DAILY CURRENT AFFAIRS 08-02-2025

GS-1

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Pineapple Express

Syllabus: GS-1: Geography – Climatology.

Context:

- After an unusually dry January, a powerful atmospheric river known as the 'Pineapple Express' is set to bring heavy rain, snow, and strong winds to central and northern California over the coming days.

1. Introduction

- A powerful atmospheric river, the **Pineapple Express**, is set to bring heavy rain, snow, and strong winds to **central and northern California**.
- This follows an **unusually dry January**, making the event significant for both drought relief and potential hazards.

2. What is the Pineapple Express?

- A **type of atmospheric river**, which is a **narrow, fast-moving "river in the sky"** transporting moisture over long distances.
- Originates near **Hawaii**, carrying **warm, moisture-laden air** to the U.S. West Coast.
- Can bring **extreme rainfall and flooding** due to its high water vapor content.
- According to the **National Oceanic and Atmospheric Administration (NOAA)**, these systems:
    - Are long, narrow bands that transport vast amounts of **water vapor from the tropics**.
    - Can carry a volume of water comparable to the **Mississippi River at its mouth**.
    - Exceptionally strong ones can transport **up to 15 times that amount**.

- These systems form alongside **large storm systems** and occur **several times a year**.

3. Expected Impact on California

(i) Heavy Rainfall & Flooding

- Expected rainfall: **10-20 inches (250-500mm)** in inland areas.
- Can lead to **severe flooding**, especially in **low-lying areas and near rivers**.
- **Drought-affected land** is more prone to **mudslides and landslides** due to sudden heavy moisture.

(ii) Heavy Snowfall & Avalanche Risk

- **Up to 6 feet (~2 meters) of snow** expected in the **Sierra Nevada mountains** (Yosemite to Lake Tahoe).
- Increased **avalanche risk** due to large accumulations of snow.

(iii) Strong Winds & Power Outages

- Winds of **90-100 mph (145-160 km/h)** expected.
- Strong winds, combined with **wet snow**, may **topple power lines**, causing **widespread outages**.

(iv) Wildfire-Affected Areas & Drought Conditions

- **Southern California**, including **Los Angeles and San Diego**, still experiencing severe drought.
- Nearly **54% of California** remains under official **drought conditions**.
- Since early January, **wildfires** have:
    - Destroyed **over 16,000 structures**.
    - Forced **hundreds of thousands** to evacuate.
    - Affected areas with **extreme drought conditions**, increasing the importance of incoming precipitation.

4. Long-Term Implications

- **Atmospheric rivers** provide **up to 50% of California's annual rainfall**.
- While beneficial, extreme events like this can cause **severe damage**.
- **Climate change may intensify atmospheric rivers**, leading to:
    - **Increased lower-elevation rainfall**.
    - **Higher flooding risks**.

- **Stronger and more damaging storms**.

5. Conclusion

- The **Pineapple Express** is a **double-edged sword**—helping relieve **drought conditions** while also **posing serious hazards** such as flooding, landslides, avalanches, and power outages.
- **Preparedness measures** are essential to mitigate risks associated with extreme weather events.

Ordinance (about- governor and president comparison)

Syllabus: GS-2: Indian Polity and constitution – Ordinance making provisions

Context:

- Karnataka: Deputy CM says police will be given more power in Ordinance to rein in microfinance companies.

1. Constitutional Basis

- **President**: Article 123 of the Constitution grants the President the power to promulgate ordinances.
- **Governor**: Article 213 of the Constitution grants the Governor the power to promulgate ordinances.

2. When Can Ordinances Be Promulgated?

- **President**:
  - Can promulgate ordinances when **both Houses of Parliament are not in session**.
  - The President must be **satisfied** that circumstances exist that require immediate action.
- **Governor**:
  - Can promulgate ordinances when the **State Legislative Assembly (or both Houses in bicameral states) is not in session**.
  - The Governor must be **satisfied** that circumstances exist that require immediate action.

3. Scope of Ordinance-Making Power

- **President**:

- Can promulgate ordinances on matters within the **Union List** and **Concurrent List**.
- Cannot promulgate ordinances on matters in the **State List** unless:
  - A state emergency (President's Rule) is in operation.
  - The state legislature has delegated such power to the Parliament.

- **Governor**:
  - Can promulgate ordinances on matters within the **State List** and **Concurrent List**.
  - Cannot promulgate ordinances on matters in the **Union List**.

4. Approval by Legislature

- **President**:
  - The ordinance must be approved by **both Houses of Parliament** within **6 weeks of reassembly**.
  - If not approved, the ordinance ceases to operate.
- **Governor**:
  - The ordinance must be approved by the **State Legislature** within **6 weeks of reassembly**.
  - If not approved, the ordinance ceases to operate.

5. Duration of Ordinance

- **President**:
  - An ordinance remains valid for a maximum of **6 months and 6 weeks**:
    - 6 months from the date of promulgation.
    - 6 weeks from the date of reassembly of Parliament (whichever is earlier).
- **Governor**:
  - An ordinance remains valid for a maximum of **6 months and 6 weeks**:
    - 6 months from the date of promulgation.
    - 6 weeks from the date of reassembly of the State Legislature (whichever is earlier).

6. Judicial Review

- **President**:

- The ordinance can be challenged in court if it is deemed to violate the **basic structure of the Constitution** or is **mala fide** (in bad faith).

- **Governor**:
  - Similarly, the Governor's ordinance can be challenged in court on the same grounds.

7. Limitations

- **President**:
  - Cannot promulgate ordinances on matters that require a **Constitutional Amendment**.
  - Cannot bypass the legislative process indefinitely; ordinances are temporary measures.

- **Governor**:
  - Cannot promulgate ordinances without the **advice of the State Council of Ministers** (Article 163).
  - Cannot promulgate ordinances during the President's Rule in the state.

8. Key Differences

Aspect	**President**	**Governor**
Constitutional Article	Article 123	Article 213
Scope	Union List and Concurrent List	State List and Concurrent List
Approval Authority	Both Houses of Parliament	State Legislature
Promulgation During	Parliament not in session	State Legislature not in session
Limitation	Cannot amend the Constitution	Requires advice of the Council of Ministers

9. Important Judgments

- **RC Cooper vs Union of India (1970)**: The Supreme Court held that the President's satisfaction while promulgating an ordinance is subject to judicial review.
- **D.C. Wadhwa vs State of Bihar (1987)**: The Supreme Court criticized the repeated re-promulgation of ordinances by the Governor, calling it a **fraud on the Constitution**.

Annual Status of Education Report

Syllabus: GS-2: Social Justice – Education.

Context:

- ASER study shows post-COVID recovery, but many students still lag in reading, arithmetic.

ASER 2024 Report - Tabular Summary with Analysis

Category	Key Findings	Analysis
Survey Overview	- 6.5 lakh children in 605 villages assessed.	Reflects comprehensive national coverage, enabling reliable data for policy-making.
	- Focus on basic reading and arithmetic skills.	Highlights the foundational gaps in early education.
Literacy Levels	**Class 3:** 23.4% can read Class 2 text (2024), up from 16.3% (2022), but below optimal levels.	Modest recovery post-COVID; however, 76.6% still struggle, indicating deep learning deficits.
	Class 5: 44.8% can read Class 2 text, similar to 2018 (44.2%).	Stagnation points to persistent systemic issues in foundational learning.
	Class 8: 67.5% can read Class 2 text.	Improvement with age, but foundational gaps still visible in upper grades.
Numeracy (Mathematics)	**Class 3:** 2 out of 3 students struggle with basic subtraction.	Major concern as early numeracy skills are critical for cognitive development.
	Class 5: Division proficiency improved from 27.9% (2018) to 30.7% (2024).	Marginal progress suggests gaps in curriculum effectiveness and teaching methods.
	Class 8: Arithmetic proficiency improved slightly from 44.1% (2018) to 45.8% (2024).	Indicates cumulative learning loss over the years, requiring targeted interventions.
State-wise Improvement	- **4-5.9% improvement:** Himachal Pradesh, Bihar.	Moderate progress due to improved state-level FLN programs.
	- **6-9.9% improvement:** Odisha,	Stronger gains indicate effective

Category	Key Findings	Analysis
	Haryana, West Bengal, Jharkhand.	policy execution and targeted programs.
	- **10%+ improvement:** Gujarat, UP, Uttarakhand, TN, Sikkim, Mizoram.	Significant improvements due to robust state initiatives and focused government interventions.
FLN Interventions	- 75% of schools implemented 3-month school readiness programs for Grade 1.	Positive impact of government policies, though coverage needs to be expanded.
	- Focus on teacher training, resource allocation, and curriculum development.	Shows that systemic support plays a role in improving learning outcomes.
Digital Literacy (14-16 yrs)	- 89% have access to smartphones; 31.4% own one.	High digital penetration offers opportunities for tech-based learning but raises concerns about screen addiction.
	- 57% use smartphones for education; 76% for social media.	Digital tools are underutilized for learning; potential to leverage ed-tech for better outcomes.
	- Boys more aware of digital safety (62% know how to block/report profiles).	Indicates a gender gap in digital literacy and online safety awareness.

Key Analytical Insights:

- **Post-COVID Recovery:**
  - While there's modest improvement, learning levels have **not fully recovered** to pre-pandemic levels, especially in numeracy.
- **State Disparities:**
  - Variations among states suggest that **local governance, policy execution, and resource allocation** significantly impact outcomes.
- **Persistent Learning Gaps:**
  - High percentages of students unable to read basic texts or solve simple math problems even in **Class 8** highlight foundational gaps.
- **Digital Divide:**

- While access to smartphones is high, **gender-based disparities** in digital literacy and usage for education need attention.

- **Policy Implications:**
  - **Strengthening FLN**, teacher training, curriculum reforms, and **targeted state interventions** are crucial for sustainable progress.

This analysis is highly relevant for **UPSC Mains (GS II - Governance, Education, Social Justice)** and **Essay Paper** on topics related to education reforms.

Household Consumption Expenditure Survey

Syllabus: GS-3: Indian Economy – Poverty and related concepts.

Context:

- The Ministry of Statistics and Programme Implementation (MoSPI) decided to conduct two consecutive surveys on household consumption expenditure during 2022-23 and 2023-24.

1. Overview of HCES 2023-24

- **Objective**: To collect data on household consumption and expenditure on goods and services.
- **Purpose**:
  - Assess trends in economic well-being.
  - Update the basket of consumer goods and services for **Consumer Price Index (CPI)** calculation.
  - Measure poverty, inequality, and social exclusion.
- **Key Indicator**: **Monthly Per Capita Consumption Expenditure (MPCE)**.
- **Surveys Conducted**:
  - **First Survey**: August 2022 to July 2023 (results released in February 2024).
  - **Second Survey**: August 2023 to July 2024 (factsheet released in June 2024).
- **Data Collection**:
  - **Sample Size**: 2,61,953 households (1,54,357 rural, 1,07,596 urban).
  - **Coverage**: All States and Union Territories.

2. Key Findings of HCES 2023-24

- **Average MPCE (Without Imputation)**:
  - **Rural**: ₹4,122.
  - **Urban**: ₹6,996.
- **Average MPCE (With Imputation of Free Items)**:
  - **Rural**: ₹4,247.
  - **Urban**: ₹7,078.
- **Growth in MPCE (Nominal Prices)**:
  - **Rural**: 9% increase from 2022-23.
  - **Urban**: 8% increase from 2022-23.
- **Urban-Rural Gap**:
  - Declined to **70%** in 2023-24 from **84%** in 2011-12.
- **Consumption Inequality**:
  - **Gini Coefficient**:
    - Rural: Declined to **0.237** (from 0.266 in 2022-23).
    - Urban: Declined to **0.284** (from 0.314 in 2022-23).

3. Expenditure Patterns

- **Non-Food Expenditure**:
  - **Rural**: 53% of MPCE.
  - **Urban**: 60% of MPCE.
  - Major contributors:
    - Conveyance.
    - Clothing, bedding, and footwear.
    - Miscellaneous goods and entertainment.
    - Durable goods.
    - Rent (7% in urban areas).
- **Food Expenditure**:
  - Major contributors:
    - Beverages, refreshments, and processed food.

- Milk and milk products.
- Vegetables.

4. Variation in MPCE Across Fractile Classes

- **Bottom 5% Population**:
  - **Rural**: ₹1,677.
  - **Urban**: ₹2,376.
- **Top 5% Population**:
  - **Rural**: ₹10,137.
  - **Urban**: ₹20,310.
- **Maximum Growth in MPCE**:
  - **Bottom 5-10%** population in both rural and urban areas.

5. State and UT-wise Analysis

- **Highest MPCE**:
  - **State**: Sikkim (Rural: ₹9,377; Urban: ₹13,927).
  - **UT**: Chandigarh (Rural: ₹8,857; Urban: ₹13,425).
- **Lowest MPCE**:
  - **State**: Chhattisgarh (Rural: ₹2,739; Urban: ₹4,927).
  - **UT**: Dadra and Nagar Haveli and Daman and Diu (Rural: ₹4,311); Jammu and Kashmir (Urban: ₹6,327).
- **Rural-Urban Gap**:
  - Highest in **Meghalaya** (104%), followed by Jharkhand (83%) and Chhattisgarh (80%).

6. Imputed Values in MPCE

- **Items Included**:
  - Food items (e.g., rice, wheat, pulses, edible oil).
  - Non-food items (e.g., laptops, bicycles, clothing).
- **Exclusions**:
  - Health services under **PM-JAY**.
  - Free education services.

7. Comparison with Previous Surveys

- **MPCE at Current Prices**:
  - **2023-24**: Rural ₹4,122; Urban ₹6,996.
  - **2022-23**: Rural ₹3,773; Urban ₹6,459.
  - **2011-12**: Rural ₹1,430; Urban ₹2,630.
- **MPCE at 2011-12 Prices**:
  - **2023-24**: Rural ₹2,079; Urban ₹3,632.
  - **2022-23**: Rural ₹2,008; Urban ₹3,510.
  - **2011-12**: Rural ₹1,430; Urban ₹2,630.

8. Policy Implications

- **Poverty Alleviation**: Growth in MPCE for the bottom 5-10% indicates improved economic conditions for the poorest.
- **Rural-Urban Convergence**: Declining urban-rural gap reflects balanced development.
- **Social Welfare Programs**: Imputed values highlight the impact of free distribution schemes on household consumption.

9. Key Takeaways for UPSC

- **Economic Indicators**: MPCE is a critical metric for assessing economic well-being and poverty.
- **Inequality Reduction**: Decline in Gini coefficient indicates reduced consumption inequality.
- **Policy Focus**: Emphasis on rural development and social welfare programs to sustain consumption growth.

Post-Quantum Cryptography (PQC)

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

Context:

- Virtual Private Network (VPN) companies are adapting to the potential threats posed by quantum computing through the implementation of Post-Quantum Cryptography (PQC).

Quantum Computing and Its Threats to Encryption

- **Quantum Computing Capabilities:**
  - Performs extremely fast calculations, surpassing classical computers.
  - Can solve complex mathematical problems that form the basis of current encryption systems.
- **Breaking Asymmetric Encryption:**
  - Quantum computers can efficiently solve:
    - **Factoring large numbers** (threatening RSA encryption).
    - **Discrete logarithm problems** (endangering elliptic curve cryptography - ECC).
  - Traditional encryption methods like **RSA and ECC** may become obsolete.
- **Store Now, Decrypt Later (SNDL) Attacks:**
  - Cybercriminals may store encrypted data today.
  - When quantum computers become powerful enough, they can decrypt this stored data.
  - This poses a **long-term security risk** for sensitive information.
- **Industry-Wide Data Security Risks:**
  - **Finance:** Threat to secure banking transactions and financial records.
  - **Healthcare:** Risk of exposing sensitive patient data.
  - **Government Communications:** Potential for breaches in national security information.

Post-Quantum Cryptography (PQC)

- **Definition:**
  - A cryptographic approach that remains secure even against quantum computers.
  - Also known as **quantum-resistant, quantum-safe, or quantum-proof cryptography**.
- **Key Features:**
  - Does not rely on mathematical problems solvable by quantum computers.
  - Designed to secure data against **both classical and quantum computing attacks**.

VPN and Quantum-Safe Encryption

- **Role of VPN Technology:**
  - Encrypts data to **protect user privacy and online security**.
  - Hides the **IP address** to maintain anonymity.
- **Adaptation to Quantum Threats:**
  - VPN companies are integrating **PQC algorithms** to counter future quantum attacks.
  - Ensures that encrypted data remains safe even if quantum decryption becomes possible.

Conclusion

- Quantum computing poses **significant risks** to traditional encryption methods.
- VPN companies and cybersecurity firms are moving towards **quantum-resistant encryption** to future-proof data security.