DAILY CURRENT AFFAIRS 10-02-2025

GS-2

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Donkey Route

Syllabus: GS-2; International Relations

Context

- Indian deportees from the US, who recently arrived in Amritsar, have shared their distressing experiences of using the "donkey route" for illegal immigration.

Key Highlights:

- **Rising Cases**: There has been a noticeable increase in the number of Indians, particularly from Punjab, Haryana, and Gujarat, attempting to migrate illegally via the donkey route. Many are young individuals seeking economic opportunities abroad.
- **Deportation and Detention**: A significant number of migrants are caught by immigration authorities in transit countries or their destination nations. They are often detained, deported, and banned from re-entering those countries.
- **Exploitation by Agents**: Human traffickers and agents exploit vulnerable individuals by charging exorbitant fees (often in lakhs of rupees) for fake documents, visas, and smuggling services. Many migrants end up in debt or stranded in unfamiliar countries.
- **Dangerous Journeys**: The donkey route often involves perilous journeys, including crossing deserts, forests, and oceans in unsafe conditions. Some migrants have reported traveling in overcrowded trucks, boats, or even shipping containers.
- **Government Warnings**: The Indian government has issued advisories urging citizens to avoid illegal migration and use only authorized channels for travel and employment abroad. However, the allure of better opportunities continues to drive many to take the risk.

About the Donkey Route:

- The term "donkey route" originates from a Punjabi idiom that describes a **difficult, unplanned journey.**
- It refers to the circuitous and dangerous paths taken by illegal migrants to reach their desired destination, such as the US, UK, or Canada.

How It Works:

- **Visa Manipulation**: Migrants often obtain legitimate tourist visas for countries in the Schengen Area or other transit hubs. They then use these visas to enter a country legally before attempting to cross borders illegally.
- **Multiple Stops**: The journey involves passing through several countries, often with the help of agents who facilitate border crossings using fake documents or smuggling tactics.
- **Final Destination**: The ultimate goal is to reach a country like the US or UK, where migrants hope to find work and settle illegally.

Risks Involved:

- **Legal Consequences**: Migrants face arrest, detention, and deportation if caught. They may also be banned from entering the destination country in the future.
- **Exploitation**: Agents often abandon migrants midway, leaving them stranded without money or resources.
- **Physical Danger**: The journey involves life-threatening risks, including exposure to extreme weather, unsafe transportation, and violence.

Government and International Response:

- **Awareness Campaigns**: Indian authorities are working to educate potential migrants about the dangers of illegal immigration and the importance of using legal channels.
- **Crackdown on Agents**: Efforts are being made to identify and prosecute human traffickers and illegal immigration agents.
- **International Cooperation**: India is collaborating with other countries to curb illegal migration and human trafficking networks.

Conclusion:

- The donkey route remains a perilous and illegal path for those seeking a better life abroad.
- While the promise of economic opportunities is tempting, the risks far outweigh the potential rewards.
- Authorities continue to emphasize the importance of legal migration and the dangers of falling prey to unscrupulous agents.

Grameen Credit Score

Syllabus: GS-3; Agriculture Economy, GS-2; Government policies and Interventions

Context

- The Grameen Credit Score scheme, announced by the Finance Minister of India in the Union Budget 2025, represents a transformative step toward financial inclusion and empowerment for women in rural areas, particularly those involved in Self Help Groups (SHGs). Here are the latest updates and key details about the initiative:

Latest Developments:

1. **Implementation Timeline:**The government has set an ambitious timeline to roll out the Grameen Credit Score scheme by mid-2025. Pilot programs are expected to begin in select states by the end of 2024 to test the framework and address any operational challenges.
2. **Partnerships with Financial Institutions:**Leading banks and financial institutions, including the State Bank of India (SBI), NABARD, and regional rural banks, have been roped in to implement the scheme. These institutions will work closely with SHGs to integrate their transaction data into the central credit system.
3. **Digital Infrastructure:**The government is investing in robust digital infrastructure to ensure seamless data collection and analysis. A dedicated portal and mobile app are being developed to allow SHG members to access their credit scores, track loan repayment schedules, and receive financial literacy training.
4. **Awareness Campaigns:**To ensure widespread adoption, the government plans to launch extensive awareness campaigns in rural areas. These campaigns will educate SHG members about the benefits of the Grameen Credit Score, how to maintain a good credit history, and the financial products available to them.

Key Features of the Grameen Credit Score Scheme:

1. **Formalization of SHG Transactions:**
    - The scheme aims to bring SHG transactions into the formal credit system, enabling financial institutions to assess the creditworthiness of rural women entrepreneurs more accurately.
2. **Customized Financial Products:**

- **Micro-Enterprise Credit Cards:** SHG members will have access to customized credit cards with limits of up to ₹5 lakh to support their micro-enterprises.
- **Low-Interest Loans:** Tailored loan products with competitive interest rates will be introduced to meet the specific needs of rural women entrepreneurs.

3. **Digital Credit Assessment:**
   - The scheme will leverage digital tools to create a transparent and efficient credit assessment framework. This will help bridge the gap in the current credit bureau system, which often excludes SHG members due to a lack of formal credit history.
4. **Financial Literacy Programs:**
   - The initiative will include training programs to educate SHG members about credit management, loan repayment, and the importance of maintaining a good credit score.

Expected Impact:

- **Enhanced Financial Inclusion:**
- By formalizing SHG transactions, the scheme will provide millions of rural women with access to formal credit, enabling them to expand their businesses and improve their livelihoods.
- **Economic Empowerment:**
- Increased credit availability will empower women-led SHGs to contribute more effectively to their households and communities, fostering economic stability and growth in rural areas.
- **Boost to Rural Entrepreneurship:**
- The scheme is expected to unlock the entrepreneurial potential of rural women, leading to the creation of new micro-enterprises and job opportunities.
- **Improved Credit Culture:**
- The introduction of the Grameen Credit Score will promote a culture of credit discipline and financial responsibility among SHG members, paving the way for long-term economic development.

Challenges and the Way Forward:

While the Grameen Credit Score scheme holds immense promise, its success will depend on addressing key challenges such as:

- **Digital Literacy:** Ensuring that SHG members are equipped to use digital tools effectively.
- **Data Privacy:** Safeguarding the personal and financial data of SHG members.
- **Scalability:** Expanding the scheme to cover all rural areas while maintaining efficiency and transparency.

The government, in collaboration with financial institutions and NGOs, is working to address these challenges through targeted interventions and capacity-building initiatives.

Conclusion:

- The Grameen Credit Score scheme is a groundbreaking initiative that has the potential to transform the lives of millions of rural women in India.
- By providing them with access to formal credit and financial services, the scheme will not only empower women entrepreneurs but also drive inclusive economic growth in rural India.
- As the implementation progresses, it will be crucial to monitor its impact and make necessary adjustments to ensure its success.

Navigation With Indian Constellation (NavIC) System

Syllabus: GS-3: Science and Technology – Satellites.

Context:

The partial failure of the NVS-02 navigation satellite marks another setback for India's indigenous Navigation with Indian Constellation (NavIC) system, highlighting challenges in maintaining a fully operational satellite navigation network.

About NavIC (Navigation with Indian Constellation)

What is NavIC?

- **NavIC (Navigation with Indian Constellation)**, formerly known as the **Indian Regional Navigation Satellite System (IRNSS)**, is India's indigenous satellite navigation system.

- Designed to provide **accurate positioning, navigation, and timing services** over India and its surrounding regions.
- **Developed by**: **Indian Space Research Organisation (ISRO)**.
- **Objective**:
  - Reduce India's dependence on foreign navigation systems like **GPS (USA), GLONASS (Russia), and Galileo (Europe)**.
  - Provide a **reliable and autonomous** positioning system for **civilian and strategic applications**.

How NavIC Works?

- Operates through a constellation of **seven satellites**:
  - **Three satellites in geostationary orbit (GEO)**.
  - **Four satellites in geosynchronous orbit (GSO)**.
- Uses **dual-frequency signals (L5 and S bands)** for **high accuracy**.
- Ground stations, including **control centers and monitoring stations**, ensure seamless operation and signal integrity.

Features of NavIC

- **Coverage**:
  - Provides services over **India** and extends up to **1,500 km beyond its borders**.
- **Accuracy**:

- **Position accuracy**: Better than **20 meters**.
- **Timing accuracy**: Better than **50 nanoseconds**.

- **Dual Services**:
  - **Standard Positioning Service (SPS)**:
    - For **civilian applications**, including **transportation, disaster management, and personal navigation**.
  - **Restricted Service (RS)**:
    - An **encrypted service** for **strategic and military** applications.
- **Interoperability**:
  - NavIC signals are **compatible with other global navigation systems** like **GPS, GLONASS, and Galileo**.
- **New Developments**:
  - **Introduction of L1 band signals (1575.42 MHz)** for **enhanced civilian use** (from 2023).

Applications of NavIC

- **Transportation**: Land, air, and marine navigation.
- **Disaster Management**: Early warning systems and relief operations.
- **Scientific Research and Surveying**: Geological studies, mapping, and resource monitoring.
- **Time Synchronization**: Used for **critical infrastructure** like **banking, telecom, and power grids**.
- **Strategic and Defense Applications**: Secure military operations, border security, and missile guidance.

India's AI Independence: Should India build a sovereign, foundational AI model?

Syllabus: GS-3: Science and Technology – Artificial Intelligence.

Context:

- As AI becomes a strategic and economic driver, India must decide whether to build its own foundational AI model or rely on foreign ones.

India's Pursuit of a Sovereign Foundational AI Model: A Critical Analysis

1. Introduction

- The debate on whether India should invest in developing a sovereign foundational AI model was sparked by OpenAI CEO Sam Altman's remarks in India (2023).
- The discussion involves balancing **sovereignty and national pride** against **financial feasibility**.
- The **IndiaAI Mission** by the IT Ministry aims to establish India's capabilities in AI.

2. Need for a Sovereign Foundational AI Model

- **Pro View:**
  - India should focus on AI model development but not primarily for sovereignty.
  - The capability to **build and deploy foundation models** is essential.
  - Sovereignty concerns arise due to **potential sanctions on AI chips and software exports**.
  - However, open-weight and open-source models (e.g., DeepSeek R1) reduce dependency on proprietary models.
  - If sanctions arise, India can **"fork" open-source models** and modify them.
- **Against View:**
  - Sovereignty is a valid concern, but **AI chip manufacturing** is a bigger issue.
  - India lacks contracts with **TSMC and other major chip manufacturers**.
  - More than sovereignty, **national ambition and pride** drive India's AI efforts.
  - Investment should be proportional to expected returns.

3. Financial Viability of AI Model Development

- **Cost Considerations:**
  - Training AI models is **highly capital-intensive**.
  - Example: DeepSeek V3's training run cost **$5.6 million**, but AI research involves multiple failed attempts, requiring **hundreds of millions of dollars**.
  - Developing a foundational model is not just about training but also includes **salaries, maintenance, and infrastructure**.
- **Market Limitations:**
  - The **U.S. dominates 60% of the global AI market**.

- Indian AI firms would mainly cater to local enterprises, limiting revenue potential.
- Cost-effectiveness of AI deployment in India is a challenge – e.g., **$200/month AI replacement cost in the U.S.** is equivalent to a human worker's salary in India.

➢ **Challenges in Public Procurement:**

- Government AI initiatives require **error tolerance**, but **India's public procurement system lacks flexibility** for high-risk research investments.
- High **failure rates in AI R&D** make it unsuitable for rigid public funding structures.

4. Alternative Focus Areas

➢ **Software Development & Application Layer Innovation:**

- India has excelled in software; similar efforts can be made in **AI applications**.
- Encouraging startups to **build on existing AI models** is a more feasible approach.
- Young Indian developers show **high enthusiasm** and **early exposure** to AI tools.

➢ **Promoting Innovation Under Constraints:**

- Companies like **Alibaba and DeepSeek** have shown how innovation can thrive despite limitations.
- India should focus on **low-cost, high-impact AI solutions** rather than replicating global giants.

5. IndiaAI Mission: Government Policy & GPU Subsidies

➢ **Positive Steps:**

- The government is making **GPU clusters available to startups and academia** at subsidized rates.
- This will **reduce computing costs** for AI researchers and startups.

➢ **Challenges & Limitations:**

- The budget is **smaller than the cost of training Meta's Llama 4 model**.
- India is spreading **limited resources too thinly** rather than making concentrated bets.
- Big Tech companies like **Google, Microsoft, and Meta** invest **$80 billion annually in AI infrastructure**, far exceeding India's budget.

- **Optimal Resource Allocation:**
  - **Focused investment** in areas like **Indic language AI models (e.g., AI for Bharat, IndicTrans2)** can yield high returns.
  - Training a **text-to-speech AI for Indian languages**requires fewer GPUs but delivers high impact.
  - Competing with **ChatGPT-4 or DeepSeek R1** may not be viable with India's current resources.

6. Conclusion

- India's AI strategy should prioritize **scalability, efficiency, and market viability** over mere sovereignty concerns.
- Instead of replicating Western AI giants, India should focus on **specialized AI solutions** that cater to local needs.
- The **IndiaAI Mission's GPU subsidy** is a step in the right direction, but **targeted investments in high-impact areas** will be more beneficial than attempting to build a full-scale sovereign AI model.

SARAT Version 2 Tool

Syllabus: GS-3: Science and Technology & GS-3: Disaster Management.

Context:

- Union Minister for Science and Technology announced the launch of SARAT Version 2, an advanced tool enhancing the efficiency of Indian search-and-rescue agencies with improved accuracy, faster response times, and better visualization capabilities.

About SARAT Version 2

- **What it is:** A specialized tool developed to assist **search-and-rescue (SAR)** operations, particularly in the **Indian Ocean region**.
- **Ministry:** Developed under the **Ministry of Earth Sciences (MoES)** and implemented by the **Indian National Centre for Ocean Information Services (INCOIS)**.
- **Aim:** Enhancing the efficiency, accuracy, and success rate of SAR operations by providing:
  - Precise search areas
  - Exportable data
  - Advanced visualization tools

Key Features

- **Accurate Search Areas**
  - Computes **search regions based on the Last Known Position (LKP)** of missing objects or individuals.
- **Exportable Data**
  - Provides digital formats of search areas for **seamless integration** with rescue planning maps.
- **Enhanced Visualization**
  - Includes **particle trajectory visualization**, color-coded search regions, and LKP markers for better interpretation.
- **Training Initiatives**
  - **INCOIS conducts workshops** for agencies like:
    - **Indian Coast Guard (ICG)**
    - **Airports Authority of India (AAI)**
- **Future Enhancements**
  - Integration of **high-frequency radar measurements**.
  - Use of **advanced ocean modeling techniques** to improve accuracy.

Significance of SARAT Version 2

- **Strengthens India's disaster response mechanism.**
- **Reduces search time**, enhancing survival chances.
- **Boosts inter-agency coordination** for SAR operations.
- **Supports India's maritime security and safety efforts.**

UPSC Exam Relevance:

- GS-3 (Science & Technology, Disaster Management)
- Government initiatives for coastal and maritime security
- Use of technology in disaster response