

GEOGRAPHY

PRE-CONTEXT

NATIONAL CRITICAL MINERAL MISSION

THE HINDU, P.NO: 13.

News: "Cabinet okays ₹16,300 crore mission to secure critical minerals."

India is heavily dependent on imports of critical minerals such as Lithium, Nickel, Cobalt etc resulted an import cost of Rs.35,000 crore in FY 2023.

About National Critical Mineral Mission:

- It will encompass all stages of the value chain, including mineral exploration, mining, beneficiation, processing, and recovery from end-of-life products.
- To intensify the exploration of critical minerals *within the country and in its offshore areas*.
- To fast track regulatory approval process for critical mineral mining projects.
- Encourage Indian PSUs and private sector companies to *acquire critical mineral assets abroad* and enhance trade with resource-rich countries.
- Provisions for setting up of mineral processing parks and supporting the recycling of critical minerals.

India established Khanij Bidesh India Ltd.(KABIL):

- A joint venture company aimed to ensure a consistent supply of critical and strategic minerals to the Indian domestic market.
- It is registered under *Companies Act 2013*.
- It sought mineral security through agreements and acquisitions via govt-to-govt, govt-to-business, and business-to-business routes.
- **KABIL signed a MoU with Australia** for a critical mineral (*cobalt and Lithium*) investment partnership.
- **KABIL signed pacts** with Latin America's *Lithium Triangle (Argentina, Chile, and Bolivia)*.
 - KABIL, has acquired an area of about 15703 Ha in the *Catamarca province of Argentina*, for exploration and mining of Lithium.
- **India and Kazakhstan** formed a joint venture, to produce *titanium slag* in India.

Note: Government of India eliminated customs duties on the majority of critical minerals in Union budget 2024-25.

Mines and Minerals (Development and Regulation) Act 1957:

Schedule 1

Critical and Strategic Minerals.

- Identified by *Ministry of Mines*.
- **Auction mining lease and composite licence** for certain critical minerals is *exclusively reserved for Central Govt*.
- Critical minerals are essential for our country's economic development and national security.
 - Eg. such as *molybdenum, rhenium, tungsten, cadmium, indium, gallium, graphite, vanadium, rare earth elements (REE), etc.*
- Minerals of lithium, beryllium, titanium, niobium, tantalum and zirconium were *delisted from Atomic Minerals* and *allowed Private Sector to mine them*.
- FDI allowed under 'Government route' *only for titanium* mining and its separation from minerals bearing it and its ores.

Atomic Minerals:

- **Private Sector is banned**, these minerals are reserved exclusively for government entities.
 - Rare earths, containing uranium and Thorium.
 - Phosphorites containing uranium.
 - Beach sand minerals etc.
- **FDI not allowed.**

Metallic and Non Metallic Minerals:

- **Metallic:** Bauxite, Chrome ore, Copper ore, Gold, Iron ore, Lead, Manganese ore, Zinc.
- **Non-Metallic:** Asbestos, Precious stones.
- **Private Sector is allowed** through auctions (post-2015 amendment).
- **100% FDI** is allowed under '*Automatic*' route.

Energy/ Hydrocarbon Minerals:

- Coal and Lignite.
- Private Sector allowed.
- **100% FDI** under '*Automatic*' route.

30 JAN 2025

S&T

PRE-CONTEXT

COPYRIGHTS

THE HINDU, P.NO: 7.

News: "The copyright conundrum in Carnatic music."

About Copy Rights:

- Copyright is a *right given by the law to creators of literary, dramatic, musical and artistic works and producers of cinematograph films and sound recordings*.
- Copyright *ensures minimum safeguards* for authors' rights, protecting and rewarding creativity.
- **The Copyright Act, 1957:**
 - It protects original *literary, dramatic, musical and artistic works and cinematograph films and sound recordings* from unauthorised uses.
 - *Unlike the case with patents, copyright protects the 'expressions' and not the ideas.*
 - In India, *copyright is generally valid for the lifetime of the author plus 60 years* from the year following their death,
- **There is no copyright protection for ideas, procedures, methods of operation or mathematical concepts** as such.
- **It is not mandatory to register a work to claim copyright, copyright is automatic** and it does not require any formality.
- A copyrighted work will be considered "*infringed*" *only if a substantial part* is made use of without authorisation.

30 JAN 2025



GS III

SYLLABUS: TECHNOLOGY MISSIONS; ECONOMICS OF ANIMAL-REARING.

WHITE REVOLUTION

THE HINDU, PG.NO: 6.

News: "Bridge the milk divide for a nutritionally secure India"

About White Revolution 1970:

- Launched by **National Dairy Development Board (NDDB)**.
- It was also known as **Operation Flood**.
- This initiative transformed India from a **milk-deficient nation into the world's largest producer of milk**.

Operation Flood (1970-1996):

- **Phase-I (1970-1980):** Focused on establishing dairy cooperatives in 18 milk-sheds and linking them to consumers in major metropolitan cities.
- **Phase-II (1981-1985):** expanded the program to cover 136 milk-sheds and created a national milk grid.
- **Phase-III (1985-1996):** aimed at consolidating earlier gains and ensuring long-term sustainability by increasing milk production.

Impacts:

- **India became world's largest milk producer**, surpassing USA and Europe. producing ~70 MT by 1996 against 20 MT in 1970s
- **Creation of Cooperatives:** over 13 million farmers organised into 1 lakh dairy cooperatives by end of operation flood.
- **Rural empowerment:** provided reliable sources of income for small and marginal farmers and empowered women involving them in dairy farming.
- **Nutritional benefits:** availability of affordable milk, improved nutrients especially among children.
- **Development of Infrastructure:** cold chain Infrastructure, milk processing, transportation networks were developed.
- **Role for Amul Cooperative 1946:** a precursor to Operation Flood. It demonstrated the success of cooperative model and served as a blueprint.

"Currently, India produces 230 million tons of milk in 2023."—**NDDB**.

30 JAN 2025

SOCIAL JUSTICE

PRE-CONTEXT

MGNREGA

THE HINDU, PG.NO: 6.

News: "Stifling demand."

MGNREGA:

- **Centrally Sponsored Scheme.**
- **Implemented by Ministry of Rural Development.**
- **Legal Guarantee of Employment (unskilled)** of **at least 100 days per financial year to every rural household.**
- **Job card:** Each household receives a unique job card listing all registered adults. A **job card is mandatory** for employment in MGNREGA.
- **Central Govt. has powers to make rules** to amend MGNREGA.
- **Unemployment Allowance:** If work is not provided within 15 days of application.
- **Timely Wage Payment within 15 days** of work completion, any delays in payment attract compensation.
- **Gram Panchayats are the principal authorities** for planning and implementation, enhancing local governance.
- **Mandatory social audits by Gram-Sabha** ensure transparency and accountability measures.
- **Gender Equity: Act mandates that at least one-third** of the beneficiaries should be **women**.
- **Focus on Sustainable Asset creation:** Eg. water conservation, drought proofing, rural connectivity etc.
- **Convergence with other schemes:** Eg. PM-Awas Yojana and Swachh Bharat Mission etc.
- **Worksite Facilities:** like drinking water, shade, first-aid, and crèche facilities at worksites.
- **Use of Technology:** Digital payments, Geo-Tagging etc.
- **Employment is provided based on the demand** for work by wage seekers, not on the availability of projects.

30 JAN 2025



SCHEMES

PRE-CONTEXT

PM VISHWAKARMA

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

PM Vishwakarma:

- Part of the Aatmanirbhar Bharat initiative to promote self-reliance and traditional crafts.
- **Nodal Ministry:** Ministry of Micro, Small and Medium Enterprises (MSME).
- **Central Sector Scheme**
- Targets Artisans from rural and urban areas, particularly marginalised communities.
- **Key features:**
 - **Financial Support:** Collateral-free loans at subsidised interest rates.
 - **Toolkits:** Provision of modern tools and equipment.
 - **Market Linkages:** Integration with Digital India for e-commerce and marketing support.
 - **Skill Development:** Training programs for skill upgradation.
 - **Certification:** Recognition through certificates to enhance credibility.

Other related Schemes: PM SVANidhi (street vendors) and PM MUDRA Yojana (small businesses).

30 JAN 2025

SCHEMES

PRE-CONTEXT

RASHTRIYA GRAM SWARAJ

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

About Rashtriya Gram Swaraj:

- Aim to strengthen Panchayati Raj Institutions (PRIs).
- **Nodal Ministry:** Ministry of Panchayati Raj.
- **Central Sponsored Scheme.**
- **Key Features:**
 - **Capacity Building:** Training for elected representatives (e.g., sarpanches) and functionaries.
 - **Social Audit:** Ensure accountability through community participation.
 - **e-Governance:** Promote tech-driven governance (e.g., digital platforms for service delivery).
 - Aligns with SDGs and the philosophy of "Sabka Saath, Sabka Vikas."

Other related Schemes:

- **Sansad Adarsh Gram Yojana (SAGY):** MP-led village development.
- **e-Panchayat Mission Mode Project:** Digital empowerment of PRIs.

30 JAN 2025

SCHEMES

PRE-CONTEXT

NAMASTE

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

About NAMASTE:

- National Action for Mechanised Sanitation Ecosystem (NAMASTE).
- **Nodal ministries:** Ministry of Social Justice and Empowerment & Ministry of Housing and Urban Affairs (MoHUA).
- IT replaces earlier **Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS)**, addressing its inefficiencies.
- NAMASTE focuses on worker welfare and mechanization.
- **Primary Objectives:**
 - **Eradicate manual scavenging.**
 - Ensure safety, dignity, and alternative livelihoods for sanitation workers.
 - Promote mechanization in sanitation services to eliminate hazardous manual cleaning of sewers and septic tanks.
- Aligns with **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013.**

30 JAN 2025

SCHEMES

PRE-CONTEXT

PM JANMAN

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

About PM Janjatiya Adivasi Nyaya Maha Abhiyan:

- It covers **75 PVTG communities** residing in 18 States and 1 UT.
- **Nodal Ministry:** Ministry of Tribal Affairs.
- Comprising **Central Sector and Centrally Sponsored Schemes.**
- PMJANMAN focuses on **11 critical interventions** being **implemented by 9 Ministries.**
- It aims to provide PVTG households and habitations with basic facilities in 3 years such as:
 - Safe housing, clean drinking water.
 - Improved access to education, health and nutrition.
 - Road and telecom connectivity, electrification of unelectrified households.
 - Sustainable livelihood opportunities.

About Particularly Vulnerable Tribe Group(PVTG):

- Sub-section of tribes who need serious attention and protection from government.
- **Dhebar commission** recommended PVTGs. **Currently 75 PVTGs** are identified out of 705 Scheduled Tribes.
- Categorisation is done by **Ministry of Home affairs.**
- **Highest number of PVTGs** are in **Orissa** ~2.5 lakh.
- **Sahariya group** has highest population among PVTGs.
- Lowest being **Sentinelets and Andamanese** ~40 in number.
- **Criteria for identification of PVTGs:**
 - Pre-agriculture level of technology.
 - Low level of literacy.
 - Economic backwardness.
 - A declining Population.
- **Characteristics of PVTGs:**
 - Mostly homogenous with small population.
 - Relatively physically isolated.
 - Absence of written language.

30 JAN 2025



SCHEMES

PRE-CONTEXT

FAME

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

Faster Adoption and Manufacturing of (Hybrid and) Electric Vehicles in India (FAME India) scheme:

- In the year 2015 as part of the **National Electric Mobility Mission Plan (NEMMP) 2020**, **Department of Heavy Industry** formulated a Scheme i.e FAME India (Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles) India
- To promote manufacturing of electric and hybrid vehicle technology and to ensure sustainable growth of the same.
- Central Sector Scheme.**
- FAME I, 2015-19:**
 - Total 500 buses received approval for purchase subsidies, which rose to 7000 buses under FAME II, which ran from 2019-24.
 - The 1st Phase of FAME India Scheme was implemented through **four focus areas namely (i) Demand Creation, (ii) Technology Platform, (iii) Pilot Project and (iv) Charging Infrastructure.**
- Phase-II FAME scheme 2019-24:**
 - In the transport sector, a subsidy of ₹6,000 crore has been provided to electric vehicle manufacturers under.
 - Implemented by **Ministry of Heavy Industries.**

30 JAN 2025

SCHEMES

PRE-CONTEXT

NATIONAL GREEN HYDROGEN MISSION

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

About National Green Hydrogen Mission

- To promote Green Hydrogen and **to become global hub for green hydrogen production and exports.**
- NHM is implemented by **Ministry of New and Renewable Energy.**
- Contribute India to become **Atmanirbhar** through clean energy production.
- Key Targets:**
 - Production:** 5 MMT (Million Metric Tonnes) per annum by 2030.
 - Renewable Energy Capacity:** 125 GW of additional RE capacity to support green hydrogen production by 2030.
 - Electrolyzer Capacity (SIGHT initiative):** 60-100 GW domestic manufacturing capacity by 2030.
 - Creation of Green Hydrogen Hubs.
- BEE under 'Ministry of Power' nodal authority to accreditation of agencies for green hydrogen projects.**
- VOC port in Chennai** became **1st hydrogen port.**

30 JAN 2025

SCHEMES

PRE-CONTEXT

INDIAAI MISSION

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

About IndiaAI Mission:

- Funding Allocation:** The Cabinet has approved over **Rs 10,300 crore** for the IndiaAI Mission over the next five years.
- Objective:** To bolster India's AI ecosystem, Position India as a force shaping the future of AI.
- Nodal Ministry:** Ministry of Electronics and Information Technology (MeitY).
- Focus Areas:** The funding will support initiatives like:
 - IndiaAI Compute Capacity:** To establish a cutting-edge, scalable AI computing infrastructure by **deploying over 10,000 GPUs** through strategic public-private collaborations.
 - IndiaAI Innovation Centre (IAIC):** will receive funding to develop and deploy foundational AI models, Eg. **Indigenous Large Multimodal Models (LMMs)** and domain-specific models.
 - IndiaAI FutureSkills program:** will expand AI education by increasing graduate and post-graduate AI program accessibility and establishing **Data and AI Labs in major and smaller towns.**
 - Financial Support for AI Startups:** providing **easier access to funding** for AI startups and supporting their growth from product development to commercialization.
 - IndiaAI Datasets Platform:** aims to **enhance public sector datasets' accessibility, quality, and utility** for data-driven governance and AI-based innovation.
 - Other areas like,** IndiaAI Application Development Initiative etc.

30 JAN 2025

SCHEMES

PRE-CONTEXT

NATIONAL QUANTUM MISSION

THE HINDU, PG.NO: 7.

News: "The old and the new: schemes to look out for on Budget day."

About National Quantum Mission:

- Budget 2020-21 allocated **Rs.8000 crore** for focus on development of quantum computing and related technologies.
- Implemented by:** **Dept. of Science & Technology.**
- Objectives:** **Setting up 4 thematic Hubs:**
 - Quantum computing.**
 - Developing intermediate scale quantum computers with 50-1000 physical qubits in 8 years.
 - Quantum communication.**
 - Developing satellite based secure quantum communications between ground stations over range of 2000km.
 - Quantum Satellites:** They facilitate quantum information transmission (qubits) and secure communication via quantum key distribution (QKD).
 - Quantum sensing & Metrology.**
 - Developing magnetometers with high sensitivity atomic systems and Atomic clocks for precision timing, communication and navigation.
 - Quantum material devices.**
 - Development of quantum materials like superconductors novel semiconductors structures.

30 JAN 2025

Thank you!