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INSAT-3DS Satellite Tracks Southwest Monsoon Withdrawal Across India

ISRO's INSAT-3DS meteorological satellite captured satellite imagery displaying the withdrawal of the southwest monsoon from northwestern India.

INSAT-3DS is India's advanced third-generation meteorological satellite designed to monitor weather, atmospheric conditions, and ocean dynamics.

KEY EXAM POINTS

- The **INSAT-3DS** satellite captured imagery showing dense cloud cover over eastern and central regions while **northwestern India** remained clear.
- Clear weather conditions over northwestern states mark the official commencement of the **southwest monsoon** withdrawal phase.
- The satellite recorded active deep depression systems causing heavy rainfall in **Odisha** and **Chhattisgarh** during late September.
- INSAT-3DS utilizes **multi-spectral imagers** and **19-channel atmospheric sounders** for continuous spatial weather tracking.

DID YOU KNOW..!?

INSAT-3DS was successfully launched on **February 17, 2024**, onboard the **GSLV-F14** rocket from SDSC SHAR, Sriharikota.

The INSAT-3DS mission is fully funded by the **Ministry of Earth Sciences** and operated by **ISRO**.

The satellite is positioned in **Geostationary Orbit** at an altitude of approximately **35,786 km** to ensure round-the-clock Earth observation.

Key payloads onboard INSAT-3DS include a **6-Channel Imager**, 19-Channel Sounder, **Data Relay Transponder**, and Satellite Aided Search and Rescue transponder.

The normal date for the initiation of the southwest monsoon withdrawal from northwestern India is **September 17**.

India's first dedicated meteorological satellite **KALPANA-1** (originally METSAT) was launched by ISRO in **September 2002** via **PSLV-C4**.

REVISION FLASHCARD

INSAT-3DS: ISRO's 3rd-generation weather satellite launched on Feb 17, 2024, via GSLV-F14 for Earth Sciences Ministry.

Syllabus Relevance: High relevance for Group 1/2 Unit 1 (General Science - Space Technology) and Geography of India (Monsoon patterns).

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