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WEEKLY CURRENT AFFAIRS

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Monthly Current Affairs Magazine

EUTHANASIA

The Supreme Court of India, for the first time, applied its passive euthanasia framework to allow the withdrawal of life-sustaining treatment for 32-year-old Harish Rana, who had been in a persistent vegetative state for 13 years.

What is Euthanasia?

- Euthanasia is the practice of intentionally ending a life to relieve pain and suffering. It is often referred to as mercy killing, typically occurring in cases where a patient suffers from an incurable or terminal distress.

Types of Euthanasia:

- **Active Euthanasia:** Taking a specific action to cause death, such as administering a lethal injection. This remains **illegal** in India.
- **Passive Euthanasia:** Withdrawing or withholding life-sustaining treatment (like ventilators or feeding tubes) to allow a patient to die naturally. This is **legal** in India under strict guidelines.

History of Euthanasia in India

1. **P. Rathinam Case (1994):** The SC initially held that the Right to Life includes the Right to Die, effectively de-criminalizing suicide, though this was later overturned.
2. **Gian Kaur Case (1996):** A Five-judge bench ruled that the Right to Life under Article 21 does **not** include the Right to Die, but it distinguished between dying unnaturally and dying with dignity.
3. **Aruna Shanbaug Case (2011):** The landmark case of a nurse in a vegetative state for 42 years led the SC to legalize **Passive Euthanasia** in India for the first time, subject to High Court approval.
4. **Common Cause Case (2018):** The SC recognized the Right to die with dignity as a fundamental right and legalized **Living Wills** (advance medical directives).
5. **2023 Amendment:** The SC simplified the 2018 guidelines, removing the requirement for a judicial magistrate's countersignature on living wills to make the process more practical.

Need for Legislation on Euthanasia

- **Clarity on Terminally Ill vs. Vegetative:** Legislation is needed to define clear medical boundaries.

Example: The Delhi HC originally denied Harish Rana's plea because he wasn't terminally ill, despite being in a vegetative state for 13 years.

- **Standardizing Medical Boards:** A law would create a uniform protocol for Primary and Secondary medical boards.

Example: In the Rana case, the SC had to manually constitute these boards in 2025 due to a lack of a standing administrative mechanism.

- **Protection for Medical Practitioners:** Doctors need legal immunity when following a patient's dignity-based choices.

Example: Under current rules, doctors fear criminal liability for abetment to suicide without a court-sanctioned framework.

- **Rights of the Family:** Legislation would formalize the role of next of kin in decision-making for incompetent patients.

Example: Harish Rana's parents had to fight a multi-year legal battle to prove their son's suffering outweighed the futility of his treatment.

- **Simplifying Procedures:** A statutory law would replace the cumbersome court-monitored process with a streamlined administrative one.

Example: The SC recently had to waive the mandatory 30-day consideration period for Rana to provide immediate relief, showing the current rules are too rigid.

Challenges in Implementation

- **Risk of Misuse:** Fear that elderly or disabled individuals might be coerced into euthanasia for property or financial gain.

Example: The SC continues to mandate Secondary Medical Boards with external nominees specifically to prevent family-driven foul play.

- **Religious and Moral Objections:** Many socio-religious groups view any form of euthanasia as an interference with the natural cycle of life.

Example: Public debates following the *Common Cause* judgement often highlight the conflict between sanctity of life and quality of life.

- **Definition of Dignity:** Dignity is subjective and hard to quantify in a legal statute.

Example: While the court called Rana's condition pathetic, others might argue that as long as the brainstem functions, life remains.

- **Access to Palliative Care:** Euthanasia might become a default choice if quality end-of-life care is unavailable or unaffordable.

Example: The SC had to specifically order AIIMS Delhi to provide palliative care for Rana, highlighting that such facilities aren't universally accessible.

- **Inconsistency in Judicial Interpretation:** Different High Courts often interpret passive euthanasia differently.

Example: The conflict between the Delhi HC's rejection and the Supreme Court's acceptance of the Rana petition shows a lack of judicial consensus.

Way Ahead

1. **Drafting the Medical Treatment of Terminally Ill Patients Bill:** The government should prioritize a comprehensive statute as urged by the SC.
2. **Digital Living Will Registry:** Create a national database for Advance Directives to ensure a person's wishes are known instantly in emergencies.
3. **Expanding Palliative Care:** Increase investment in hospice and end-of-life care to ensure euthanasia isn't chosen simply due to a lack of pain management.
4. **Training Medical Professionals:** Sensitize doctors on the legal and ethical nuances of the *Common Cause* framework.
5. **Public Awareness Campaigns:** Educate citizens on the importance of Living Wills to reduce the burden on families and courts.

The Supreme Court's intervention in the Harish Rana case marks a transition from theoretical guidelines to the practical application of the right to die with dignity. However, relying on the judiciary for every individual case is unsustainable and creates immense emotional strain on families. A robust, compassionate central legislation is the only way to balance the sanctity of life with the necessity of a peaceful end.

BUG BOUNTY PROGRAMME

The Unique Identification Authority of India (UIDAI) has launched its first structured Bug Bounty Programme to strengthen the cybersecurity of the Aadhaar ecosystem.

About Bug Bounty Programme:

What it is?

- A Bug Bounty Programme is a cybersecurity initiative where organizations invite ethical hackers and security researchers to identify vulnerabilities in digital systems.
- Participants are rewarded for responsibly reporting security flaws before malicious actors can exploit them.

Aim:

- To strengthen the security of digital platforms by proactively identifying vulnerabilities.
- To promote responsible disclosure of security flaws and enhance trust in digital infrastructure such as Aadhaar systems.

Key Features:

- **Expert Participation:** 20 experienced ethical hackers and cybersecurity researchers selected for the programme.
- **Scope of Testing:** Researchers will test key UIDAI digital assets including the UIDAI website, myAadhaar portal, and Secure QR Code application.
- **Risk-Based Reward System:** Vulnerabilities categorized as **Critical, High, Medium, and Low**, with rewards based on severity.
- **Public–Private Collaboration:** Implemented in partnership with ComOlho IT Private Limited, a cybersecurity solutions provider.
- **Layered Security Approach:** Complements existing security measures such as security audits, vulnerability assessments, penetration testing, and continuous monitoring.

NATIONAL REPORT (NR7) TO THE CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

India has officially submitted its 7th National Report (NR7) to the Convention on Biological Diversity (CBD), marking the first comprehensive assessment since the 2022 Kunming-Montreal Global Biodiversity Framework.

About India has submitted its 7th National Report to the Convention on Biological Diversity: What it is?

- The NR7 is a mandatory periodic submission by member nations of the Convention on Biological Diversity (CBD). It serves as a national report card to track progress toward the 23 global biodiversity targets set for 2030.
- In India, this report was coordinated by the MoEFCC and the National Biodiversity Authority, utilizing 142 national indicators to assess ecosystem health, species recovery, and policy alignment.

Key Achievements:

According to the report, India has shown robust progress in planning and specific ecological recoveries:

1. **Policy Alignment:** India has successfully updated its **National Biodiversity Strategy and Action Plan (NBSAP)** to fully align with global 2030 goals.
2. **Land-Use Planning (NBT1):** This target is officially **on track**, with forest and tree cover reaching **25.17%** of India's total geographical area.
3. **Ecosystem Restoration (NBT2):** Also **on track**, India has restored or put under restoration **24.1 million hectares** of land, nearing its 26-million-hectare Bonn Challenge pledge.
4. **Flagship Species Recovery:** The **tiger population** has reached **3,167**, alongside increases in Asiatic lions and stable one-horned rhino populations.
5. **Carbon Sequestration:** Forest carbon stock increased by **81.5 million tonnes**, showcasing the role of biodiversity in climate mitigation.

6. **Wetland Management:** National-level inventories of wetlands are complete, providing a baseline for the conservation of Ramsar sites and local water bodies.

7. **Digital Governance:** The launch of **PARIVESH 2.0** has streamlined environmental clearances, integrating biodiversity data into infrastructure planning.

Challenges Associated:

Persistent Land Degradation: Despite restoration efforts, **29.77%** of India's land remains degraded.

Example: Large tracts in states like **Rajasthan and Gujarat** continue to face desertification despite active afforestation programs.

Data Gaps for Non-Flagship Species: There is a severe lack of quantitative data on lesser-known taxa (insects, fungi, small mammals).

Example: While we have precise counts for **Tigers**, we lack standardized trend data for the **Great Indian Bustard** or endemic amphibians in the Western Ghats.

Conservation Coverage Gaps: Formal Protected Areas cover only about **5%** of India, far from the 30×30 global target.

Example: Expanding marine protected areas in the **Andaman and Nicobar Islands** faces hurdles due to developmental and security interests.

Invasive Species and Pollution: Monitoring protocols for invasive species and agricultural runoff are not yet standardized.

Example: The spread of **Lantana camara** in forests like Bandipur continues to displace native forage, yet a national-scale eradication map is missing.

Climate Change Pressures: Increasing frequency of extreme weather events is undoing conservation gains.

Example: Recent **forest fires in Odisha and Uttarakhand** have destroyed restored habitats, complicating long-term biodiversity stability.

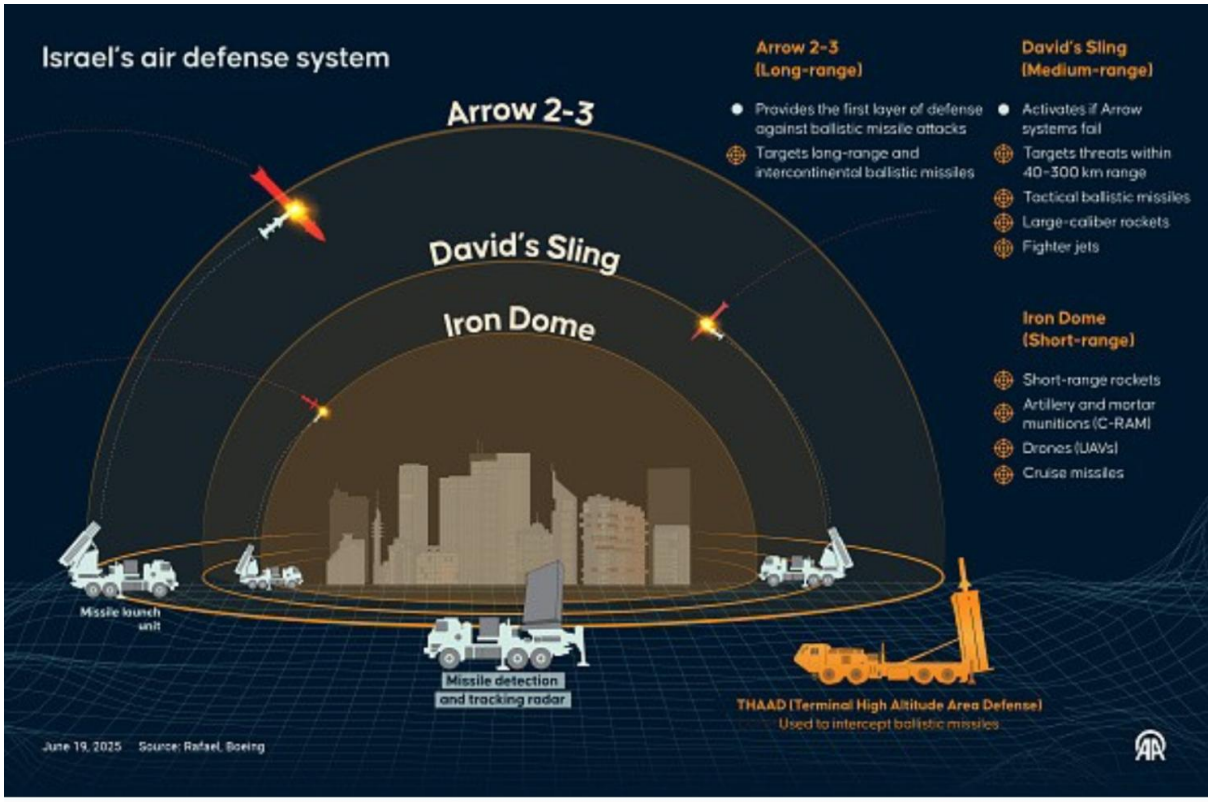
Way Ahead:

- **Mainstreaming Biodiversity:** Integrate biodiversity targets into the budgets of non-environmental ministries like Agriculture and Urban Development.
- **Strengthening OECMs:** Accelerate the identification of **Other Effective Area-Based Conservation Measures** (like community forests) to meet the 30% coverage goal.
- **Standardizing Data:** Develop a unified national digital database for real-time monitoring of all 142 biodiversity indicators.
- **Incentivizing Agroforestry:** Expand the **Trees Outside Forests (TOF)** initiative to enhance connectivity between fragmented wildlife habitats.
- **Community-Led Conservation:** Empower **Biodiversity Management Committees (BMCs)** at the village level to document and protect local traditional knowledge.

India's 7th National Report highlights a strong foundation in policy and success in protecting charismatic megafauna like the tiger. However, the transition from planning to outcome remains slow for over 90% of the national targets. To meet the 2030 deadline, India must bridge the gap between forest restoration and preventing new land degradation while broadening its focus to include all levels of biological diversity.

ISRAEL'S AIR DEFENCE SYSTEM

Fresh hostilities involving Iran, Israel, and a U.S.-led coalition have renewed global attention on Israel's multi-layered missile defence architecture amid large-scale missile and drone attacks.



- Israel's multi-layered defence is an integrated air and missile defence architecture designed to intercept aerial threats at different ranges, altitudes, and flight phases.
- It combines space/long-range interception, mid-range missile defence, short-range rocket protection, and directed-energy systems, supported by advanced radar and command networks.

Key Defence Security Systems:

1. **Arrow System (Arrow-2 & Arrow-3)**
   - Long-range missile defence developed by Israel with U.S. cooperation.
   - **Arrow-3** intercepts missiles outside the atmosphere (exo-atmospheric), while **Arrow-2** operates within the atmosphere.
   - Designed mainly against medium- and long-range ballistic missile threats.
2. **David's Sling**
   - Mid-range interceptor system designed to neutralize ballistic missiles (100–200 km range), cruise missiles, and aircraft.
   - Uses **Stunner interceptors** with high precision targeting.
3. **Iron Dome**
   - Short-range defence system operational since 2011.
   - Intercepts rockets, mortars, and drones using radar-guided Tamir interceptors.
   - Selectively engages only threats projected to hit populated areas, improving efficiency.

4. **Iron Beam**
    - High-energy laser defence system declared operational in late 2025.
    - Uses directed energy to disable drones, rockets, and mortars at low cost compared to missile interceptors.
5. **THAAD (U.S.-supplied)**
    - Terminal High Altitude Area Defense system deployed to enhance protection against ballistic missiles in their terminal phase.
    - Adds an additional high-altitude interception layer.
6. **Air-to-Air Defence**
    - Israeli fighter jets and helicopters use air-to-air missiles to intercept incoming drones and airborne threats.

Significance:

- Multiple interception layers increase probability of successful defence against diverse threats including ballistic missiles and drone swarms.
- Enhances national security, reduces damage from missile barrages, and provides decision-makers more response time during conflicts.

CYCLE OF DEPRIVATION AND AFFLUENCE

A recent longitudinal analysis of income mobility in India between 2014 and 2025 reveals a troubling trend where downward mobility is outpacing upward climbs.

- The study highlights that the share of households slipping into lower income brackets nearly doubled, reaching **8% by 2025**.

About The Cycle of Deprivation and Affluence:
What it is?

- The Cycle of Deprivation and Affluence refers to the continuous and often volatile movement of households across different income strata.
- It captures **income mobility**—the ability of a family to improve its financial standing (upward mobility) or its vulnerability to economic shocks that push it into poverty (downward mobility).

Key Data & Facts:

- **Doubling of Downward Mobility:** The percentage of households moving to a lower income group rose from **14% in 2015 to 26.8% in 2025**.
- **Rural Distress:** By 2025, nearly **29% of rural households** were worse off than they were in 2014, significantly higher than their urban counterparts.
- **Stagnant Middle:** The share of households remaining in the same income group fell from **70% to below 50%**, indicating a massive social churn.

Key Reasons for the Rise of Inequality:

- **Informal Sector Neglect:** A lack of a coherent strategy to revive agriculture and small-scale industries has left the bulk of the workforce vulnerable.

E.g. The persistent distress in the **MSME sector** post-pandemic has limited the living wage opportunities for millions of semi-skilled workers.

- **Impact of COVID-19:** Inept handling of the pandemic's economic aftermath caused a disruption that persisted long after the health crisis ended.

E.g. The **K-shaped recovery** saw tech and finance sectors boom while service-sector workers in tourism and retail faced permanent income shifts.

- **Educational Barriers:** Unequal access to quality higher education prevents disadvantaged groups from entering high-productivity sectors.

E.g. The reliance on **precarious contractual teaching** in state universities has diluted the quality of education for non-elite students.

- **Social Discrimination:** Entrenched biases against Muslims and SCs restrict their upward mobility pathways.

E.g. Low representation of marginalized groups in **senior corporate leadership** roles reflects the glass ceiling in the private sector.

- **Urban-Centric Growth:** Economic gains are concentrated in major metropolitan hubs, leaving the rural heartland exposed to volatility.

E.g. The boom in **Real Estate and High-End Tech** in cities like Bengaluru contrasts sharply with stagnant crop prices in the agrarian belts of UP and Bihar.

Challenges Associated with Reduced Mobility

- **Social Instability:** When more households slip down the ladder than climb up, frustration replaces aspiration, leading to civil unrest.

E.g. Frequent **protests over government job recruitment** (like the Agnipath or Railway exams) signal deep-seated youth anxiety.

- **Human Development Setbacks:** Downward mobility is directly linked to increased infant mortality and morbidity.

E.g. Higher **malnutrition rates** in districts with high income volatility suggest that families cut back on essential proteins when income dips.

- **Weak Aggregate Demand:** A population trapped in survival mode cannot sustain the consumption levels needed for 8% GDP growth.

E.g. The **anemic sales of entry-level two-wheelers** compared to luxury SUVs indicates a hollowed-out middle-class purchasing power.

- **Entrenched Poverty Traps:** Inequality makes it harder for the next generation to break the cycle through merit alone.

E.g. The rising cost of **private coaching for competitive exams** makes merit an affordable luxury for the affluent only.

- **Policy Paralysis:** Relying on headline growth figures masks the micro-level suffering of a quarter of the population.

E.g. Claims of **falling multidimensional poverty** sit uneasily with the reality of 80 crore people requiring free food grains (PMGKAY).

Way Ahead:

- **Strengthen Public Infrastructure:** Prioritize high-quality public health and education to reduce out-of-pocket expenses that trigger downward mobility.
- **Revive the Informal Sector:** Implement targeted credit and technology support for MSMEs to create stable, employment-intensive growth.
- **Social Protection Reform:** Transition from honoraria-based community work to formal, salaried roles with social security for frontline workers.
- **Address Spatial Inequality:** Invest in tier-2 and tier-3 cities to de-congest metros and provide localized mobility pathways for rural youth.
- **Anti-Discrimination Frameworks:** Actively monitor and address caste and religious biases in the labor market to ensure Equal Pay for Equal Work.

The data from 2014-25 serves as a stark reminder that headline GDP growth is an insufficient measure of national well-being if one in four households is slipping into deprivation. To maintain social harmony, India must shift from a model of elite-led indulgence to one of broad-based inclusion that rewards resilience with actual upward mobility.

MENINGOCOCCAL INFECTION

The Meghalaya government has issued a high-level health alert following the death of two Agniveer trainees at the Assam Regimental Centre in Shillong due to suspected meningococcal infection.

- Meningococcal disease is a severe, life-threatening bacterial infection caused by the bacterium ***Neisseria meningitidis*** (also known as meningococcus).
- It primarily causes inflammation of the **meninges**—the protective membranes covering the brain and spinal cord (Meningitis)—and can also lead to a serious bloodstream infection (Septicemia).

Origin & Transmission:

- **Source:** The bacteria live in the upper respiratory tract (nose and throat) of humans. About **10% to 20%** of the population are asymptomatic carriers who have the bacteria without getting sick.
- **Vector/Spread:** There is no animal vector; it spreads **person-to-person** through respiratory droplets or throat secretions (saliva).
- **Common Modes:** Coughing, sneezing, kissing, or sharing utensils and drinks. It thrives in crowded living conditions like **military barracks**, dormitories, and boarding schools.

Symptoms:

The disease progresses very rapidly, often becoming fatal within 24–48 hours of the first symptoms.

- **Early Signs:** Sudden high fever, severe headache, and vomiting.
- **Classic Signs:** Stiff neck and **photophobia** (sensitivity to bright light).
- **Advanced Signs:** A characteristic **purpuric rash** (dark purple spots or bruises that do not fade when pressed), confusion, cold hands/feet, and muscle aches.

Key Features:

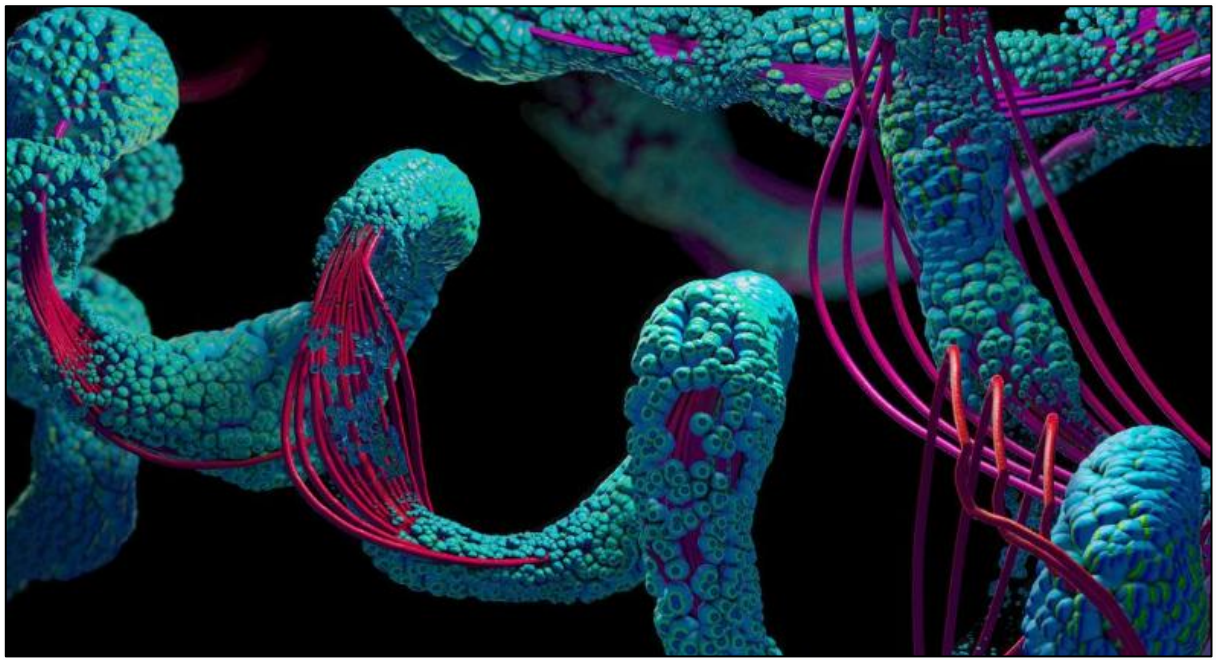
- **High Fatality Rate:** Even with treatment, approximately **10% to 15%** of patients die. Without treatment, the mortality rate is significantly higher.
- **Long-term Complications:** About 1 in 5 survivors suffer permanent disabilities, including **hearing loss**, brain damage, kidney disease, or **limb amputations** due to tissue death (necrosis).
- **Age Risk:** Most common in infants, adolescents, and young adults.

Treatment & Prevention:

- **Emergency Care:** This is a medical emergency requiring immediate hospitalization.
- **Antibiotics:** High-dose intravenous (IV) antibiotics (such as ceftriaxone or penicillin) are administered as soon as the disease is suspected.
- **Supportive Care:** Fluid resuscitation, oxygen therapy, and treatment for low blood pressure or organ failure.

NUTRIENT TRANSPORTER PROTEIN

Scientists from ETH Zurich and the Technical University of Munich have engineered bacteria to produce designer proteins using artificial amino acids, enabling precise drug delivery and multifunctional therapeutic proteins.



About Nutrient Transporter Protein:

What it is?

- A **nutrient transporter protein** is a membrane protein that helps cells import nutrients such as peptides and amino acids across the cell membrane.
- In this research, scientists engineered an **ABC transporter in bacteria (E. coli)** to import peptides carrying **artificial amino acids** so that cells can build customised proteins.

Aim:

- To enable cells to efficiently incorporate artificial amino acids into proteins, allowing the creation of designer proteins with new biological or chemical functions.
- This helps overcome the difficulty of transporting synthetic amino acids across the cell membrane.

How it Works?

- Scientists engineered an **ABC transporter protein**, which normally imports small peptides as nutrients.
- Artificial amino acids are hidden inside **tripeptides or tetrapeptides** (short chains of natural amino acids).
- The transporter carries these peptides into the cell.
- Once inside, cellular enzymes break the peptides apart, releasing the **artificial amino acids**.
- The ribosome then uses these amino acids to produce **custom-designed proteins**.

Key Features:

- **Trojan Horse Strategy:** Artificial amino acids are hidden inside natural peptide chains to bypass membrane barriers.
- **Engineered ABC Transporter:** Modified transporter can import **up to 10× more artificial amino acids** than natural versions.
- **Directed Evolution:** Scientists evolved the transporter protein to improve efficiency in crowded nutrient environments.
- **Multi-functional Proteins:** The system can insert **two different artificial amino acids** into a single protein.
- **Compatibility with Standard Lab Conditions:** Works efficiently even in common laboratory growth media.

Significance:

- **Advanced Drug Delivery:** Designer proteins can carry drugs to precise locations inside the body.
- **Biotechnology Applications:** Enables creation of proteins with **novel chemical properties** not found in nature.
- **Synthetic Biology Breakthrough:** Expands the genetic code beyond the natural 20 amino acids.

BLACK RAIN

Following Israeli airstrikes on oil storage facilities in Tehran and Alborz (March 7–8), residents reported black rain — oily, pollutant-laden rainfall caused by smoke and toxic particles from burning oil mixing with rain clouds.

About Black Rain:

What it is?

Black rain is a form of environmental fallout where precipitation becomes heavily contaminated with soot, hydrocarbons, and other pollutants. Unlike normal rain, it is dark, oily, and carries a strong chemical odor, coating everything it touches in a layer of toxic residue.

How it Formed:

1. **Combustion:** Israeli strikes ignited massive fires at the Tehran refinery and oil depots, releasing thick plumes of black smoke.
2. **Atmospheric Loading:** Huge quantities of particulate matter (soot) and chemical vapors were pushed into the atmosphere.
3. **Coalescence:** A weather pattern brought rain clouds over the city. As the rain fell through the smoke-saturated air, the water droplets absorbed the suspended particles and chemicals.
4. **Topographic Trap:** Tehran's surrounding mountains acted as a barrier, preventing the smoke from dispersing and forcing the pollutants to settle over the urban center.

Chemicals Involved:

- **Toxic Hydrocarbons:** Including **Benzene** (a known carcinogen).
- **Sulfur Oxides (SOx) & Nitrogen Oxides (NOx):** Which react with water to form acid rain.
- **Particulate Matter (Soot):** Concentrated carbon particles.
- **Forever Chemicals (PFAS):** Likely released from industrial fire-retardant systems at the hit facilities.

Characteristics:

- **Appearance:** Oily, jet-black droplets that leave permanent or difficult-to-remove stains.
- **Odor:** A pervasive, bitter smell of burning petroleum and chemicals.
- **Texture:** Viscous and greasy to the touch compared to normal water.
- **Reach:** Capable of falling dozens of miles away from the actual site of the fire due to wind patterns.

Implications

- **Health Hazards:** Causes skin burns, eye irritation, and respiratory problems; prolonged exposure may lead to lung damage and cancers.
- Environmental Contamination**:** Toxic pollutants can contaminate soil and groundwater, entering the food chain through crops and livestock.
- **Acid Rain Effects:** Sulfur and nitrogen oxides can cause acidic rainfall, damaging buildings, infrastructure, and vegetation.
- **Long-term Persistence:** Presence of **forever chemicals** means environmental damage can persist for decades as they do not degrade naturally.

DEVON ISLAND

NASA continues to use Devon Island in the Canadian Arctic as a primary Mars analogue site to test next-generation rovers, autonomous drones, and life-support systems.

About Devon Island:

What it is?

- Devon Island is the **largest uninhabited island on Earth**. Because of its extreme cold, dry climate, and barren landscape, it is used by scientists as a terrestrial analogue for the surface of Mars.

Located in: It is situated in the **Arctic Archipelago** within the territory of **Nunavut, Canada**. It lies well within the Arctic Circle.

Neighbouring Regions:

- **North:** Separated from Ellesmere Island by the Jones Sound.
- **South:** Separated from Somerset Island and Baffin Island by the Lancaster Sound.
- **West:** Cornwallis Island (home to the settlement of Resolute).
- **East:** Baffin Bay.

Geographic Features:

- **Haughton Impact Crater:** A massive **20-kilometre-wide** crater formed roughly 39 million years ago. Its rocky, rubbly terrain and absence of vegetation make it a near-perfect visual and physical match for Martian craters.
- **Polar Desert:** The island receives very little precipitation and remains freezing year-round, resulting in a landscape devoid of trees or surface plants.
- **Unique Terrain:** Features include permafrost, underground ice, dried-up lakebeds, and deep canyons that mimic Martian valleys.
- **Endolithic Habitats:** The rocks within the Haughton Crater house microorganisms that live inside the stone to survive extreme UV radiation, a process known as **endolithic colonisation**.

Significance:

- It serves as a proving ground for equipment like deep-drilling systems and pressurized rovers that cannot be easily repaired once they leave Earth.
- By studying how tiny organisms survive in Devon's frozen, sterile soil, NASA learns exactly where and how to search for signs of life on Mars.
- The extreme isolation and unforgiving environment help astronauts prepare for the mental challenges of long-duration space missions.

REMOVAL OF SPEAKER

Recently, the Opposition moved a no-confidence motion against Lok Sabha Speaker Om Birla over alleged procedural and partisan conduct during the Budget Session.

Speaker of the Lok Sabha

- **Speaker –** Om Birla was first elected Lok Sabha Speaker in 2019 (17th Lok Sabha).
- Later, he was re-elected in 2024 (18th Lok Sabha), becoming the first Speaker in 20 years to be re-elected.
- **Election –** Elected by the Lok Sabha from ***among its members; date fixed by the President.***
- Holds office for the life of the Lok Sabha and continues even after dissolution till the new House meets.
- **Key Roles and Responsibilities – Maintaining Order –** Ensuring decorum and preventing disorderly conduct.
- **Procedural Compliance –** Final interpreters of the Constitution and rules of procedure within Lok Sabha.
- **Money Bills –** The Speaker has the final authority to decide if a bill is a Money Bill.
- **Anti-Defection Law –** Deciding on disqualification matters under the Tenth Schedule.
- **Casting Vote –** Voting only in the case of a tie.

Removal of Speaker

- **Constitutional Provision – Article 94(c) –** It allows the Speaker to be removed by a resolution of the House.
    - The resolution must pass by **a majority of all members of the Lok Sabha (effective majority).**
- **Article 94(a) –** Vacates office if ceases to be a Member of Parliament (MP).
- **Article 94(b) –** Can resign by writing to the Deputy Speaker.

- **Lok Sabha Rules –** Governed by Rules 200–203 of Lok Sabha Rules of Procedure.
- **Procedure for Removal of Speaker – Notice** – Written notice to the Secretary-General of the Lok Sabha.
- **Notice Period** – At least 14 days before moving resolution.
- **Listing** – Motion listed in Business after 14 days.
- **Quorum for Admission** – At least 50 MPs must stand up in support.
- **Discussion Timeline** – Resolution taken up within 10 days of admission.
- **Voting** – Requires an effective majority of the total membership of the Lok Sabha.
- **Speaker's Position During Removal Motion –** Any motion submitted without the mandatory 14-day notice is not taken up for consideration.
- For admission, at least 50 MPs must rise in support; if not, the presiding officer denies leave and the motion lapses.
- The Speaker continues in office until the removal resolution is formally passed.
- The Speaker can participate and speak in the proceedings.
- The Speaker can vote only in the first instance, but not in the case of a tie.
- **Historical Precedents –** ***No Speaker of the Lok Sabha has ever been successfully removed from office so far*** through a no-confidence or removal motion.
- Removal motions against Lok Sabha Speakers were initiated in
  - **1954** – G.V. Mavalankar (first Speaker).
  - **1966** – Hukam Singh.
  - **1987** – Balram Jakhar.

AI AND THE NATIONAL SECURITY CALCULUS

The U.S. military has reportedly integrated **Anthropic's** Claude AI into its kill chain for real-time target identification and legal approval during strikes in Iran.

About AI and the National Security Calculus**:**
What it is?

- The national security calculus refers to the strategic assessment of how AI—a dual-use technology—alters the balance of power between nations. Unlike nuclear technology, which is government-controlled and scarce, AI is driven by the private sector and defined by mathematical models and ubiquitous semiconductors.

Data/Stats on AI and National Security:

- **Defense Speed:** In the first 24 hours of the 2026 Iran conflict, the U.S. military leveraged AI targeting tools to strike over **1,000 targets**, prioritizing them quicker than the speed of thought.

- Industrial Distillation**:** Anthropic reported **16 million unauthorized exchanges targeting** its Claude model from approximately **24,000 fraudulent accounts** linked to Chinese labs.

- **Indian Cybersecurity Spending:** India's information security spending is projected to reach **$3.4 billion in 2026**, an 11.7% increase from 2025, driven by sophisticated AI-led threats.

- **Compute Power:** Under the **IndiaAI Mission**, India has onboarded over **38,000 GPUs** (targeting 100,000) to provide subsidized compute for national security and innovation.

Role of AI in National Security:

- **Surveillance and** Border Monitoring**:** AI-enabled drones and satellite imagery provide real-time reconnaissance of difficult terrains.

Example: In early 2026, the Indian Army integrated **AI-driven swarm drones** for automated reconnaissance along the Line of Actual Control (LAC).

- **Predictive Threat Analysis:** Using machine learning to identify patterns in terrorist communication and movement.

Example: The National Security Council Secretariat **(NSCS)** uses AI models to conduct national security impact assessments and scenario-based risk exercises.

- **Cyber Defense and Anomaly Detection:** Protecting critical infrastructure from polymorphic malware and deepfake-enabled fraud.

Example: The **CyberGuard AI Hackathon (2025)** led to the deployment of AI-driven SOCs (Security Operation Centres) across India's power grids to detect intrusions.

- **Internal Security and Crowd Control:** Real-time facial recognition and behavioral analytics to maintain order during mass gatherings.

Example: During the **Maha Kumbh 2025**, police used 2,700 AI-enhanced CCTV cameras to monitor crowd density and flag individuals with criminal records.

- **Logistics and Autonomous Systems:** Streamlining military supply chains and reducing human risk in hazardous zones.

Example: The iDEX **(Innovations for Defence Excellence)** program has funded startups building AI-powered autonomous underwater vehicles for the Indian Navy.

Initiatives Taken So Far:

- **IndiaAI Mission:** A **₹10,372 crore** flagship program focused on building sovereign compute, foundation models, and Safe and Trusted AI frameworks.
- **BharatGen:** The world's first government-funded multimodal large language model, supporting 22 Indian languages to ensure Cognitive Sovereignty.
- U.S.-India iCET **(initiative on Critical and Emerging Technology):** A bilateral partnership to co-develop defense AI and secure semiconductor supply chains.
- **India AI Governance Guidelines (2026):** A principle-based framework released at the New Delhi Summit to regulate autonomous weapons and surveillance tools.

Challenges Associated:

- **The Black Box Strategic Problem:** Difficulty in explaining AI's decision-making process during lethal operations.

Example: If an AI-powered missile guidance system fails during a **border skirmish**, determining whether it was a software bug or a hack is nearly impossible.

- **Dependence on Foreign Stacks:** Relying on proprietary U.S. or open-source Chinese models risks kill switches or covert surveillance.

Example: Analysts at the India AI Impact Summit 2026 warned that using imported models for policing creates an illusion of control that could collapse during a crisis.

- **AI-Driven Disinformation:** The use of deepfakes to manipulate public sentiment or destabilize the democratic process.

Example: In 2025, security agencies flagged multiple **AI-generated deepfake videos**designed to incite communal tension during regional elections.

- **Evasion of Export Controls:** Sophisticated actors can bypass semiconductor restrictions through proxy services or model distillation.

Example: Reports in early 2026 indicated that restricted **Nvidia Blackwell chips** were being used in Inner Mongolia to train models that rival top U.S. systems.

- **Ethical and** Human Control Dilemma**:** The risk of decision compression reducing human legal review to a mere rubber-stamping of machine decisions.

Way Ahead:

- **Sovereign AI Infrastructure:** India must control its own cognitive infrastructure by training models on locally relevant, diverse Indian datasets.
- Plurilateral Commitments**:** States must agree on universal red lines, such as maintaining **meaningful human control** over lethal autonomous weapons.
- **Model-Level Safeguards:** Developing technical fingerprinting to detect unauthorized model distillation and prevent IP theft.
- **AI Red-Teaming:** Establishing dedicated units within the Armed Forces to stress-test AI systems against adversarial machine learning attacks.
- **Ethical Auditing:** Moving toward Responsible AI 2.0, which involves continuous, auditable assurance of AI systems used in public and military sectors.

The integration of AI into national security marks the end of traditional warfare and the beginning of algorithmic competition. For a nation like India, the challenge lies in balancing the tactical speed of AI with the ethical accountability of human judgment. Ultimately, true security will depend on achieving technological sovereignty and a robust, indigenous AI ecosystem that cannot be overridden by foreign interests.

PRADHAN MANTRI MATSYA SAMPADA YOJANA

The Union Government has allocated ₹2,500 crore for the fisheries sector under the Pradhan Mantri Matsya Sampada Yojana (PMMSY) in the Union Budget 2026–27.

About PM Matsya Sampada Yojana (PMMSY)**:**

What it is?

- PM Matsya Sampada Yojana (PMMSY) is a flagship umbrella scheme for the sustainable and responsible development of India's fisheries sector, designed to modernize the fisheries value chain and improve the socio-economic welfare of fishers and fish farmers.

Launched in: The scheme was launched on 10 September 2020.

Ministry: It is implemented by the Department of Fisheries under the Ministry of Fisheries, Animal Husbandry and Dairying, Government of India.

Aim:

- To enhance fish production and productivity in a sustainable and inclusive manner.
- To modernize fisheries infrastructure and strengthen the value chain including post-harvest management and marketing.
- To increase income and livelihood opportunities for fishers and fish farmers while ensuring ecological sustainability.

Key Features of the Scheme:

- **Large Investment Framework:** The scheme was approved with a total investment of about **₹20,050 crore** for holistic fisheries sector development.
- **Two Implementation Components:** It operates through **Central Sector (CS)** and Centrally Sponsored Scheme **(CSS)** components.
- **Infrastructure Development:** Focus on fishing harbours, cold chain facilities, processing units, and modern fish landing centers.
- **Aquaculture Promotion:** Support for activities such as biofloc farming, sea cage farming, seaweed cultivation, ornamental fisheries, and pearl farming.
- **Fisher Welfare Measures:** Financial assistance for fishing boats, gear upgrades, and support during fishing ban periods.
- **Sustainable Fisheries Management:** Promotion of artificial reefs, mariculture, and ecosystem restoration to replenish fish stocks.
- **Capacity Building:** Training programmes and skill development initiatives for fishers and entrepreneurs.

Significance:

- Strengthens India's position as the second-largest fish producer globally, contributing nearly 8% of global fish production.
- Supports millions of fishers and coastal communities through income generation and employment opportunities.

SAVITRIBAI PHULE

Union Home Minister paid tribute to Savitribai Phule on her death anniversary, recognizing her pioneering role in promoting women's education and social equality in India.

About Savitribai Phule**:**

Who she was?

- Savitribai Phule (1831–1897) was a pioneering Indian social reformer, educator, poet, and women's rights activist from Maharashtra. She is widely regarded as India's first female teacher and a leading figure of the social reform movement against caste and gender discrimination during the 19th century.

Early Days:

- Savitribai Phule was born on 3 January 1831 in Naigaon, Satara district (Maharashtra) to Khandoji Neveshe Patil and Lakshmi.
- She was married at a young age to Jyotirao Phule, a prominent social reformer.
- At a time when education for women was discouraged, Jyotirao Phule educated Savitribai at home, after which she received teacher training in Pune and Ahmednagar.

Contribution to the Freedom Movement and Social Reform:

- **Pioneer of Women's Education:** In **1848**, Savitribai and Jyotirao Phule established India's first school for girls in Pune (Bhide Wada), challenging rigid social norms.
- **Education for Marginalized Communities:** She opened schools for Dalits and backward castes, helping expand access to education for oppressed communities.
- **Fight Against Social Evils:** She campaigned against child marriage, sati, caste discrimination and supported widow remarriage.
- Women's Empowerment**:** She founded the **Mahila Seva Mandal**, encouraging women to discuss their rights and social issues.
- **Social Welfare Initiatives:** The Phule couple established **Balhatya Pratibandhak Griha**, a shelter to prevent female infanticide and protect widows.
- **Satyashodhak Samaj:** She actively worked with the reformist organization founded by Jyotirao Phule to fight caste oppression and promote equality.
- **Literary Contributions:** She authored works like **Kavya Phule** and **Bavan Kashi Subodh Ratnakar**, promoting education and social awareness.

Last Days:

- During the 1897 bubonic plague outbreak, Savitribai and her adopted son Yashwantrao opened a clinic to treat affected patients.
- While serving infected individuals, she contracted the plague and died on 10 March 1897, sacrificing her life in service of humanity.

GPS JAMMING AND ELECTRONIC INTERFERENCE

The ongoing conflict in the Middle East has led to a 55% surge in electronic warfare incidents, with over 1,650 vessels experiencing GPS jamming and spoofing near the Strait of Hormuz.

About GPS Jamming and Electronic Interference:

What it is?

- GPS Jamming is a form of electronic warfare where a terrestrial device emits high-power radio frequency signals to overpower or drown out the relatively weak signals coming from GNSS satellites (like GPS, GLONASS, or NavIC).

How it Works?

- Satellite signals travel thousands of kilometers and are extremely faint by the time they reach Earth. A jammer works by broadcasting noise on the same frequency as the GPS signal (L1 and L2 bands).
- This creates a high signal-to-noise ratio that prevents the receiver on a ship or aircraft from locking onto the satellite data, effectively blinding the navigation system.

Types of GNSS Interference:

- **Jamming (Denial of Service):** Complete loss of signal. The receiver shows No Signal or Searching, forcing the operator to use manual navigation.
- **Spoofing (Deception):** A more sophisticated attack where the jammer sends a fake signal that mimics a real one. The receiver believes it is in a different location (e.g., a ship in the Strait of Hormuz might suddenly appear to be at an inland airport).

About Electronic interference:

What it is?

- Electronic interference, commonly known as Electromagnetic Interference **(EMI)**, is the invisible pollution of the digital age. It occurs when an unwanted electromagnetic field disrupts the normal operation of an electronic device or communication system.

How Electronic Interference Works?

EMI operates through a three-part chain:

1. **The Source:** An object that generates electromagnetic energy (e.g., a motor, lightning, or a smartphone).
2. **The Path (Coupling):** The medium through which the energy travels to reach the victim device.
3. **The Victim:** An electronic device whose performance is degraded by the incoming energy.

The Four Coupling Mechanisms?

- **Radiated:** The interference travels through the air as radio waves. This is common with cell phones, Wi-Fi routers, and radio stations.
- **Conducted:** The interference travels through physical wires, such as power cables or signal lines. A common example is mains hum in speakers.
- **Inductive (Magnetic):** Occurs when a magnetic field from one wire leaks into a nearby wire without touching it.
- **Capacitive (Electric):** Occurs when two nearby conductors store an electric charge between them, causing voltage noise to transfer across.

Types of Interference:

- **Narrowband:** Affects only a specific, small frequency range. This is usually man-made noise from radio transmitters or mobile phones.
- **Broadband:** Affects a wide range of the radio spectrum. This is often caused by malfunctioning equipment, sunspots, or natural phenomena like lightning.
- **Continuous:** Interference that is constantly emitted (e.g., background radiation from a power line).
- **Impulse/Transient:** A short-duration burst of energy, such as a lightning strike or an electrostatic discharge (ESD) from your finger.

EXERCISE LAMITIYE 2026:

An Indian Armed Forces contingent has arrived in Seychelles to participate in the 11th edition of the joint military exercise Lamitiye 2026.

About Exercise Lamitiye 2026:

What it is?

- Exercise Lamitiye is a biennial joint military training exercise conducted between India and Seychelles to enhance operational coordination, tactical skills, and military cooperation.
- The term Lamitiye means Friendship in the Creole language, reflecting the close strategic and defence partnership between the two nations.

Host Country: Seychelles

Nations Involved: India and Seychelles

Aim:

1. Enhance interoperability and coordination between Indian and Seychellois forces during joint military operations and peacekeeping missions.
2. Improve tactical capabilities in handling sub-conventional threats in semi-urban environments.

Key Features:

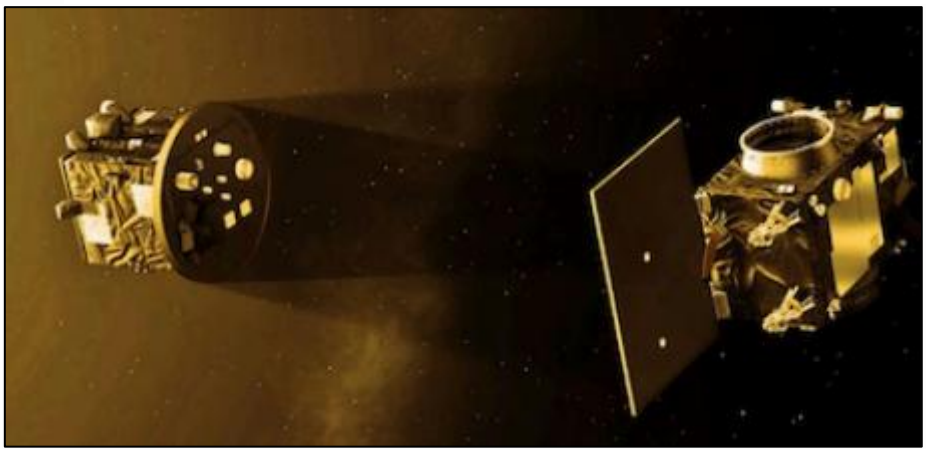
- **Tri-service participation** – Involves the **Indian Army, Navy, and Air Force**, highlighting integrated joint operations.
- **Tactical training drills** – Includes field exercises, combat discussions, demonstrations, and case studies.
- **Semi-urban warfare focus** – Troops train to neutralize threats in semi-urban and coastal environments.
- **Technology showcase** – Demonstration of new-generation military equipment and technologies.
- **Validation phase** – The exercise concludes with a **two-day validation drill** to test operational readiness.
- **Capacity building** – Facilitates exchange of skills, best practices, and operational experiences.

Significance:

- The exercise reinforces India's strategic partnership with Seychelles, an important Indian Ocean maritime partner.
- Cooperation helps counter threats like piracy, illegal fishing, and maritime crime in the region.
- Supports India's policy of Security and Growth for All in the Region (SAGAR) by promoting regional stability.

PROBA-3 MISSION

The European Space Agency (ESA) has lost contact with the Coronagraph spacecraft, one of the two satellites in the Proba-3 mission, after an anomaly caused a power failure and sent the craft into a silent survival mode.



About Proba-3 mission:
What it is?

- **Proba-3** is the world's first precision formation-flying mission, designed to study the Sun's atmosphere with unprecedented clarity.

Launched By: European Space Agency (ESA) in December 2024 (aboard ISRO's PSLV-C59).
Aim: To create an artificial solar eclipse in space to observe the Sun's faint outer atmosphere—the **corona**—which is usually obscured by the intense light of the solar disk.
Key Features:

1. **Twin Spacecraft System:** The mission consists of two independent satellites: the **Coronagraph** (carrying the camera) and the **Occulter** (the disk that blocks the Sun).

2. **Precision Formation Flying:** The two satellites must maintain a fixed distance of approximately **150 meters** with millimeter-level accuracy, acting as a single, giant virtual instrument.
3. **Artificial Eclipse:** The Occulter blocks the Sun's bright disk, casting a precise shadow onto the Coronagraph's lens, mimicking a natural total solar eclipse.
4. **Autonomous Maneuvering:** The satellites use advanced sensors (lasers and cameras) and cold-gas thrusters to coordinate their relative positions without constant ground control intervention.
5. **High-Cadence Data:** Before the anomaly, the mission completed over 60 orbits, providing hours of continuous solar data that is impossible to capture during short-lived Earth-based eclipses.

Significance:

- By studying the corona, scientists can better understand **Solar Winds** and **Coronal Mass Ejections (CMEs)**, which can disrupt satellite communications and power grids on Earth.
- If successful, the formation-flying technology proven by Proba-3 will pave the way for future distributed space telescopes that are too large to be launched as a single piece.

MALAWI

India has dispatched 1,000 metric tonnes of rice as humanitarian assistance to Malawi after a severe drought triggered by the El Niño caused a major food crisis.

What it is?

- Malawi is a landlocked country in southeastern Africa known for its agriculture-based economy and large freshwater lake system.
- The country is heavily dependent on subsistence farming, making it vulnerable to climate shocks such as droughts and floods.

Location: Malawi is located in **southeastern Africa** along the East African Rift Valley.
Capital City: Lilongwe
Neighbouring Nations: Tanzania, Mozambique, and Zambia.
Key Geographical Features

- **East African Rift Valley** – The country lies along the **Great Rift Valley**, shaping much of its topography.
- **Lake Malawi (Lake Nyasa)** – One of Africa's largest lakes, covering over one-fifth of Malawi's total area and forming part of its eastern boundary.
- **Shire River Valley** – The **Shire River**, the only outlet of Lake Malawi, flows southward into the **Zambezi River**.
- **Highlands and Plateaus** – Includes regions such as the Nyika Highlands and Shire Highlands, with elevations above 2,000 metres.
- **Mulanje Mountain Massif** – The **highest point in Malawi (3,002 m)** located in southeastern Malawi.
- **Lake Chilwa Basin** – A shallow inland lake system important for local fisheries and wetlands.

Significance:

- A large share of the population depends on subsistence agriculture and cash crops such as tea and tobacco.
- Lake Malawi is one of the largest and most biodiverse freshwater lakes in the world, supporting fisheries and livelihoods.

ASMITA INITIATIVE

Prime Minister recently shared an article on ASMITA initiative promoting women in sports.

About ASMITA Initiative:

- **Full form:** ASMITA stands for **Achieving Sports Milestone by Inspiring Women Through Action.**
- **Nodal ministry:** It comes under **Ministry of Youth Affairs and Sports.**
    - **Implementing authority:** The **Sports Authority of India (SAI)** supports National Sports Federations in conducting Khelo India women's leagues across multiple age groups at both zonal and national levels.
    - **Objective:** It aims to **promote women's participation in sports and identify grassroots talent** through dedicated leagues and competitions.

- **Launch:** It was started **in 2021.**
- **Rebranding:** It is a landmark vertical of the Khelo India Mission. It was **formerly known as the Khelo India Women's League.**
    - **Scope:** It covers **over 30 sports disciplines** (e.g., athletics, swimming, football) across hundreds of districts.
- **Categorisation:** These sports are conducted for **three age groups (Under-13, 13–18, and 18+ years).**
- **Significance:** The Khelo India ASMITA league is a **core component of the 'Khelo Bharat Niti,' promoting sports for nation-building** and women's empowerment.
- **Status:** Till now, the ASMITA League has witnessed participation of **almost 3 lakh women in 33 disciplines** across 2600 leagues.

DUDHWA TIGER RESERVE

Recently, in a rare incident a female one-horned rhinoceros was killed by two tigers in Sonaripur forest range of Rhino Rehabilitation Enclosure-I in Dudhwa Tiger Reserve.

About Dudhwa Tiger Reserve:

- **Location:** It is located on the Indo-Nepal border in the district of **Lakhimpur-Kheri in Uttar Pradesh.**
- **Establishment:** It was declared National Park in 1977 and **Tiger Reserve in 1988.**
- **Constituent areas:** It includes the **Dudhwa National Park and two nearby sanctuaries, viz. Kishanpur and Katerniaghat.**
    - **Indo-Nepal Border:** It shares a **transboundary link with Nepal's Bardia National Park,** facilitating genetic flow between tiger populations.
    - **Topography:** It represents a typical **Tarai-Bhabar habitat of the upper Gangetic plains,** consisting of marshy grasslands, swamps, and dense forests.
    - **Rivers:** The **Sharda River** flows by the Kishanpur WL Sanctuary, the **Geruwa River** flows through the Katerniaghat WL Sanctuary, and the **Suheli and Mohana streams** flow in the Dudhwa National Park, all of which are tributaries of the mighty Ghagra River.
    - **Vegetation:** The vegetation is of the **North Indian Moist Deciduous type,**containing some of the finest examples of Sal forests in India.
    - **Flora:** It mainly consists of Sal Forest (Shorea robusta) along with its associate tree species like **Terminalia alata (Asna), Lagerstroemia parviflora (Asidha), Adina cordifolia (Haldu),** etc.
- **Fauna:** Key species include Tiger, leopard, Swamp deer, Rhinoceros, chital, hog deer, barking deer, Sambhar, wild boar, and Ratel. It is the **only wildlife habitat in Uttar Pradesh where Tigers and One-horned Rhinoceroses coexist.**
- **Birds:** There are **over 400 species of birds** in the park, such as the **Florican and black-necked storks.**

KHARG ISLAND

The United States is considering seizing Iran's Kharg Island to choke off the regime's oil revenues, a US official has suggested.

About Kharg Island:

- **Location:** It is a small coral island **in Iran in the northern Persian Gulf.** It lies about 30 Km from the Iranian mainland.
- **Area:** Its area is **25 sq.km.,** its length is 8 km, and its width is 4.5 km.
- **Uniqueness:** This rocky limestone island is unique because it is **one of the few islands in the Persian Gulf with freshwater,** which has collected within the porous limestone.
- **Climate:** The island experiences **hot and humid summers**, and its highest point, Mount Didehban, stands at 87 meters above sea level.
- **Oil field:** The discovery of an offshore oil field in the waters around Kharg in the early 1960s stimulated the development of the island as a **site for major petroleum and petrochemical installations.**
- Connection by pipelines to the underwater oil fields transformed Kharg into **Iran's largest oil-loading terminal by the early 1970s.**
- **Reconstruction:** During the **Iran–Iraq war (1980–1988), Kharg repeatedly was bombed,** and its oil facilities suffered extensive damage, but they were reconstructed in the early 1990s.
- **Capacity:** It boasts a massive **storage capacity of 28 million barrels** and loading infrastructure capable of handling VLCCs and ULCCs. It has a loading capacity of about 7 million barrels per day. It can load eight to nine supertankers simultaneously.
- **Significance:** It facilitates as much as **90 percent of the country's oil exports** and is vital for Iran's economy. Its strategic significance lies in its **proximity to the Strait of Hormuz,** a crucial global oil passage.

WHITE PHOSPHORUS

Recently, the Human Rights Watch accused Israel of "unlawfully" using white phosphorus over residential parts of a southern Lebanese town.

About White Phosphorus:

- **Nature:** It is an **allotrope of phosphorus** (P_4), that turns yellow when exposed to light.
- **Pyrophoric character:** It **ignites spontaneously in air at temperatures above 30 °C** and continues to burn until it is fully oxidized or until deprived of oxygen.
- **Reactivity:** It is **insoluble in water** but soluble in organic solvents. Because of its high reactivity with oxygen, it is **typically stored under water** to prevent accidental combustion.
- **Toxicity:** It is **highly toxic if ingested or inhaled** and can cause severe, deep burns (often down to the bone) that are slow to heal and can reignite if exposed to air.

- **Appearance:** White (sometimes called yellow) phosphorus is a **white to yellow waxy solid with a garlic like odour.**
  - **Not a Chemical Weapon: Under the Chemical Weapons Convention (CWC),**white phosphorus is not classified as a chemical weapon because it relies on thermal energy (heat/flame) rather than toxicity to achieve its primary military effect.
- **Applications:**
  - It is often used **by militaries to illuminate battlefields**, to generate a smokescreen and as an incendiary.
  - It is used for military purposes **in grenades and artillery shells** to produce illumination, to generate a smokescreen and as an incendiary.
  - Its major industrial uses are in the **production of phosphoric acid, phosphates** and other compounds.
- These are also used to manufacture a range of products including **fertilizers and detergents.** Phosphorus has been used as a **rodenticide and in fireworks.**
- **Impact on Humans:**
- It is **harmful to humans by all routes of exposure.**
  - The smoke from burning phosphorus is also **harmful to the eyes and respiratory tract** due to the presence of phosphoric acids and phosphine.
  - It **can cause deep and severe burns**, penetrating even through bone.

SILENT VALLEY NATIONAL PARK

Recently, a comprehensive bird survey conducted in Silent Valley National Park documented 192 bird species.

About Silent Valley National Park:

- **Location:** It is located along the southwest corner of the Nilgiris in South India, in the **State of Kerala.**
    - **Etymology:** Named "Silent" by the British due to the **perceived absence of cicadas,** which typically create a buzzing sound in such forests
    - **Significance:** It is one of the last **undisturbed tracts of tropical rainforest** in India.
    - **Status:** It constitutes the centerpiece of the **Nilgiri Biosphere Reserve**, sanctified as a **World Heritage Site by UNESCO** in 2012.
- **Altitude:** The altitude of the park varies **between 658 to 2383 meters.**
- **River:** The **Kunthipuzha River** traverses the entire 15 km length of the park from north to south before joining the Bharathapuzha.
- **Vegetation:** It has four types of vegetation **"West Coast tropical evergreen forest, southern sub-tropical broad-leaved hill forest,** montane wet temperature forest, and grasslands.
- **Flora:** The flora of the valley includes about **1000 species of flowering plants, 107 species of orchids, 100 ferns and fern allies,** 200 liverworts, 75 lichens, and about 200 algae. Plants of high medicinal value as well as the towering Culinea trees are also found here.
- **Fauna:** It is famous for its population of **lion-tailed macaques, Nilgiri langur, Malabar giant squirrel, Indian elephant,** tiger, leopard, and gaur (Indian bison).
- **Tribes:** The area is home to indigenous groups including the **Irulas, Kurumbas, Mudugas, and Kattunaikkars,** whose ethnic heritage is protected within the region.

The Energy and Resources Institute (TERI) launched LaBL 2.0 (Lighting a Billion Lives 2.0) in New Delhi to expand decentralized renewable energy solutions across India.

About LaBL 2.0 (Lighting a Billion Lives 2.0):

What it is?

- LaBL 2.0 is a next-generation decentralised renewable energy (DRE) programme aimed at expanding clean energy access while enabling productive rural livelihoods and climate action.
- It builds upon the earlier Lighting a Billion Lives initiative (launched in 2008) that focused on providing solar lighting solutions to off-grid communities.

Launched By: The Energy and Resources Institute (TERI)

Aim:

- To expand clean and decentralized renewable energy access in rural and underserved regions.
- To promote green livelihoods and women-led enterprises.
- To integrate climate finance, carbon markets, and sustainable development goals into grassroots energy projects.

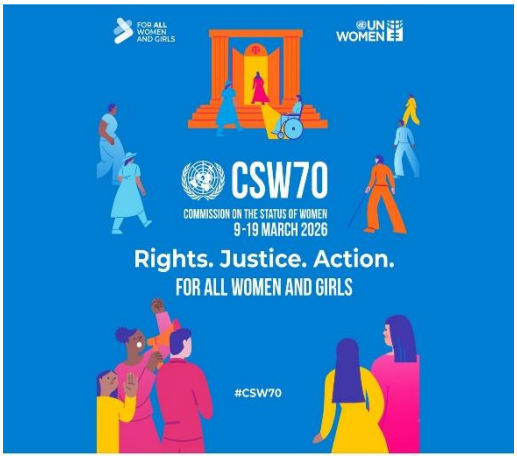
Key Features:

1. **Decentralized Renewable Energy (DRE) Expansion** – Promotes solar and other clean energy solutions in off-grid and rural areas.
2. **Green Livelihoods Creation** – Encourages productive use of energy for small businesses and rural enterprises.
3. **Women-led Entrepreneurship** – Focuses on empowering women as clean energy entrepreneurs.
4. **Carbon Accounting & Climate Outcomes** – Integrates Monitoring, Reporting and Verification (MRV) frameworks to measure climate benefits.
5. **Finance-ready Implementation Models** – Links decentralized projects with climate finance and carbon markets to attract investment.
6. **Flagship Projects** – Includes initiatives such as Hastinapur Model City, HUDCO Model Solar Village, GCC DRE Carbon Credit Program, and solar technology partnerships.

Significance:

- Supports India's energy transition and Net Zero 2070 commitments.
- Strengthens rural economic development and employment through clean energy.

COMMISSION ON THE STATUS OF WOMEN (CSW)



The Commission on the Status of Women (CSW) is holding its annual session at the United Nations Headquarters in New York, bringing together governments, UN agencies, and civil society to review global progress on gender equality.

About The Commission on the Status of Women (CSW):

What it is?

- The Commission on the Status of Women (CSW) is the principal global intergovernmental body dedicated to promoting gender equality and the empowerment of women.

- It operates as a functional commission of the United Nations Economic and Social Council (ECOSOC) and serves as the largest annual UN forum on women's rights and gender equality.

Established in:

- **1946**, through **ECOSOC Resolution 11(II) of 21 June 1946**.
- Its secretariat support is provided by **UN Women**, the UN entity for gender equality and women's empowerment.

Aim:

- To promote gender equality and protect the rights of women and girls worldwide.
- To develop international policy frameworks and recommendations that advance women's empowerment in political, economic, and social spheres.

Key Functions

1. **Policy Formulation** – Develops global policy recommendations and agreed conclusions to promote gender equality.
2. **Monitoring Implementation** – Reviews progress in implementing the Beijing Declaration and Platform for Action (1995) and other gender commitments.
3. **Standard Setting** – Contributes to international norms such as the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).
4. **Global Dialogue Platform** – Provides a forum for member states, UN agencies, NGOs, and civil society to discuss gender equality issues.
5. **Mainstreaming Gender Perspective** – Integrates gender considerations into broader UN programmes and policies.

Significance:

- Acts as the central UN platform for advancing women's rights globally.
- Helps shape international legal and policy frameworks on gender equality.

KERALA STATE CIVIL SERVICE ACADEMY

Established under Centre for Continuing Education Kerala (CCEK)

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