Space Projects in Ladakh

Prelims – *Current events of National and International importance| Space Technology.*

Why in News?

Recently, ISRO, under the Department of Space, is undertaking multiple space-based initiatives to enhance remote sensing, communication, and disaster management in Ladakh.

- **Telecommunications & Broadband –** "Among the operational communication satellites, *12 satellites have the coverage over the Union Territory of Ladakh.*
- In addition, *10 foreign satellites and 3 Low Earth Orbit /Medium Earth Orbit Constellations* are given authorization to provide services over India including Union Territory of Ladakh.
- **Natural Resources Census Program (NR Census) of ISRO/DoS -** Periodic monitoring of natural resources, status of land degradation, desertification and wastelands are carried out of national level, including Himalaya and Ladakh.
- **Himalayan studies –** Mountain Ecosystem Studies of the North-west Himalaya for monitoring Himalayan resources, natural hazards, and geodynamics.
- **Remote sensing applications**

Ladakh Specific Modelling and Space Applications (LAMA)	• Scientific investigations of natural resources, environment and climate change over the Ladakh region. • A customised dynamic geoportal was developed for the assessment and management of natural resources.

Spatial Data Infrastructure (SDI) Geoportal (Geo-Ladakh) with allied database for development of Ladakh	• Bio-resources expansion, agriculture & horticulture management, sites for developing artificial glaciers, conserving water resources, harvesting solar & wind energy, assessing flood hazard, etc.
Atal Mission for Rejuvenation and Urban Transformation (AMRUT)-1.0	• Large Scale Urban Geospatial Database created by using Very High-Resolution Satellite Data formulation of GIS- based Master Plans for Leh and Kargil towns.
AMRUT 2.0	• Development of Waterbody Information System for Leh and Kargil towns.
Land Use and Land Cover Change Analysis	• Assessment of LULC on 1:50,000 scale of 2020-21 and 2025-26, for Ladakh.

- **Disaster Management Support Program (DMSP) of ISRO/DoS** – It provides satellite data-based inputs to the nodal Ministries/ Departments for various natural hazards for effective disaster management at national level, including the Himalayan region of Ladakh.
- **Optical telescope –** It is being established under the scope of NETRA (Network for Space Object Tracking and Analysis) project at Hanle, Ladakh for tracking objects at Geostationary Orbit (GEO).

Reference

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