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10 April 2024

National & 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, collaborating 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 the **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 the assembly, integration, and testing of satellites, data processing, and satellite control centers.
- **Collaboration with ISRO for future launches is also envisioned.**



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Daily Current Affairs Encyclopedia

Right against the adverse effect of climate change is part of the right to life, and 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 through the Union Government by July 31, 2024.**

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 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 "right against the adverse effects of climate change."



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Constitutional Provisions:

- **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.

Interpretation of Articles 14 and 21:

- 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

Context:

- 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.

Key points:

- 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.**

DGTR:

- 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.

NaCN:

- 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.**



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Glycaemic Index

Context:

- 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**.

About:

Glycaemic Index (GI):

- 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.

Glycaemic Load (GL):

- 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.

Types of Diabetes:

- **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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