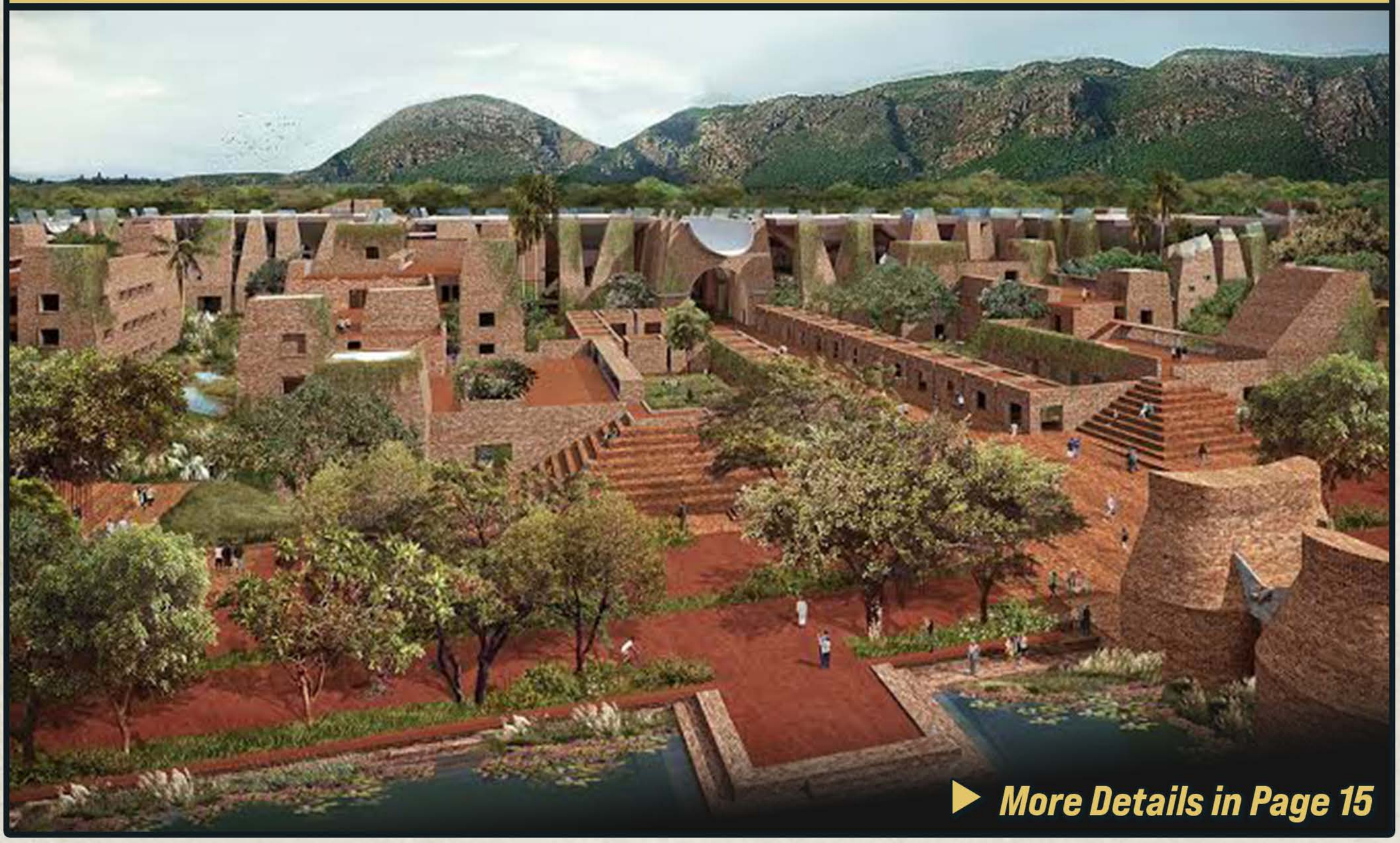
WEEKLY NEWS

June 16-22, 2024

Nalanda University: Revival and Historical Significance



▶ More Details in Page 15

Persistent Organic Pollutants (POPs)

▶ More Details in Page 07

HIGHLIGHTS

- India's DeepTech Dawn
- Arbitration
- Railway Safety in India

Democratization of Technology (DoT)

Overview

- **Definition:** The process by which access to technology becomes more widespread among the larger population.
- **Key Facets:** Accessibility, affordability, decentralization, skill development, shared resources.

Significance of DoT

- **Economic Impact:**

  Enables individuals and small businesses to leverage tech platforms to start new ventures.

  Drives economic growth, job creation, and income opportunities through innovation and competition.

- **Social Impact:**

  Bridges digital divides and provides access to educational resources, healthcare information, financial services.

  Enables social mobility, exemplified by Massive Open Online Courses offered by NPTEL.

- **Cultural Impact:**

  Social media platforms like Twitter and Instagram give voice to diverse communities.

  Facilitates the sharing of cultural content globally.

- **Governance Impact:**

  Facilitates greater citizen engagement, public discourse, and accountability in governance.

  Enhances decision-making processes, with examples like social media outreach to public service beneficiaries.

Challenges in DoT

- **Digital Divide and Infrastructure Gap:**

  Lack of reliable and affordable internet connectivity, particularly in remote and rural areas.

- **Gender and Social Inequities:**

  Persistent gender disparities in access to education, employment, and resources exacerbate the digital divide.

- **Cybersecurity and Privacy Concerns:**

  Concerns about data privacy and online fraud can deter individuals and organizations from fully embracing technology.

Steps Taken for DoT in India

- **Digital Public Infrastructure:** Development of 'India Stack' for digital identification, payments, and data management.
- **Common Service Centres:** Creation of access points for the delivery of Government-to-Citizen (G2C) e-Services within reach of citizens through physical service delivery ICT infrastructure.
- **NAMO Drone Didi Initiative:** Assistance for Women Self-Help Groups (SHGs) to purchase drones for farming purposes.
- **India AI Mission:** Aimed at democratizing the benefits of AI across all strata of society.

Way Forward

- **Enhancing Infrastructure:** Invest in reliable and affordable internet connectivity, especially in remote and rural areas.
- **Promoting Inclusivity:** Address gender and social inequities to ensure equal access to technology.
- **Strengthening Cybersecurity:** Implement robust data privacy and security measures to build trust in digital platforms.
- **Skill Development:** Promote digital literacy and skill development programs to empower more individuals to use technology effectively.
- **Encouraging Innovation:** Support innovation and the creation of tech-driven solutions to address local and global challenges.

India-Italy Strategic Partnership

Why in News?

- Prime Ministers of India and Italy reviewed progress on the sidelines of the G7 Summit.
- Agreed to **strengthen cooperation** in global and multilateral initiatives, including the **India-Middle East-Europe Economic Corridor (IMEC).**

Key Aspects of Bilateral Partnership

Political Relations

Historical Context: Political relations established in 1947, elevated to a **Strategic Partnership in 2023.**

Action Plan: In a Virtual Summit in 2020, a 2020-2025 Action Plan was adopted to enhance the partnership between the countries.

Economic Cooperation

Trade Relations: Italy is **India's 4th largest trading partner** in the EU, following **Germany, Belgium, and the Netherlands.**

Economic Commission: The **Indo-Italian Joint Economic Commission Cooperation** has been active since 1976.

Migration Agreement: A **Migration and Mobility Partnership Agreement** was signed in **2023** to ensure safe and legal migration.

Technology Collaboration

Science & Technology Agreement: A new Science & Technology Cooperation Agreement was signed in **November 2003,** focusing on Electronics, Biotechnology, Energy, and more.

Future Cooperation: A new **Executive Programme of Cooperation** for 2025-27 aims to promote joint research and development in Science & Technology.

Defence and Security

Indo-Pacific Ocean Initiative: In 2023, Italy joined the **Science and Technology Pillar** of the Indo-Pacific Ocean Initiative.

Joint Military Exercises: Participation in **PASSEX** Exercise and **MILAN Naval** Exercises.

Cooperation in Multilateral Bodies

International Alliances: Italy joined India-led **International Solar Alliance, Coalition for Disaster Resilient Infrastructure, Global Biofuels Alliance, and IMEC.**

- ***Way Forward***
  - **Strengthening Political Ties:** Continue to build on the strategic partnership with regular high-level exchanges.
  - **Enhancing Economic Relations:** Explore new areas of economic cooperation and boost trade and investment.
  - **Expanding Technological Collaboration:** Focus on joint research in emerging technologies and innovation.
  - **Increasing Defence Cooperation:** Deepen collaboration in defence and security through more joint exercises and initiatives.
  - **Promoting Multilateral Cooperation:** Work together in global and multilateral forums to address common challenges.

Solid Waste Management Cess

Why in News?

- Bruhat Bengaluru Mahangara Palike (BBMP) has proposed a Solid Waste Management (SWM) Cess of ₹100 per month for each household.

Solid Waste Management Overview

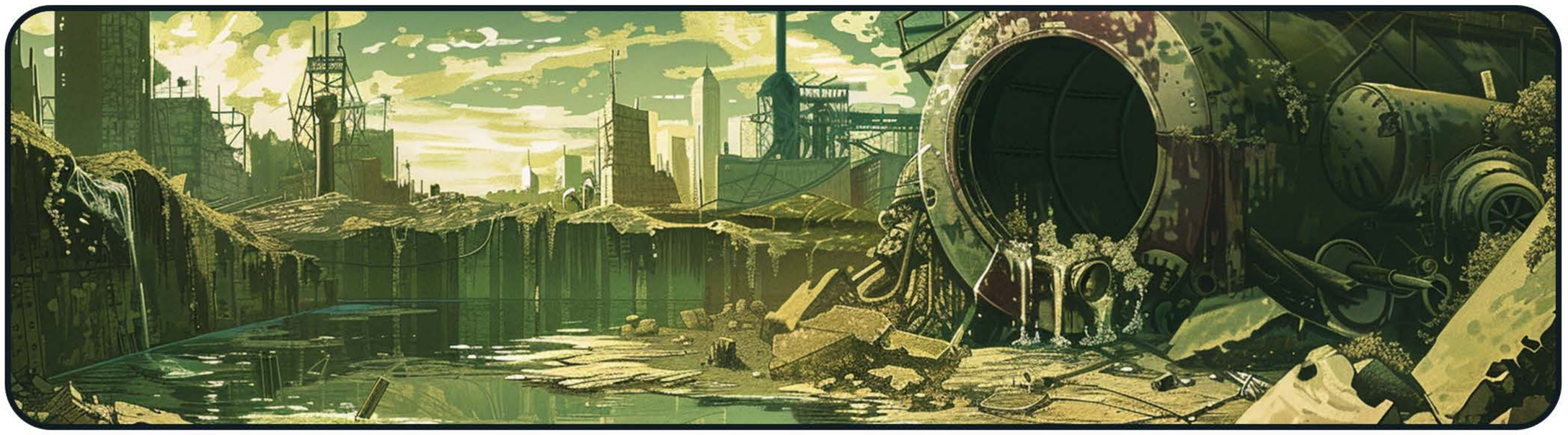
- **Definition:** Byproducts of household or commercial activities that have lost value to the original owner(s) but may hold significance for others, such as municipal solid waste and industrial waste.
- **Legal Framework:** Solid Waste Management Rules, 2016, enable Urban Local Bodies to levy user fees or SWM cess.

Current State of Solid Waste Management in India

- **Waste Generation:** India generates 160,038.9 tons of solid waste per day (CPCB, 2020-21).
- **Collection Efficiency:** Approximately 95% of waste is collected efficiently.
- **Waste Treatment:** Around 50% of collected waste undergoes some form of treatment.
- **Unaccounted Waste:** 31.7% of the total waste generated remains unaccounted for.

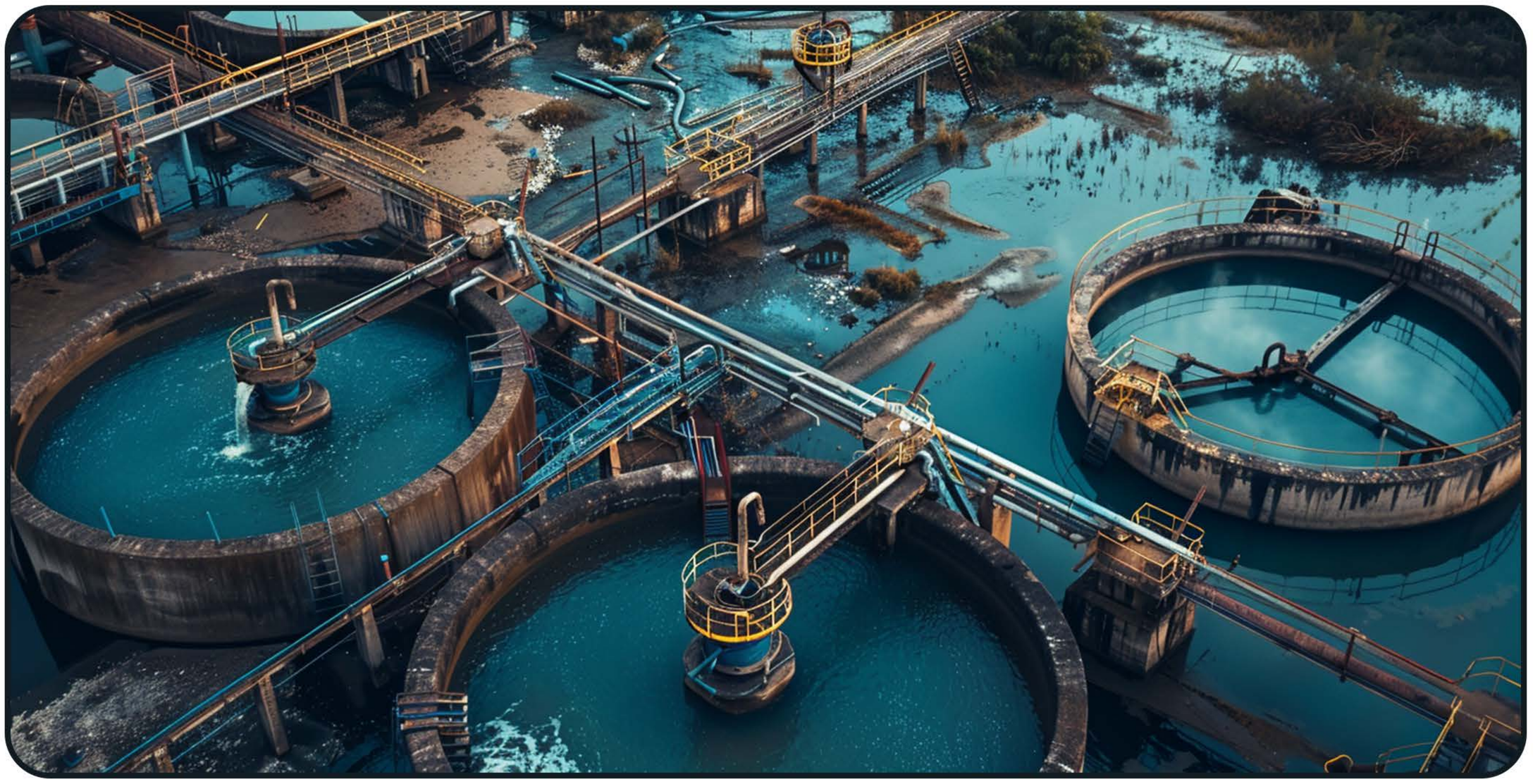
Challenges in Solid Waste Management in India

- **Segregation:** Inadequate segregation at the source increases disposal costs.
- **Collection and Transportation:** Underdeveloped storage infrastructure and limited door-to-door collection.
- **Disposal and Treatment:** Reliance on open dumps emitting methane, contributing to environmental hazards.
- **Municipal Finance:** Difficulty generating sufficient revenue and attracting private capital due to inadequate creditworthiness.



- ***Key Provisions of Solid Waste Management Rules, 2016***
  - **Applicability:** Municipal areas, urban agglomerations, census towns, notified industrial townships, etc.
  - **Segregation of Waste:** Mandates segregation into Biodegradable, Non-biodegradable, and Sanitary and Domestic Hazardous waste.
  - **Collection & Disposal:** Local authorities responsible for waste collection, transportation, processing, and disposal.
  - **Recovery and Recycling Facility:** Developers in industrial areas must allocate at least 5% of the total area for recovery and recycling facilities.

- ***Way Forward***
  - **Improving Segregation and Collection:** Educate citizens on waste segregation. Develop robust waste storage infrastructure and expand door-to-door collection services.
  - **Advancing Disposal and Treatment:** Promote scientific disposal methods and invest in advanced treatment technologies.
  - **Strengthening Municipal Finance:** Explore innovative financing models and encourage public-private partnerships.
  - **Promoting Recycling and Recovery:** Facilitate recycling facilities in industrial areas and support circular economy initiatives.



Persistent Organic Pollutants (POPs)t

Why in News?

- A comprehensive global study on **Persistent Organic Pollutants (POPs)** was implemented by the UN Environment Programme (UNEP) and funded by the Global Environment Facility **(GEF).**
- The study monitored the status of 30 POPs listed under the **Stockholm Convention** as of 2021.

Key Findings

- **Decline in Use:** Regulatory actions taken globally since 2004 have led to a **decline** in the use of 12 POPs.
- **Reduction of DDT:** The use of DDT (**dichloro-diphenyl-trichloroethane**), a synthetic insecticide, has decreased in human milk samples by over 70% since 2004.
- **Replacement POPs:** High levels of replacement POPs, such as **per- and polyfluoroalkyl** substances (PFAS), were detected.

About POPs

- **Definition:** Chemical substances **(carbon-based)** that persist in the environment, including pesticides, industrial chemicals, or unwanted by-products of industrial processes.
- **Resistance:** They resist **photolytic, biological**, and **chemical degradation.** Examples include Dieldrin, Endrin, Heptachlor.
- **Key Properties:**

  Often **halogenated** and characterized by **low water solubility.**

  Highly lipid-soluble, facilitating bio-accumulation in living organisms.

  Semi-volatile, enabling long-distance movement in the atmosphere before deposition occurs.
- **Impacts:** Linked to **cancer, liver damage, decreased fertility,** and increased risk of **asthma and thyroid** disease due to their endocrine-disrupting properties.

- ***Stockholm Convention***
  - **Overview:** An international **legally binding agreement** on POPs, adopted in 2001 and entered into force in 2004.
  - **India's Role:** India ratified the Stockholm Convention in **2006**. The Ministry of Environment, Forest and Climate Change (MoEFCC) notified the **'Regulation of POP Rules, 2018'** under the provisions of the **Environment (Protection) Act, 1986.**
  - **Financial Mechanism:** GEF is the designated interim financial mechanism for the Convention.

- ***Way Forward***
  - **Strengthening Regulations:** Enhance global and national regulatory frameworks to further reduce the use and impact of POPs.
  - **Monitoring and Research:** Continue comprehensive monitoring and research on both existing and emerging POPs.
  - **Public Awareness:** Increase public awareness about the dangers of POPs and promote safer alternatives.
  - **International Cooperation:** Foster international cooperation and information exchange to effectively manage and reduce POPs globally.
  - **Implementation of Alternatives:** Promote the development and use of safer, sustainable alternatives to POPs.

Railway safety in India

Why in News?

- A collision between a Passenger Express and a goods train occurred due to a signalling error.
- This follows other recent accidents, such as the collision of the Bengaluru-Howrah Superfast Express and a goods train in 2023.

Status of Railway Accidents

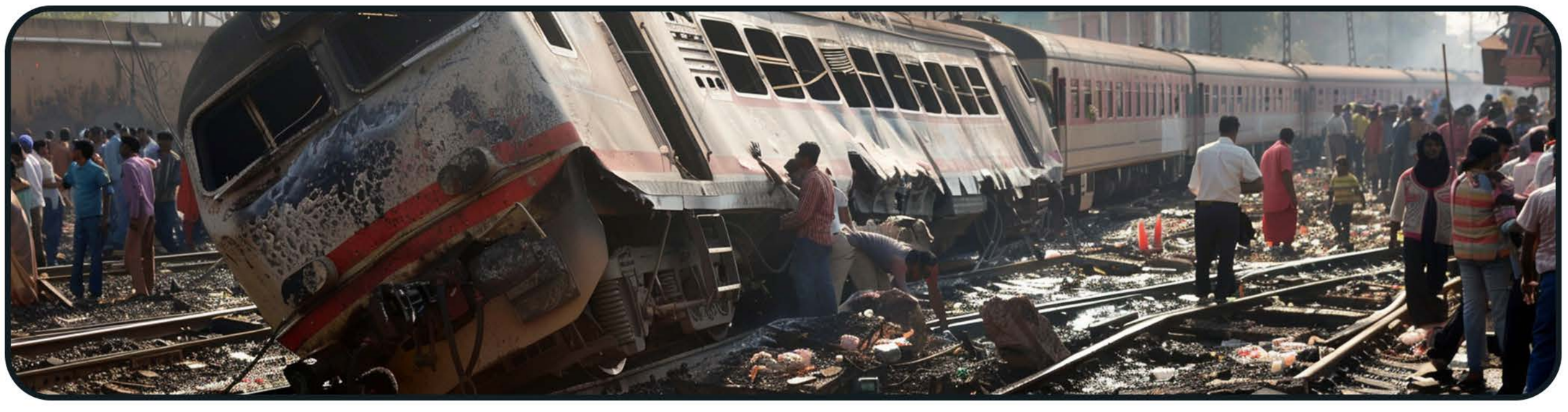
- **Decline in Accidents:** Consequential train accidents have decreased significantly from 473 in 2000-01 to 48 in 2022-23.
- **Consequential Accidents:** These are accidents with serious repercussions, including loss of life, injury, damage to property, or interruption of rail traffic.

Major Causes of Rail Accidents

- **Derailments:** Example: Bikaner-Guwahati Express derailment in 2022.
- **Unmanned Railway Crossings:** The second major cause of rail accidents after derailments.
- **Other Causes:** Fire incidents in trains (e.g., short circuits in electrical wiring). Signalling errors by local pilots.

Measures Taken for Safety

- **KAVACH System:** An Automatic Train Protection system that prevents trains from passing red signals and activates automatic train braking.
- **Rashtriya Rail Sanraksha Kosh (RRSK):** Funds for replacement, renewal, and upgradation of critical safety assets.
- **Interlocking Systems:** Electrical/electronic systems that prevent more than one train from running on the same track simultaneously.



- ***Challenges in Curbing Rail Accidents***
  - **Track Congestion:** Passenger and goods trains often share the same tracks, leading to congestion.
  - **Technical Glitches and System Failures:** Including poor signalling systems.
  - **Other Challenges:** Lack of sufficient funds for switching to safer LHB (Linke Hofmann Busch) coaches.

- ***Committees on Rail Safety***
  - **Justice Khanna or Railway Safety Review Committee (1998):** Led to the creation of a safety department in Indian Railways with officers and staff from all disciplines.
  - **High-Level Safety Review Committee (2012):** Chaired by Dr. Anil Kakodkar, it recommended switching from the Integral Coach Factory (ICF) design coaches to the safer LHB design coaches.

- ***Way Forward***
  - **Enhanced Safety Measures:** Implementation and regular updating of advanced safety systems like KAVACH.
  - **Infrastructure Improvement:** Invest in modernizing and expanding railway infrastructure to reduce congestion and enhance safety.
  - **Funding and Investment:** Increase funding for safety upgrades, including transitioning to LHB coaches.
  - **Regular Audits and Inspections:** Conduct frequent safety audits and inspections to identify and address potential issues.
  - **Public Awareness and Training:** Enhance training for railway staff and raise public awareness about rail safety protocols.

Krishi Sakhi Convergence Program

Why in News?

- The Prime Minister granted certificates to 30,000 Krishi Sakhis, recognizing them as trained para extension professionals in agriculture at the grassroots level.
- Certificates were awarded under the Krishi Sakhi Convergence Program (KSCP).

Krishi Sakhi Convergence Program (KSCP)

- **Objective:** Joint initiative of the **Ministry of Agriculture and Farmers' Welfare** and the **Ministry of Rural Development** to enhance the skills of rural women in agriculture.
- **Alignment:** Supports the objectives of the **"Lakhpati Didi"** Program, aimed at economic empowerment and financial independence of rural women.

Women Workforce in Agriculture Sector

- **Status:** About 80% of rural women are employed in agriculture (NITI Aayog).
- **Ownership:** Percentage of female operational holdings increased from 12.78% (2010-11) to 13.78% (2015-16).
- **Contribution:** Women are responsible for producing 60-80% of the country's food and contribute significantly to GDP per capita.
- **Impact:** Women's leadership in agriculture can help address gender inequality.

Challenges Faced by Women Farmers

- **Limited Access:** Challenges include limited access to credit, markets, and information.
- **Inheritance Issues:** Many women do not inherit land in traditional societies, limiting their control over agricultural assets.

- ***Government Schemes for Women Farmers***
  - **Mahila Kisan Sashaktikaran Pariyojana:** Aims to empower women through systematic investments to enhance their participation and productivity in agriculture.
  - **Namo Drone Didi:** Provides training to women of selected Women Self-Help Groups (SHGs) on drone usage for agricultural purposes.
  - **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN):** Provides financial assistance to landholding farmer families, including women farmers.

- ***Way Forward***
  - **Enhancing Support Programs:** Expand and strengthen initiatives like KSCP to reach more rural women and enhance their agricultural skills.
  - **Improving Access:** Address challenges of credit, markets, and land inheritance through policy interventions and targeted programs.
  - **Capacity Building:** Continue training and skill development efforts to equip women farmers with modern agricultural techniques and technologies.
  - **Policy Advocacy:** Advocate for policies that promote gender equality in agricultural land ownership and decision-making processes.
  - **Monitoring and Evaluation:** Regularly assess the impact of programs to ensure they effectively empower and support women in agriculture.

Offshore Areas (Existence of Mineral Resources) Rules, 2024

Why in News?

- The Central Government has introduced **the Offshore Areas (Existence of Mineral Resources) Rules, 2024,** under the powers conferred by the Offshore Areas Mineral (Development and Regulation) Act, 2002.
- **Offshore Mining Definition:** Retrieval of mineral deposits from deep seabeds, typically deeper than 200 meters.

About the Rules

- **Legislative Background:** The rules apply to mineral resources in India's territorial waters, continental shelf, exclusive economic zone (EEZ), and other maritime zones.
- **Exclusions:** They do not apply to mineral oils, hydrocarbons, and certain specified minerals under the Mines and Minerals (Development and Regulation) Act, 1957.
- **Provisions:** Define stages of exploration, feasibility studies, economic viability assessments, and classification of mineral resources and reserves.

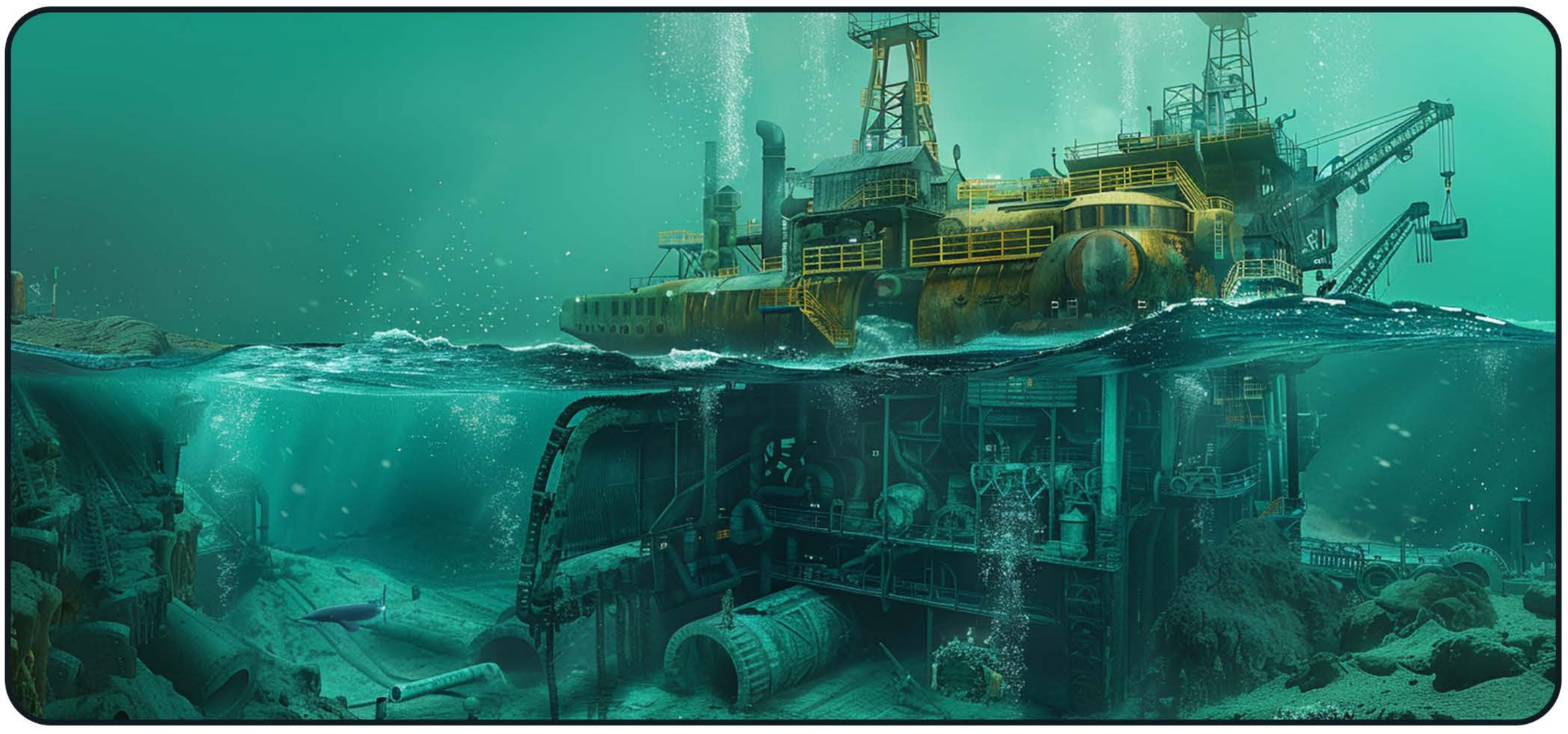
Significance of Offshore Mining for India

- **Resource Potential:** India's offshore mineral reserves include gold, diamond, copper, nickel, cobalt, manganese, and rare earth elements crucial for development.
- **Exclusive Economic Zone (EEZ):** India's EEZ, covering over two million square kilometers, holds substantial recoverable resources.
- **Import Reduction:** Offshore mining can increase mineral availability domestically and reduce dependency on imports.

- ***Challenges***
  - **Limited Private Participation:** Currently, there is insufficient private sector involvement in offshore mining projects.
  - **Skilled Labor Requirement:** Operations require highly skilled labor due to the technical complexities involved.
  - **Capital Intensity:** High initial capital investment is needed for offshore mining ventures.

- ***Types of Resources Mined from Deep Sea***
  - **Polymetallic Nodules:** Potato-shaped lumps found on the seabed containing metals like manganese and iron.
  - **Seafloor Massive Sulphides:** Deposits around hydrothermal vents with minerals such as copper, gold, silver, and zinc.
  - **Cobalt-rich Ferromanganese Crusts:** Crust-like deposits on underwater mountains rich in cobalt and manganese.

- ***Way Forward***
  - **Promoting Private Sector Participation:** Encourage private investment through favorable policies and incentives.
  - **Capacity Building:** Enhance training programs to develop a skilled workforce for offshore mining operations.
  - **Technological Advancement:** Invest in research and development to improve mining technologies suitable for deep-sea conditions.
  - **Environmental Safeguards:** Implement strict regulations to mitigate environmental impact and ensure sustainable mining practices.
  - **International Cooperation:** Collaborate with international partners for knowledge sharing and technology transfer in deep-sea mining.



Nalanda University: Revival and Historical Significance

Why in News?

- The new Nalanda University, envisioned as a center for inter-civilizational dialogue, has been established as a **'Net Zero Green Campus'.**
- Located near the ancient Nalanda ruins, it was established under the **Nalanda University Act 2010** passed by the Indian Parliament.

Ancient Nalanda University

- **Foundation:** Founded by **Kumargupta** I in the 5th century CE and flourished as a center of learning until the 12th century CE.
- **Architecture:** A monastic university (**Mahavihara**) comprising residential and educational buildings, stupas, shrines, and artworks in stucco, stone, and metal.

Educational Excellence

- **Diverse Student Body:** Attracted students from China, Tibet, Central Asia, Sri Lanka, Thailand, Burma, and other Southeast Asian countries.
- **Curriculum:** Offered studies in Veda, fine arts, medicine, mathematics, astronomy, politics, and warfare.
- **Merit-based Admission:** Admission strictly based on merit with exams conducted by trained gatekeepers.

Foreign Visitors and Recognition

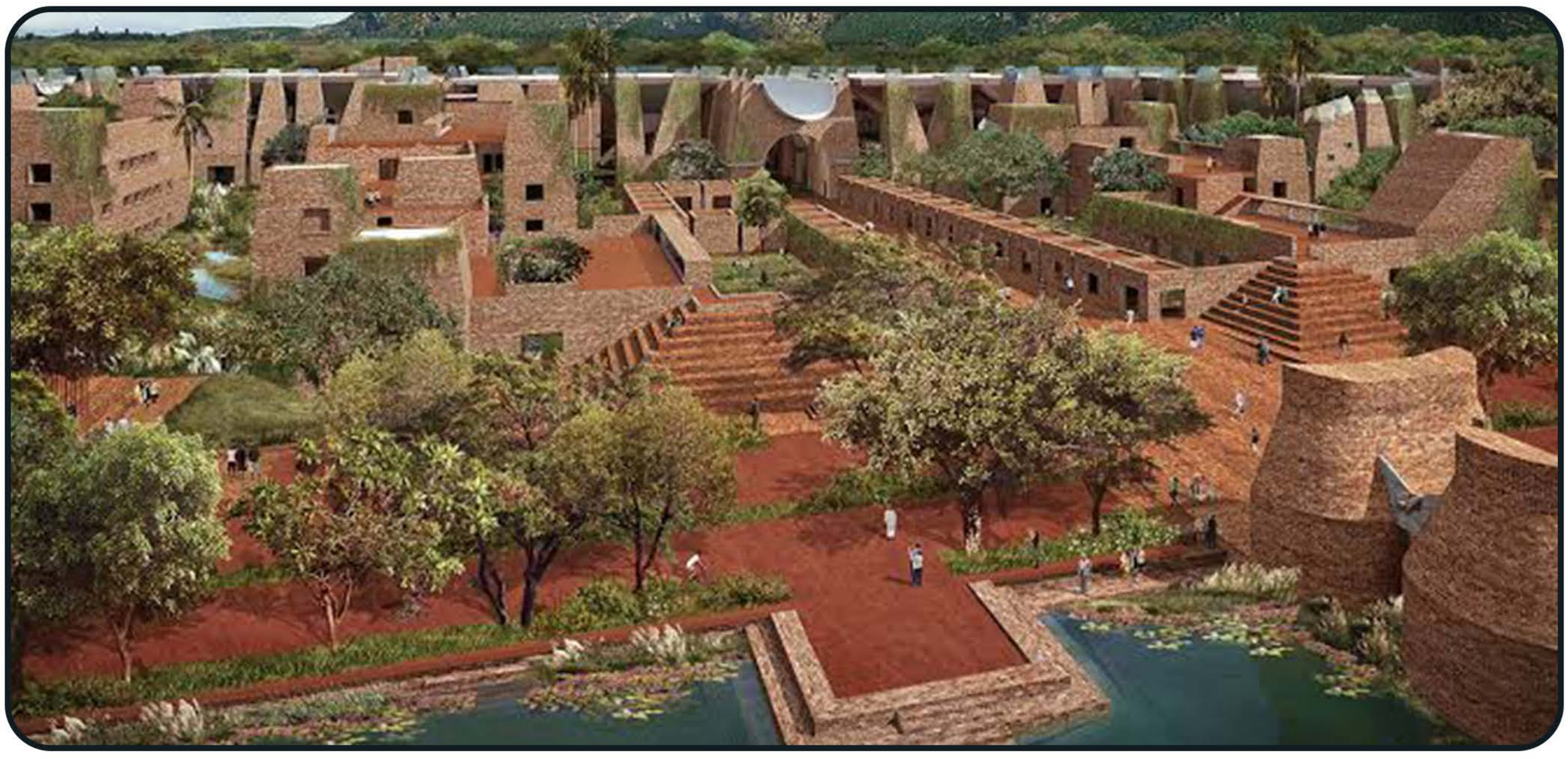
- **Notable Visitors:** Chinese scholars **I-Qing** and **Xuan Zang** visited in the 7th century CE, with Xuan Zang studying yogashastra under Chancellor Shilabhadra.
- **UNESCO Recognition:** Declared a UNESCO World Heritage site in 2016.

Major Institutions of Learning in Ancient India

- **Vikramshila (Bihar):** Established in the 8th century CE by **Dharmapala**, propagated **Vajrayana Buddhism.**
- **Nagarjunakonda (Andhra Pradesh):** Named after **Nagarjuna**, a master of **Mahayana Buddhism.**
- **Taxila (Takshashila, Pakistan):** Ancient center of learning; notable alumni include **Panini, Jivaka, and Chanakya.**
- **Other Universities: Valabhi** (Gujarat), **Odantapuri** (Bihar), **Jagaddala** (Bangladesh).

Way Forward

- **Modern Revival:** Continue developing Nalanda University as a hub for academic excellence and cultural exchange.
- **Environmental Sustainability:** Maintain the 'Net Zero Green Campus' status through sustainable practices and innovations.
- **International Collaboration:** Foster partnerships with global institutions to promote inter-civilizational dialogue and academic cooperation.
- **Preservation of Heritage:** Ensure ongoing conservation efforts at Nalanda and other ancient sites to safeguard cultural heritage.
- **Educational Excellence:** Uphold rigorous academic standards and promote research in diverse fields to honor the legacy of ancient Indian universities.



WEF's "Fostering Effective Energy Transition 2024" Report

Why in News?

- The **World Economic Forum** has released the **"Fostering Effective Energy Transition 2024"** report.
- The report is based on the **Energy Transition Index (ETI),** evaluating 120 countries on energy system performance and readiness for secure, sustainable, and inclusive energy systems.

Key Findings

- **Investment Trends:** Clean energy infrastructure investments reached $1.8 trillion in 2023. Nearly 90% of growth since 2021 occurred in advanced economies and China.
- **Top Performers:** Sweden, Denmark, Finland, Switzerland, and France are the top five performers.
- **Six G20 countries among the top 20 performers:** France, Germany, Brazil, China, the UK, and the USA.
- **India** is ranked **63rd** on the **ETI**.
- **Net-Zero Emissions:** Eight countries achieved net-zero emissions in 2022: Bhutan, Comoros, Gabon, Guyana, Madagascar, Niue, Panama, and Suriname.
- **Digital Innovations:** Generative AI can enable energy companies to save over $500 billion annually.

Project Details

- **Lack of incentives** for private sector investment in clean electricity.
- **Only 6%** of G20 recovery funding is directed towards clean energy.
- **Ongoing subsidies** for fossil fuels.
- **Rollback of critical energy transition commitments** by some advanced economies and large energy companies.

Initiatives in Energy Transition

- **Global Renewables and Energy Efficiency Pledge:** Signed by 133 countries at CoP 28 of UNFCCC, calling for tripling the rate of renewables capacity by 2030.
- **Addressing Technology Gaps for Energy Transitions:** Initiatives by G20.
- **Just Energy Transition Partnerships:** Launched by the International Energy Agency & WEF in 2022 to support developing countries in their transition towards clean energy.
- **Carbon Border Adjustment Mechanism (CBAM):** Launched by the EU in 2023.

Way Forward

- **Increase incentives** for private sector investment in clean electricity.
- **Allocate a larger share of recovery funding** towards clean energy in G20 countries.
- **Reduce** or eliminate **subsidies** for fossil fuels.
- **Maintain and strengthen commitments** to energy transition by advanced economies and large energy companies.
- **Support global initiatives and partnerships** aimed at accelerating the energy transition, especially in developing countries.

Offshore Wind Energy in India

Why in News?

- India has launched a VGF scheme with a total outlay of Rs. 7,453 crore to commission 1 GW of **Offshore Wind Energy Projects (OWEP).**
- The projects will be split equally between the coasts of **Gujarat** and **Tamil Nadu.**
- The scheme also includes upgrading two ports to meet logistics requirements.

India's Wind Energy Status

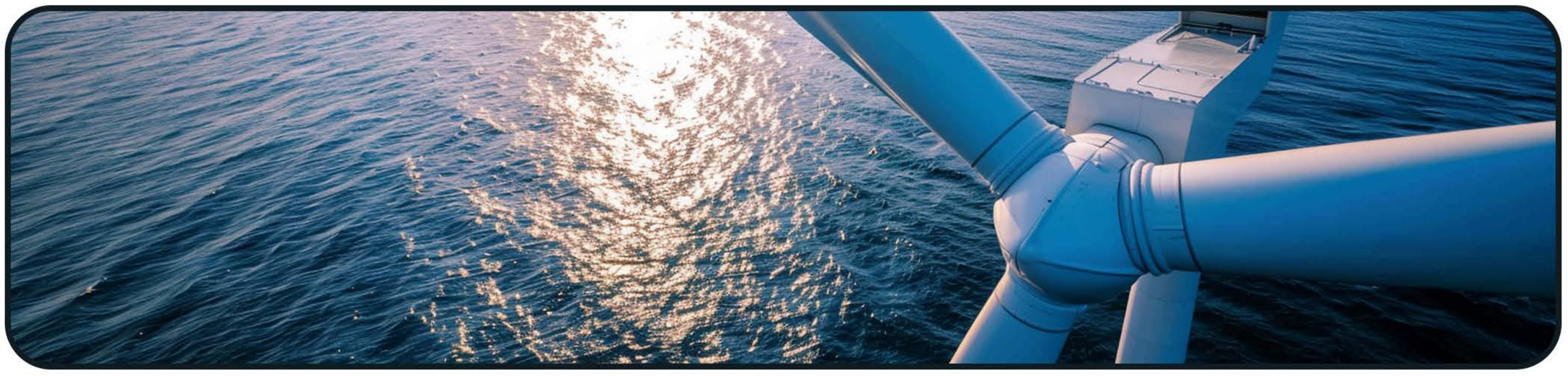
- **India** is the **fourth-largest wind energy producer globally,** with a cumulative installed capacity of 46.4 GW as of May 2024.

About the VGF Scheme for OWEP

- **Nodal Ministry:** Ministry of New and Renewable Energy **(MNRE).**
- **Objective:** Supports the implementation of the **National Offshore Wind Energy Policy, 2015.**
- **Deployment:** Private developers will establish the projects, while **Power Grid Corporation of India Ltd.** will build the transmission infrastructure, including offshore substations.

Significance of the Scheme

- **Renewable Energy Production:** The 1 GW OWEP will generate approximately 3.72 billion units of renewable electricity annually.
- **Environmental Impact:** This will reduce CO_2 emissions by 2.98 million tons each year for 25 years.
- **Economic Viability:** Reduced power costs from offshore wind projects will make them viable for purchase by DISCOMs.
- **Sector Development:** The scheme will help create an ecosystem for the offshore wind sector, attract investments, and develop indigenous manufacturing capabilities.



- ***About Offshore Wind Energy***
  - **Definition:** Energy derived from winds blowing across the sea, transformed into electricity, and supplied to the onshore electricity network.
  - **MNRE Target:** 30 GW offshore wind installations by 2030.
  - **Benefits:** Higher adequacy and reliability, lower storage requirement, and higher employment potential.
  - **Challenges:** Technical challenges such as installation and infrastructure shortcomings, displacement of marine wildlife, etc.

- ***Way Forward***
  - **Research and Development:** Focus on overcoming technical and infrastructural challenges.
  - **Environmental Protection:** Implement measures to mitigate the impact on marine wildlife.
  - **Investment and Collaboration:** Encourage both domestic and international investments and collaborations.
  - **Policy Support:** Ensure continuous policy support and incentives for sustainable growth in the offshore wind sector.

Arbitration

- ***Why in News?***

  - **Definition:** A mechanism for resolving disputes between investors and brokers, or between brokers.
  - **Oversight:** Managed by the Financial Industry Regulatory Authority (FINRA), with decisions being final and binding.

- ***Types of Arbitration***

  - **Commercial Arbitration**

    Purpose: Resolves disputes from commercial contracts or transactions.

    Common Areas: Business disputes, breach of contract, partnership disputes.

  - **International Arbitration**

    Definition: Involves parties from different countries, often used in international commercial and investment disputes.

    Institutions: Conducted under rules of bodies like the International Chamber of Commerce (ICC) or the London Court of International Arbitration (LCIA).

  - **Domestic Arbitration**

    Definition: Occurs within a single country, involving parties from the same jurisdiction.

    Common Areas: Local business disputes, real estate conflicts, employment disputes.

  - **Ad hoc Arbitration**

    Definition: Conducted independently by the parties without institutional involvement, using mutually agreed rules or those established by the arbitrator.

    Flexibility: Offers more flexibility but requires parties to manage administrative tasks.

  - **Consumer Arbitration**

    Purpose: Resolves disputes between consumers and businesses.

    Focus: Provides a faster and less expensive resolution compared to court litigation.

Arbitration Laws in India

- **Legal Framework:** Governed by the Arbitration and Conciliation Act, 1996.
  - **International Influence:** Incorporates provisions from the UNCITRAL Model Law on International Commercial Arbitration and the UNCITRAL Arbitration Rules.
- **Latest Amendment:** Arbitration and Conciliation (Amendment) Act, 2021.
  - **Unconditional Stay on Awards:** Automatic stay on enforcement of arbitral awards if the arbitration agreement or contract is prima facie fraudulent or corrupt.
  - **Qualifications of Arbitrators:** Specifies qualifications and experience required for arbitrators to ensure quality and competence.
- **Institutions Providing Arbitration Services:**
  - Indian Council of Arbitration **(ICA)**
  - International Centre for Alternative Dispute Resolution **(ICADR)**
  - Mumbai Centre for International Arbitration **(MCIA)**
  - Delhi International Arbitration Centre **(DIAC)**

Way Forward

- **Enhanced Awareness:** Increase understanding of arbitration benefits and processes among stakeholders.
- **Capacity Building:** Strengthen the capabilities of arbitration institutions and professionals.
- **Policy Support:** Ensure supportive policies and regulatory framework to promote fair and efficient arbitration practices.
- **International Collaboration:** Foster global cooperation to harmonize arbitration standards and practices.

India's Space Economy: Future Growth and Current Challenges

Why in News?

- India's share in the global space economy is expected to increase fourfold by 2030, as highlighted by the **Minister of State for Science & Technology.**

Current Status of India's Space Economy

- **2021:** India held a **2% share** in the global space economy.
- **2023:** The size of India's space economy is estimated at $8.4 billion, around 2-3% of the global space economy.
- **Future Projections:** Expected to capture **9% of the global market share by 2030**. Aiming for a **15% share by 2047.**

Growth of Space Start-ups

- **Increase in Start-ups:** Nearly 200 space start-ups in 2024, up from 1 in 2022.
- **Private Sector Involvement:** Rising involvement in space missions. **Example**: Skyroot Aerospace successfully test-fired a 3D-printed cryogenic engine running on liquefied natural gas and liquid oxygen.

Investment in the Space Sector

- **FDI:** 100% Foreign Direct Investment (FDI) is allowed in the space sector.

Challenges Facing India's Space Economy

- **Budget Constraints:** Space spending as a percentage of GDP remains relatively low. India spends 0.04% of its GDP on space compared to the United States' 0.28%.
- **Shortage of Skilled Professionals:** A lack of trained scientists, engineers, and technicians to meet the demands of an expanding space program.
- **Regulatory Gaps:** Absence of clear national space legislation, leading to a lack of clarity in planning and conducting space-related activities.

Steps Taken in the Space Sector

- **Indian Space Policy 2023:** Enables end-to-end participation of Non-Governmental Entities (NGEs) in all domains of space activities.
- **IN-SPACe:** Indian National Space Promotion and Authorization Centre, an independent nodal agency under the Department of Space, allowing space activities.
- **New Space India Limited:** Established to promote private sector participation in the space sector.

Way Forward

- **Enhance Budget Allocation:** Increase space spending to match global leaders.
- **Skill Development:** Invest in education and training programs to produce a skilled workforce for the space sector.
- **Clear Legislation:** Develop and implement comprehensive national space laws to provide clarity and foster growth.
- **Encourage Private Participation:** Continue to support and incentivize private sector involvement in space activities.
- **Leverage Technology:** Focus on advanced technologies like 3D printing and cryogenic engines to maintain a competitive edge.

India's DeepTech Dawn: Forging Ahead

Why in News?

- **NASSCOM** released the report **"India's Deeptech Dawn: Forging Ahead,"** highlighting the different attributes and challenges of **DeepTech startups** in India.

Key Findings

- **Global Ranking:** Despite having the 3rd largest pool of DeepTech startups, **India ranks 6th** among the top 9 DeepTech ecosystems worldwide.
- **Startup Numbers:** India currently has over 3600 DeepTech startups.
- **Funding Trends:** Indian DeepTech startups raised a cumulative $10 billion between 2019 and 2023. In 2023, funding witnessed a 77% decline compared to 2022.

About DeepTech Startups

- **Definition:** DeepTech startups leverage advanced technologies like AI, IoT, Blockchain, and AR/VR to create novel solutions for complex problems, often combining multiple technologies to redefine or create new markets. Examples include Agnikul, GalaxyEye, and Sarvam AI.
- **Characteristics:** Extended development timelines, high capital intensity.
- **Key Potential Areas:** Reshape sectors such as healthcare (AI-powered diagnostics & precision medicine) and agriculture (agribots & automation).

Key Challenges

- **Pre-commercialization Phase:** Lack of access to necessary infrastructure.
- **Business Operations:** Limited understanding of business operations and market dynamics.
- **Talent Competition:** Competition from large enterprises for adequately skilled talent.

- ***Initiatives Taken***
  - **Draft National Deep Tech Startup Policy (2023)**
  - **Technology Incubation and Development of Entrepreneurs (TIDE 2.0)**
  - **Other Initiatives:** Startup India Seed Fund, India AI Mission, etc.

- ***Way Forward***
  - **Government Actions Needed:**

    Establish co-investment programs with venture capitalists for DeepTech startups.

    Introduce **government-backed instruments.**

    Facilitate platforms that connect enterprises with DeepTech startups.

    Launch DeepTech-focused **skill development programs.**

    Provide grants and access to regulatory sandboxes for prototyping and testing.

    Provide **logistical support** for commercialization.

- ***Conclusion***
  - The NASSCOM report underscores the significant potential of India's DeepTech startups while also highlighting the challenges they face. Strategic government interventions and supportive initiatives can propel India to a leading position in the global DeepTech ecosystem.

VIDYARTHEE

www.vidyarthee.co.in

WEEKLY NEWS

Scan the QR for Digital Edition

@_vidyarthee_

t.me/eduvidyarthee