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News In Short

CHALLENGES LINKED TO HIGH SEAS TREATY

In News

- The High Seas Treaty, ratified by over 60 countries, will take effect in January 2026.

Origin and Evolution of Treaty

- The High Seas Treaty process began in **2004** when the UN General Assembly formed a working group to **address gaps in UNCLOS (1982) regarding Biodiversity Beyond National Jurisdiction (BBNJ).**
- By 2011, countries agreed to **negotiate four key areas**: Marine Genetic Resources (MGRs), Area-Based Management Tools (ABMTs), Environmental Impact Assessments (EIAs), and capacity building with technology transfer.
- After four Intergovernmental Conferences between 2018 and 2023, a final agreement was reached in March 2023, and the **treaty was formally adopted in June 2023 and ratified in September 2025.**

The Biodiversity Beyond National Jurisdiction (BBNJ) Agreement

- **Overview:**
  - The BBNJ Agreement, or High Seas Treaty, is a global framework under UNCLOS to **protect marine biodiversity** in international waters.
  - It establishes a global framework to **govern marine biodiversity in international waters.**
  - It designates **Marine Genetic Resources (MGRs)** as the common heritage of humankind, ensuring fair benefit-sharing.
- **Key Features:**
  - The treaty introduces **Area-Based Management Tools (ABMTs)**, including Marine Protected Areas (MPAs), to enhance climate resilience and food security by integrating scientific and indigenous knowledge.
  - It mandates **Environmental Impact Assessments (EIAs)** for activities with potential cumulative or transboundary effects.
  - It supports progress toward several Sustainable Development Goals, especially SDG14 (Life Below Water).
- **Significance:**
  - It aims to protect marine biodiversity and regulate sustainable use of ocean resources, tackling threats like climate change, overfishing, and pollution.
  - It promotes sustainable use through international cooperation, prohibits sovereign claims over high seas resources, and ensures fair benefit-sharing.
  - The treaty adopts an inclusive, ecosystem-based approach, integrating traditional and scientific knowledge.

Challenges

- The High Seas Treaty faces several challenges, including ambiguity between the principles of "common heritage of humankind" and "freedom of the high seas," especially regarding Marine Genetic Resources (MGRs), leading to unclear rules on access, research, and benefit-sharing.
- While the treaty introduces a framework for equitable sharing of MGR benefits, it lacks clarity on implementation, raising concerns about biopiracy and exclusion of developing nations.
- Its effectiveness is further threatened by the non-ratification of major powers like the U.S., China, and Russia.

Way Ahead

- The High Seas Treaty strengthens UNCLOS by introducing science-based rules for Environmental Impact Assessments (EIAs), Area-Based Management Tools (ABMTs), and benefit sharing.
- However, vague language around Marine Genetic Resources (MGRs) and the "common heritage of humankind" principle poses implementation challenges.
- Effective delivery of the BBNJ agreement will **require dynamic management of Marine Protected Areas (MPAs), regular monitoring**, and **integration** of **climate** and **biodiversity considerations** for resilient ocean governance.
- Additionally, the treaty must harmonize with existing institutions such as the International Seabed Authority and Regional Fisheries Management Organisations to avoid legal conflicts and fragmentation in ocean governance.

Source: TH

NEED FOR SHIFT FROM FOOD SECURITY TO NUTRITION SECURITY

Context

- At the inaugural session of the Emerging Science, Technology and Innovation Conclave (ESTIC) 2025 PM Modi urged the scientific community to **focus on moving from food security to nutrition security.**

Status of Food Security in India

- According to the **Third Advance Estimates for 2024-25,** India has achieved record foodgrain production of **353.96 million tonnes,** including **117.51 million tonnes** of wheat and 149.07 million tonnes of rice.
- **The National Food Security Act (NFSA), 2013** ensures subsidised foodgrains to about **81.35 crore beneficiaries**, covering 75% of rural and 50% of urban populations.
- As of July 2025, the **Food Corporation of India (FCI)** and state agencies have a total of **917.83 Lakh Metric Tonnes (LMT)** of covered and Cover and Plinth (CAP) storage capacity for central pool grains.
    - However food security does not ensure nutritional security.

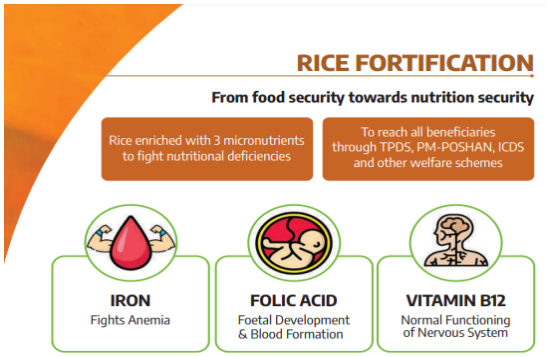
Parameter	Food Security	Nutrition Security
Focus	Calorie sufficiency	Adequate intake of macro & micronutrients
Goal	Prevent hunger	Ensure physical and cognitive well-being
Indicators	Grain availability, PDS coverage	Anaemia, stunting, obesity, diet diversity
Approach	Quantity-driven	Quality- and diversity-driven
Policy Orientation	Cereal-centric (rice & wheat)	Crop & diet diversification
Main Schemes	PDS, NFSA, Mid-Day Meal	Poshan Abhiyaan, ICDS, Food Fortification Mission
Measurement Metric	Food availability per capita	Nutrition outcomes and diet diversity
Sustainability Aspect	Short-term relief	Long-term health & sustainability

Need to focus towards Nutrition Security

- **Persistent Child Malnutrition:** According to NFHS-5 (2019–21).
    - 35.5% of children under five are stunted (low height-for-age).
    - 19.3% are wasted (low weight-for-height).
    - 32.1% are underweight.
- **Maternal and Women's Nutrition:** The proportion of malnourished women (BMI < 18.5) declined modestly from 22.9% to 18.7%, but anemia among women (15–49 years) remains alarmingly high at 57% (NFHS-5).
- **Micronutrient Deficiencies:** India faces widespread deficiencies of iron, vitamin A, zinc, and iodine.
    - The Comprehensive National Nutrition Survey (CNNS) found that over 50% of preschool children suffer from vitamin A or iron deficiency.
    - Such "**hidden hunger"** persists even in food-secure households that depend heavily on cereal-based diets.
- **Economic and Social Impact:** Malnutrition limits human capital development, reducing productivity, increasing healthcare costs, and perpetuating the cycle of poverty, thereby affecting national development goals.

Policy Initiatives Toward Nutrition Security

- **POSHAN Abhiyaan (National Nutrition Mission):** Launched in 2018, it aims to reduce stunting, undernutrition, and anemia through convergence across ministries.
    - **The revamped Mission POSHAN 2.0** integrates the Supplementary Nutrition Programme and Poshan Tracker App for real-time monitoring of children and women's nutrition.
- **Fortification of Foods:** The Government has mandated the distribution of fortified rice through the PDS, ICDS, and Mid-Day Meal schemes by 2028.
    - Fortification of edible oil, milk, and salt continues under FSSAI's Food Fortification Initiative.



- **The Integrated Child Development Services (ICDS)** provides supplementary nutrition, growth monitoring, and health education through Anganwadi centres.

- **Anaemia Mukt Bharat (2018)** targets reduction of anaemia among children, adolescents, and women.
- **Agricultural and Food System Diversification:** Promotion of millets and pulses to enhance dietary diversity, aligned with the success of the International Year of Millets 2023.
  - **Research on biofortified crops** (iron-rich bajra, zinc-rich wheat, protein-enriched maize) by ICAR to address hidden hunger.

Way Ahead

- **Enhance Dietary Diversity:** Expand the PDS basket to include pulses, millets, and edible oils.
- **Focus on the First 1,000 Days:** Strengthen maternal and child health services with emphasis on antenatal nutrition, exclusive breastfeeding, and complementary feeding.
- **Address Underlying Determinants:** Improve sanitation, safe drinking water, and women's education, all of which significantly influence nutrition outcomes.
  - **Empower women** through self-help groups (SHGs) and community mobilisation for dietary awareness.
- **Data-Driven Governance:** Use tools like Poshan Tracker, NFHS, and Health Management Information System (HMIS) for district-level targeting.
  - Focus on outcomes such as stunting reduction, not just input delivery.

Source: TH

INDIA AND BAHRAIN'S BILATERAL RELATIONS

Context

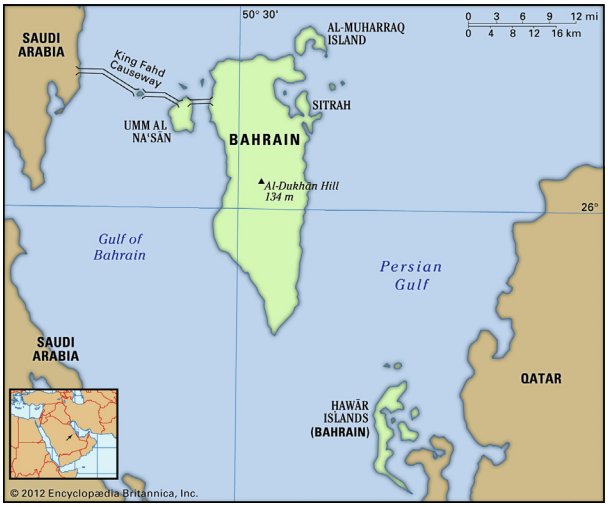
- External Affairs Minister S Jaishankar met Bahrain's Foreign Minister and discussed **cooperation in defence and security.**
  - India and Bahrain have agreed to **combat the threat of terrorism** through **enhanced bilateral and multilateral cooperation**.

Brief on India Bahrain Ties

- **Bilateral trade:** USD 1.64 billion (FY 2024–25); India among Bahrain's top **five trading partners.**
  - Emphasis on diversification into electronics, petroleum products, processed foods, base metals, gems & jewellery.
- **Investment Cooperation:** Two-way investments between the countries are growing, and have increased 40% since 2019.
  - From the first quarter of 2023 to the first quarter of 2024, there was a 15% increase in investments taking total two-way investments to $1.56 billion.
- **Space Cooperation:** Progress in collaboration between Bahrain Space Agency (BSA) and New Space India Limited (NSIL).
  - Draft MoU under finalization to enhance cooperation in satellite and space applications.
- **Defence and Security:** Both sides committed to enhancing defence and security cooperation, especially in regional maritime security.
- **Counter-Terrorism Cooperation:** Strong condemnation of terrorism in all forms, including cross-border terrorism.
  - Agreement to boost collaboration through intelligence sharing, capacity building, and cybersecurity initiatives.
- **Tourism:** The number of Indian tourists to Bahrain increased by 44% between 2022 and 2023 crossing 1 million tourist arrivals.
  - Indian e-visa for Bahraini nationals across 9 categories to boost tourism.
- **Cultural and People-to-People Ties:** Plans to celebrate 55 years of diplomatic relations in 2026 with cultural exchanges.
  - Bahrain is home to 332,000 Indians, and both sides also welcomed the contributions of the Indian diaspora in Bahrain.

Significance of Bahrain for India

- **Gateway to the Gulf:** Bahrain, located near the western shores of the Gulf, serves as a strategic entry point for India into the Gulf Cooperation Council (GCC) region.



- **Maritime Security Partner:** Its proximity to key sea lanes of communication (SLOCs) in the Arabian Gulf makes it crucial for ensuring the safety of energy supply routes and Indian shipping.
- **Energy Security:** Bahrain, though a smaller oil producer compared to other GCC states, plays a role in India's energy diversification strategy and refined petroleum trade.
- **Cultural Diplomacy:** Both sides are preparing to celebrate 55 years of diplomatic ties in 2026, showcasing long-standing friendship.

Way Ahead

- Bahrain fits into India's "Think West" policy, focusing on deeper engagement with the Gulf and Middle East.
- The relationship complements India's strong ties with UAE and Saudi Arabia, contributing to a stable and multipolar Gulf order favorable to Indian interests.

Source: IE

NITI AAYOG UNVEILS "REIMAGINING AGRICULTURE: ROADMAP FOR FRONTIER TECHNOLOGY LED TRANSFORMATION"

In News

- NITI Aayog's Frontier Tech Hub unveiled a major roadmap titled "Reimagining Agriculture: A Roadmap for Frontier Technology Led Transformation".

Key Features of the Roadmap

- **Frontier Technologies:** The roadmap focuses on integrating cutting-edge tools such as climate-resilient seeds, digital twins, precision agriculture, AI (including Agentic AI), and advanced mechanization.
- **Customization for Farmer Segments:** Farmers are categorized as Aspiring, Transitioning, and Advanced, with each group receiving tailored solutions to address their unique needs – from smallholders to commercial cultivators.
- **Pilots to Scale:** Start with high-impact use cases (variable-rate application, disease prediction, micro-irrigation scheduling) and scale through state programs and PPPs.
- **State-examples:** Gujarat is showcased as a leading example: digital crop survey, farmer registry, portal i-Khedut etc.

Potential Challenges in Adopting Frontier Tech

- **Land fragmentation:** With 86% of farmers being small and marginal (in earlier data) it is a structural barrier to adoption of precision farming or large-scale mechanisation.
- **Cost and return:** Frontier tech often comes with high upfront cost — question of affordability, access to finance, risk management.
- **Data ownership and privacy:** With increasing use of data, IoT, digital twins — issues around farmer data rights, cybersecurity, transparency become relevant.
- **State-centre coordination:** Agriculture is a state subject in India; launching a national roadmap is good but implementation will need state adaptation, resources, capacity.

Significance of Adopting Frontier Tech

- Higher yields with lower input intensity, improved profitability, and reduced post-harvest losses through predictive and precision operations.
- Enhanced climate resilience and food system stability, supporting India's bioeconomy and export competitiveness in high-value agri segments.

Source: PIB

HEAVY METALS CONTAMINATION

Context

- A recent study, published in Environmental Earth Sciences, reveals alarming levels of **heavy metal contamination** in fish species of Cauvery River, posing serious risks to ecosystems and public health.

About the Heavy Metals

- These are naturally occurring elements with **high atomic weights and densities.**
- While some like iron and zinc are essential in trace amounts, others such as **lead, mercury, arsenic and cadmium** are toxic even at low concentrations.
    - These pollutants settle in river sediments and **bioaccumulate in aquatic life,** entering the human food chain through fish and drinking water.

Sources of Contamination

- **Anthropogenic sources** like coal mining, smelting, leather tanning, and many more.

- **Natural sources:** Some heavy metals are naturally present in groundwater due to seepage from rocks, volcanic activities and forest fires

Contamination in Water Bodies

- **River System:** According to the **Central Water Commission (CWC),** toxic metals such as arsenic, cadmium, chromium, copper, nickel, and lead etc were found in concentrations exceeding permissible limits.
  - Rivers like the **Ganga, Yamuna, Cauvery, and Arkavati** showed multi-metal pollution, often linked to industrial discharge and untreated sewage.
- **Groundwater Contamination:** The Ministry of Jal Shakti confirmed that 36,873 rural habitations were affected by heavy metal contamination in groundwater.
  - Arsenic and fluoride were the most common pollutants, with cadmium and lead present in isolated pockets.
- **Contamination in Food Sources:** Fish from the Cauvery River and Kochi backwaters contained dangerous levels of mercury, lead, and cadmium.
  - Vegetables sold in Bengaluru markets were found to contain heavy metals beyond safe limits, according to a study by EMPRI Karnataka.

Impacts of Heavy Metal Contamination

- **Health Hazards:** Causes neurological damage, kidney failure, bone deformities, cancers, and developmental disorders in children.
- **Soil Degradation:** Reduces soil fertility and microbial activity, lowering crop yield and food quality.
- **Water Pollution**: Contaminates rivers and groundwater, leading to bioaccumulation in fish and aquatic food chains.
- **Economic Losses**: Affects agriculture, fisheries, and increases healthcare costs in contaminated regions.
- **Ecosystem Imbalance:** Disrupts biodiversity, alters nutrient cycles, and damages flora and fauna in affected ecosystems.

Remedies for Heavy Metal Contamination

- **Scientific and Technological Solutions:** Eco-friendly reduction methods like **adsorption, membrane filtration, and photocatalysis** are being refined for sustainable water treatment.
  - **Bioremediation**: Microorganisms and plants (e.g., Streptomyces Rochei) are used to absorb and detoxify metals from soil and water.
  - **Phytoremediation**: Certain plants can extract metals from contaminated soil, offering a low-cost and green solution.
  - **Biosorption:** It relies on the utilization of various types of raw materials derived from agro-waste, plant residue, and algal and microbial biomass.
  - **Reverse Osmosis:** Water is passed through a series of semi- permeable filters.
  - **Resin based water treatment technology:** It uses ion exchange resins — small, porous beads — to purify water by swapping undesirable ions for harmless ones.
- **KC Valley Project:** Karnataka's treated wastewater recharge initiative helped restore groundwater quality in drought-prone areas.
- **Community and Environmental Action:**
  - **Decentralized water treatment:** Emphasizes local solutions like sand filtration and activated carbon for rural communities.
  - **Land remediation:** Steel slag and other industrial byproducts are being repurposed to reduce soil toxicity.

Government Initiatives

- **National Clean Ganga Mission (NCG) and Namami Gange** target industrial effluent reduction.
- **National Aquifer Mapping & Management Programme (NAQUIM)** identifies heavy-metal zones.
- **Ban on leaded petrol (BS Norms)** and lead paint regulations (2016).
- **E-waste Management Rules (2022)** to curb toxic discharges.
- **National Programme on Prevention & Control of Fluorosis and Arsenicosis**

Source: TH

CHINA'S FIRST-EVER THORIUM FUEL CONVERSION PAVES WAY FOR 100MW MOLTEN-SALT REACTOR

Context

- China has successfully achieved the **first-ever conversion** of **thorium into uranium fuel** within a **Thorium Molten Salt Reactor (TMSR).**

About

- It is the **first time in the world** that scientists have been able to **acquire experimental data on thorium operations from inside a molten salt reactor.**
- The achievement makes the **2 megawatt liquid-fuelled thorium-based molten salt reactor (TMSR)** the **only operating example of the technology** in the world to have successfully loaded and used thorium fuel.

What is a Molten Salt Reactor (MSR)?

- It is a **fourth-generation nuclear reactor** that uses **molten salt as both fuel carrier and coolant,** instead of solid fuel rods and water.
- The reactor operates at **atmospheric pressure and high temperatures** (≈700°C).
- It allows **continuous circulation of liquid fuel,** enabling on-the-fly refuelling.
- **Thorium-to-Uranium Conversion Process:** Thorium-232 absorbs a neutron → becomes Thorium-233 → decays to Protactinium-233 → decays to Uranium-233 (fissile).
  - This creates a "**burn while breeding" cycle** – self-sustaining and highly fuel-efficient.
  - The **conversion occurs inside the reactor core,** eliminating the need for external fuel fabrication.

India's Thorium Reserves

- India has one of the largest reserves of thorium in the world.
- **Major thorium deposits** are found with large reserves in **Kerala, Odisha, Tamil Nadu, and Andhra Pradesh.**
  - Together, **Kerala and Odisha account for over 70%** of India's thorium.
- India has been developing a **three-stage nuclear program,** with thorium-based reactors being a critical part of the third stage.
- **Challenges:** Extracting thorium from ores requires high amounts of energy and creates significant waste.
  - While India has large thorium reserves, extracting it for nuclear energy use has faced challenges, including the need for advanced reactor technology and economic viability.

Key Advantages of TMSR

- **Safety:** Operates at atmospheric pressure; molten salts trap radioactive materials; automatic drain system for leak containment.
- **Efficiency:** Continuous fuel circulation allows full fuel utilisation and minimal waste.
- **Low Water Requirement:** No need for cooling water; suitable for inland or arid areas.
- **Reduced Radioactive Waste:** Produces less long-lived nuclear waste than uranium reactors.
- **Fuel Abundance:** Thorium is 3–4 times more abundant than uranium.

Program Development and Industrial Integration

- **Initiated:** 2011 under China's strategic nuclear energy program.
- **Milestones:**
  - **2023:** 2 MW liquid-fuelled TMSR achieved first criticality.
  - **2024:** Achieved full-power operation.
  - **2024:** First thorium-fuelled test conducted.
- **Goal:** To build a 100 MW demonstration plant by 2035 in the Gobi Desert.
- **Industrial Collaboration:** Nearly 100 Chinese institutions involved in design, materials science, and reactor engineering.
- **Self-Reliance:** All core components and supply chain are 100% domestically developed.

Strategic Significance for China

- **Energy Security:** Thorium reserves could potentially supply energy for tens of thousands of years.
  - Enables energy independence from imported uranium.
- **Resource Utilisation:** One mine tailings site in Inner Mongolia is estimated to hold enough of the element to power China entirely for more than 1,000 years.
- **Climate and Carbon Goals:** TMSR supports low-carbon energy systems, complementing solar and wind.
  - High-temperature heat can aid green hydrogen production.
- **Technological Leadership:** China now leads the world in operational thorium MSR technology, positioning itself at the forefront of fourth-generation nuclear innovation.
- **Strategic Sectors:** The country is exploring thorium-powered ships and lunar reactors for future moon bases.

Challenges and Limitations

- **Material Durability:** Molten salts are corrosive; reactor materials need to withstand extreme conditions.

- **Radioactive Handling:** Managing protactinium and uranium isotopes safely is complex.
- **Economic Viability:** High initial R&D and infrastructure costs.
- **Regulatory Framework:** Global safety and licensing standards for MSRs are still evolving.

Way Forward

- China aims for commercial-scale TMSR deployment by 2035.
- The success could reshape global nuclear energy by providing a sustainable, low-carbon alternative to fossil fuels and conventional uranium reactors.
- If scalable, thorium MSRs could be pivotal in achieving net-zero targets and ensuring long-term energy security.

Source: BS

NEWS IN SHORT

MALDIVES BECOMES FIRST NATION TO ENFORCE GENERATIONAL TOBACCO BAN

In News

- The Maldives has become the first country worldwide to impose a historic generational ban on tobacco and vaping.

What is Generational Ban?

- A generational ban on tobacco refers to a progressive legal prohibition designed to create a tobacco-free generation by banning tobacco sales and usage for all individuals born after a specified date.
- Under such a policy, people born beyond that cut-off year are permanently barred from buying, possessing, or using tobacco products throughout their lives, effectively phasing out tobacco use over time.

Status of Tobacco Consumption

- Tobacco-related diseases cause over 7 million deaths annually worldwide, making tobacco one of the leading causes of preventable death globally.
- India is among the largest consumers and producers of tobacco globally.
- Despite global anti-tobacco efforts like the WHO Framework Convention on Tobacco Control (WHO FCTC), 1.3 billion people still use tobacco products worldwide.
- India implements multiple tobacco control measures like bans on public smoking, pictorial health warnings, advertising restrictions, and the COTPA law.

Source: TH

ENCEPHALOMYOCARDITIS VIRUS (EMCV)

In News

- Delhi zoo's lone African elephant died from the **rare rodent-borne encephalomyocarditis virus (EMCV)** — the first such case reported in any Indian zoo.

Encephalomyocarditis Virus (EMCV)

- It is a small, non-enveloped single-stranded RNA virus that causes myocarditis, encephalitis, neurological disorders, reproductive issues, and diabetes across various mammalian species.
- Its pathogenesis is both strain- and host-specific, necessitating deeper research into its virulence factors.
- **Transmission** : Consumption of food and water contaminated with rodent urine or feces
  - Ingestion of rats or mice infected with EMCV
  - Transplacental (vertical) transmission in swine
  - Direct transmission between pigs has not been documented
- **Occurrence** : EMCV was first identified in 1945 from a gibbon in Florida, with the first pig case reported in Panama in 1958. It is now widespread globally, especially in South America, Australia, China, Europe, Canada, and the US.

Source :IE

NATIONAL COMPANY LAW APPELLATE TRIBUNAL (NCLAT)

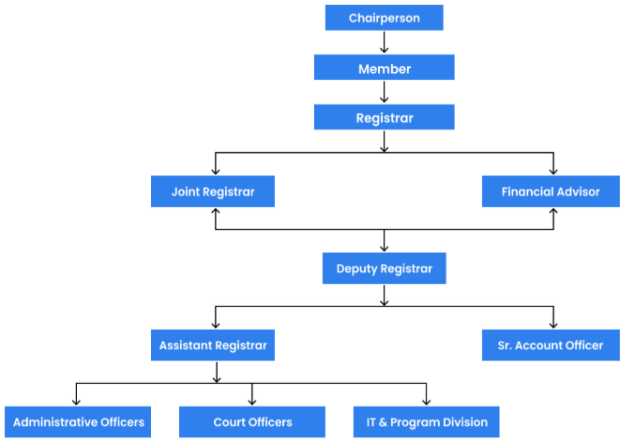
Context

- The Supreme Court refused to intervene with an order of the National Company Law Appellate Tribunal (NCLAT) which had allowed Aakash Educational Services Ltd, a subsidiary of Byju's, to proceed with its proposed rights issue.

About National Company Law Appellate Tribunal (NCLAT)

- The National Company Law Appellate Tribunal (NCLAT) was constituted under **Section 410** of the **Companies Act, 2013,** with effect from **2016.**

- It functions as a **quasi-judicial body** to hear appeals against orders of the National Company Law Tribunal (NCLT) and several other regulatory authorities.
- It also serves as the Appellate Tribunal for hearing appeals against orders passed by the
  - **National Company Law Tribunal** (under Section 61 of the Insolvency and Bankruptcy Code, 2016),
  - **Insolvency and Bankruptcy Board of India** (under Sections 202 and 211 of the IBC),
  - **Competition Commission of India (CCI),** and
  - **National Financial Reporting Authority (NFRA).**
- **Organization chart**



Source: LIVELAW

PRADHAN MANTRI FASAL BIMA YOJANA

In News

- The Union Agriculture Minister has ordered on-field investigations into **extremely low insurance payouts**—some as little as Re 1—under the **Pradhan Mantri Fasal Bima Yojana**, calling them a "mockery" and "injustice" to farmers.

Pradhan Mantri Fasal Bima Yojana (PMFBY)

- It was launched in 2016 to replace the existing National Agricultural Insurance Scheme (NAIS) and the Modified National Agricultural Insurance Scheme (MNAIS).
- It works on the **One Nation, One Crop, One Premium**.
  - Under the scheme, all farmers including sharecroppers and tenant farmers growing "notified crops" in the "notified areas" are eligible for coverage.
  - It was initially mandatory for loanee farmers, but was made optional for all in February 2020.
- **Coverage**: It covers all non-preventable natural risks from pre-sowing to post-harvest, ensuring financial support in the event of crop failure due to natural calamities, pests, or diseases.
  - It also covers individual farms nationwide for localized disasters like hailstorms, landslides, floods, and wildfires, as well as post-harvest losses from cyclones, heavy rain, and hail.
- **Premium**: Premium rates are capped at 2% for kharif crops, 1.5% for rabi crops, and 5% for horticultural crops, with the remaining subsidy initially shared equally by the Centre and states.
  - However, the Centre later capped its subsidy at 30% for unirrigated and 25% for irrigated areas. States failing to pay their share on time may be disqualified from implementing the scheme in the next season

Source :IE

COAL INDIA LIMITED (CIL)

Context

- Coal India Limited (CIL), is marking the completion of 50 years of its establishment.

About Coal India Limited

- CIL is a **Maharatna Public Sector Undertaking** under the **Ministry of Coal.**
- It was **established** in **November 1975.**
- **Headquarters:** Kolkata.
- **Products:** CIL produces coking coal, semi-coking coal, non-coking coal, washed and beneficiated coal, coal fines, and coke.
- CIL has 21 training Institutes and 76 Vocational Training Centres.
- **Strategic Relevance:** It contributes to **80%** of total domestic coal production and 75% of total coal based generation.

Source: PIB

NORTH EASTERN SCIENCE & TECHNOLOGY (NEST) CLUSTER

Context

- The Union Minister for Communications and Development of North Eastern Region inaugurated

the **North Eastern Science & Technology (NEST) Cluster** at IIT Guwahati.

About

- NEST Cluster will serve as the nerve centre of the **Northeast's innovation ecosystem,** transforming local wisdom into global solutions.
- **It will focus on four verticals:**
  - Grassroots Innovation; Semiconductors & Artificial Intelligence; Bamboo-Based Technologies; Biodegradable Plastics.
- **Investment in Assam:** Rs 6.2 lakh crore has been invested in the region through the 10% Gross Budgetary Support policy, boosting growth and connectivity.
  - Key projects like the Bogibeel Bridge, Bhupen Hazarika Setu, Sela Tunnel, and Jogighopa Multi-Modal Logistics Park have contributed to Assam's infrastructure development.
  - The Act East Policy has also opened new trade routes, cutting travel time between Kolkata and Agartala from 31 hours to just 10 via Bangladesh.
  - Projects worth Rs 6,500 crore in Darrang and Rs 18,530 crore across Assam have been launched, showing the Centre's continued focus on health, education, and industry.

Source: PIB

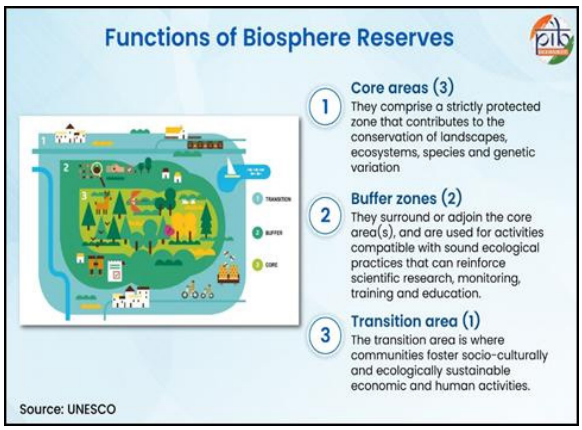
INTERNATIONAL DAY FOR BIOSPHERE RESERVES

Context

- The **International Day for Biosphere Reserves** was observed on 3rd November.

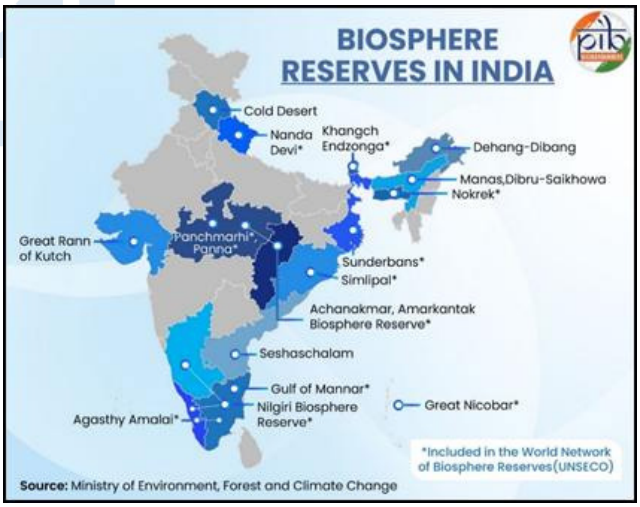
Biosphere Reserves

- **Biosphere reserves** are areas identified by national governments for conserving biodiversity and promoting sustainable development.
  - It includes terrestrial, marine and coastal ecosystems.
- They are nominated by **national governments and remain under the sovereign jurisdiction** of the states where they are located.



BRs in India

- India has **18 Biosphere Reserves** covering 91,425 sq. km, with **13 recognized by UNESCO.**
- The programme operates under a **Centrally Sponsored Scheme** with a 60:40 funding pattern, and 90:10 for North Eastern and Himalayan states.
- In 2025, India's **Cold Desert Biosphere Reserve** in **Himachal Pradesh** was included in UNESCO's World Network of Biosphere Reserves.
- National initiatives like Project Tiger, Project Elephant, and Green India Mission complement Biosphere Reserve efforts.



World Network of Biosphere Reserves (WNBR)

- The UNESCO World Network of Biosphere Reserves (WNBR) was formed in **1971.**
- It covers internationally designated protected areas, known as biosphere reserves, which are meant to demonstrate a balanced relationship between people and nature.
- They are created under the **Man and the Biosphere Programme (MAB).**

Source: PIB

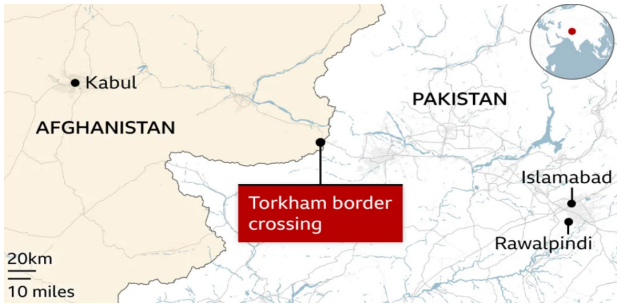
TORKHAM BORDER

Context

- The Torkham border crossing between Afghanistan and Pakistan has reopened after nearly weeks of closure following deadly border clashes.

About

- The **Torkham border** is a major crossing point between **Afghanistan and Pakistan**, located along the **Grand Trunk Road** on the international border.
- It connects **Nangarhar province** of Afghanistan with **Khyber Pakhtunkhwa province** of Pakistan.
- It is the **busiest port of entry** between the two nations, serving as a key hub for **transport, trade, and logistics**.



Source: AIR