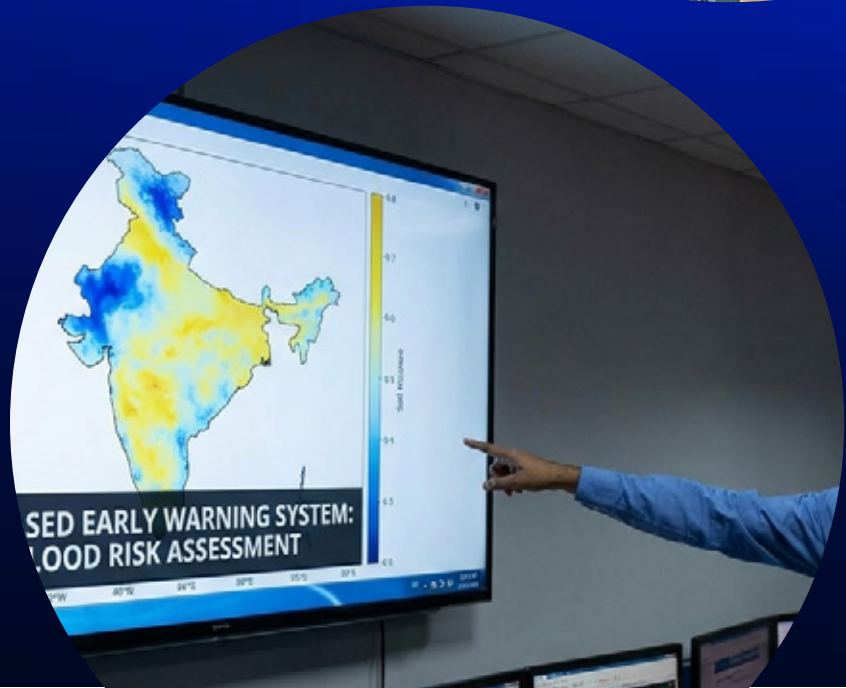
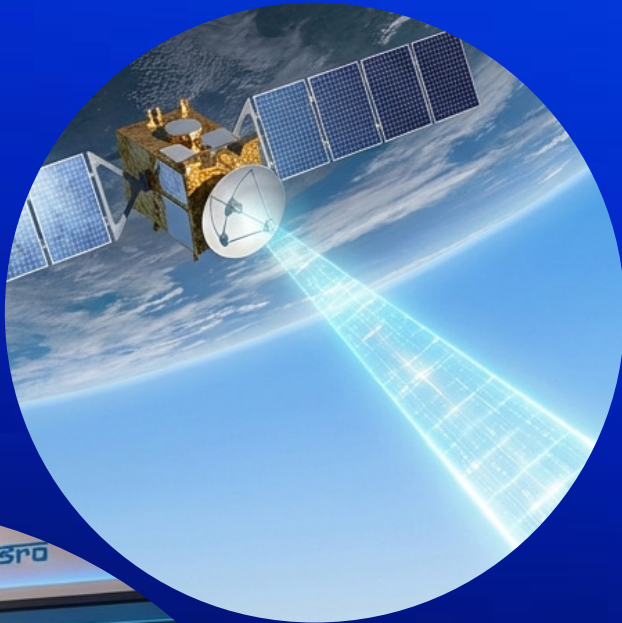




PadhAI

Kurukshetra

January 2025 Edition



Welcome to PadhAI

KURUKSHETRA MONTHLY COVERAGE

You are here because you understand a fundamental truth of UPSC preparation: ***it's not about reading everything – it's about reading what truly matters, in the right way, at the right time.***

Magazines like Kurukshetra offer deep insights into rural development, governance, social schemes, and grassroots policy implementation. Yet for many aspirants, the challenge lies in separating exam-relevant content from general narratives.

PadhAI's Kurukshetra coverage is designed to do exactly that - ***filter, structure, and align policy discussions with UPSC requirements.***

Why This Kurukshetra Coverage Matters

At PadhAI, we don't reproduce articles. We ***extract core themes***, map them with the syllabus, and connect them with ***Prelims and Mains PYQs***.

Every topic included here:

- carries relevance for ***GS Papers or Essay***,
- strengthens understanding of ***developmental and governance issues, and***
- builds ***analytical depth*** rather than surface-level knowledge.

Nothing is added for volume.

Everything is added for value.

Part of the PadhAI Preparation Ecosystem

This Kurukshetra coverage forms part of a larger, integrated learning system that includes:

- early and concise ***monthly magazines***,
- ***daily PIB summaries*** with exam-focused clarity,
- ***monthly compliance tracking***,
- complete ***Prelims & Mains PYQs with structured answers***,
- relevant ***news article summaries***, and
- ***personal tutor chat support*** for continuous guidance.

The aim is simple:

one trusted ecosystem instead of multiple scattered sources.

Our Guiding Philosophy

At PadhAI, everything is built around one belief:

- *Learn only what matters.*
- *Learn it the right way.*
- *Learn it at the right time.*

We don't believe in shortcuts.

We believe in clarity, consistency, and cumulative preparation.

A Final Note

UPSC preparation is demanding and often overwhelming.

PadhAI exists to ensure you prepare with ***direction, relevance, and confidence*** — never blindly, never alone.

If this **Kurukshetra** coverage helps you save time, connect policy with practice, and strengthen your answers, then it has served its purpose.

Welcome to PadhAI.

A community built to prepare — not to overwhelm.

Topic 1: ISRO's Role in Rural Development



Summary: The Indian Space Research Organisation (ISRO) acts as a primary enabler for rural transformation by utilizing **remote sensing, Geographic Information Systems (GIS), and satellite-based applications**. These technologies help bridge the rural-urban divide by fostering sustainable development in agriculture, water management, and infrastructure.

Background: Rural India supports over **65% of the national population**, yet these areas face significant hurdles such as fragmented agriculture, poor infrastructure, and high vulnerability to natural disasters. ISRO's involvement stems from the necessity to provide technological solutions to these socio-economic challenges.

Key Points:

- **Agricultural Productivity:** Satellite imagery tracks crop health and acreage, which is vital for the **Public Distribution System (PDS)** and export planning.
- **Soil Health:** The **Soil Health Card Scheme** utilizes satellite data to offer insights into soil fertility and moisture.
- **Government Support:** ISRO's data facilitates the **Pradhan Mantri Fasal Bima Yojana (PMFBY)** by ensuring accurate crop damage assessments for insurance claims.
- **Water Management:** Geospatial tools aid the **Integrated Watershed Management Programme (IWMP)** in soil and water conservation.
- **Rural Connectivity:** ISRO has established **473 Village Resource Centres (VRCs)** to provide telemedicine, tele-education, and agricultural advisories.

Prelims Facts (One Liners):

1. Rural areas constitute the backbone of India's socioeconomic fabric, housing over 65% of the population.
2. The **Soil Health Card Scheme** relies on satellite data for analyzing nutrient deficiencies.
3. ISRO has established exactly **473 Village Resource Centres** in collaboration with NGOs.

[Click here to access Monthly Magazine](#)

[Click here to access Yojana Magazine](#)

[Click here to access Current Affairs](#)

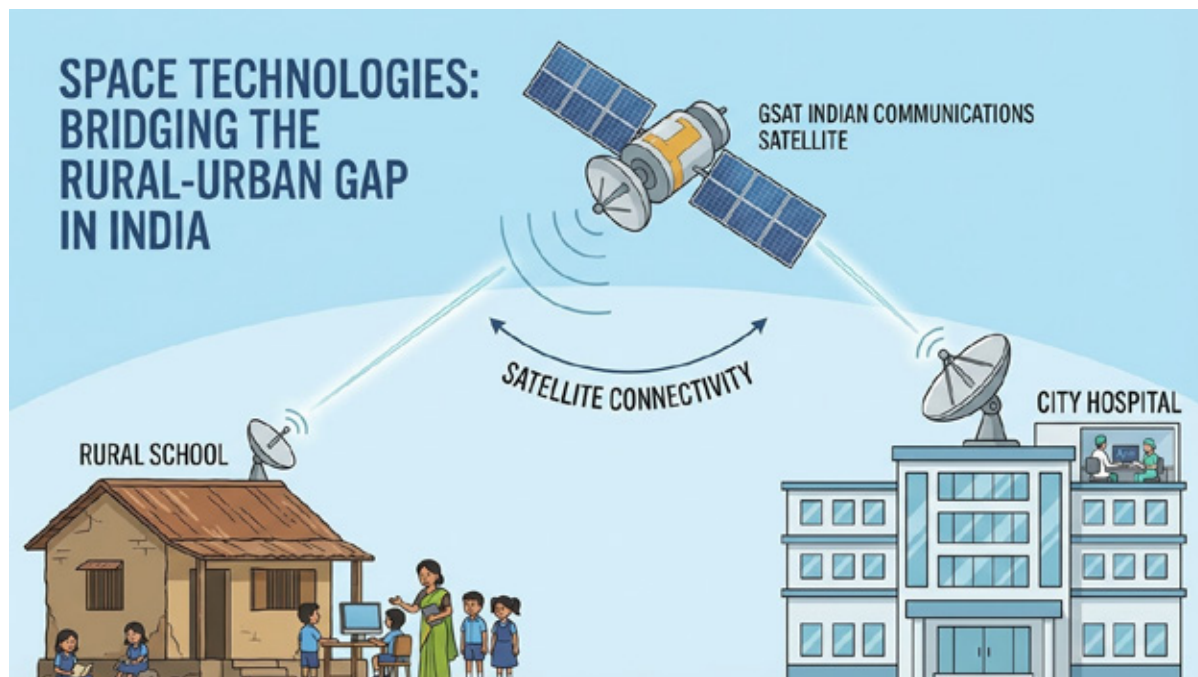
[Click here to access PIB Summaries](#)

4. The **SVAMITVA Scheme** uses drones and geospatial tech to map rural land parcels.

MCQ Practice: Q. Which of the following portals provided by ISRO supports Gram Panchayats in decentralized planning and resource management? A) AgriStack B) Bhuvan Panchayat C) eSanjeevani D) PMGSY

Answer: B (The Bhuvan Panchayat portal provides geospatial data for infrastructure planning and monitoring development projects).

Topic 2: Space Technologies: Bridging the Rural-Urban Gap in India



Summary: Space technology has revolutionised communication and environmental monitoring, allowing rural populations to access services previously limited to urban centres. By leveraging **GSAT satellites and remote sensing**, India is fostering a more resilient and inclusive future.

Background: The digital divide has historically isolated rural communities from global networks; however, satellite-based services now ensure equitable access to healthcare, education, and governance.

Key Points:

- **Telemedicine:** Launched in 2001, this program connects rural healthcare facilities with urban specialists via satellite.
- **Weather Prediction:** Satellites like **INSAT-3D and Megha-Tropiques** provide accurate forecasts that help farmers decide on sowing and harvesting times.
- **Disaster Management:** Remote sensing tracks hazards such as cyclones and floods, supporting early warning systems and evacuations.
- **Precision Agriculture:** Satellite data assists in optimizing irrigation and monitoring land degradation.

Prelims Facts (One Liners):

1. ISRO's Telemedicine Program was launched in the year **2001**.
2. **INSAT-3D** is a key satellite used for weather prediction to assist rural upliftment.
3. Space technologies help track **deforestation and land degradation** to protect ecosystems.

MCQ Practice: Q. The primary role of GSAT satellites in rural development is to: A) Map urban property boundaries B) Bridge the digital divide through communication services C) Only monitor underwater resources D) Control insect migrations

Answer: B (GSAT satellites facilitate telemedicine, e-learning, and digital governance to ensure equitable access to services).

Topic 3: Reimagining the Future of Learning: Educating on Space Technology



Summary: As India aims for a **\$77 billion space economy by 2030**, integrating space technology into the education system is crucial for preparing a skilled workforce. This includes school curriculum reforms and public-private partnerships to inspire innovation.

Background: The UN's **Space4SDGs** initiative highlights how space technology supports Sustainable Development Goals like **Quality Education** and **Decent Work**.

Key Points:

- **Economic Growth:** The global space economy is projected to reach **\$1.8 trillion by 2035**.
- **YUVIKA:** This Young Scientist Program by ISRO introduces students to mission planning and satellite building.

- **Curriculum Integration:** Proposals include using satellite data for teaching urban planning and renewable energy mapping.
- **EDUSAT:** The world's first dedicated education satellite facilitates distance learning for rural students.

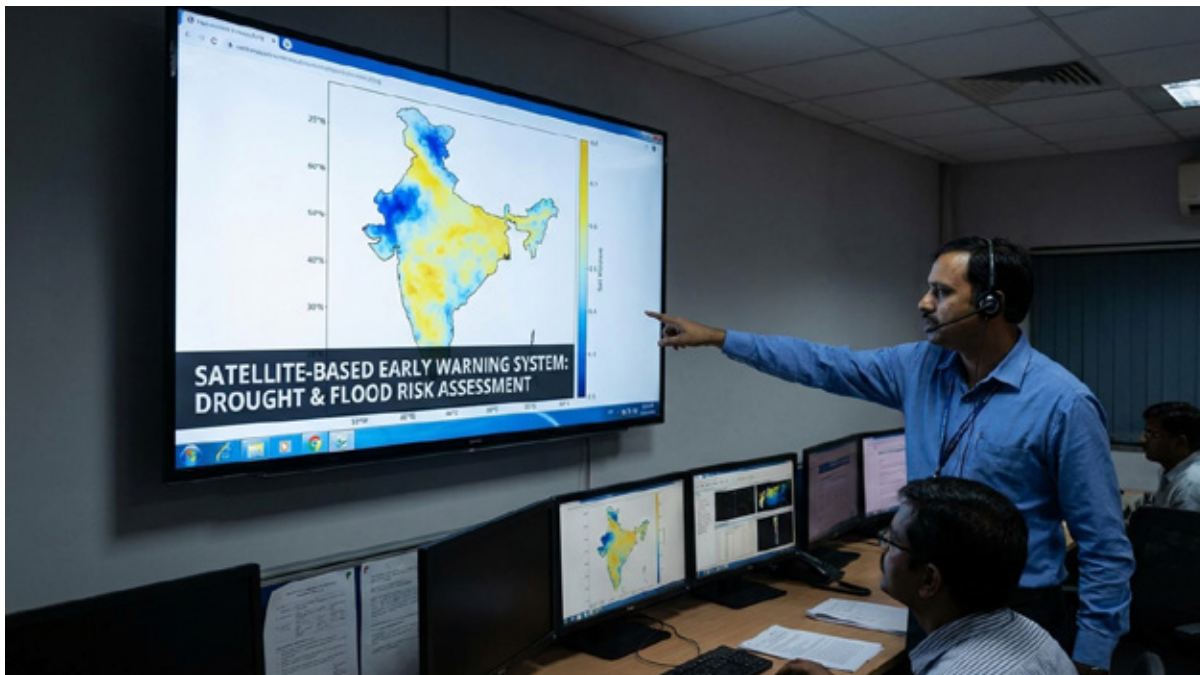
Prelims Facts (One Liners):

1. India's space economy is expected to grow at a **CAGR of 26%** to reach \$77 billion by 2030.
2. **YUVIKA** is an ISRO program designed specifically for young scientists.
3. **EDUSAT** was the first satellite in the world dedicated solely to education.

MCQ Practice: Q. According to the "Space4SDGs" initiative, space technology is relevant to how many Sustainable Development Goals? A) 5 B) 10 C) 17 D) 12

Answer: C (The initiative highlights its role in achieving all 17 Sustainable Development Goals).

Topic 4: Satellite-Based Early Warning Systems for Drought and Flood Management



Summary: Satellites provide precise monitoring for droughts and floods, which are major threats to food security and rural livelihoods. Advanced sensors track rainfall, soil moisture, and vegetation health to mitigate these risks.

Background: India faces various types of droughts—**meteorological, agricultural, hydrological, and socioeconomic**—necessitating high-resolution monitoring for timely intervention.

Key Points:

- **Sensors and Indices:** The **NDVI (Normalized Difference Vegetation Index)** is used to detect crop stress and drought-affected areas.

- **Flood Risk Assessment:** Altimetry tracks river water levels, while mapping identifies high-risk floodplains.
- **Global Collaboration:** Indian efforts are complemented by global programs like **Sentinel (ESA) and Landsat (NASA)**.
- **Mitigation:** Satellite data informs structural measures like embankment design and non-structural measures like afforestation.

Prelims Facts (One Liners):

1. **NDVI** stands for Normalized Difference Vegetation Index and measures crop health.
2. **SMAP** is a tool used for real-time soil moisture mapping.
3. Agricultural drought refers specifically to **insufficient soil moisture** for crops.

MCQ Practice: Q. Which Indian satellite series is specifically mentioned as providing critical data for weather and disaster monitoring? A) GSAT B) INSAT C) EDUSAT D) Aryabhata

Answer: B (INSAT, along with RISAT and Cartosat, provides critical data for disaster-prone areas and weather monitoring).

Topic 5: Krishi Decision Support System (Krishi-DSS)



Summary: Launched on **August 16, 2024**, Krishi-DSS is a unified geospatial platform that integrates satellite imagery, soil health, and weather data to empower stakeholders in the agricultural sector. It is often described as the **“Gati Shakti” for agriculture**.

Background: Part of the **Digital Agriculture Mission**, which has a financial outlay of **₹2,817 crores**, Krishi-DSS aims to centralize agricultural data for better decision-making.

Key Points:

- **Data Integration:** It combines data from the **RISAT-1A satellite, Bhuvan Geoplatform, and VEDAS.**
- **Field Parcel Segmentation:** This allows for analysis at the level of individual field parcels for targeted interventions.
- **Disaster Preparedness:** Provides early warnings for pests, hailstorms, and heavy rainfall.
- **Agri Stack:** A digital repository included in the mission to revolutionise agricultural services.

Prelims Facts (One Liners):

1. Krishi-DSS was launched by the **Department of Agriculture and Farmers Welfare** in August 2024.
2. The Digital Agriculture Mission has a total financial outlay of **₹2,817 crores.**
3. **RISAT-1A** is the primary Earth Observation Satellite providing data for the platform.

MCQ Practice: Q. Krishi-DSS is designed to provide near-real-time data on which of the following? A) Industrial chemical exports B) Urban traffic congestion C) Soil moisture and crop residue burning D) Deep-sea mining locations

Answer: C (The platform tracks crop health, residue burning, soil moisture, and water storage).