Science & Technology

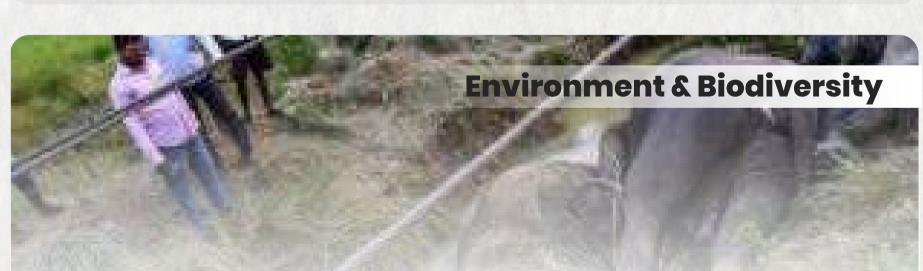## Discovery of New Moiré Superconductor

Scientists have discovered a new moiré superconductor, a material that could pave the way for advancements in quantum technologies. The unique properties of these materials, created by stacking and twisting two layers of crystals, have implications for quantum computing and superconductivity research.

Source: The Hindu Newspaper

Defence & Security

Four Mechanised Infantry Battalions Honored

Four battalions of the Mechanised Infantry and Brigade of the Guards received President's Colours from Army Chief General Upendra Dwivedi in Maharashtra. The honor, symbolizing the battalions' distinguished service, underscores their contributions to operations like Vijay and UN peacekeeping missions.
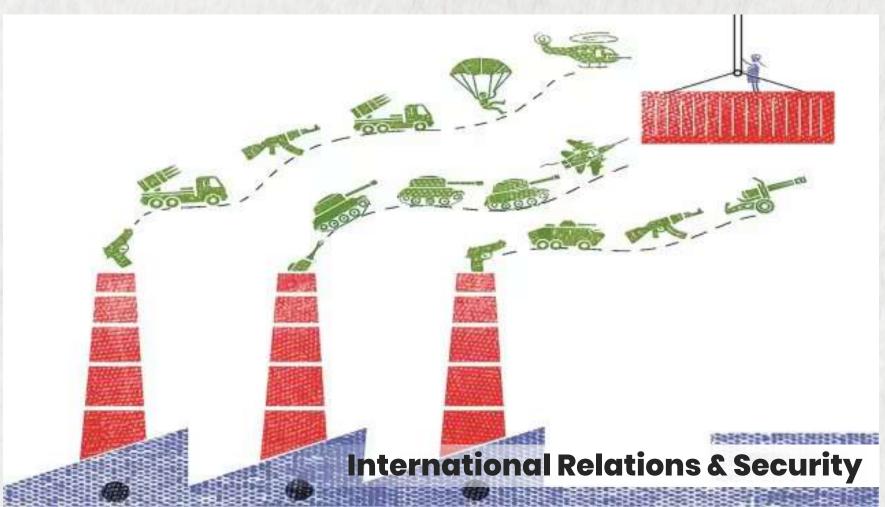
Source: The Hindu Newspaper

Environment & Biodiversity

Odisha Records 790 Elephant Deaths in a Decade

Odisha reported 790 elephant deaths in 10 years, attributed to electrocution, train accidents, and poaching. The state faces criticism for inadequate measures to address these threats. A comprehensive strategy to protect elephant corridors and reduce human-wildlife conflict is urgently needed.

Source: The Hindu Newspaper

Dealing with the China Question: Enhancing Defence Cooperation

International Relations & Security

India's Proposal at Global Plastics Treaty Negotiations

Environment

India has proposed that developing countries comply with "control measures" on plastic only if compensated for associated costs, at the Global Plastics Treaty negotiations in Busan. This aligns with the principle of equity used in climate negotiations. India emphasized technology transfer respecting "national circumstances." No agreed definitions of terms like "plastic" or "control measures" exist yet. A dedicated multilateral fund for such measures was suggested. Pacific nations demand stricter controls citing existential threats.

Source: The Hindu Newspaper

Polity & Social Justice

The Right to Work Deleted from Constitution

Historical constitutional debates reveal that the "right to work" was considered but ultimately excluded as a fundamental right in the Indian Constitution. Its inclusion was seen as impractical due to economic constraints. Instead, it was placed in the Directive Principles of State Policy, reflecting a long-term goal rather than an enforceable right. This omission remains a subject of policy discourse, especially concerning unemployment and labor rights.

Source: The Hindu Newspaper

Hyundai, Mahindra Face Emission Penalties

Economy & Environment

The Centre identified eight automakers, including Hyundai and Mahindra, for non-compliance with tightened CAFE norms for FY 2022-23. Hyundai faces the largest penalty at ₹2,837 crore, followed by Mahindra (₹1,788 crore) and Kia (₹1,346 crore). The norms aim to reduce oil dependency and emissions, penalizing violations at ₹25,000-₹50,000 per vehicle. Automakers argue penalties should apply only post-January 2023, when stricter norms began.

Source: The Indian Express

Indian Army Deploys Sabal-20 Logistics Drones

Science & Technology

The Army deployed Sabal-20 drones for logistics in the eastern sector. Developed by EndureAir, these VTOL drones support payloads up to 20 kg with stealth capabilities. IIT-Kanpur's cloaking tech enhances radar evasion.

Source: The Hindu Newspaper

NSO Group's Pegasus and Its Operations

Science & Technology

NSO Group's Pegasus spyware was sold for $6.8M annually to select government agencies globally, including allegations of misuse in India against journalists and activists. The spyware operated through sophisticated exploits like Heaven, Eden, and Erised, targeting devices via WhatsApp vulnerabilities. Despite NSO's claims that clients solely controlled Pegasus, court documents revealed NSO actively managed deployments. This raises critical issues of cybersecurity, privacy, and governance.

Key features include
- Pegasus spyware licenses cost $6.8M/year and were sold to government-approved agencies globally.
- Exploits like Heaven, Eden, and Erised used WhatsApp vulnerabilities to target smartphones.
- Allegations in India included surveillance of journalists, activists, and politicians.
- Supreme Court inquiries found inconclusive evidence due to government non-cooperation.
- WhatsApp's lawsuit revealed NSO controlled spyware deployment, contradicting customer-only use claims.
- Highlights cybersecurity vulnerabilities, privacy concerns, and governance challenges.

Source: The Indian Express

India Welcomes Israel-Hezbollah Ceasefire

International Relations

India welcomed the ceasefire, emphasizing de-escalation and stability. It expressed concern over attacks on UNIFIL, which includes Indian peacekeepers. The truce aims to prevent further regional conflicts.

Source: The Hindu Newspaper

SC on Religious Conversion for Quota Benefits

Polity & Social Justice

The Supreme Court ruled that quota-based religious conversions without genuine belief undermine reservation policy. A Puducherry Christian woman claiming SC benefits after embracing Hinduism was denied relief.

Source: The Hindu Newspaper

Manipur CM Conditions Kuki-Zo Return

CM Biren Singh offered conditional return for displaced Kuki-Zo people, emphasizing 1961 NRC compliance. Civil society groups were urged to maintain peace as combing operations intensified.

Source: The Hindu Newspaper

Two new defence pacts—air-to-air refueling with Australia and stealth equipment production with Japan—highlight India's push for defence cooperation in Asia. The agreements reflect regional concerns over China's growing military capabilities, exemplified by its massive defence production and assertive policies. India must accelerate defence reforms and modernize its industrial base to address this imbalance and seize international collaboration opportunities.

Source: The Indian Express