGDR/UGI may also be allowed as per agreed terms. The UGI will eliminate duplicity of efforts among national agencies like Survey of India, National Remote Sensing Centre (NRSC), Forest Survey of India (FSI), Geological Survey of India (GSI), National Bureau of Soil Survey and Land Use Planning, etc that create Geospatial Data using public funds and various other agencies.

5.1.4. Survey of India shall be the agency responsible for developing and operating the NGDR and the UGI in collaboration with BISAG-N, other institutions and the private sector, under the guidance and supervision of GDPDC in relation to the scope, functionality, and performance of the NGDR and the UGI. Although the NGDR and the UGI are intended to provide access to all Fundamental and Sectoral Geospatial Data Sets and other Central/State Government datasets, nothing in this Policy shall be construed to prevent any Partnering Agency from presenting, providing, or disseminating data through their own mechanisms.

5.1.5. Standards related to National Fundamental and Sectoral Geospatial Data Themes would be developed and promulgated after consultation with a broad range of data users and providers and, to the maximum extent possible, national and international standards adopted by voluntary and open standards consensus bodies would be used. New standards will be established only to the extent that such standards do not exist for adoption and use by the stakeholder communities.

5.2. Mapping Infrastructure

5.2.1. Map making has recently been deregulated in our country to spur domestic innovation, encourage creation of quality maps and enable Indian companies to compete in the global mapping ecosystem. The need for continuous updating of existing data sets, requirement of manpower and technology, and avoiding duplication in data acquisition/ processing make it imperative for the Government to collaborate with private and other agencies for improving Geospatial information delivery. Towards this objective, this Policy shall replace the National Map Policy, 2005. Rules and regulations for operating aircrafts and drones for the purposes of surveying would be further simplified.

5.2.2. Role and Organization of SoI

5.2.2.1. While SoI will continue to be the overarching nodal agency for Geospatial Data, only the generation/ maintenance of minimal foundational data/ core functions would be performed by Sol. SoI may also involve private sector and other surveying entities such as GSI, FSI, etc.

5.2.2.2. Amongst the 14 National Fundamental Geospatial Data Themes, Geodetic Reference Frame, Orthoimagery and Elevation are most pivotal because together they provide the Geodetic and Digital Spatial Framework that act as common reference (X,Y,Z) for the assembly and maintenance of data pertaining to all other Fundamental and Sectoral Data Themes. When interpreted, Ortho-imagery and Elevation act as the source for many other Fundamental and Sectoral data.

5.2.2.3. SoI would be responsible for maintaining Geodetic Reference Frame, Orthoimagery, Elevation (DEM), Functional Areas (Administrative Boundaries) and Geographical Names (Toponymy) in collaboration with various stakeholders including the private sector by suitably aligning with the priorities of the Government, while adhering to the Goals set out in the Policy.

5.2.2.4. While within the government SoI would play the lead role for maintaining high resolution /high spatial accuracy Orthoimagery, private sector will be free to take up creation, maintenance and use of such data suitable to their requirements. Department of Space will similarly play the lead role for generating Orthoimagery of high temporal accuracies using space-based technology.

5.2.2.5. For creation and maintenance of remaining National Fundamental Geospatial Data Themes, nodal ministries have been given at **Annexure III.** Ministries/Departments would increasingly engage with private sector to meet their requirements. They will bear the cost for the creation and development of Geospatial Data required by them and they must explore procurement of Geospatial services on their own under the liberalized Geospatial regime, rather than use Sol as an intermediary.

5.2.2.6. SoI will act as facilitator in harmonization of the data sets created using public money to ensure that data generated from various mapping activities by various stakeholders get seamlessly integrated into Geodetic Reference Framework and develop a mechanism to facilitate consolidation of the data sets into the national topographic template to meet the demand of periodically updated, high-resolution and accurate topographic data for the country.

5.2.2.7. The organizational structure of SoI would be aligned with the changed Geospatial data regime, with focus on facilitating and nurturing a vibrant domestic Geospatial services industry. SoI would be transformed into a fully civilian organization. Defence stream of recruitment in SoI would be discontinued and defence stream officers seconded to SoI would be permanently reverted to Military Survey, Ministry of Defence. Requirements of fast changing skill sets in SoI would be met by domain experts sourced from the .market

5.2.3 Role of Private Sector

5.2.3.1 While there are nodal Ministries/Departments for each of the National Fundamental Geospatial Data Themes, this does not imply that the entire work has to be necessarily done departmentally or through SoI or only government/public sector entities. Actual collection and collation of data and development of Data Themes would be increasingly done with private sector participation consistent with February, 2021 Guidelines. Needs and requirements of the citizens related to various Geospatial/location-based solutions will predominantly be serviced by the private sector, with SoI and nodal ministries/agencies of various Geospatial Data Themes in a facilitative role. The Private Sector will play a key role in creation and maintenance of Geospatial and mapping Infrastructures, innovations and process improvements and monetization of Geospatial data.

5.3. Sub-surface and Hydrographic Infrastructure

5.3.1. The subsurface or underground is a complex environment which hosts vital infrastructure such as water and energy supply, communication systems, sewers and drainage. A concrete strategy for mapping the subsurface infrastructure in cities in 3D mode and collating or updating data in cases where it has already been done, will be developed.

5.3.2. With the growing importance of Inland Water Resources and the continued emphasis on nurturing the Blue Economy, there has been a need to provide necessary Geospatial data underpinnings for their sustainable management. Fisheries, deep sea mining, and offshore oil and gas make up a large component of India's blue economy. Such resources in the streams, ponds, lakes, rivers, and seas on and around the shore-lines are required to be surveyed and mapped. Bathymetric Geospatial Data is also a crucial resource for a vibrant blue economy that would require active participation of the private sector in their acquisition and use, apart from traditional agencies like the Indian Navy, etc. GDPDC will develop strategies for facilitating such surveys and for the development and maintenance of suitable hydrographic data infrastructure with the active participation of private and public sector Indian companies. In order to promote growth in hydrographic infrastructure and related data products, DST would be empowered to undertake hydrographic surveys and preparation of navigational charts with the involvement of appropriate government agencies and/or private sector.

5.4. National Digital Twin

5.4.1. The Digital Twin is a virtual replica of a physical asset, process or service that lies at the core of the new digital revolution. National Digital Twin would be an ecosystem of smart, dynamic, connected Digital Twins, enabled by secure and interoperable data sharing, to facilitate better decision-making. National Digital Twin strategy, which is geospatially aware and built on a dynamic Geospatial infrastructure, would be devised by GDPDC to provide for the following:-

- Reliable, accessible, usable, interoperable, continuously updated datasets for both 'above the surface' and 'subsurface' environments as per the required attributes;
- Precise positioning data from Global Navigation Satellite System (GNSS) systems, or resilient Positioning, Navigation and Timing (PNT) systems and Internet of Things (IoT) sensors.

5.5. Geospatial Knowledge Infrastructure (GKI)

5.5.1. GKI will provide the critical Geospatial component to knowledge and automation. With focus on 'data provision' to 'knowledge creation and foresight', GKI will be enabled by integration of Geospatial data/technology/concepts with Fourth Industrial Revolution (4^{th} Industrial Revolution) technologies and the growing digital infrastructure (Web, Cloud, Networks, etc.). It will encompass governance, technology, data and people, at the heart of "knowledge co-creation" in the wider digital ecosystem for delivering value to future economy and society. GDPDC will create an enabling environment to promote innovations towards GKI enablement, with active participation of private industry.

6. Geospatial Education and Skill Development

6.1.1. Geospatial education is imparted in around 200 universities/institutions at different levels in colleges, universities, Industrial Training Institutes and National Skill Training Institutes. However, there is lack of standardization of Geospatial curriculum. Geospatial education is not adequately integrated in the innovation system.

6.1.2. With the implementation of the Policy, the field of surveying and mapping is likely to see a sharp rise, creating job opportunities for various job-roles in Geospatial domain. To fill this resource gap, DST and SoI, together with experts from Industry and academia will work with the National Skill Development Council (NSDC) to create a Geospatial Skill Council. The Geospatial Skill Council will conduct skill gap studies, develop Qualification Packs, Occupational Standards as part of multi-level National Skill Qualification Framework (NSQF) for various job-roles/competencies in the Geospatial sector. Courses aligned to the NSQF will be run by various academic/ training institutions. Affiliation/ accreditation/ examination/ certification process will be standardised in accordance with NSQF as determined by the Ministry of Skill Development and Entrepreneurship mechanism for Vocational Training and Education or similar mechanisms of GoI.

6.1.3. Development of international standard Geospatial Science education programs from the schools till the level of the universities will be encouraged. Cutting-edge research in Geospatial Science and Technology for indigenous capacity building and identification of new areas of application and solution will be promoted. Research in emerging technologies involving integration of Geospatial Technology with 4 th IndustrialRevolution Technologies will be encouraged.

6.1.4. Geospatial science is interdisciplinary, combining various technologies and affecting diverse fields. There is a need for training Institute(s) for developing and nurturing of Geospatial professionals in all the diverse areas of Geospatial and allied technologies. National Institute for Geo-informatics Science and Technology (NIGST), Indian Institute of Remote Sensing (IIRS) and/or any suitable institute(s), public or private, will be developed into Centre(s) of Excellence - providing specialized courses in the domain of Geospatial Science & Technology.

6.1.5. Online courses will be made commonly available, including in collaboration with iGOT Karmayogi (Department of Personnel & Training, GoI) platform. A sustainable model for training will be developed through active and intrinsic industry participation. Strong industry linkages will be used, both for providing training inputs and placement activities, to complete the training lifecycle. Tie-ups with allied industries will be established to increase the placement spectrum of the trained youth.

6.2. Surveyors' Registration and Certification

6.2.1. Surveying, being a specialized task, requires knowledge and skill. Mechanisms are in place to maintain the quality of many professions through various legislations and regulations. However, at present, there is no mechanism in the country to certify the requisite surveying skills. It leads to an unpredictable and skill-deficient work force that adversely affects the survey operations and at times even result in failure of projects. In order to maintain the quality of survey professionals, Surveyors' registration and certification will be developed through industry driven benchmarks and standards, in line with global best practices. These benchmark and certification standards will also be developed to appropriately provision for Aerial Survey Professionals, UAV Survey Professionals, GIS Professionals, Remote Sensing Professionals, etc. who are different from traditional surveyors.

7. Geospatial Enterprise

7.1. An enabling ecosystem will be provided for industry, academia and research with ease of doing business and pro-actively engaging them in various spheres of Geospatial domain for employment generation and contribution to the national economy. Proactive steps will be taken for stimulating Geospatial technological innovations and supporting the growth and development of the Geospatial industry in the country. Measures would be taken to promote the use of state-of-the-art drone/aircraft/land-vehicle/ship/satellite borne sensors like Light Detection and Ranging (LIDAR) including Hydrographic LIDAR, Synthetic Aperture Radar (SAR), Ground Penetrating Radar, Electromagnetic Locator, Digital Camera etc for survey and mapping activities in the country.

7.2. The Geospatial industry is a critical industry in the national economy. An advisory body named as Geospatial Industrial Development Board (GIDB) headed by an eminent industrialist, will be constituted by DST under the aegis of GDPDC, with representation from Ministry of Commerce and Industry, Department of Science and Technology and Department of Revenue among others. It would be assisted by a panel of members from the Geospatial industry who would provide valuable inputs to the Board for advancing the growth of the Indian Geospatial entities. The Board would assist and advise GDPDC and DST on matters related to Geospatial industry.

7.3. Geospatial Incubation Centres and/or Geospatial Industry Accelerators would be established in collaboration with Geospatial industry, user sectors, academia and the civil society to promote innovation in the sector. Long-term Contract R&D would be facilitated to enable the Geospatial industry to build next-generation Geospatial technologies to strengthen the Geospatial infrastructure in the country.

7.4. Indian companies in Geospatial field earn a large part of their revenue from export of Geospatial data processing services. Opening up of the domestic Geospatial market would help them in growing rapidly thereby creating a large skilled manpower base in the country which would help the country to become a global hub for Geospatial services. The capacity of Indian Geospatial industry would be supported and enhanced with appropriate promotional programs of various Departments. To create synergies and holistic development, Geospatial Technology Parks would be established considering feedbacks of relevant Departments. The Technology Parks will further advance the Geospatial industry in the country, providing

businesses with the requisite facilities to innovate and invent at one place. It is expected that private businesses will seize the opportunity created by liberalization of the Geospatial sector in the country to leverage the potential for unlocking value by commodification of high accuracy, real time Geospatial data that will be easily available and accessible from various Agencies.

8. Making it happen

8.1. The core of Integrated Geospatial Information Infrastructure will be cooperation and collaboration among various stakeholders. Concerted efforts by all the Partnering Agencies would be the underpinning premise for availability of Geospatial data for its use and access by decision makers and content developers.

8.2. GDPDC as constituted by the Government will be the apex body for implementation of the Policy, its various provisions, formulation of guidelines and steering the course of the development of Geospatial sector in the Country. DST shall be the Nodal Department of the Government for the Policy. The Nodal Ministries for National Fundamental Geospatial Data Themes and other key components of Geospatial Ecosystem are mentioned at **Annexure-III**. GDPDC can identify additional themes and nodal agencies or make modifications to those given at Annexure-III, in consultation with the stakeholders.

Annexure-I

Geospatial Data Promotion and Development Committee (GDPDC)

1.1. Composition*:* GDPDC will have representatives from relevant Departments/Ministries of the Government, Industry, Academia and Research as given below:

1.1.1.

1.	Person of repute from industry, government or academia	Chairperson
2.	Secretary, Department of Science & Technology, GoI	Vice Chairperson
3.	Representative of Department of Defence, GoI	Member
4.	Representative of Department for Promotion of Industry and Internal Trade, GoI	Member
5.	Representative of National Security Council Secretariat	Member
6.	Representative of Department of Land Resources, GoI	Member
7.	Representative of Ministry of Electronics & Information Technology, GoI	Member
8.	Representative of Ministry of Earth Sciences, GoI	Member
9.	Representative of NITI Aayog	Member
10.	Director, National Remote Sensing Centre	Member
11.	Director General, Geological Survey of India	Member
12.	Director General, Directorate General of Hydrocarbons	Member
13.	Director General, Bhaskaracharya National Institute for Space Applications and Geo-informatics	Member
14.	Director General, Forest Survey of India	Member
15.	Maximum of **two officials** of Joint Secretary rank and above of the Government of India or State Government departments, whose activities are related to the usage, promotion and development of Geospatial data/ Information	Member
16.	Minimum of **two members** from Geospatial Industry	Member
17.	Surveyor General of India, Survey of India	Member Secretary

Note –

I. The representatives should not be below the rank of Joint Secretary to GoI.

II. For Sl. No. 1, 15 and 16 of GDPDC composition, the appointment shall be made by the Government for a period of three years, and that there shall be maximum of two terms for an individual so appointed.

1.2 Functions:

GDPDC shall be the apex national body for formulating and implementing appropriate guidelines, strategies and programs for promotion of activities related to collection, generation, preparation, dissemination, storage, publication, updating and/or digitization of Geospatial data along with associated products, solutions and services. It shall take measures to foster innovation, provide leadership and coordination, and promote standards necessary to strengthen Geospatial information management so that they can be used to find sustainable solutions to emerging development and security challenges facing the nation. DST shall be the nodal Department of the Government and GDPDC shall make suitable recommendations to DST in this regard as detailed below:

(i) Lead the establishment and management of an Integrated Geospatial Information Infrastructure to support on-demand provision of Geospatial data/ information/ knowledge services towards guiding development and security-related strategies at different levels of the governance hierarchy;

(ii) Determine and decide the Geospatial data needs of the country and require the creation and collection of such data to meet those needs;

(iii) Establish a mechanism for active engagement of all the stake holders including Governments, Industry, Academia, NGOs for development of standards, information infrastructure including ICT frameworks and innovation;

(iv) Periodically review and update National Fundamental and Sectoral Data Themes;

(v) Designate one or more Central or State Level Partnering Agencies as Lead Agencies for managing each identified National Fundamental or Sectoral Data Theme with appropriate private sector participation;

(vi) Periodically review the duties and responsibilities of the Lead Partnering Agencies and their operational aspects as per the National Geospatial Policy;

(vii) Objectively assess each Lead Partnering Agency on the basis of its annual performance report submitted to the Committee to determine its progress and achievements in delivering the required data service;

(viii) Recommend an audit of compliance and standards of Geospatial data and services of Partnering Agencies towards their obligations and responsibilities, wherever deemed appropriate and bring it to the notice of the Competent Authority;

(ix) Get operationalized the National Geospatial Data Registry and the Unified Geospatial Interface and lay appropriate rules and procedures for the upscaling and maintenance of its servers, networks and accessibility to their service;

(x) Develop, promulgate, and review the standards for the National Fundamental and Sectoral Data Themes through the Bureau of Indian Standards (BIS) and their adoption by the Partnering Agencies;

(xi) Support and promote the infrastructure of networks, systems, services, and standards that provide a digital representation of the Earth to users for various applications;

(xii) Promote and enable investment in the Geospatial sector and create a conducive environment that encourages competitive excellence in providing Geospatial data, applications, services and solutions;

(xiii) Promote the development of human resources in the Geospatial sector;

(xiv) Decide on issues arising out of finalization of negative attribute lists and frame regulations on those attributes;

(xv) Assess the adequacy of existing legal and regulatory frameworks to deal with enforcement of provisions of the National Geospatial Policy and related guidelines, and suggest strategies for overcoming shortcomings, if any, in their enforcement;

(xvi) Coordinate with international organizations having a stake in the development and utilization of the National or Global Geospatial Information Infrastructures to address challenges in various domains of development and security;

(xvii) Aid and advice the Central Government on matters related to the National Geospatial Policy;

(xviii) Publish articles or reports related to Integrated Geospatial Information Infrastructure and business growth;

(xix) To do all such acts as may be necessary, beneficial or desirable for the promotion and achievement of objectives of the National Geospatial Policy;

1.3. Rules and Procedure

GDPDC shall have the power to frame rules and procedures for the conduct of its business. In the absence of Chairperson, Secretary, Department of Science & Technology, GoI shall preside over the Committee meetings. The Committee shall meet at least once every year at such time and place as fixed by the Chairperson.

Annexure-II

National Fundamental Geospatial Data Themes

1. Geodetic Reference Frame
2. Orthoimagery
3. Functional Areas (Administrative Boundaries)
4. Geographical Names (Toponymy)
5. Elevation and depth
6. Water
7. Transport Networks
8. Buildings and Settlements
9. Land Cover and Land Use
10. Physical Infrastructure
11. Land Parcels
12. Addresses
13. Geology and Soils
14. Population Distribution

Annexure-III

Responsibility Matrix for National Fundamental Geospatial Data Themes and other key components of Geospatial Ecosystem

S. No.	Responsibility	Nodal Ministry/Department (Organizations)
1.	National Fundamental Geospatial Data Themes	
i.	Geodetic Reference Frame	Department of Science & Technology (Survey of India)
ii.	Orthoimagery	Department of Science & Technology (Survey of India) Department of Space (Space based technology) (National Remote Sensing Centre)

iii.	Functional Areas (Administrative Boundaries)	Department of Science & Technology (Survey of India)
iv.	Geographical Names (Toponymy)	Department of Science & Technology (Survey of India)
v(a).	Elevation	Department of Science & Technology (Survey of India)
v(b).	Depth	Ministry of Ports, Shipping & Waterways (Inland Water) Ministry of Earth Science (Ocean & Sea)
vi.	Water	Department of Water Resources, River Development and Ganga Rejuvenation
vii.	Transport Networks	Ministry of Road Transport and Highways Ministry of Railways Ministry of Ports, Shipping & Waterways Ministry of Civil Aviation
viii.	Buildings and Settlements	Ministry of Housing and Urban Affairs (Urban) Ministry of Panchayati Raj (Rural)
ix.	Land Cover and Land Use	Department of Space (National Remote Sensing Centre) Ministry of Environment, Forest & Climate Change (Forests) (Forest Survey of India)
x.	Physical Infrastructure	Ministry of Housing and Urban Affairs (Urban) Ministry of Panchayati Raj (Rural)
xi.	Land Parcels	Department of Land Resources (Rural) Ministry of Housing and Urban Affairs (Urban)
xii.	Addresses	Ministry of Housing and Urban Affairs (Urban) Ministry of Panchayati Raj (Rural)
xiii(a).	Geology	Ministry of Mines (Geological Survey of India)
xiii(b).	Soils	Department of Agricultural Research and Education (National Bureau of Soil Survey and Land Use Planning)
xiv.	Population Distribution	Ministry of Home Affairs (Office of the Registrar General & Census Commissioner, India)
2.	Innovation	Department of Science & Technology
3.	NGDR & UGI	Department of Science & Technology (Survey of India) Ministry of Electronics & Information Technology (BISAG-N)
4.	Satellite related Earth Observation Infrastructure	Department of Space
5.	Sub-surface Infrastructure	Ministry of Housing and Urban Affairs

6.	National Digital Twin	Ministry of Housing and Urban Affairs
7.	PNT Infrastructure	Department of Space (Indian Regional Navigation Satellite System (IRNSS)) Department of Science & Technology (Continuously Operating Reference Stations (CORS)) (Survey of India)
8	Geospatial Education & Skill Development	Ministry of Skill Development and Entrepreneurship
9	Geospatial Enterprise	Department for Promotion of Industry & Internal Trade

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