

India's first commercial space situational awareness observatory (SSAO)

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In news– India's first commercial space situational awareness observatory will be set up in the Garhwal region of Uttarakhand by Digantara, a space sector start-up.

About observatory-

- It will **help India track any activity in space including that of space debris and military satellites** hovering over the region.
- **Currently, the United States is a dominant player in monitoring space debris** with observatories in multiple locations and commercial companies providing additional inputs from across the world.
- The high-quality observations, along with those of its partner ground-based sensor network, would help improve its ability to monitor events occurring in deep space, especially in the geostationary, medium-Earth, and high-Earth orbits.
- With this data, it would be **able to reduce the potential for collisions between satellites and other spacecraft** by making more accurate predictions of their location, speed, and trajectory.
- Observatory will be strategically positioned to serve global space traffic management operations.
- The observatory will also **give India indigenous capabilities to monitor space activity** over the subcontinent.
- With the establishment of the observatory Digantara will be able to supplement its space-based sensors in their

mission to monitor satellites and debris in orbits ranging from Low Earth Orbit (LEO) to Geosynchronous Earth Orbit (GEO).

- The addition of the new observatory will be a part of Digantara's network of observational facilities and was expected to work in tandem with the currently planned constellation of space-based sensors.
- This will improve the effectiveness of tracking and identifying pre-existing resident space objects (RSO), and will result in the creation of a hybrid data pool that will serve both the commercial and the defence sectors of the space industry.