



10 April 2024

National and International News

TSAT-1A



Context:

- **Tata Advanced Systems Ltd (TASL) in Partnership with Satellogic Launches India's First Privately-Built Sub-Metre Resolution Surveillance Satellite.**
- TASL, in collaboration with **Satellogic**, has successfully launched **TSAT-1A, India's first privately-built sub-metre resolution** surveillance satellite. This marks a significant achievement in India's space capabilities.

Launch Details:

- TSAT-1A was launched from the **Kennedy Space Center, Florida**, aboard **SpaceX Falcon 9 rocket** on April 7.
- It was assembled at TASL's Vemagal facility in Karnataka.

Technical Specifications:

- TSAT-1A offers **high-resolution optical satellite imagery** with multispectral and hyperspectral capabilities.
- It boasts a **sub-metre resolution** (0.5-0.8 meters natively) which can be enhanced to 0.5 to 0.6-meter super resolution using software.
- **Weighing less than 50 kg, it is positioned in low-earth orbit, enabling increased collection capacity and low-latency delivery of satellite images.**

Key points:

- **TSAT-1A aims to cater primarily to government agencies, including the Indian armed forces, with plans to extend services to commercial clients.**
- Its inclined orbit allows for frequent revisits to areas of interest, enhancing surveillance capabilities.
- TASL aims to expand its capabilities in the space sector by focusing on assembly, integration, and testing of satellites, data processing, and satellite control centers.
- **Collaboration with ISRO for future launches is also envisioned.**



Right against adverse effect of climate change part of right to life, equality

Context:

- The Supreme Court has broadened the scope of **Articles 14 and 21 to encompass the "right against the adverse effects of climate change."**

Background of the Case:

- A plea was filed to protect the **Great Indian Bustard (GIB) from habitat loss due to power transmission lines.**
- On April 19, 2021, the **Supreme Court ordered restrictions on overhead transmission lines and suggested their conversion to underground lines.**
- Ministries of Environment, Forests, Power, and New and Renewable Energy sought modifications citing international commitments on renewable energy and technical challenges.

Court's Decision:

- Acknowledged practical difficulties in implementing the order due to technical challenges, land acquisition, and costs.
- Emphasized the **importance of renewable energy**, particularly solar power, and the need to balance GIB conservation with overall environmental preservation.

Formation of Expert Committee:

- Established a **nine-member committee to assess the feasibility of undergrounding power lines** in specific areas, considering factors like terrain, population density, and infrastructure.
- The committee was instructed to submit a **report by July 31, 2024, through the Union Government.**

Lack of Specific Legislation:

- Despite various governmental policies recognizing climate change, there's no comprehensive legislation in India addressing it.
- People still have a right against the adverse effects of climate change.

Impact on Right to Life and Health:

- **A clean environment is crucial for fully realizing the right to life.**
- **Climate change affects health** through factors like air pollution, diseases, droughts, and food shortages.
- Inability to cope with climate change violates both the right to life and the right to equality for underserved communities.

Ruling by the Supreme Court:

- Expanded the scope of Articles 14 and 21 to include the



	<p>"right against the adverse effects of climate change."</p> <p>Constitutional Provisions:</p> <ul style="list-style-type: none"> • Article 48A emphasizes the State's responsibility to protect and improve the environment. • Article 51A(g) mandates citizens to protect and improve the natural environment. • While not directly enforceable, these provisions indicate the Constitution's recognition of the importance of the natural world. <p>Interpretation of Articles 14 and 21:</p> <ul style="list-style-type: none"> • Article 21 recognizes the right to life and personal liberty. • Article 14 ensures equality before the law. • These articles are seen as sources of the right to a clean environment and protection against climate change effects.
ANTI DUMPING	<p>Context:</p> <ul style="list-style-type: none"> • The Directorate General of Trade Remedies (DGTR) has recommended imposing anti-dumping duty on sodium cyanide (NaCN) imports from China, the European Union, Japan, and Korea. <p>Key points:</p> <ul style="list-style-type: none"> • Anti-dumping duty is imposed on imported goods when they are sold at a lower price than their normal value, causing injury to producers of competing products in the importing country. • The purpose of this duty is to rectify the trade distortions caused by dumping and to re-establish fair trade. <p>DGTR:</p> <ul style="list-style-type: none"> • The DGTR is an Indian government organization that handles trade issues, including unfair trade practices and subsidies that harm Indian businesses. • It was formed in 2018 by merging several trade-related directorates. • The DGTR operates under the Department of Commerce, Ministry of Commerce & Industry, and is responsible for dealing with anti-dumping and countervailing duty (CVD) cases, safeguard measures, and providing trade defense support to domestic industries and exporters. <p>NaCN:</p> <ul style="list-style-type: none"> • Sodium cyanide (NaCN) is a toxic compound used in various industries. • It is a white, water-soluble solid with a high affinity



	<p>for metals, making it highly toxic.</p> <ul style="list-style-type: none"> • Its main application is in gold mining, where its reactivity toward metals is exploited.
Glycaemic Index	<p>Context:</p> <ul style="list-style-type: none"> • A recent international study suggests that adhering to diets with a low glycaemic index (GI) and low glycaemic load (GL) may help prevent the onset of type 2 diabetes. <p>About:</p> <p>Glycaemic Index (GI):</p> <ul style="list-style-type: none"> • GI ranks carbohydrate-containing foods based on their post-meal blood glucose response. • Foods are ranked on a scale of 0 to 100, with pure glucose having a value of 100. • The lower a food's GI, the slower it raises blood sugar levels. • Foods high in fiber or fat typically have a lower GI, while processed foods tend to have a higher GI. <p>Glycaemic Load (GL):</p> <ul style="list-style-type: none"> • GL considers both the quality and quantity of carbohydrates in a specific food. • It is the product of the GI and the amount of carbohydrate in a serving. <p>Types of Diabetes:</p> <ul style="list-style-type: none"> • Diabetes is a chronic disease caused by either the pancreas not producing enough insulin or the body not effectively using the insulin it produces. • Type 1 Diabetes: This autoimmune condition involves the immune system attacking insulin-producing beta cells in the pancreas, resulting in little to no insulin production. It is often diagnosed in children and young adults. • Type 2 Diabetes: This type is primarily caused by the body's ineffective use of the insulin it produces, often due to excess body weight and physical inactivity.

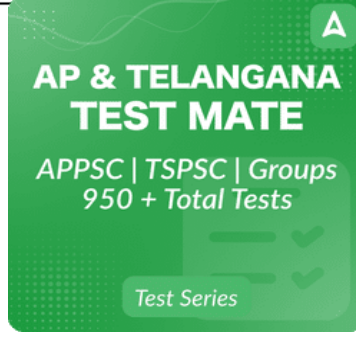


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