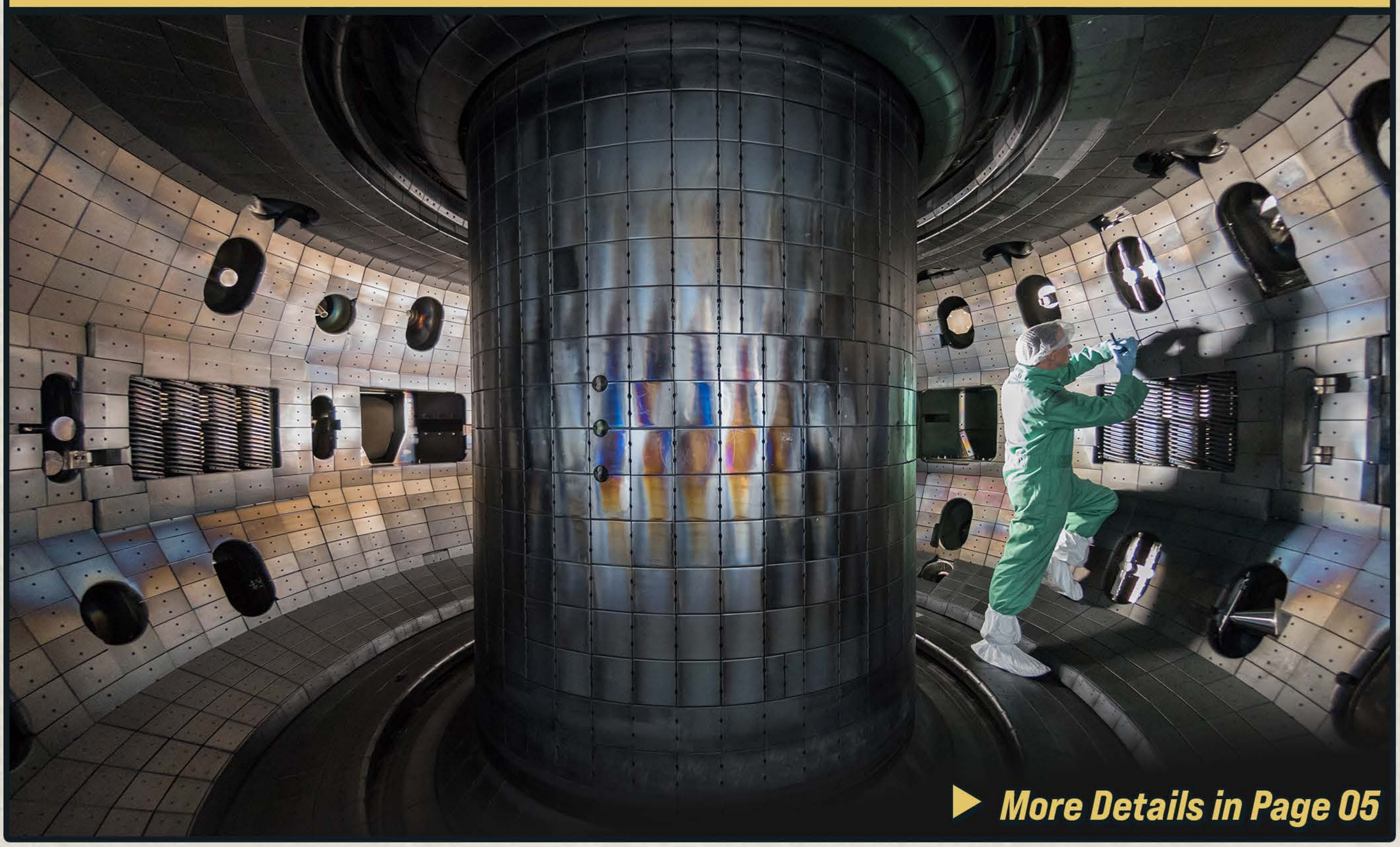
WEEKLY NEWS

July 07-13, 2024

Tokamak Fusion Technology



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Quantum Governance

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HIGHLIGHTS

- Thirty Meter Telescope
- Digital Economy
- Scientific Deep Drill

Codex Alimentarius Commission (CAC)

Why in News?

- India participated in the **86th session** of the Executive Committee (CCEXEC) of the **Codex Alimentarius Commission (CAC).**
- The **Food Safety and Standards Authority of India (FSSAI)** represented India, elected on a geographic basis (Asia), in the session held in **Rome**.

Key Highlights of the Session

- **Codex Guidance on Recycled Materials:** India proposed new guidance on recycled materials in food packaging.
- **Recycling Guidelines:** Shared guidelines developed by FSSAI on recycling polyethylene terephthalate (PET) containers and bottles.
- **Standards Development in Spices:** Advocated for the development of standards in spices such as cardamom, turmeric, and vanilla to facilitate smoother international trade.
- **Support for Other Standards:** Supported the development of standards for vegetable oils and guidelines for the control of Shiga Toxin-Producing Escherichia coli.

About Codex Alimentarius Commission (CAC)

- **Genesis:** Established jointly by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) in 1963.
- **Objective:** Protect consumer health and ensure fair practices in food trade by developing food standards known as Codex Alimentarius (CA). CA includes a collection of international standards, guidelines, and codes of practice. These standards are voluntary.
- **WTO SPS Agreement:** Encourages members to harmonize national regulations with Codex Alimentarius.
- **Membership:** Comprises 189 members (188 countries and 1 organization, the EU).
- **Headquarters:** Rome, Italy.

Related News

FSSAI's New Labelling Pattern:

Proposed nutritional information on total sugar, salt, and saturated fat in **bold letters** and **increased font size** on packaged food labels.

The **Food Safety and Standards (Labelling and Display) Regulations, 2020** require mentioning serving size and nutritional information on food product labels.

Significance: Aims to empower consumers to make healthier choices and combat the rise of non-communicable diseases (NCDs).

Way Forward

- **Enhanced Standards:** Continue advocating for and developing robust international food standards.
- **Consumer Empowerment:** Implement new labelling patterns to help consumers make informed and healthier food choices.
- **International Collaboration:** Strengthen participation and collaboration in international food safety and standards initiatives.

Establishment of PACS in All Villages

Why in News?

- **Call to Action:** During the **102nd International Day of Cooperatives,** the Union Minister of Home Affairs and Cooperation urged stakeholders to support the establishment of **Primary Agricultural Credit Societies** (PACS) in all villages and blocks of the country.

International Day of Cooperatives

- **Celebration:** Annually celebrated on the **first Saturday of July since 1923** by the **International Cooperative Alliance (ICA).**

About PACS

- **Grassroots Level:** PACS are the grassroots arms of the short-term cooperative credit structure.
- **Key Link:** Serve as the final link between ultimate borrowers and higher financing agencies such as Scheduled Commercial Banks, RBI, and NABARD.
- **Direct Interaction:** Directly deal with rural (agricultural) borrowers and also undertake distribution and marketing functions.
- **Current Numbers:** Approximately 65,000 functional PACS in the country.
- **Government Target:** Aim to have PACS in all Panchayats by 2029.

Significance of PACS

- **Foundation:** First building block of the cooperative banking system in India.
- **Farmer Support:** Brings farmer communities closer to credit, inputs, market, and value addition.
- **Integration Potential:** Can integrate its warehouse with physical and financial supply chains of agro-commodities in Gramin Agriculture Markets (GrAMs) or large private sector warehouses.

- ***Initiatives to Promote Cooperatives in India***
  - **Constitutional Status:** Constitution (Ninety-Seventh) (Amendment) Act, 2011 granted constitutional status to Cooperative Societies.
  - **Ministry of Cooperation:** Created in 2021 to realize the vision of **'Sahkar se Samriddhi'** (Cooperation to Prosperity).
  - **Legislative Support:** Multi-State Co-operative Societies (Amendment) Act, 2023 aims to strengthen governance, enhance transparency, increase accountability, and reform the electoral process in Multi-State Cooperative Societies.

- ***Way Forward***
  - **Stakeholder Engagement:** Active participation from cooperative stakeholders to establish PACS in all villages.
  - **Government Initiatives:** Continued support and implementation of government policies and amendments to strengthen the cooperative movement.
  - **Community Awareness:** Increase awareness about the benefits and roles of PACS among rural communities.
  - **Infrastructure Development:** Focus on developing the necessary infrastructure to support the establishment and efficient functioning of PACS.

Tokamak Fusion Technology

Why in News?

- **China's Achievement:** China has developed the world's first high-temperature superconducting Tokamak device named '**HH70**'.
- **International Progress:** The EU and Japan inaugurated **JT-60SA**, the world's largest and most advanced Tokamak fusion reactor, in Japan, pledging support to advance fusion research for the **International Thermonuclear Experimental Reactor (ITER).**

Key Features of Tokamak

- **Definition:** A Tokamak is a machine designed for controlled thermonuclear fusion with a **toroidal** (doughnut-like) shape.
- **Purpose:** Used to achieve controlled nuclear fusion reactions.

About Nuclear Fusion

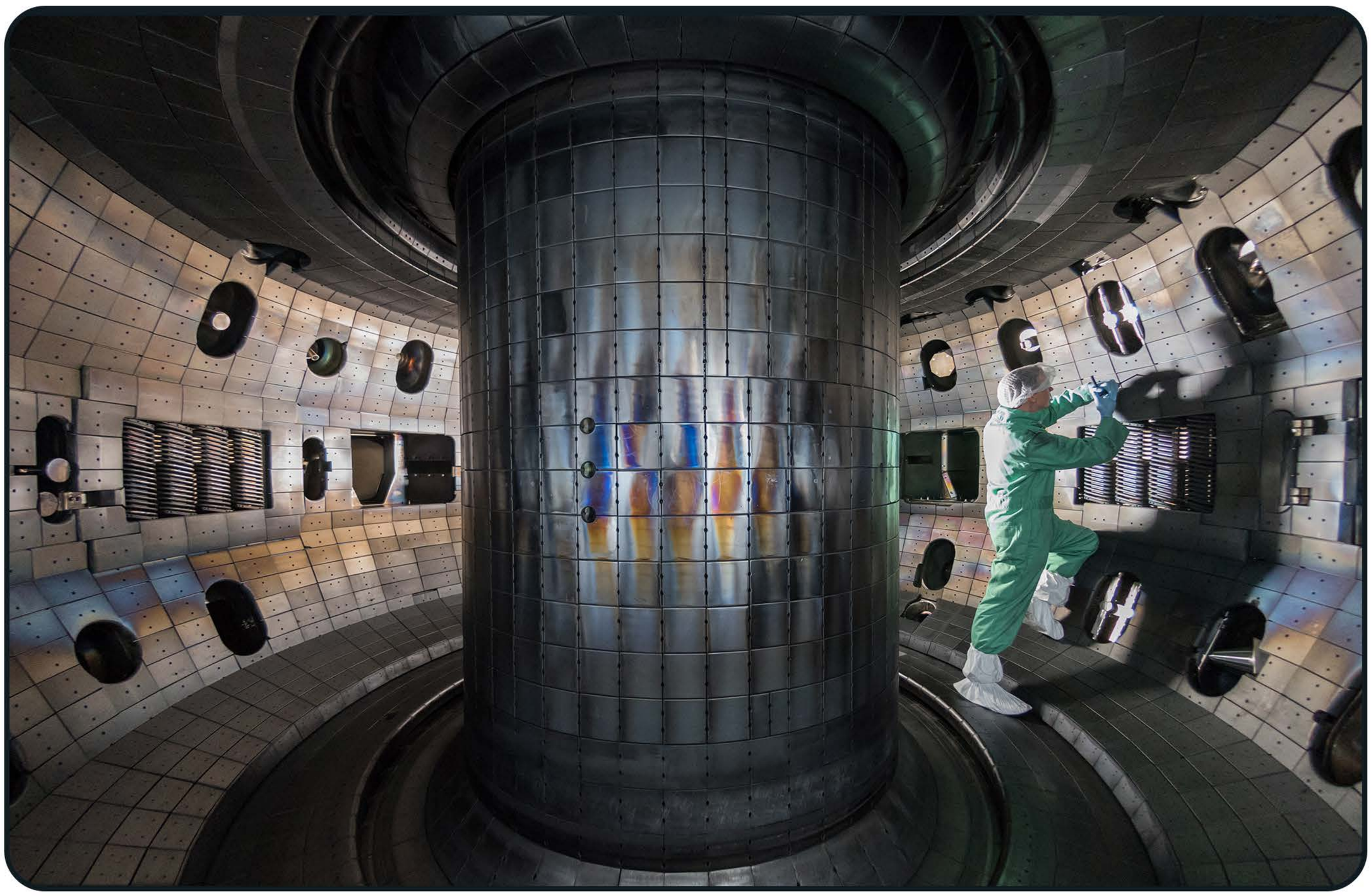
- **Fusion Process:** Involves combining two light atomic nuclei to form a single heavier nucleus, releasing massive amounts of energy.
- **Fission vs. Fusion:** Nuclear fission involves splitting large atomic nuclei into smaller nuclei, releasing energy.
- **Fuel:** Most fusion reactors use a mixture of deuterium and tritium, isotopes of hydrogen that contain extra neutrons.

About ITER

- **Global Partnership:** ITER is a collaboration among China, Europe, Japan, India, the Republic of Korea, Russia, and the US.
- **Location:** Currently under construction in France.
- **Objective:** To demonstrate the viability of fusion as a sustainable energy source.
- **Significance:** It will be the largest Tokamak device to test magnetic confinement for producing fusion energy.
- **Fusion Power Gain:** Designed for a high fusion power gain with a target of $Q \geq 10$, meaning the thermal output power is ten times the heating input power.
- **Current Record:** The European JET facility in the UK holds the current record for fusion power gain in a Tokamak with $Q = 0.67$.

- ***ITER-India***
  - **Membership:** India joined the ITER Project in 2005.
  - **Responsibility:** ITER-India, under the Institute for Plasma Research (IPR), is responsible for delivering ITER packages such as the Cryostat, In-wall Shielding, Cooling Water System, Cryogenic System, and Ion-Cyclotron RF Heating System.
  - **IPR:** An organization under the Department of Atomic Energy, Government of India.

- ***Way Forward***
  - **Continued Research and Development:** Focus on advancing Tokamak technology and nuclear fusion research.
  - **International Collaboration:** Strengthen international partnerships and collaboration to achieve common goals in fusion energy research.
  - **Support from Governments:** Encourage government support and funding to facilitate progress in nuclear fusion projects.
  - **Public Awareness and Education:** Increase public awareness and education about the benefits and potential of fusion energy as a sustainable and safe energy source.



New Comprehensive Mineral Policy

Why in News?

- **SBI** report emphasizes the need for a **new comprehensive mineral policy** to boost India's stagnant mineral production and address various sector challenges.

Need for New Mineral Policy

- **Low CAGR:** 5-year CAGR (FY19 to FY24) for most major minerals is in single digits or declining.
- **High Employment Potential:** Mining is labor-intensive; a 10% increase in mineral production could generate 50,000 - 70,000 daily jobs.
- **Import Reliance:** India is 100% import-dependent for certain critical minerals (e.g., lithium, graphite).
- **Other Challenges:** Bureaucratic hurdles, regulatory issues, and lack of infrastructure.

Recommendations of the Report

- **Comprehensive Policy:** Covering the entire value chain with advanced geoscience techniques and sustainable extraction methods.
- **International Collaboration:** Partnering with other countries for resource acquisition and technology exchange.
- **Enhancing Processing Capacity:** Increasing domestic capacity for mineral processing.
- **Private Sector Involvement:** Encouraging private sector participation in mining and mineral processing.
- **Policy Initiatives:** Introduction of Production Linked Incentives (PLI) and promoting a circular economy through recycling.

- ***Steps Taken to Promote the Mining Sector***
  - **Khanij Bidesh India Ltd. (KABIL):** Tasked with identifying and acquiring overseas minerals of critical and strategic importance.
  - **Legislative Amendments:** Mines & Mineral (Development and Regulation) Act, 1957 with amendments in 2015 and 2020.
  - **Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY):** Aimed at welfare of mining-affected areas and District Mineral Foundation (DMF).

- ***Way Forward***
  - **Policy Implementation:** Effective implementation of the comprehensive policy to ensure growth and sustainability in the mineral sector.
  - **Infrastructure Development:** Improving infrastructure to support mining activities.
  - **Stakeholder Engagement:** Active involvement of private sector and international partners in the mining value chain.

Call for Quantum Governance

Why in News?

- **Quantum Governance Advocacy:** Researchers and governments are advocating for Quantum Governance to harness the potential of Quantum Science & Technology.
- **Caution by Oxford:** The University of Oxford cautioned against inflated expectations of quantum technologies despite their significant potential.

Key Points on Quantum Governance

- **Need for Governance:**

  Potential Misuse: Quantum technologies, such as quantum computing and quantum sensors, carry risks due to their dual-use applications, especially in digital security.

  Framework Proposal: Calls for creating awareness and exploring the benefits of Quantum Governance.

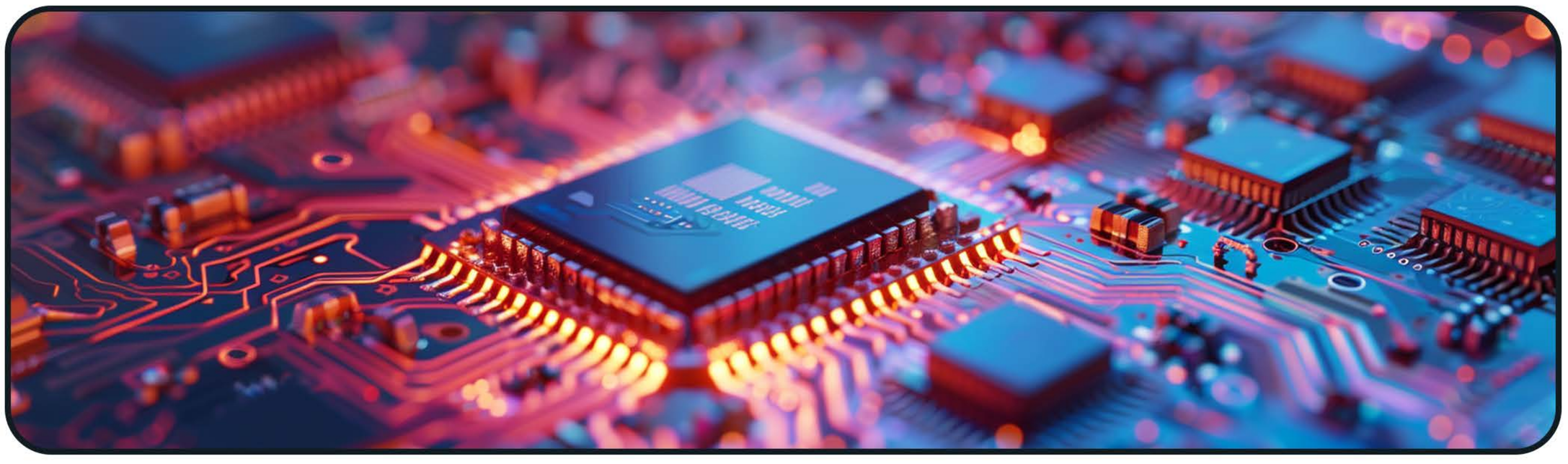
- **WEF Initiative:**

  Early Advocate: The World Economic Forum (WEF) was one of the first organizations to discuss quantum computing governance.

  Framework Principles: Based on transparency, inclusiveness, accessibility, non-maleficence, equitability, accountability, and the common good.

Significance of Quantum Governance

- **Development Acceleration:** Builds trust in quantum technology to accelerate responsible development.
- **Ethical Consideration:** Encourages addressing ethical issues during the design and development phases.
- **Learning from Other Technologies:** Applies ethical principles from AI, nanotechnology, and nuclear technologies.



Challenges

- **Open Frameworks vs. IP Protections:** Researchers favor open quantum frameworks, while national policies emphasize strong intellectual property protections.
- **Profit-Driven Private Sector:** The private sector's focus on profit may hinder responsible, open quantum development.
- **Limited Evidence:** There is limited evidence on the impact of responsible innovation policies in quantum governance.

About Quantum Technologies

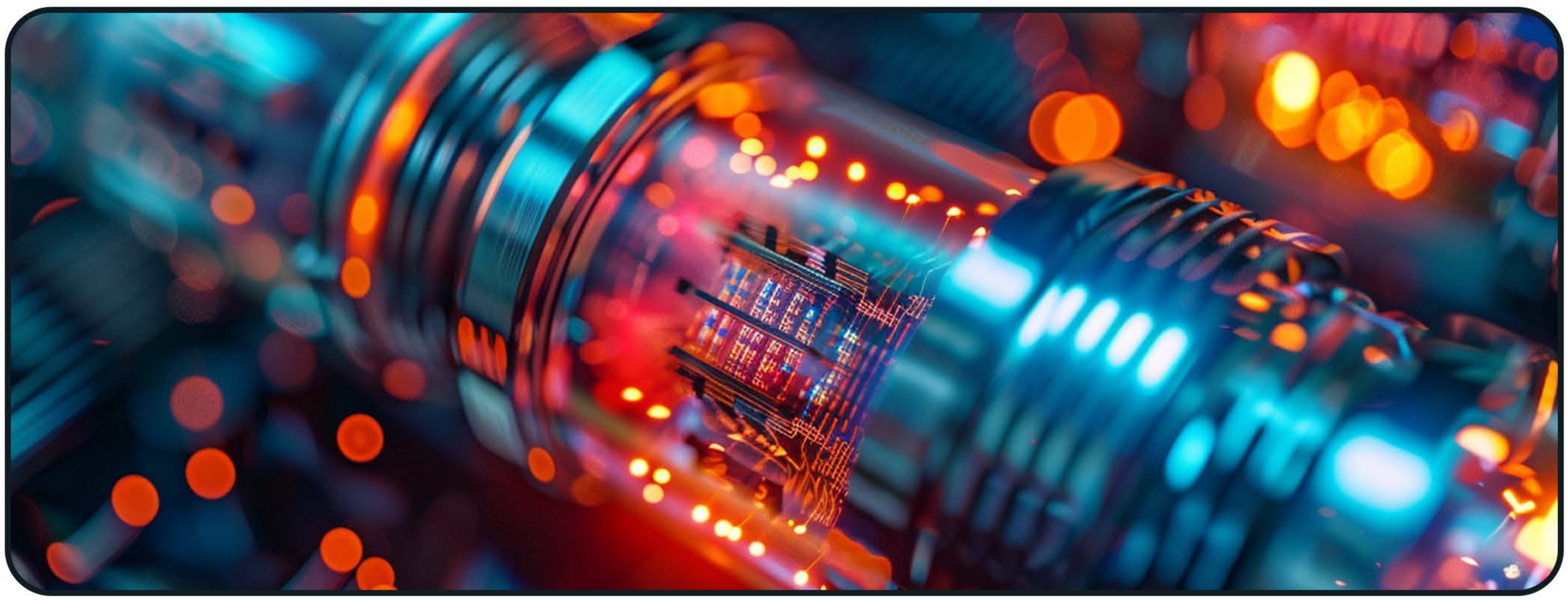
- **Foundation:** Based on quantum mechanics principles developed in the early 20th century.
- **Applications:** Secure communication, disaster management, computing, simulation, chemistry, healthcare, cryptography, etc.

Initiatives in India

- **National Mission:** Launched the National Mission on Quantum Technologies and Applications in 2023.
- **Quantum Hubs:** Establishment of 21 quantum hubs and 4 quantum research parks across India.

Way Forward

- **Policy Development:** Formulate policies that balance open research with intellectual property protections.
- **Public Awareness:** Increase public and stakeholder awareness about the benefits and risks of quantum technologies.
- **International Cooperation:** Collaborate internationally to develop standardized guidelines for quantum governance.
- **Responsible Innovation:** Promote responsible innovation through ethical considerations and inclusive policy-making.



Biodiversity Beyond National Jurisdiction (BBNJ) Agreement

Why in News?

- **Union Cabinet Approval:** The Union Cabinet has approved India's signing of the **Biodiversity Beyond National Jurisdiction (BBNJ) Agreement.**
- **Significance:** This marks a crucial step towards the conservation and sustainable utilization of marine biological diversity in areas beyond national jurisdiction.

BBNJ Agreement

- **Nature of the Agreement:** Part of the United Nations Convention on the Law of the Sea (UNCLOS). Also known as the **High Seas Treaty.**
- **High Seas Definition:** Areas beyond national jurisdiction, considered global commons open for lawful international activities such as navigation, overflight, and laying submarine cables and pipelines.
- **Adoption:** Adopted in 2023 by the Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction. Will become international law upon signing and ratification by at least 60 countries.
- **Implementation in India:** The **Ministry of Earth Sciences** is responsible for implementing the agreement.

Key Issues Addressed by the Agreement

- **Marine Genetic Resources:** Ensures fair and equitable sharing of benefits.
- **Area-Based Management Tools:** Includes the establishment of marine protected areas.
- **Environmental Impact Assessments:** Conducts assessments to manage environmental impacts.
- **Capacity-Building and Technology Transfer:** Focuses on building capacities and transferring marine technology.

About UNCLOS

- **Adoption and Purpose:** An international convention adopted in 1982 and came into force in 1994. Establishes a comprehensive legal framework for the world's oceans and seas.
- **Regulation:** Governs the use of ocean resources by countries.
- **Marine Zones:** Divides marine areas into zones: Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ), and High Seas.

Way Forward

- **Implementation and Compliance:** Ensure effective implementation of the BBNJ Agreement and compliance with its provisions.
- **Capacity Building:** Strengthen national capacities to manage and protect marine biodiversity.
- **International Collaboration:** Foster international cooperation to enhance the conservation and sustainable use of marine biological diversity.
- **Public Awareness:** Increase awareness among stakeholders about the importance and benefits of the BBNJ Agreement.

Ahom Era 'Moidams'

Why in News?

- The International Council on Monuments and Sites (**ICOMOS**) has recommended Assam's **Ahom Era Moidams** for inclusion in the UNESCO World Heritage List.
- ICOMOS is an advisory body of the UNESCO World Heritage Committee for the implementation of the World Heritage Convention.

About Ahom 'Moidam'

- **Location:** Situated in Assam's Charaideo district.
- **Historical Significance:** These are the burial grounds of rulers of the Ahom kingdom, often compared to the pyramids of Egypt.
- **Foundation:** Founded by Chau-lung Siu-ka-pha in the 13th century, who established his first capital at **Charaideo** (at the foothill of Patkai hills).

Significance

- **Historical Value:** Highlights the rich cultural and historical heritage of the Ahom kingdom.
- **Global Recognition:** Potential to increase global awareness and tourism in Assam.

Architectural Features

- **Exterior:** Hemispherical shape with varying sizes based on the status of the buried individual.
- **Major Features:**

  Vaulted Chamber: Centrally raised platform for the body.

  Hemispherical Mound: Earthen mound covering the chamber with a brick structure (Chaw-chali).

  Octagonal Boundary Wall: Surrounds the mound's base, featuring an arched gateway on the west.

- **Buried Objects:** Royal insignia, wood, ivory, iron objects, gold pendants, and other items used by the deceased.
- **Construction Materials:** Recorded in the Changrung Phukan (canonical text developed by the Ahoms), including wood, stone, and burnt bricks.

- ***Way Forward***
  - **UNESCO Recognition:** Awaiting final decision from the UNESCO World Heritage Committee.
  - **Cultural Preservation:** Efforts to preserve and maintain these historical sites for future generations.

Thirty Meter Telescope (TMT)

Why in News?

- **Development by Indian Scientists:** Indian scientists have developed an open-source tool to create a comprehensive star catalogue for the **Adaptive Optics System (AOS)** of the **Thirty Meter Telescope (TMT).**
- **Objective:** The tool will enable TMT to generate sharper astronomical images.

Key Features

- **Atmospheric Distortion:**

  Telescopes on Earth's surface face atmospheric distortion, affecting image quality.

  The distortion is more pronounced in telescopes with high light-collection capacities, like the TMT.

- **Adaptive Optics System (AOS):**

  AOS uses sophisticated, deformable mirrors controlled by computers to correct atmospheric turbulence in real-time.

  Requires a bright reference star near the object of study to measure and correct blurring.

  TMT's AOS, known as Narrow Field Infrared Adaptive Optics System (NFIRAOS), will be enhanced by a Laser Guide Star (LGS) facility and feedback from three real stars, known as Natural Guide Stars (NGS).

Ground-Based Astronomy

- **Description:** Involves large telescopes located on Earth's surface employing sophisticated optics to capture and analyze celestial objects. More cost-effective and easier to maintain compared to space-based telescopes.
- **Extremely Large Telescopes:** Includes the Thirty Meter Telescope, the Giant Magellan Telescope, and the European Southern Observatory.

- ***Thirty Meter Telescope (TMT)***
  - **Location:** Being installed at **Maunakea** in Hawaii.
  - **Development:** Designed and developed by the TMT International Observatory LLC (TIO), a non-profit international partnership.
  - **Partnership Involvement:** Includes the USA, Japan, India (Department of Science and Technology), and Canada.
  - **Indian Collaboration:**

    Indian Institute of Astrophysics (IIA), Bengaluru.

    Inter-University Center for Astronomy and Astrophysics (IUCAA), Pune.

    Aryabhatta Research Institute for Observational Sciences (ARIES), Nainital.

- ***Way Forward***
  - **Enhancement of Tools:** Continue developing advanced tools to further improve the accuracy and efficiency of the Adaptive Optics System.
  - **International Collaboration:** Strengthen international partnerships for shared knowledge and resources.
  - **Public Awareness:** Increase public awareness and understanding of the significance of ground-based astronomy and the advancements in technology.

Landslide in Papua New Guinea

Why in News?

- **Humanitarian Assistance:** India has sent humanitarian aid to Papua New Guinea after a devastating landslide.
- **Showcase of Commitment:** This action highlights India's dedication to the Forum for India–Pacific Islands Cooperation (FIPIC) partnership.

Key Details of the Assistance

- **Humanitarian Assistance and Disaster Relief (HADR):** Demonstrates India's commitment to providing timely support to partner countries in times of need. Enhances the bilateral relationship between India and Papua New Guinea.

About Forum for India–Pacific Islands Cooperation (FIPIC)

- **Formation:** Established in 2014 to foster cooperation between India and 14 Pacific Island nations.
- **Member Nations:**

  Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Samoa, Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu, and Vanuatu.

  These islands are part of three major groups: Melanesia, Micronesia, and Polynesia.

- **Objectives:**

  Facilitate trade and investment through business exchanges and other collaborative efforts.

  Promote sustainable development and mutual growth.

Significance of FIPIC for India

- **Economic Interests:** Access to large Exclusive Economic Zones (EEZs) rich in natural and mineral resources like natural gas.
- **Geostrategic Interests:**

  Strengthening India's influence in the Indo-Pacific region.

  Aligns with India's vision of a free, open, and inclusive Indo-Pacific, countering China's influence.

  Enhances India's maritime strategy, leveraging its rising naval capabilities.

- ***Way Forward***
  - **Strengthening Partnerships:** Continue fostering strong relationships with Pacific Island nations through FIPIC. Engage in regular dialogues and collaborative projects to enhance mutual benefits.
  - **Enhancing Support Mechanisms:** Develop robust mechanisms for timely and effective humanitarian assistance and disaster relief. Leverage India's capabilities in disaster management and relief operations.
  - **Expanding Economic Ties:** Promote trade and investment opportunities with Pacific Island nations. Encourage business exchanges and partnerships to boost economic growth.
  - **Strategic Cooperation:** Work towards a cohesive and cooperative strategy in the Indo-Pacific region. Align FIPIC initiatives with India's broader foreign policy and strategic interests.

Digital Economy Report 2024 by UNCTAD

Why in News?

- **Release of Report:** UN Trade and Development (UNCTAD) released the Digital Economy Report 2024.
- **Urgent Need:** The report emphasizes the urgent need for sustainable strategies throughout the digitalization lifecycle for an environmentally sustainable and inclusive digital future.

Key Findings

- **Increase in Internet Users:** From 1 billion in 2005 to 5.4 billion in 2023.
- **Environmental Footprint of Digitalization:**

  GHG Emissions: The ICT sector accounted for 1.5–3.2% of global GHG emissions in 2020.

  E-waste: Digital-related waste increased by 30% from 2010 to 2022, reaching 10.5 million tonnes globally.

  Water Footprints: Data centres consumed 460 terawatt hours in 2022, expected to double by 2026.

  Critical Minerals Supply: Demand for minerals like graphite, lithium, and cobalt could surge by 500% by 2050, potentially leading to inefficient processes and larger environmental footprints.

Key Recommendations

- **Adopt Circular Economy Models:** Promote reuse, recycling, and reduction of waste in digital products.
- **Strengthen Regulations:** Enforce tougher environmental standards for the ICT sector.
- **Invest in Renewable Energy:** Support R&D of energy-efficient technologies and renewable energy sources.
- **Incentivize Sustainable Business Models:** Promote new business models such as electronic products as a service.

- ***About UN Trade and Development (UNCTAD)***
  - **Genesis:** Established in 1964 as a permanent intergovernmental body by the United Nations General Assembly.
  - **Objective:** Aid developing countries, especially the least developed and transitioning economies, in effectively integrating into the global economy.
  - **Members:** 195 nations, including India.
  - **Flagship Reports:** Trade and Development Report, World Investment Report, etc.
  - **Headquarters:** Geneva, Switzerland.

Scientific Deep Drilling

Why in News?

- **India's Sole SDD Programme:** The Borehole Geophysics Research Laboratory (BGRL), under the Ministry of Earth Sciences, is executing India's only Scientific Deep Drilling (SDD) programme.

About Scientific Drilling at Koyna

- **Objective:** Drill the Earth's crust to a depth of 7 km for scientific observations.
- **Reason for Choosing Koyna:**

  Recurrent earthquakes since the impounding of Koyna Dam (Shivaji Sagar Lake) in 1962.

  Example of Reservoir Triggered Seismicity (RTS) near India's west coast.
- **Techniques Used:**

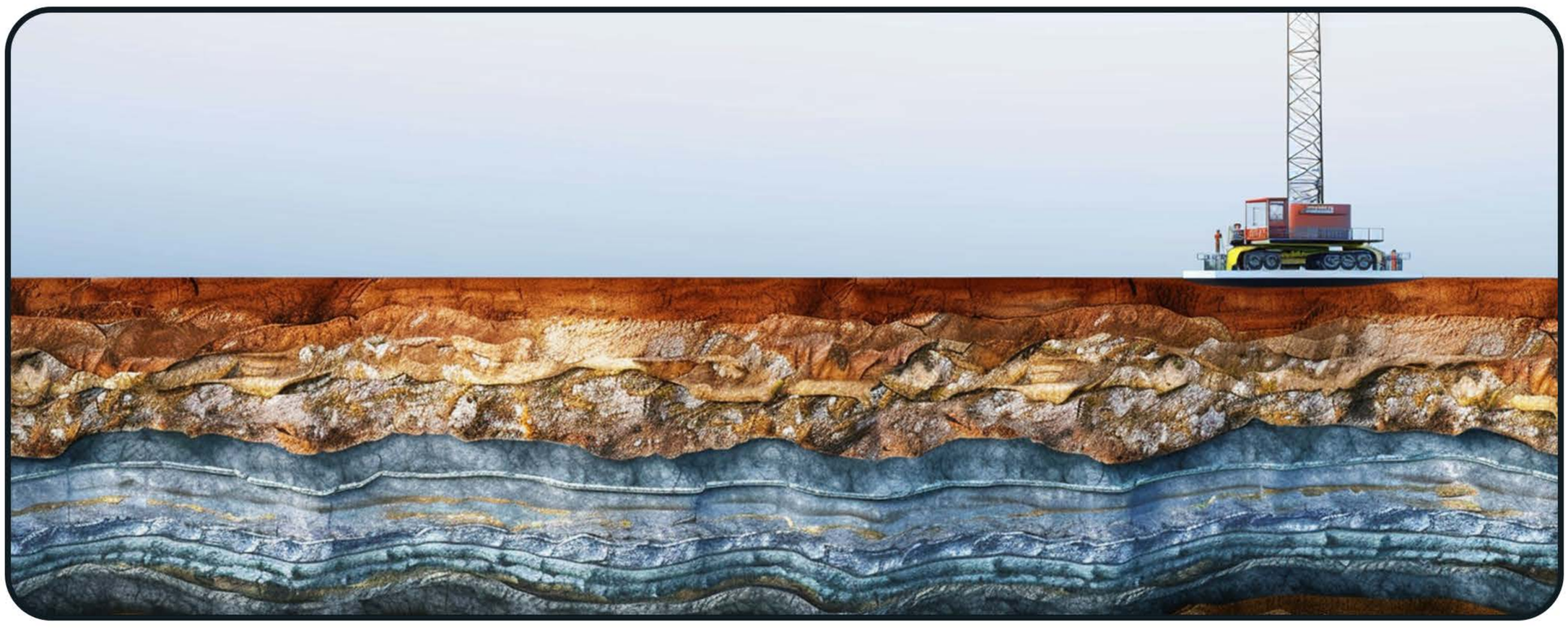
  Hybrid Drilling: Combination of mud rotary drilling and percussion drilling (air hammering).

  Rotary Drilling: Uses a steel rod to cut rocks, cooled by drilling mud.

  Air Hammering: Uses compressed air to deepen the borehole and remove debris.

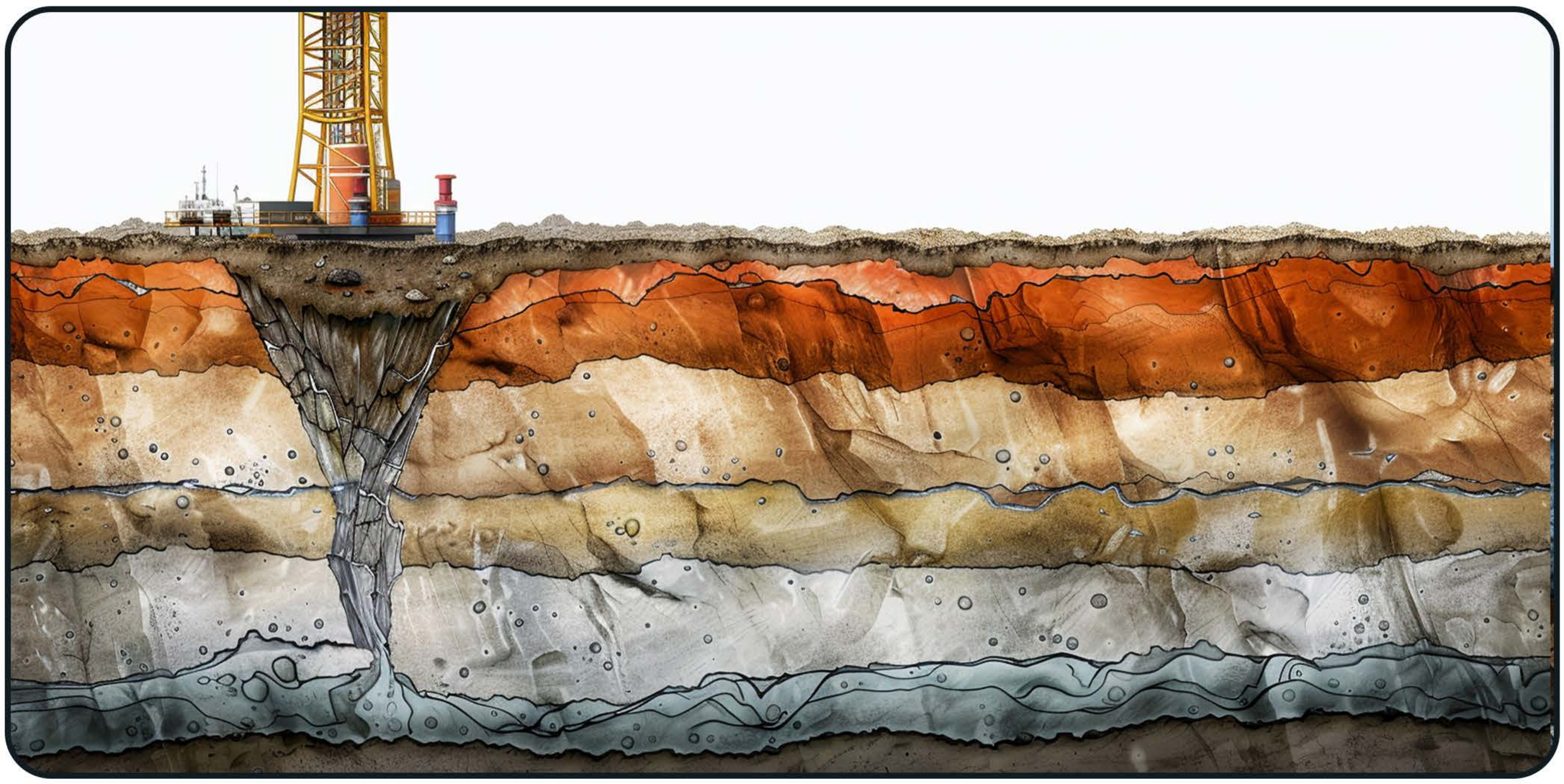
Associated Challenges

- **Labour and Capital-Intensive:** Requires meticulous planning and expertise.
- **Increasing Load:** The load on the hook increases with borehole depth.
- **Nature of Earth's Interior:** Hot, dark, and high-pressure conditions hinder long operations.



- ***Significance of Scientific Drilling at Koyna***
  - **Earthquake Studies:** Provides opportunity and access to study earthquakes.
  - **Geological Insights:** Expands understanding of planet's history, active fault zones, rock types, energy sources, and life forms.
  - **Deccan Volcanism and Mass Extinction:** Offers insight into these phenomena.
  - **Geothermal Potential:** Evaluates the geothermal potential of the West Coast Belt.
  - **RTS Mechanism:** Aids in developing a model for Reservoir Triggered Seismicity mechanisms.

- ***Way Forward***
  - **Enhanced Research:** Promote further research and development in scientific deep drilling techniques.
  - **Collaborations:** Foster international collaborations to share knowledge and expertise.
  - **Resource Allocation:** Ensure adequate funding and resources for continuous and advanced drilling operations.



SCOMET

Why in News?

- **Seizure by Indian Security Agencies:** A consignment containing the internationally banned chemical **Ortho-Chloro Benzylidene Malononitrile,** used in tear gas and riot control, was seized at a port in **Tamil Nadu.**

Key Details of the Seizure

- **Legal Provisions:**

  Seized under the **Customs Act, 1962.**

  Seized under the **Weapons of Mass Destruction and Delivery Systems (Prohibition of Unlawful Activities) Act, 2005.**

- **Export Control:**

  The chemical is listed on India's export control list '**SCOMET**' as a controlled substance.

  Export permitted only against an export authorization.

About SCOMET List

- **Definition:**

  Stands for **Special Chemicals, Organisms, Materials, Equipment, and Technologies.**

  It is the National Export Control List of dual-use items, munitions, and nuclear-related items, including software and technology.

- **Dual-Use Items:**

  Goods and technologies with both civilian and military applications.

  Named as SCOMET under **Foreign Trade Policy, 2023.**

- **Export Regulations:**

  Export of dual-use items and technologies is either prohibited or permitted under a license.

  Notified under Indian Trade Clarification based on Harmonized System [ITC (HS)] Classification.

- ***Multilateral Export Control Regimes***
  - **Wassenaar Arrangement (1996):** Controls conventional arms and dual-use goods and technologies.
  - **Nuclear Suppliers Group (NSG) (1974):** Manages transfers of civilian nuclear material and nuclear-related equipment and technology.
  - **Missile Technology Control Regime (MTCR) (1987):** Limits the spread of ballistic missiles and other unmanned delivery systems.
  - **Australia Group (1985):** Regulates chemical and biological weapons.

- ***India's Membership***
  - **Membership Status:** India is a member of all the above control regimes except the NSG.

- ***Way Forward***
  - **Strengthening Controls:** Enhance monitoring and enforcement of export control regulations to prevent unauthorized shipments.
  - **International Cooperation:** Collaborate with international bodies to align and strengthen export control measures.
  - **Awareness and Compliance:** Increase awareness among exporters about the regulations and ensure compliance with the SCOMET list and related laws.
  - **Technological Integration:** Use advanced technology for tracking and monitoring exports to prevent illegal activities.

SDG India Index 2023-24

Why in News?

Release by NITI Aayog: NITI Aayog has released the 4th edition of the Sustainable Development Goal (SDG) India Index 2023-24.

Key Features

Measurement and Tracking:

Tracks national progress of all States and Union Territories (UTs) on 113 indicators.

Indicators aligned to the Ministry of Statistics and Programme Implementation's National Indicator Framework.

Composite Score Calculation:

Aggregates performance across 16 SDGs for each State/UT.

Scores range between 0–100; a score of 100 indicates achievement of 2030 targets.

Categorization of States:

Achiever: Score of 100

Front Runners: Scores between 65-99

Performers: Scores between 50-64

Aspirants: Scores between 0-49

Key Findings

➪ National Level

Overall Score Improvement: India's composite score improved from 66 in 2020-21 to 71 in 2023-24.

Significant Progress in Specific Goals:

Goals 1 (No Poverty), 8 (Decent Work and Economic Growth), and **13** (Climate Action) have shown significant progress and are now in the front runner category.

Goal 13 recorded the highest increase in score, followed by **Goal 1.**

Impact of Government Interventions:

Programs like **Pradhan Mantri Awas Yojana** (Goal 11), **Swachh Bharat Mission** (Goal 6), and **Ayushman Bharat** (Goal 3) have led to rapid improvement.

➪ **State/UT Level**

Overall Improvement: All States have shown an improvement in their overall scores.

Front Runner Category: 32 States and UTs are in the front runner category.

Performer Category: 4 States: Meghalaya, Nagaland, Jharkhand, Bihar.

➪ **Top Performers:**

States: Uttarakhand and Kerala with scores of 79 each.

Top UT: Chandigarh.

Way Forward

➪ **Continued Focus on Improvement:** States and UTs should continue to implement targeted interventions to improve their scores further.

➪ **Sharing Best Practices:** Encourage sharing of successful strategies and programs among States and UTs to foster overall national progress.

➪ **Strengthening Data Collection:** Enhance data collection and reporting mechanisms to ensure accurate tracking of SDG progress.

➪ **Inclusive Development:** Focus on inclusive development to ensure that no region or demographic group is left behind in the progress towards achieving SDGs.

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