ISRO's heaviest rocket Lunar Module Launch Vehicle (LMLV) to be ready by 2035

Key Features of LMLV

- Design: Improved version of the NGLV (Next Generation Launch Vehicle).
 - ⊕ As tall as a 40-storey building.
- Purpose: Lunar missions, including India's first human mission to the Moon planned by 2040.
- Payload: It can carry 80 tonnes to Low Earth Orbit (LEO) or approximately 27 tonnes to the Moon.
- 3 Stages: Liquid propellent for its first two stages and a cryogenic propellant for its third stage.

ISRO's Key Launch Vehicles and Capabilities

- > PSLV (Polar Satellite Launch Vehicle): ISRO's workhorse, a third-generation vehicle with liquid stages, capable of launching satellites into Sun-synchronous Polar Orbit, LEO, Geosynchronous Transfer Orbit (GTO) (e.g., Chandrayaan-1, Mars Orbiter Mission).
- GSLV (Geosynchronous Satellite Launch Vehicle): A fourth-generation, three-stage vehicle designed to launch 2.0-ton class satellites into GTO for communication satellites.
- LVM 3: A heavy-lift, three-stage vehicle capable of carrying 4-ton class satellites to GTO or about 10 tons to LEO (Chandrayaan-2 and 3).
 - It is proposed to be used for **Bharativa Antariksh Station**.
- SSLV (Small Satellite Launch Vehicle): Three-stage, all-solid propulsion vehicle designed for launching Mini, Micro, or Nano satellites (10 to 500 kg mass).

Supreme Court (SC) issues modified directions to control the menace of stray dogs

SC's earlier order to shift all stray dogs to shelters, without return, was referred to a three-judge bench.

Supreme Court's Modified Directions

- > Prohibition on Public Feeding: It is now illegal to feed stray dogs on streets and in public places.
- Dedicated Feeding Spaces: To be created by municipal authorities in each municipal ward.
- Relocation After Treatment: Sterilized, dewormed, and vaccinated dogs must be returned to their original pick-up location. • This policy excludes dogs with rabies, suspected rabies, or aggressive behavior.
- National Policy: SC has expanded the case to include all States and Union Territories, consolidating related High Court cases for a final national policy.
- Adoption: Animal lovers are permitted to apply to municipal bodies for the adoption of street dogs.

Issues of Stray Dogs

- Stray Dog Population: 1.5 crore stray dog population (2019 livestock census).
- Public Safety Concern: Rising attacks by aggressive and rabid stray dogs threaten citizens' safety.
 - India accounts for 36% of the world's rabies deaths.
 - Dog bites and scratches cause 99% of the human rabies cases.

Provisions related to Stray Dogs in India

- Constitution: Article 243W mandates municipalities to control stray dog population.
 - Article 51A(g): Fundamental Duty "to have compassion for living creatures".
- > Animal Birth Control Rules, 2023 under Prevention of Cruelty to Animals Act, 1960 seek to control stray dog through sterilisation and vaccination.
- Court Judgements:
 - Jallikattu Case 2014: Interpreted the right to life and liberty (Article 21) as extending to animals.
 - People for Elimination of Stray Trouble v. Animal Welfare Board of India: Suspended the killing of all street dogs, including troublemakers.







Sundarbans Tiger Reserve now India's second largest after expansion of area

National Board of Wildlife (NBWL), led by the Union minister of Environment, Forest and Climate Change, approved the West Bengal government's proposal to increase the area of Sundarbans Tiger Reserve (STR).

Now STR is just behind Andhra Pradesh's Nagarjunasagar-Srisailam Tiger Reserve in size and elevates it from the seventh to the second-largest tiger reserve within India's 58 tiger reserves.

Procedure to declare or alter Tiger reserve

- > Tiger Reserves are notified by State Governments as per provisions of Section 38V of the Wildlife (Protection) Act, 1972 on advice of the National Tiger Conservation Authority.
 - The following steps are involved in the notification:
 - Proposal is obtained from the State.
 - In-principle approval is communicated from the National Tiger Conservation Authority, soliciting detailed proposals under section 38V of the Wildlife (Protection) Act, 1972.
 - The National Tiger Conservation Authority recommends the proposal to the State after due diligence.
 - The State Government notifies the area as a Tiger Reserve.
- Process for alteration: As per section 38 W (1) of Wildlife (Protection) Act, 1972. No alteration in the boundaries of a tiger reserve shall be made except on a recommendation of the Tiger Conservation Authority and the approval of the National Board for Wild Life.
 - Such proposals are also obtained from the State.

About Sundarbans Tiger Reserve (STR)

- **Location:** Coastal districts of West Bengal
- ▶ Only mangrove forest throughout the world (besides Bangladesh) to harbour significant tiger population.
- Borders:
 - Bounded on the east by the international boundary with Bangladesh formed by the rivers Harinbhanga, Raimangal and Kalindi.
 - On the south lies the Bay of Bengal.
 - The western border is formed by the river Matla.
 - Towards the north-west, the area is bound by rivers Bidya and Gomdi.
- The National Park area of the Tiger Reserve is a natural World Heritage Site and part of Sundarban Biosphere Reserve.

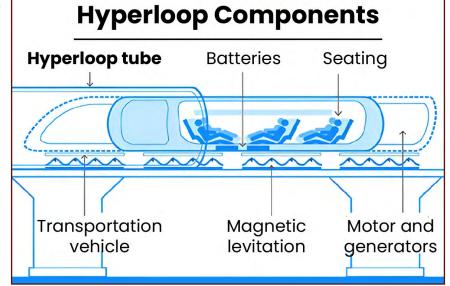
Maharashtra inks deal with IIT Madras startup(TuTr Hyperloop Pvt Ltd) to build hyperloop

Proposed Linear Induction Motor (LIM)-based hyperloop mobility system will connect Jawaharlal Nehru Port Trust in Navi Mumbai to the upcoming Vadhavan Port in Palghar district.

About Hyperloop Mobility System

- In 2013, the CEO of SpaceX, Elon Musk, proposed a concept of Ultra-High-Speed Rail (UHSR) called hyperloop and opensourced it.
- It is basically a magnetic levitation (maglev) system where pods travel at ultra-high speeds through low-pressure tubes.
- Its Functioning and Key Components
 - Hyperloop functions in a sealed tube with minimal air resistance, utilizing vacuums and magnetic levitation for hovering.
 - Linear Induction Motors (LIM) propels pods silently enabling the theoretical speed of 1,200 km/h.
 - pressure), pressurized capsules, a compressor for airflow, and air bearing suspension.
- Advantages: Ultra-high speeds (e.g., Mumbai-Pune in 25 mins), energy efficiency (potentially carbon-free), noise reduction, and logistics redefinition (moving cargo quickly and efficiently).
- > Issues with technology: Conceptual status, high costs (\$25-\$27 million/mile for technology), safety concerns (fire in pods, difficult evacuation), vacuum maintenance challenges, demanding straight-line infrastructure, requiring regulations, etc.

Substantial financial backing, continuous research and development complemented by new regulatory frameworks are crucial for overcoming technical and safety challenges of hyperloop technology.









RBI Paper says flexible Inflation Targeting (FIT) framework served India well amid global challenges

Recent discussion paper from RBI initiates the second five-yearly review of India's FIT framework.

FIT framework was established in May 2016 through an amendment to RBI Act, 1934, with a mandate to maintain price **stability** while keeping in mind the objective of growth.

Overview of India's FIT Experience (2016-2025)

- From the inception of the FIT in 2016 till about the end of 2019, inflation in India remained low and stable, averaging around 4 per cent.
- ▶ Inflation breached the target (4 ±2%) in the 2020s due to food and fuel shocks amidst pandemic and Russia-Ukraine conflict.
- Inflation subsequently receded by targeted supply-side interventions, anti-inflationary monetary policy, and falling international commodity prices.

Key debates in the discussion paper			
	Key Discussion Points	Arguments in favour	Arguments Against
	Target Benchmark – Headline Inflation or not:	Food and Fuel constitute over 50 per cent of consumption basket	Food and fuel inflation are volatile, supply- driven, and less responsive to monetary policy making core inflation a better benchmark.
	Optimality of 4 per cent Inflation Target	 Raising the target could undermine credibility. Lowering it may not be credible given global food inflation risks. 	Lower inflation targets may impact the growth prospects in the long run, thus, need to have higher targets.
	Appropriateness of Tolerance Band (+/- 2 per cent)	 Provides flexibility to accommodate shock-induced fluctuations and manage growth-inflation trade-offs. India's high food share in the consumption basket further supports it. 	 Volatility of headline inflation has declined since FIT adoption. A revised CPI series with a potentially lower food share could further reduce headline inflation volatility.
2	Range Targeting (i.e. 2% to 6%)	 Offers greater flexibility for central banks to respond to economic shocks. Acknowledges inherent uncertainties in inflation forecasting 	Shifting from a point target to a range could add ambiguity, undermine policy credibility, and diminish fiscal policy discipline.

Also in News



Article 311

Jammu and Kashmir government has fired two employees for alleged terror links

The decision was taken under Article 311 (2)(c) of the Constitution.

About Article 311

- It deals with dismissal, removal, or reduction in rank of persons employed in civil capacities under the Union or
- Article 311 (1): Members of Civil service cannot be dismissed or removed by any authority subordinate to the appointing authority.
- Article 311 (2): No civil servant can be dismissed, removed, or demoted without an inquiry, prior notice of charges, and a fair chance to be heard.



Rampage Missiles

IAF to acquire more Israeli-origin Rampage missiles. **About Rampage Missiles**

- Long range, air to ground precise attack missile. It can travel at supersonic speeds, making it difficult to detect.
- Developed by: Israel Aerospace Industries.



Advanced Medium Combat Aircraft (AMCA)

India will jointly manufacture advanced jet engines for India's fifth-generation fighter aircraft (AMCA) programme with French aerospace major Safran.

About Advanced Medium Combat Aircraft (AMCA)

- The AMCA is a fifth-generation, medium-weight stealth fighter jet being developed by the DRDO under a project valued at approximately Rs 15,000 crore.
- Timeline: Prototype expected by 2028-29; induction by 2034-35.
- Features of fifth-generation fighter jet: Stealth, Twin-engine powered Supercruise, advanced Al-enabled avionics and long-range target detection via AESA radars.



Druzhba pipeline

Ukrainian attack suspends Russian oil flows to Hungary, Slovakia.

About Druzhba (Friendship) Pipeline:

- It is one of the biggest crude oil pipeline networks in the world.
- Total Length: 5500 kms
- The Druzhba pipeline begins in Russia and transports oil through Belarus and Ukraine to Slovakia and Hungary.









Integrated Food Security Phase Classification (IPC)

IPC has confirmed Famine in Gaza

More than half a million people in Gaza are trapped in famine, marked by widespread starvation, destitution and preventable death

About IPC

- Overview: Standardized international tool used to measure and communicate the severity of food insecurity in a country or region.
- Genesis: Developed in 2004 by the Food Security and Nutrition Analysis Unit (FSNAU), managed by the Food and Agriculture Organization of the United Nations (FAO) in Somalia.
 - It is an innovative 21-partner initiative made up of UN agencies and international NGOs.
- Governance:
 - The IPC High Level Executive Committee is the highest-level entity within the IPC global governance structure.
 - The IPC Global Steering Committee: It is the governing body of the initiative.



Drake Passage

Magnitude 7.5 earthquake has struck drake passage near Argentina and Chile

About Drake Passage

- ▶ Location: Between Cape Horn (southernmost point of South America) and the South Shetland Islands (north of Antarctic Peninsula).
- ▶ Name: Named after Sir Francis Drake, the famous English navigator and circumnavigator.
- Ocean Current: Water majorly flows from west to east and forms part of the Antarctic Circumpolar Current (the most voluminous current).
- ➤ Historic Trade Route: Key passage for trade before the Panama Canal opened in 1914.
- Sailing Challenge: Known for stormy seas and icy conditions, making Cape Horn rounding a severe test for ships.



Great Nicobar Infrastructure Project (GNIP)

The tribal council held that forest rights of tribal people were not settled for the Nicobar project.

About GNIP

- It is a mega project to be implemented at the southern end of the Andaman and Nicobar islands i.e. Great Nicobar Island.
- It involves developing:
 - Transhipment port
 - International airport
 - Township development
 - 450 MVA gas and solar based power plant
- Implementing Agency: Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO)
- Concern
 - Potential impact on seismically active region of the Andaman and Nicobar Islands.
 - Threat to tribes on islands e.g. Shompen, Nicobarese tribes etc.



Asia-Pacific Institute for Broadcasting Development (AIBD)

India has been elected as the Chairman of the Executive Board of AIBD at 23rd General Conference in Thailand.

About Asia-Pacific Institute for Broadcasting Development

- Genesis: Founded in 1977 under the auspices of UNESCO, AIBD is a unique regional inter-governmental organization.
- Mandate: To achieve a vibrant and cohesive electronic media environment in the Asia-Pacific region.
- ▶ Members: It currently has 92 member organizations from 45 countries.
 - India is a founding member of AIBD, and Prasar Bharati India's public service broadcaster represents the Ministry of Information & Broadcasting in the organization.
- Secretariat: Kuala Lumpur.

Place in News



Spain (Capital: Madrid)

Massive wildfires across Spain this summer have burned about 350,000 hectares in just two weeks during an early August heatwave.

Political Features

- ▶ Location: Southwestern Europe on the Iberian Peninsula
- Boundaries: France and Andorra (northeast), Portugal (west), Gibraltar-UK (south) and Morocco bordered by Spain's autonomous cities of Melilla and Ceuta
- ▶ Maritime Boundary: Mediterranean Sea (east and southeast), Atlantic Ocean (northwest and southwest), and Bay of Biscay (north).

Geographical Features

- Climate: maritime, continental, and Mediterranean in different parts.
- ➤ Features: Spain is an extremely mountainous country with a large central plateau.
- ➤ Two major mountainous areas: Sistema Central and the Montes de Toledo.





























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