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ISRO's Innovative Orbital Debris	Approach	to	Zero	 Context: ISRO's PSLV-C58/XPoSat mission has achieved a remarkable feat by leaving virtually no debris in Earth's orbit. This achievement is attributed to the innovative use of the PSLV Orbital Experimental Module (POEM), developed by the Vikram Sarabhai Space Centre (VSSC).
				 POEM: POEM is powered by solar panels and a lithium-ion battery mounted on the fuel tank of the rocket's fourth stage. It is equipped with a dedicated navigation, guidance, and control (NGC) system, including four Sun sensors, a magnetometer, and gyroscopes, which communicate with ISRO's NavIC satellite constellation for navigation. POEM also features helium control thrusters and a telecommand system for ground station communication.
				 Key points: This achievement is significant due to the escalating issue of space debris, particularly in low Earth orbit (LEO). LEO debris consists of spacecraft fragments, rockets, defunct satellites, and fragments from anti-satellite missile tests, posing risks to operational satellites. ISRO's Space Situational Assessment Report 2022 noted a significant increase in the number of objects placed in space, highlighting the urgent need for effective debris mitigation strategies.
				 Concerned Laws: While there are no international laws specific to LEO debris, most space-faring nations adhere to the Space Debris Mitigation Guidelines 2002 set by the Inter-Agency Space Debris Coordination Committee (IADC), endorsed by the U.N. in 2007. Aim: to reduce accidental collisions, break-ups during operations, intentional destruction, and post-mission break-ups.

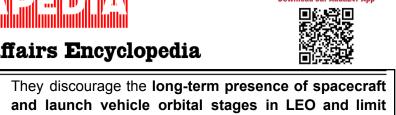








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	and launch vehicle orbital stages in LEO and limit their impact on the geosynchronous orbit (GEO).
	 Various initiatives: Various space agencies have implemented strategies to address space debris. NASA's Orbital Debris Program, initiated in 1979, focuses on reducing orbital debris and developing technologies for tracking and removing existing debris. The European Space Agency (ESA) has adopted a 'Zero Debris charter,' aiming for zero space debris by 2030 and advocating for its adoption by other agencies. Japan's Commercial Removal of Debris Demonstration (CRD2) project is another effort to tackle the issue of space junk.
Right to sleep	 Context: The Bombay High Court rejected a plea from a 64-year-old businessman regarding his arrest by the Enforcement Directorate (ED), criticizing the ED for making him wait overnight and recording his statement, thereby depriving him of the 'right to sleep' under Article 21 of the Constitution.
	 Key points: The court emphasized that the 'right to sleep' is a fundamental human need and depriving someone of it violates their human rights, affecting their health and cognitive skills. It directed the agency to issue guidelines on the timings for recording statements under Section 50 of the Prevention of Money Laundering Act (PMLA).
Credit-Deposit Ratio	 Context: The March 2024 report by CareEdge highlighted that banks' credit-deposit (CD) ratio has reached a decadal high, standing at around 80 percent. This ratio reflects the percentage of deposits banks have raised that have been lent out, indicating liquidity and credit risks for banks.
	 About: The currency deposit ratio, on the other hand, reveals the proportion of currency that individuals hold compared to aggregate deposits. When the cash deposit ratio increases, the money multiplier decreases.













 Similarly, an increase in deposit rates encourages depositors to deposit more, reducing the Cash to Aggregate Deposit ratio and increasing the Money Multiplier.
 Context: The Jiadhal River, a tributary of the Brahmaputra River in northern India, is facing the adverse effects of climate change, disrupting its once tranquil flow.
 Key points: Originating in the sub-Himalayan mountains of Arunachal Pradesh at an altitude of 1247m, the river courses through a narrow gorge in Arunachal Pradesh before entering the plains of Assam's Dhemaji district, where it flows in braided channels. It finally meets the Brahmaputra near Selamukh in Lakhimpur district. However, due to the construction of an embankment over the Kherkutiya Suti of the Brahmaputra, the river now merges with the Subansiri River. Spanning a total length of 187 km, the river's topography transitions from hilly terrain in the upper basin (Himalayan range) to a plain area in the middle and downstream. The Jiadhal River's catchment area covers 1053.20 sq.km., with 696.80 sq. km. in Assam and 356.4 sq. km. in Arunachal Pradesh. It receives heavy rainfall, leading to a significant silt load from its 1346 sq. km catchment area during the rainy season. This results in the considerable rise of its riverbed as the silt deposits on its bed in the plains. Known for its frequent course changes and devastating floods, the Jiadhal River exemplifies a flashy river, causing floods with a sudden, high discharge over a short time (a few hours to a day) and carrying a high sediment load and debris.
 Context: The Indian Army commemorated 40 years of 'Operation Meghdoot' on the Siachen Glacier, a milestone in its strategic presence there. This operation has seen significant technological and logistical advancements.













 Operation Meghdoot's History: Launched on April 13, 1984, by the Indian Army and Indian Air Force (IAF), it marked a pivotal moment in securing the strategically crucial region dominating Northern Ladakh. IAF helicopters had been operating in the area since 1978, including the first landing of an IAF helicopter on the glacier in October 1978.
 Operation Meghdoot's Unique Significance: Launched in 1984, 'Operation Meghdoot' secured the Siachen Glacier, involving the first assault on the world's highest battlefield. Indian troops gained control of the entire Siachen Glacier as a result of this operation. The Siachen Glacier now boasts state-of-the-art medical infrastructure, including telemedicine nodes established by ISRO. The Indian Army acknowledged the sacrifices of its brave soldiers and the immortal spirit that characterizes its long deployment in Siachen.
 Improved Living Conditions and Connectivity: Recent initiatives have focused on improving connectivity, leading to advancements in the supply chain. This ensures that personnel stationed at forward posts in the Northern and Central Glaciers now have access to fresh rations and vegetables. The use of heavy-lift helicopters and logistic drones has significantly improved the supply of essential resources to personnel stationed at isolated posts, especially during harsh winter conditions.

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