2nd World Geospatial Information Congress

For Prelims: UN World Geospatial Information Congress,

For Mains: Geospatial sector of India - Challenges and Opportunities, Government Policies & Interventions

Why in News?

Recently, 2nd United Nations World Geospatial Information Congress was inaugurated in Hyderabad under the theme **'Geo-Enabling the Global Village: No one should be left behind'.**

- India's geospatial economy is expected to cross Rs. 63,100 crores by 2025 at a growth rate of 12.8%.

What is the UN World Geospatial Information Congress?

- The first United Nations World Geospatial Information Congress was held in Deqing, Zhejiang Province, China in 2018.
- The United Nation Committee of Experts on Global Geospatial Information Management (UN-GGIM) **organizes the United Nations World Geospatial Information Congress (UNWGIC) every four years.**
- The objectives are **enhancing international collaboration** among the Member States and relevant stakeholders in Geospatial information management and capacities.

What is Geospatial Technology?

- **About:**
  - Geospatial technology is a term used to **describe the range of modern tools contributing** to the geographic mapping and analysis of the Earth and human societies.
    - The term 'geospatial' refers to a collection of technologies that help to collect, analyse, store, manage, distribute, integrate, and present geographic information.
  - Broadly, it consists of the following technologies:
    - **Remote Sensing**
    - **GIS (Geographic Information System)**
    - **GNSS (Global Navigation Satellite System)**
    - **Survey**
    - **3D modelling**
- **Significance:**
  - **Employment Generation:**
    - It will provide employment to more than 10 lakh people mainly through Geospatial start-ups in India.
  - **Socio-Economic Development:**
    - Geospatial technology has become one of the key enablers in socio-economic development by **enhancing productivity, ensuring sustainable infrastructure**

planning, effective administration, and aiding the farm sector.

- **Other Advantages:**
  - Other advantages include **sustainable urban development, managing and mitigating disasters, tracking the impact of** climate change, forest management, water management, stopping **desertification** and **food security.**
  - Intelligent maps and models can be created using geospatial technology.
    - It can be used to reveal spatial patterns hidden in large amounts of data that are complex to access collectively through mapping.
  - Geospatial technology has been driving inclusion and progress in national development projects like **SVAMITVA**, **PM Gati Shakti master plan**, Jan Dhan-Aadhaar-Mobile (JAM) Trinity **etc.**

What are the Challenges related to the Sector in India?

- **Absence of Sizeable Market:**
  - Among the most prominent hurdles is the **absence of a sizable geospatial market in India.**
  - There is no demand for geospatial services and products on a scale linked to India's potential and size.
    - This lack of demand is mainly a consequence of the lack of awareness among potential users in government and private sectors.
- **Lack of Skilled Manpower:**
  - The other hurdle has been the **lack of skilled manpower across the entire pyramid.**
  - Though India has many who are trained in geospatial this is mostly either through a master's level programme or on-job training.
    - Unlike the West, India lacks a strata of core professionals who understand geospatial end-to-end.
- **Unavailability of Data:**
  - The unavailability of foundation data, especially at high-resolution, is also a constraint.
  - The lack of clarity on data sharing and collaboration prevents co-creation and asset maximisation.
- **No-Ready-to-use Solutions:**
  - Additionally, there are still no ready-to-use solutions especially built to solve the problems of India.

What are the Related Initiatives?

- **Google Street View** is launched in ten cities of India under the **Guidelines of the National Geospatial Policy (NGP), 2021.**
- The **Survey of India** has developed a **web Geographic Information System (GIS) called Sarthi.** It will help users in creating applications for geospatial data visualisation, manipulation, and analysis without a lot of resources at their end.
- The online maps portal of Survey of India has over 4,000 maps with national, state, district, and tehsil level data that have been indexed for end users.
- National Atlas and Thematic Mapping Organization (NATMO) has released thematic maps such as the cultural map of India, the climactic map, or the economic map, on Manchitran portal.
  - NATMO, functioning as a subordinate department under the Department of Science & Technology, Ministry of Science & Technology, with its headquarters at Kolkata.
- **Bhuvan,** is the national Geo-portal developed and hosted by ISRO comprising Geo Spatial Data, Services and Tools for Analysis.
- The Association of Geospatial Industries has released a report titled **"Potential of Geospatial Technologies for the Water Sector in India''.**

Way Forward

- India needs to be aggressive to make a leapfrog; **special attention is required as far as the geospatial sector is concerned.**
- There is a need to **establish a geo-portal to make all public-funded data accessible** through

data as a service model, with no or nominal charge.
- Solution developers and **start-ups** should be engaged to build solution templates for various business processes across departments.

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. In the context of space technology, what is “Bhuvan”, recently in the news? (2010)

(a) A mini satellite launched by ISRO for promoting the distance education in India

(b) The name given to the next Moon Impact Probe, for Chandrayan-II

(c) A geoportal of ISRO with 3D imaging capabilities of India

(d) A space telescope developed by India

Ans: (c)

Source: PIB