National Geospatial Policy 2022

Why in news?

The National Geospatial Policy 2022 was notified by the Ministry of Science and Technology recently.

What is the National Geospatial Policy 2022?

- The National Geospatial Policy, 2022 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 created by the "Guidelines for acquiring & producing Geospatial Data and Geospatial Data Services including Maps" issued by Department of Science & Technology in 2021.

  While the Guidelines deregulated the Geospatial sector by liberalizing Geospatial data acquisition/ production/ access, the Policy lays down a framework for holistic development of the Geospatial ecosystem.

- The Policy seeks to
  - Develop Geospatial infrastructures,
  - Develop Geospatial skill and knowledge,
  - Develop Geospatial standards and 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.

What is the objective?

- The National Geospatial Policy 2022 is aimed at setting up high resolution topographical survey and mapping, with a high-accuracy Digital Elevation Model (DEM) for the country by 2030.
- This is a vibrant initiative to promote the Start-Up & reduce the last mile dependencies on the foreign soil.

What are the visions?

- To make India a World Leader in Global Geospatial space with the best in the class

ecosystem for innovation.
- To develop a coherent national framework in the country and leverage it to move towards digital economy and improve services to citizens.
- To enable easy availability of valuable Geospatial data collected utilizing public funds, to businesses and general public.
- To have a thriving Geospatial industry in the country involving private enterprise.

What are certain issues that need immediate attention?

- Geospatial data can be described as complex data objects with complex relationships among them.
- Securing this type of data poses major challenges and bottlenecks that are yet to be fully understood and addressed.
- The issues may be related to
    - Access control and securities,
    - Privacy such as the unit of protection,
    - Developing secure and interoperable GIS applications in the areas of Defence (Tri-Services).

Geospatial data play a vital role in a wide spectrum of frequencies for critical data management applications, such as military operations, disaster and emergency management, environmental monitoring, land and city planning.

- All these require coordination among diverse organizations, their data repositories, and users with different responsibilities need to be clearly identified.
- Although a variety of models and techniques are available to manage access and share geospatial data, very little attention has been paid to addressing the National security concerns, such as
- In his view “if the entire body of geospatial data would be made available by simply integrating the data from different repositories, there is severe chances of potential data misuse and privacy violations.
- Also sensitive information such as building ownerships might be revealed or information about critical infrastructure could become publicly accessible and it is a major concern in context to the applications in Defence (Military Assets).”
- Given the number of people and organizations involved in a disaster preparation scenario, security measures must be taken to provide users and applications only with data on a need-to-know basis.

What is the security concern?

- Security issues for geospatial data are different and in many ways more complex than security issues for relational data.
- These differences concern both the data organization and structures, and in particular the ways the data are manipulated & used.
- In a GIS, data is typically organized in different thematic layers; these layers, which can be large in number, represent different aspects of an application domains and

areas.

- Also the same spatial region can be represented by either field-based data, i.e., satellite imagery or map data, or by vector-based data, i.e., a collection of possibly complex geographic features.
- Because of the organization in layers, the same geo-references feature, e.g., a building or road can be represented in different layers and ways as it is very common practice.
- In terms of data usage and its further applications, many applications generating and using geospatial data are dynamic as the set of subjects and geographic features may dynamically and rapidly change, as in the case of dynamic GIS coalitions for emergency response.
- Moreover, in such a context, one may need to combine data from several sources that are independently administered and therefore depicted by heterogeneous security policies.
- Such usage requires different approaches to architecting the data, security solutions.
- **Solution** - A clear roadmap should be drawn.
- An SOP should be developed in National Geospatial Policy 2022 for the National Securities Issues for the country where in it is the three services, Para military or Critical Infrastructure Sectors.

What is the Geospatial Data Promotion and Development Committee?

- The Geospatial Data Promotion and Development Committee (GDPDC) shall be constituted by the Government at the national level.
- It 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 in 2006 and
    - Geospatial Data Promotion and Development Committee constituted vide DST Office Memorandum in 2021.
- The Geospatial Data Promotion and Development Committee (GDPDC) will have representatives from various Departments and Ministries, including a Department of Defence Representative.
- The Survey of India (SoI) would become an entirely civilian agency.

Department of Science & Technology shall continue to be the nodal Department of the Government.

GDPDC shall make suitable recommendations to DST in the discharge of its functions relating to the Geospatial regime.

Reference

1. Financial Express | National Geospatial Policy 2022: Expert anticipates scope for potential data violation

2. Survey of India | National Geospatial Policy-2022

