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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.



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	<p>Ruling by the Supreme Court:</p> <ul style="list-style-type: none"> Expanded the scope of Articles 14 and 21 to include the "right against the adverse effects of climate change." <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.
<p>ANTI DUMPING</p>	<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.



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	<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 for metals, making it highly toxic. Its main application is in gold mining, where its reactivity toward metals is exploited.
<p>Glycaemic Index</p>	<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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