DAILY CURRENT AFFAIRS 29-07-2024

GS-2

1. **PM Janjatiya Unnat Gram Abhiyaan**
2. **Tarang Shakti-2024**

GS-3

3. **Greenium**
4. **Lunar cave**
5. **World's Forests 2024 Report**

PM Janjatiya Unnat Gram Abhiyaan

Syllabus: GS-2: Social Justice – Welfare measures and schemes.

Context:

- *Recently, in the Budget Government launched the* **Pradhan Mantri Janjati Unnat Gram Abhiyan** *to improve the* **socio-economic conditions of tribal communities.**

Pradhan Mantri Janjatiya Unnat Gram Abhiyan

Aim

- **Universal Coverage***: Targeting tribal households in tribal majority villages and aspirational districts.*
- **Scope***: Covers 63,000 villages, benefiting 5 crore tribal people.*

Nodal Ministry

- **Ministry of Tribal Affairs***: Responsible for overseeing the implementation and execution of the scheme.*

Design and Objective

- **Inspiration***: Modeled after the Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN).*
- **Goal***: Achieve saturation of basic facilities for Particularly Vulnerable Tribal Groups (PVTGs).*
- **Beneficiaries***: Scheduled Tribe populations across the country.*

Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN)

Launch Details

- **Date***: Launched on Janjatiya Gaurav Divas, 15th November 2023.*
- **Location***: Jharkhand, in honor of Bhagwan Birsa Munda's birth anniversary.*

Objective

- **Focus***: Development of 75 Particularly Vulnerable Tribal Groups (PVTGs) who have been excluded from various schemes by different Ministries/Departments.*

Nodal Ministry

- **Ministry of Tribal Affairs***: Charged with the scheme's management and coordination.*

Critical Interventions

- **Housing**: *Provision of pucca (permanent) houses.*
- **Infrastructure**:
  - *Connecting roads for improved accessibility.*
  - *Piped water supply or community water supply systems.*
- **Healthcare**:*Mobile Medical Units (MMUs) with necessary medicines.*
- **Education and Childcare**:
  - *Construction of hostels.*
  - *Construction of Anganwadi Centers for early childhood care and education.*
- **Community Facilities**:*Construction of Multipurpose Centers (MPC).*
- **Electrification**:*Energization of habitations/households via grid and off-grid solar power solutions.*
- **Economic Development**:*Setting up of Van Dhan Vikas Kendras for promoting tribal enterprises.*
- **Communication**:*Installation of mobile towers to improve connectivity.*

Tarang Shakti-2024

Syllabus: GS-2; International Relations

Context

- *India to host its first multinational air exercise Tarang Shakti*

About

- *Tarang Shakti-2024 is a significant international naval exercise hosted by India, aimed at enhancing maritime cooperation and interoperability among participating navies.*
- *This exercise plays a crucial role in fostering naval diplomacy, ensuring maritime security, and promoting peace and stability in the region.*

Key Objectives

- **Enhancing Interoperability**: *To improve the ability of participating navies to work together seamlessly in various maritime operations.*
- **Maritime Security:** *To strengthen collective efforts to ensure safe and secure seas, addressing challenges such as piracy, smuggling, and terrorism.*
- **Capacity Building:** *To share best practices, tactics, techniques, and procedures among participating navies to enhance their operational capabilities.*
- **Diplomatic Relations:** *To foster goodwill and strengthen diplomatic ties between India and the participating nations.*
- **Participants**: *The exercise includes navies from multiple countries, reflecting a diverse and collaborative international effort. Key participants typically include major naval powers and regional partners.*

Phases of Exercise

- **Harbour Phase:**
  - *Briefings and Planning: Detailed briefings and planning sessions are conducted to outline the objectives and structure of the exercise.*
  - *Cross-Training: Personnel from different navies participate in cross-training activities to understand each other's operational procedures.*
  - *Cultural Exchanges: Events and activities aimed at promoting cultural understanding and camaraderie among participants.*

- **Sea Phase***:*
  - *Maritime Operations: Conducting various maritime operations, including search and rescue missions, anti-piracy drills, and tactical maneuvers.*
  - *Live-Fire Drills: Live-fire exercises to test the combat readiness and coordination among the participating navies.*
  - *Anti-Submarine Warfare: Exercises focused on detecting and countering submarine threats.*

Significance

- **Regional Stability***: Reinforces India's commitment to maintaining peace and stability in the Indo-Pacific region.*
- **Strategic Partnerships:** *Strengthens strategic partnerships and mutual trust among participating nations.*
- **Capability Enhancement:** *Provides a platform for participating navies to enhance their operational capabilities and readiness.*

Greenium

Syllabus: GS-3; Economy

Context

- **Chief Economic Advisor V. Anantha Nageswaran** *said that private investors need to "walk the talk" on prioritising sustainable investments citing the low "greenium" from them on India's sovereign green bond offerings.*

About

- *"Greenium" is a portmanteau of* **"green" and "premium,"** *referring to the premium price investors are willing to pay for green bonds compared to conventional bonds.*
- *This concept has gained traction as* **environmental, social, and governance (ESG)** *considerations have become integral to investment strategies.*

Key Concepts

Green Bonds

- **Definition:** *Debt instruments specifically earmarked to raise money for climate and environmental projects.*

- **Purpose:** *To fund renewable energy projects, energy efficiency improvements, clean transportation, sustainable water management, and other environmental initiatives.*
- **Issuers:** *Governments, municipalities, financial institutions, and corporations.*

Premium Pricing (Greenium)

- *Greenium refers to the lower yield investors accept for green bonds compared to similar conventional bonds.*
- *This lower yield translates to higher prices for green bonds.*
- *Investor Motivation*
    - *The premium is driven by the growing demand for sustainable investments and the positive impact on the environment. Investors are often willing to accept lower returns in exchange for the environmental benefits.*

Factors Influencing Greenium

- **Investor Demand**
    - *Increasing awareness and commitment to sustainability have led to a surge in demand for green bonds.*
    - *Institutional investors, such as pension funds and insurance companies, are incorporating ESG criteria into their investment decisions.*
- **Regulatory Support**
    - *Governments and regulatory bodies are promoting green finance through incentives and frameworks.*
    - *Policies like the European Union's Green Bond Standard provide clarity and encourage green bond issuance.*
- **Certification and Standards**
    - *Certification by recognized bodies (e.g., Climate Bonds Initiative) enhances credibility and attracts investors.*
    - *Adherence to standards like the Green Bond Principles ensures transparency and accountability.*
- **Market Dynamics**
    - *Supply and demand imbalances can create or diminish greenium.*
    - *Limited supply of green bonds compared to high demand can lead to higher premiums.*
- **Perceived Risk**
    - *Green bonds are often perceived as lower risk due to the backing of sustainable projects.*
    - *The commitment to ESG standards can reduce operational and reputational risks for issuers.*

Benefits of Greenium

- **For Issuers**
  - **Lower Cost of Capital:** *Issuers can finance projects at a lower interest rate.*
  - **Enhanced Reputation:** *Commitment to sustainability can improve corporate image and stakeholder relations.*
  - **Diversified Investor Base:** *Attracts a broader range of investors focused on sustainability.*
- **For Investors**
  - **Sustainable Impact:** *Directly supports environmental and climate-related projects.*
  - **Portfolio Diversification:** *Adds ESG-aligned assets to the investment portfolio.*
  - **Potential for Lower Risk:** *Projects funded by green bonds often have stable, long-term benefits.*

Challenges and Criticisms

- **Greenwashing**
  - *Risk of issuers misrepresenting the environmental benefits of projects to attract investment.*
  - *Importance of stringent certification and monitoring to ensure genuine impact.*
- **Market Maturity**
  - *The green bond market is still developing, with limited liquidity compared to conventional bonds.*
  - *Standardization and increased issuance are needed to enhance market depth and investor confidence.*
- **Pricing Complexity**
  - *Difficulties in accurately assessing the premium attributable to the "green" label.*
  - *Variations in greenium across different markets and sectors.*

Future Outlook

- **Growth Potential**
  - *Expected continued growth in green bond issuance driven by increasing regulatory support and investor demand.*
  - *Expansion into emerging markets and diversification of green bond projects.*
- **Integration with Broader ESG Strategies**
  - *Greenium concept may extend to other financial instruments like green loans and sustainability-linked bonds.*

- *Broader integration of ESG factors in overall investment strategies.*

- **Technological Advancements**
  - *Use of blockchain and digital platforms to enhance transparency and traceability of green bonds.*
  - *Improved data analytics to assess environmental impact and performance.*

Conclusion

- *Greenium represents a significant development in sustainable finance, highlighting the willingness of investors to prioritize environmental benefits alongside financial returns.*
- *While challenges remain, the growing emphasis on ESG principles and regulatory support suggest a promising future for green bonds and the continued relevance of greenium in the financial markets.*

Lunar cave

Syllabus: GS-3; Science and Technology

Context

- *Scientists have confirmed a* **cave on the moon**, *not far from where Neil Armstrong and Buzz Aldrin landed 55 years ago, and suspect there are hundreds more that could house future astronauts.*

About

- *Lunar caves, also known as lunar lava tubes, are natural subterranean cavities formed by ancient* **volcanic activity on the Moon.**

Significance

- *They are of immense interest due to their* **potential for providing shelter and resources for future lunar exploration and habitation.**

Formation and Characteristics

- **Formation:** *Lunar caves are believed to have formed billions of years ago during periods of volcanic activity when flowing lava created hollow channels beneath the surface.*
- **Structure:** *These tubes can vary in size, with some extending for several kilometers in length and having widths and heights of several meters.*

- **Surface Indications:** *Skylights or collapses in the lunar surface often indicate the presence of these caves below.*

Importance for Lunar Exploration

- **Radiation Protection:**
  - *The Moon's surface is exposed to high levels of cosmic and solar radiation. Lunar caves can provide natural shielding from this harmful radiation, making them safer for human habitation.*
- **Thermal Stability:**
  - *The Moon experiences extreme temperature variations, with surface temperatures ranging from -173°C during the night to 127°C during the day. Lunar caves maintain a more stable thermal environment.*
- **Micrometeorite Protection:**
  - *The Moon lacks a significant atmosphere, leaving its surface vulnerable to micrometeorite impacts. Lunar caves offer protection from these hazards.*
- **Resource Availability:**
  - *Lunar caves may contain resources such as water ice, which is crucial for life support and can be used to produce oxygen and hydrogen for fuel.*

Potential for Human Habitation

- **Shelters:** *Lunar caves are considered potential sites for establishing lunar bases due to their protective advantages.*

- **Scientific Research:** *They provide unique opportunities for scientific studies, including geology and potential biosignatures.*
- **Construction Feasibility:** *Building habitats within lunar caves could reduce the need for heavy radiation shielding materials, thus lowering the cost and complexity of construction.*

Exploration and Research Initiatives

- **Lunar Reconnaissance Orbiter (LRO):** *NASA's LRO has mapped the lunar surface in detail, identifying potential skylights and cave entrances.*
- **Robotic Missions:** *Future missions are planned to explore these caves using robotic rovers and landers equipped with advanced imaging and sampling tools.*
- **International Collaboration:** *Agencies like NASA, ESA, and Roscosmos are collaborating on lunar exploration, with a focus on lunar caves for sustainable human presence.*

Challenges and Considerations

- **Accessibility:** *Reaching and exploring lunar caves presents significant technical challenges, including safe landing near skylights and navigating the rugged terrain.*
- **Robust Technology:** *Developing technology that can withstand the harsh lunar environment and operate autonomously or with minimal human intervention is crucial.*
- **Cost and Funding:** *Establishing bases in lunar caves will require substantial investment and international cooperation.*

Conclusion

- *Lunar caves represent a promising frontier for the future of lunar exploration and habitation.*
- *Their natural protection from radiation, thermal extremes, and micrometeorite impacts makes them ideal candidates for establishing lunar bases.*
- *Ongoing and future missions will play a critical role in unlocking their potential and addressing the challenges associated with their exploration and use.*

World's Forests 2024 Report

Syllabus: GS-3: Environment – Forests.

Context:

- **State of the World's Forests 2024**, *released by the* **Food and Agriculture Organization (FAO)** *recently, has brought both relief and concern regarding the state of the world's forests.*

Global Forest Coverage

- **Total Forest Area***:*
  - *The world has approximately* **4.1 billion hectares** *of forest.*
  - *This area represents* **31% of the total land** *on Earth.*
- **Top Five Countries***:*
  - *The* **United States, Canada, Russia, and China** *together hold 54% of the world's forest area.*
- **Other Significant Contributors***:*
  - *Countries such as Australia, the Democratic Republic of the Congo, Indonesia, Peru, and India also play a major role.*
  - *Collectively, these countries contribute to* **two-thirds of the world's total land area.**
- *India gained 2,66,000 hectares of forest annually from 2010-2020, ranking third globally in forest area gains.*

Deforestation Trends

- **Overall, Forest Loss***:*
  - *Between 1990 and 2020,* **about 420 million hectares** *of forest were converted for other land uses.*
  - *This conversion was* **primarily driven by agriculture**, *urban development, and other land use changes.*

- **Improvement in Deforestation Rates***:*
    - *During the period from 1990 to 2002,* **deforestation occurred at a rate of 15.8 million hectares per year.**
    - *From 2015 to 2020, this rate decreased to 10.2 million hectares per year, indicating* **progress in forest conservation** *efforts.*
- **Regional Analysis***:*
    - **Africa experienced the highest rates of deforestation**, *followed by South America and Asia.*
    - *These regions faced significant pressures from* **expanding agricultural frontiers and infrastructure development.**

Forest Recovery and Gains

- **Countries with Forest Growth***:*
    - *Several countries, including China and India,* **reported annual increases in their forest areas by 2020.**
    - *These gains were attributed to* **large-scale afforestation and reforestation** *programs.*
- **Political and Environmental Measures***:*
    - *In Indonesia and Brazil,* **concerted efforts to implement political and environmental** *measures have led to substantial reductions in deforestation rates.*
    - *Policies promoting* **sustainable land use and forest protection** *have been crucial in these successes.*

Mangrove Ecosystems

- **Total Mangrove Area***:*
    - *There are about* **14.8 million hectares** *of mangrove forests worldwide.*
- **Trends in Mangrove Areas***:*
    - *While there was a* **net loss of mangrove forests** *from 2000 to 2020, natural growth rates have been higher than natural loss rates.*
    - *This suggests that mangrove ecosystems are resilient and can recover from disturbances.*

- **Challenges***:*
    - *Despite their resilience, mangrove forests face constant threats from* **extreme weather events** *such as hurricanes and cyclones, which can cause significant damage.*

About FAO (Food and Agriculture Organization)

- *The FAO was founded in 1945 to improve* **agricultural productivity and food security globally.**

Global Reach*:*

- *The organization* **operates in over 130 countries**, *coordinating international efforts to combat hunger and malnutrition.*
- *Its* **headquarters are located in Rome**, *Italy, reflecting its central role in global food governance.*

Core Initiatives*:*

- *FAO leads initiatives focused on promoting sustainable agricultural practices and enhancing climate resilience.*
- *One of its key publications is the* **State of Food Security and Nutrition** *report, which is released annually to provide vital data and insights on the state of global food security and nutrition.*