Freedom UPSC

TOGETHER WE SCALE HEIGHTS

# Daily Current Affairs

## To The Point

### by Dhananjay Gautam

## Table Of Content

07 Dec 2024




Subscribe to our YouTube Freedom UPSC with Dhananjay Gautam

GS Paper 3 – Infrastructure and Economic

## 1 Bharatiya Vayuyan Vidheyak 2024: Revolutionizing India's Aviation Laws


**Context:** The **Bharatiya Vayuyan Vidheyak (BBV) 2024**, which replaces the outdated **Aircraft Act, 1934**, represents a major reform in India's aviation regulations. The bill has been **passed by the Rajya Sabha**, following its earlier clearance in the Lok Sabha in **August 2024**.

This legislation aims to modernize aviation laws and improve the **ease of doing business** in the sector. The move comes after suggestions from the **International Civil Aviation Organization (ICAO)** to align India's aviation laws with **global standards**.

**Key Features of the Bharatiya Vayuyan Vidheyak 2024:**

**1. Establishment of Three Key Authorities:**

- **Directorate General of Civil Aviation (DGCA):** Responsible for regulatory functions and safety oversight.
- **Bureau of Civil Aviation Security (BCAS):** Handles aviation security.
- **Aircraft Accidents Investigation Bureau (AAIB):** Investigates aircraft accidents.

**Government: Supervision:** The central government retains **supervisory powers** over these bodies, including the ability to issue directions and review their decisions.

**Appeals:** All appeals against decisions by the DGCA or BCAS will lie with the **central government**, with no further recourse.

**2. Aircraft Design Regulation:**

- The bill retains existing provisions for regulating the **manufacture, use, and operation of aircraft**.
- **New powers:** It introduces the regulation of aircraft **design**, enhancing India's aviation safety standards.

**3. Expanded Rule-Making Powers:**

- **Existing Powers Retained:**
  - Regulating aircraft activities, licensing, and certification.
  - Implementing the **1944 International Civil Aviation Convention**.
- **New Powers Added:**
  - Regulating **radio telephone operator certificates** and licenses under the **International Telecommunication Convention**.

**4. Stricter Offences and Penalties:**

- **Punishable Offences:** Violations such as carrying **prohibited goods**, endangering public safety, and disobeying DGCA/BCAS directions are punishable by up to **two years' imprisonment**, a fine of **1 crore**, or both.
- **Enhanced Penalties:** Activities like dumping rubbish near airports can lead to penalties of up to **three years' imprisonment** or **1 crore fine**.
- **Civil and Criminal Penalties:** Discretionary penalties include **fines of up to 1 crore** and imprisonment of up to **two years**.

**5. Adjudication and Appeal Mechanism:**

- The bill retains the **appointment of adjudicating officers** by the central government to impose penalties.
- Introduces a **Second Appellate Officer** to allow further appeals beyond the **First Appellate Officer**, ensuring a more comprehensive adjudication process.

**Criticisms of the Bharatiya Vayuyan Vidheyak:**

**1. Lack of Autonomy for the DGCA:**

- Unlike independent regulators in sectors like telecom, electricity, and insurance, the **DGCA functions as a government department**.
- The **Director General's qualifications, selection process, and tenure** are not clearly defined, raising concerns about operational independence.

**2. Limited Appeal Mechanism:**

Appeals against decisions by authorities such as the DGCA or BCAS are restricted to the **Union Government**, which may undermine the perception of professionalism and independence.

**3. Arbitrator Appointment for Compensation:**

- The government has the power to appoint arbitrators for determining compensation.
- Critics argue this violates **Article 14 of the Constitution**, as the **Supreme Court** has ruled that unilaterally appointed arbitrators compromise fairness.

**4. Overreach of Government Discretion:**

- The central government has significant discretion to **define criminal penalties**, which could infringe on the **principle of separation of powers**.

**5. Concerns Over Inclusivity:**

- The bill's **Hindi title** has sparked criticism for being exclusionary, as **60% of India's population** does not speak Hindi. Analysts argue that a more inclusive title is necessary for a diverse country like India.

**Implications for India's Aviation Sector:**

The **Bharatiya Vayuyan Vidheyak 2024** is a bold step towards modernizing India's aviation laws. While it addresses many **contemporary challenges** and aligns India's aviation sector with global standards, concerns about **regulatory independence**, **government overreach**, and **inclusivity** must be resolved for its effective implementation.

This legislation has the potential to position India as a global aviation hub while safeguarding public safety and fostering innovation in the sector.

GS Paper 3 – Indian Economy

## 2 Rising Potato Prices in Odisha: Reasons, Trends, and Impacts

**Context:** The **Odisha government** has attributed the **surge in potato prices** to the **West Bengal government's restrictions** on shipments.

- **Odisha**, which depends on potato imports, is facing an extended period of high prices due to these limitations.
- West Bengal, a **key supplier**, reduced shipments to safeguard its own markets amidst rising prices.

**Agro-Climatic Conditions for Potato Cultivation:**

**Ideal Climate for Growth:**

- **Temperature:** Best growth occurs between **18–29°C** during the day and **13–18°C** at night.
- **Tuber Formation:** Optimal at **20°C**; temperatures over **30°C** can halt tuber development.
- **Sunlight:** At least **six hours of daily sunlight** is necessary, though excessive shade can reduce yields.

**Soil Preferences:**

- Loose, well-drained **loamy or sandy loam soils**, rich in organic matter, are ideal.
- **pH Range:** Potatoes thrive in soils with a pH of **5.2 to 6.4**.
- Avoid **saline or alkaline soils**.

**India's Potato Production: A Global Leader:**

**India's Global Rank:**

- **Second-largest producer worldwide**, after China.

**Growth Over the Years:**

**Between** 1991-92 **and** 2020-21**:**

- **Cultivation Area:** Increased from **11 to 22 lakh hectares**.
- **Production:** Tripled, from **181.95 to 561.72 lakh metric tonnes**.
- **Productivity:** Improved by over 50%, reaching **25 metric tonnes per hectare**.

**Primary Potato Cultivation Seasons and States:**

- **Rabi Season (Winter-Spring):** Main potato-growing period.
- **Top Producers (2021-22):**
  - **Uttar Pradesh:** 161 lakh metric tonnes.
  - **West Bengal:** 124 lakh metric tonnes (jointly contributing 50% of national production).
- **Kharif Cultivation:** Limited to **Uttarakhand, Karnataka, Himachal Pradesh, Tamil Nadu**, and **Maharashtra**.

**Trends in Potato Prices:**

**Seasonal Fluctuations:**

- **Winter-Spring (Rabi Crop Arrival):** Prices generally dip.
- **Late Summer and Monsoon:** Prices rise significantly.

**2024 Price Trends:**

In **2024**, potato prices have remained **consistently high nationwide**, including Odisha.

- **Retail Prices (December 3, 2024):**
  - Average: ₹**38.08 per kg**.
  - **4.90% higher** than last month.
  - **55.49% higher** than the previous year.
- **Wholesale Prices (December 3, 2024):**
  - Average: ₹**3,120.99 per quintal**.
  - **5.24% higher** than last month.
  - **69.63% higher** than the previous year.

**Economic Impact:**

- Potatoes contribute **0.98% to the Consumer Price Index (CPI)** and **0.28% to the Wholesale Price Index (WPI)**.
- The volatility affects consumers and industries like **hotels, restaurants, and catering (HoReCa)**.

**Reasons for the Surge in Potato Prices:**

**1. Decline in Production:**

- **2023-24 Production Drop:**
  - Total production decreased by **5.6%**, from **601 lakh metric tonnes** (2022-23) to **567 lakh metric tonnes**.
- **Top Producers Affected:**
  - **Uttar Pradesh:** Production reduced by **10 lakh tonnes**, from **201.3 to 191.7 lakh tonnes**.
  - **West Bengal:** Sharper decline, falling **15 lakh tonnes**, from **145 to 130 lakh tonnes**.

**2. Shrinking Cultivation Area:**

- Cultivation area fell slightly from **23.32 to 23.22 lakh hectares** due to **low prices in the previous year**, discouraging farmers.

**Odisha's Heavy Dependence on Potato Imports:**

**Limited Local Production:**

Odisha's agro-climatic conditions are **unsuitable** for large-scale potato farming due to temperatures exceeding the ideal range of **15°C–25°C**.

Reliance on West Bengal

- West Bengal typically sends **150–200 truckloads of potatoes daily** to Odisha and Chhattisgarh.
- Restrictions on shipments have created **artificial scarcity** in Odisha, exacerbating the price hike.

**In Summary:**

The **rising potato prices in Odisha** highlight the state's dependence on imports and underline the challenges of a fluctuating supply chain. Efforts to enhance **local potato cultivation**, diversify sources, and strengthen supply chains are crucial to ensuring **price stability** in the future.

GS Paper 1– Indian Heritage and Culture

## 3 The 80-Pillar Assembly Hall of Kumhrar and Mauryan Architecture

**Context:** The **Archaeological Survey of India (ASI)** has initiated an excavation project to uncover the **80-pillar assembly hall** at Kumhrar, a prominent **Mauryan archaeological site in Patna**.

- This endeavor aims to reignite **global interest in the Mauryan Empire's** remarkable contributions to **art and architecture**.

**Key Facts About the 80-Pillar Assembly Hall:**

**Historical Importance:**

- The **80-Pillar Assembly Hall** is linked to the **Mauryan Empire (321–185 BCE)**, one of ancient India's greatest dynasties.
- **Emperor Ashoka (268–232 BCE)** is believed to have convened the **3rd Buddhist Council** here, an event that unified the **Buddhist sangha** and spread **Dhamma (Buddhist teachings)** globally.
- The site emphasizes **Pataliputra's** (Mauryan capital) role as a **political and cultural hub**.

**Architectural Significance:**

- The hall featured **80 sandstone pillars** supporting a **wooden roof and floor**.
- Materials like **sandstone and wood** were transported via the **Sone-Ganga river route**, showcasing advanced resource management.

**Archaeological Discoveries:**

1. **First Excavation (1912–1915):**
   - Discovered **one intact pillar**, **80 pillar pits**, and stone fragments.
   - Evidence of **thick ash layers** indicated destruction, possibly during the **Indo-Greek or Huna invasions**.
2. **Second Excavation (1961–1965):**
   - Unearthed **four additional pillars**.

**Preservation Challenges and Reopening Efforts:**

- Rising **water levels** submerged parts of the site, prompting the ASI to **cover it with soil (2004–2005)** for conservation.
- **Reopening Plans:**
  - ASI is exposing **6–7 pillars** to assess impacts of **humidity and groundwater**, with guidance from the **Central Ground Water Board**.
  - Full reopening will depend on recommendations from an **expert committee**, balancing preservation with public access.

**Key Highlights of Mauryan Art and Architecture:**

**Architectural Types:**

1. **Court Art:**
   - Designed for **political and religious purposes**.
2. **Popular Art:**
   - Widely accessible and influenced by **local traditions**.

**Mauryan Court Art:**

**Palaces:**

- Greek historian **Megasthenes** described Mauryan palaces as **magnificent creations**, while Chinese traveler **Fa Hien** called them **god-gifted monuments**.
- **Chandragupta Maurya's palace** was inspired by **Achaemenid palaces** in **Persepolis** and built primarily with **wood**.
- Notable examples: **Ashoka's palace at Kumhrar** and **Chandragupta's palace**.

**Pillars:**

- **Mauryan pillars** were **tall, monolithic, and free-standing**, made from **Chunar sandstone**.

- **Ashoka's pillars**, with their polished finish, featured **animal capitals** (lions, bulls) symbolizing state power.
- Inscribed with **Buddhist teachings** in **Pali, Prakrit, Greek, and Aramaic**.
- Structure:
    1. **Shaft** (monolithic).
    2. **Capital** (lotus- or bell-shaped).
    3. **Abacus**.
    4. **Capital figure**.

**Stupas:**

- Represented **Buddhist principles**, featuring elements like a **hemispherical mound (anda)** and a **central pillar with umbrellas (chhatra)**.
- **Core material:** Unburnt brick; **outer layer:** Burnt bricks and plaster.
- Examples:
    - **Sanchi Stupa (Madhya Pradesh):** The most famous Ashokan stupa.
    - **Piprahwa Stupa (Uttar Pradesh):** The oldest.

**Mauryan Popular Art:**

**Cave Architecture:**

- Used as **viharas** by Jain and Buddhist monks.
- Known for their **polished interiors** and **decorative gateways**.
- Example: **Barabar Caves (Bihar)**, created by Ashoka for the **Ajivika sect**.

**Sculptures: Yaksha and Yakshi figures** were revered across **Hinduism, Buddhism, and Jainism**.

- Examples:
    - **Lohanipur Yaksha** (male figure torso).
    - **Didargunj Yakshi (Patna)**.

**Pottery:** Known as **Northern Black Polished Ware (NBPW)**, featuring **black paint and a lustrous finish**.

**Mauryan Dynasty: Key Rulers:**

**1. Chandragupta Maurya (321–297 BCE):**

- Founder of the Mauryan Empire.
- Overthrew the **Nanda dynasty** and expanded the empire.
- Formed a treaty with **Seleucus Nicator**, gaining territories.
- Adopted Jainism later in life.

**2. Bindusara (298–272 BCE):**

- Expanded the empire to the Deccan.
- Known as **Amitraghata (slayer of enemies)**.

**3. Ashoka (272–232 BCE):**

- Renounced violence after the **Kalinga War**.
- Spread **Buddhism globally**, organized the **3rd Buddhist Council**, and promoted **Dhamma**.

**4. Decline of the Mauryan Empire:** Last ruler, **Brihadratha**, was assassinated by **Pushyamitra Shunga**, marking the end of the Mauryan dynasty in **185 BCE**.

**Archaeological Survey of India (ASI): Custodians of History:**

- The ASI operates under the **Union Ministry of Culture** to protect monuments and archaeological sites.
- Founded in **1861** by **Alexander Cunningham**, the **Father of Indian Archaeology**.
- Key Responsibilities:
    - Conducting **excavations, surveys**, and **site preservation**.
    - Governed by the **AMASR Act, 1958**.

The **80-Pillar Assembly Hall at Kumhrar** stands as a testament to the **Mauryan Empire's architectural brilliance** and its significant contributions to **India's cultural heritage**. The ongoing excavation by the **ASI** promises to uncover deeper insights into this ancient marvel.

GS Paper 3 – Science and Technology

## 4 International Advisory Body for Submarine Cable Resilience

**Context:** A new **International Advisory Body for Submarine Cable Resilience** has been launched to address the challenges faced by **submarine cable infrastructure** and ensure its continued **resilience**. These cables are crucial for supporting the **global digital economy**.

**About the Advisory Body:**

**Joint Initiative:**

- The body was jointly launched by the **International Telecommunication Union (ITU)** and the **International Cable Protection Committee (ICPC)**.
- It aims to fortify the **resilience of submarine cables**, which serve as the backbone of global communication networks.

**Membership:**

- The body includes **40 members** from across the world, comprising:
  - **Ministers**,
  - **Heads of regulatory authorities**, and
  - **Senior telecommunications experts**.
- The diverse membership ensures a **global perspective** on cable resilience.
- Members convene **bi-annually** to discuss **policies, infrastructure,** and **best practices**.

**Functions of the Advisory Body:**

1. **Promoting Best Practices**:
   - Works with **governments and industries** to enhance **submarine cable resilience**.
   - Aims to minimize **risks of damage** and ensure **quick repairs** and deployments.
2. **Providing Strategic Guidance**:
   - Offers insights into tackling challenges such as:
     - Increasing **data traffic**,
     - **Aging infrastructure**, and
     - Rising **environmental threats** to cables.
3. **Addressing Stakeholder Needs**:
   - Focuses on the livelihoods of communities dependent on **submarine cables**.
   - Supports those responsible for **deploying, maintaining**, and **protecting** this critical infrastructure.

**Significance of Submarine Cables:**

- Submarine cables are the **lifelines of global communication**, carrying **98% of international data traffic**.
- Their resilience is vital to supporting industries like **finance, healthcare**, and **technology**.

**About the International Cable Protection Committee (ICPC):**

- **Founded in 1958**, the ICPC is a global organization uniting **governments and private stakeholders** in the submarine cable industry.
- It acts as a platform for exchanging:
  - **Technical expertise**,
  - **Legal frameworks**, and
  - **Environmental strategies**.
- The ICPC's mission is to ensure the **security and sustainability** of **undersea cables**.

**Conclusion:** The creation of the **International Advisory Body for Submarine Cable Resilience** highlights the growing recognition of submarine cables as **critical infrastructure**. By fostering **global cooperation** and promoting **best practices**, the initiative is set to safeguard these essential systems against future challenges, ensuring their reliability in the **digital age**.

GS Paper 2 – Governance and Social Justice

## 5 Anna Chakra and SCAN Portal: Revolutionizing India's Public Distribution System

**Context:** The Union government has launched the **Anna Chakra** and the **Subsidy Claim Application for NFSA (SCAN) Portal**, marking a significant step toward modernizing the **Public Distribution System (PDS)** and streamlining **subsidy claim processes**.

**What is Anna Chakra?**

The **Anna Chakra** is an innovative system developed by the **Department of Food and Public Distribution** in collaboration with the **World Food Programme (WFP)** and **IIT Delhi's Foundation for Innovation and Technology Transfer (FITT)**. It aims to optimize the entire **food grain supply chain** involving farmers, transporters, warehouses, and Fair Price Shops (FPS).

**Key Features of Anna Chakra:**

1. **Route Optimization**:
   - Employs advanced algorithms to identify the most efficient transportation routes, reducing **time** and **costs**.
2. **Integrated Logistics Platforms**:
   - Linked with the **Freight Operations Information System (FOIS)** of the Railways.
   - Part of the **PM Gati Shakti platform**, mapping the geo-locations of FPSs and warehouses.
3. **Environmental Impact**:
   - Cuts down on transportation-related emissions, contributing to a **reduced carbon footprint** and **sustainable development**.

**What is the SCAN Portal?**

The **Subsidy Claim Application for NFSA (SCAN) Portal** simplifies and accelerates the process of **subsidy claims** under the **National Food Security Act (NFSA)**.

**Key Features of SCAN Portal**

1. **Single-Window Submission**:
   - Offers a unified platform for states to submit claims efficiently.
2. **Automated Workflow**:
   - Streamlines scrutiny, approval, and settlement of claims using **rule-based automation**.
3. **Real-Time Monitoring**:
   - Ensures transparency and minimizes delays in fund disbursal.

**Other Government Initiatives for Food Security:**

1. **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)**:
   - Provides **5 kg of free wheat or rice** per person monthly.
   - Initially launched during the **COVID-19 pandemic** and extended for **five years** from January 2024.
2. **Antyodaya Anna Yojana (AAY)**:
   - Supplies **35 kg of grains** per household monthly at subsidized rates (₹**3/kg for rice,** ₹**2/kg for wheat**).
3. **Integrated Management of Public Distribution System (IM-PDS)**:
   - Enables **One Nation One Ration Card (ONORC)**, ensuring food grain access across India, especially for **migrant workers**.
4. **Decentralized Procurement (DCP) Scheme**:
   - Encourages states to **procure and distribute food grains**, reducing logistics costs and improving localized food security.

**Challenges in the Public Distribution System:**

1. **Food Grain Diversion**:
   - A large share of food grains is leaked or diverted to the black market.

2. **Errors in Inclusion and Exclusion**:
    - Non-eligible households often benefit, while genuine beneficiaries are excluded due to identification flaws.
3. **Corruption at Fair Price Shops (FPS)**:
    - Issues like **under-weighing**, **poor-quality grains**, and **overcharging** undermine the system's credibility.
4. **Inadequate Warehousing**:
    - Poor storage facilities lead to **spoilage and wastage** of grains.

**Way Forward:**

1. **Strengthen Infrastructure**:
    - Expand storage and transportation facilities to support the system's growing scale.
2. **Adopt Advanced Technology**:
    - Use **artificial intelligence** and **blockchain** for real-time monitoring and eliminating inefficiencies.
3. **Promote Sustainability**:
    - Introduce **green logistics** and energy-efficient transport solutions to reduce the environmental impact.

By integrating **Anna Chakra** and the **SCAN Portal**, the government is not only addressing long-standing issues within the **PDS** but also paving the way for a more **efficient, transparent**, and **sustainable food distribution system**.

GS Paper 3 – Science and Technology

## 6 ISRO Launches PSLV-C59 Rocket with ESA's Proba-3 Satellite

**Context:** The **PSLV-C59** rocket, carrying the **Proba-3 spacecraft**, was successfully launched as a dedicated commercial mission by **NewSpace India Limited (NSIL)**. This mission highlights India's increasing capabilities in **space technology** and solidifies its growing influence in the **global space community**.

**About the Proba-3 Mission: A World-First in Precision Formation Flying:**

**Mission Objective:**

The primary objective of the **Proba-3 mission** is to observe the **Sun's corona** using **precision formation flying**, a world-first achievement in space exploration.

**Key Spacecraft:**

**The mission uses two specialized spacecraft:**

1. **Coronagraph**: Designed to study the **Sun's corona**.
2. **Occulter**: Positioned to block the **Sun** and create **artificial eclipses**, enhancing the quality of observation.

**Benefits for India's Space Program:**

1. **Strengthening Global Market Presence:** India currently holds **2-3% of the global space economy** and has significant potential for further growth. The success of such missions increases India's competitive edge, positioning it as a leader in space exploration.
2. **Economic Growth & Job Creation:** The rise in **commercial space launches** and the **development of space technologies** has the potential to significantly contribute to India's economic growth. In 2022, India earned over **$279 million** from foreign satellite launches, boosting the national economy and creating jobs.
3. **Technological Advancements:** Collaborating on advanced projects like **Proba-3** fosters technological growth, allowing India to strengthen its role in the **global space industry** while making significant strides in space research.
4. **Strategic Importance:** India's expanding space capabilities play a key role in enhancing the nation's **strategic autonomy** and its participation in **international space exploration**.

**Key Initiatives Driving India's Space Future:**

1. **IN-SPACe (Indian National Space Promotion and Authorization Center):** This **regulatory body** is crucial in promoting **private sector participation** in India's space sector, providing a platform for innovative ventures.
2. **Indian Space Policy 2023:** The **Indian Space Policy 2023** aims to **liberalize** the space sector further, encouraging private investment, fostering innovation, and allowing new players to thrive in the space ecosystem.
3. **Startups & SSLV (Small Satellite Launch Vehicle):** The rise of **private space startups** and the development of the **SSLV** demonstrates India's commitment to building a **vibrant and competitive space ecosystem**, supporting both public and private sector involvement.

India's **PSLV-C59** launch with the **Proba-3 satellite** underscores the nation's growing prominence in the global space sector. As India continues to expand its **technological reach**, participate in international collaborations, and open doors to private innovation, it is positioning itself as a **leader** in **space exploration** for the future.