

Standing Committee on Coal, Mines and Steel Presents Report on 'Self-Reliance in Minerals and Metals'

The report outlines a roadmap for India to reduce import dependency and achieve the vision of Atmanirbhar Bharat and Viksit Bharat.

Self-Sufficiency Levels in Minerals and Metals

- India is **largely self-sufficient in key industrial minerals** like bauxite, chromite, iron ore, kyanite, limestone and sillimanite.
- However, certain minerals, such as magnesite, manganese ore, and rock phosphate, are deficient and must be **imported to meet domestic demand**.
- India is 100% dependent on imports for vital minerals such as **lithium, Cobalt, and Nickel**.

Key challenges in achieving Self-Sufficiency

- Operational Delays:** Out of 486 mineral blocks auctioned since 2015, only 63 are operational. Mining projects face long gestation periods of about 5 to 14.5 years.
- Technology Gap:** India lags global standards in automation, AI and IoT use in mining, which raises costs and limits exploration intensity.
- Exploration Constraints:** Only about 15% of India's area has been covered by detailed exploration, mostly focusing on surface deposits rather than deep-seated ones.

Key Recommendations

- Urban Mining & Circular Economy:** The committee recommends a focus on recovering minerals from e-waste, industrial scrap, and EV batteries.
- Inter-Ministerial Coordination:** Suggests setting up an Inter-Ministerial Group to fast-track post-auction progress and statutory clearances for critical mineral projects.
- Public-Private Collaboration:** Encourages leveraging the strengths of Public Sector Undertakings (PSUs) and private sector expertise for faster exploration and processing development.
- Upskilling:** Recommends that mining companies allocate a percentage of CSR funds for upskilling the workforce to handle advanced technologies like AI and automation.

Policy Framework for Self-Reliance

- Mines and Minerals (Development and Regulation) (MMDR) Act Amendments (2015-2023):** Key reforms include the introduction of transparent e-auctions, uniform 50-year lease periods, and a new Exploration Licence (EL) category for 29 deep-seated and critical minerals.
- National Critical Mineral Mission (NCMM):** Launched in 2025, this mission aims to secure the supply chain for 30 identified critical minerals.
- Overseas Acquisitions:** Through KABIL (a joint venture of NALCO, HCL, and MECL), India is actively pursuing mineral assets in resource-rich nations like Argentina, Chile, and Australia.
- Offshore Mining:** In 2024, the government launched the first tranche of 13 offshore mineral blocks for auction, targeting construction sand and **polymetallic nodules**.

Child Marriage Free Bharat Campaign completes One Year

Child Marriages in India

- Child Marriage:** Refers to marrying a child before attaining adulthood.
 - In India, **Prohibition of Child Marriage Act, 2006** prohibits marriages before 18 years of age for females and 21 years for males.
 - Globally, **Convention on the Rights of the Child** defines child as any human **below the age of 18** and refers to marriages within this age group as child marriage.
- Trends:** Dropped from **47.4% (2005-06) to 26.8% (2015-16) to 23.3% (2019-21)** as per National Family Health Survey (NFHS).
 - Among the states, **West Bengal, Bihar and Tripura** top in Child Marriage cases.

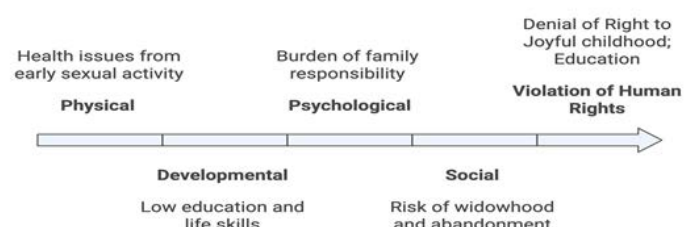
Key Reasons for Child Marriage

- Poverty:** Patriarchal Indian society considers girls as an **economic burden**.
- Patriarchy:** Girl's right to education is considered **secondary to her labour in household**.
- Socio-cultural and religious practices:** Some religious communities believe **marrying girls before attaining puberty** as auspicious.

Key Measures taken

- Legal:** **Prohibition of Child Marriage Act, 2006** provides for appointment of **Child Marriage Prohibition Officer** by States.
- Schemes:** '**Beti Bachao Beti Padhao (BBBP)**, etc.
- Grassroot Initiatives:** **Surajpur (Chhattisgarh) Model** where 75 Panchayats were declared 'Child Marriage-Free'.
- Global Commitments:** India is a signatory to **United Nations Convention on Rights of the Child (UNCRC)**; India Committed to achieve **SDG 5, for eliminating child, early, and forced marriage, by 2030**, etc.

Consequences of Child Marriage



Reviving Shipbuilding in India

Shipbuilding is known as **mother of heavy engineering** as it enhances national security, strategic independence, and the resilience of trade and energy supply chains.

Current Status of Shipbuilding in India

- Shipbuilding industry accounts for **less than 1%** of the global shipping market.
 - ⊕ **China** has the biggest shipbuilding capacity in the world, followed by South Korea and Japan.
 - ⊕ Foreign ships carry 92% of India's total trade and are paid \$75 billion annually for it.
- **Cochin Shipyard** has India's **highest capacity in shipbuilding and repairing**.

Challenges faced by Sector

- **High capital costs:** Due to **expensive financing options** available, making large investments risky and limiting shipyards' ability to scale.
- **Import dependence:** Lack of indigenous availability of many advanced materials and components.
- **Lower productivity:** Compared with China, Indian shipyards are less productive, often due to outdated technology, longer build times, Supply chain limitations, etc.

Strengthening India's shipbuilding sector is vital to transforming India into a global maritime and shipbuilding hub by 2047.

Key Initiatives taken to promote Shipbuilding in India

- **Financial Assistance:** Shipbuilding Financial Assistance Scheme, Maritime Development Fund.
- **Public Procurement Preference:** Ships under 200 crore must be procured from Indian shipyards as per the Make in India Order, 2017.
- **Infrastructure Status:** Ships have been reclassified as 'infrastructure', making them eligible for favorable financing.
- **Haritha Nauka Guideline, Green Tug Transition Programme (GTTP):** Promotes green shipbuilding and domestic manufacturing.
- **Shipbuilding Development Scheme (SbDS):** Drives greenfield clusters, yard expansions, and risk coverage.
- **Other: Maritime Amritkal Vision 2047 for Shipping Sector.**

New Definition protects over 90% of Aravalli: Union Environment Minister

Recently, Supreme Court (SC) accepted a **uniform definition of Aravalli hills**, recommended by Central Government appointed expert committee, along with issuing other directions.

- As per SC, the definition offers **Landscape Level conservation**, treating Aravalli as a **continuous geological ridge, not just isolated hills**.

Key Committee Recommendations

- **Operational Definitions:** The committee defined both the **Aravalli Hills and Range**.
 - ⊕ **Aravalli Hills:** Any landform in Aravalli districts with an elevation of **100 metres or more from the local relief**.
 - ⊕ **Aravalli Range:** Two or more Aravalli Hills located within the **proximity of 500m from each other**.
- **Core/inviolate Zones Safeguards:** Mining is **absolutely prohibited** in protected areas, eco-sensitive zones, tiger reserves, wetlands, and CAMPA plantation sites.

Other Key directions by SC

- **Management Plan for Sustainable Mining (MPSM):** By Indian Council of Forestry Research and Education (ICFRE) for entire Aravalli.
- **Freeze on New Mining Leases:** Until preparation of new MPSM on lines of the one prepared by ICFRE for **Saranda Forest, Jharkhand**.

Significance of Aravallis



Prevents Desertification: Serves as barrier, **checking spread of Thar Desert**.



Nurtures Sub-Himalayan Rivers: Guides the monsoon clouds eastwards towards Shimla, Nainital.



Green Lungs of Delhi: Protecting Delhi from **hot winds** from Thar Desert.



Economic: Rich in **minerals (E.g., limestone, marble, copper, zinc)** for mining and quarrying.

About Aravalli

- One of the World's **oldest mountain ranges (Pre-Cambrian)**, predating the Himalayas.
- Stretches over **800km from Gujarat to Delhi (through Rajasthan and Haryana)**.
- **Highest Peak:** Guru Shikhar (Mount Abu).

Initiatives taken for Protection

- **Matri Van Initiative:** To develop 750-acre urban forest in Aravalli hills under 'Ek Ped Maa Ke Naam' programme.
- **Aravalli Green Wall Project:** Greening 5 km buffer area around Aravalli in four states.
- **MC Mehta v. Union of India:** In a series of judgments, SC prohibited and banned mining activities in the entire region.

Also In News



Dark Stores

Recent surge in **Dark Stores** shows rising trends in India's **Quick-commerce market**.

- **Quick Commerce** refers to rapid delivery of goods ordered online, usually between 10-30 minutes.

About Dark Stores

- They are stocked like **standard retail stores** but used **only for storage and not open to public**.
- They are a **critical working infrastructure** for Quick commerce firm.
- They offer **automated order details** using a dispatch software that swiftly redirects it to warehouse staff and delivery personnel offering **quick and efficient delivery**.



Government-e- Marketplace (GeM)

GeM raised Rs. 2,200 crore over **last four years** through disposal of assets such as scrap, e-waste, old vehicles, etc.

About GeM

- It is incorporated under Section 8 of the **Companies Act, 2013** and functions under the administrative control of the Department of Commerce, **Ministry of Commerce and Industry**.
- **Launched: 2016**
- **Function:** Facilitates **online procurement** of common use Goods & Services required by various Government Departments/Organisations/PSUs.
- **Significance:** Enhance transparency, efficiency and speed in public procurement.



Food Safety and Standards Authority of India (FSSAI)

FSSAI firmly rejected claims linking eggs to cancer risk.

About Food Safety and Standards Authority of India (FSSAI)

- **Ministry:** Ministry of Health and Family Welfare.
- **Establishment:** Under Food Safety and Standards Act, 2006.
- **Mandate:** Lays down **science-based standards** and regulate food manufacture, storage, distribution, sale and import ensuring safety.
- **Key Initiative:** Eat Right India
- **Governing Structure:** Includes **Food Authority** with Chairperson and 22 members (**one-third being women**).



Ghost Pairing

CERT-In has issued advisory warning Indian users about the WhatsApp Account takeover campaign (GhostPairing).

About Ghost Pairing

- **What It Is:** A new cyber scam that allows hackers to take over a WhatsApp account without needing a password or SIM card.
- **How It Works:** The attack exploits WhatsApp's device-linking feature by tricking users into approving a fake but authentic-looking pairing code.
 - ⊕ Victims receive deceptive messages like "Hi, check this photo," which initiates the account compromise.
- **Account Hijacking:** Once linked, the attacker's device gains full access as a hidden trusted device.



Superkilonova

An international research team including from IIT-Bombay and the Indian Institute of Astrophysics, Bengaluru reported a possible second version of Superkilonova.

About Superkilonova

- A superkilonova is a rare kind of cosmic explosion where a star's death appears to involve **two explosive processes in sequence**, a **supernova** followed shortly by a **kilonova** from the same source.
- The supernova core may produce two neutron stars that merge and cause **kilonova**.
 - ⊕ **Supernova:** A **massive star** ends its life in a powerful explosion called supernova.
 - ⊕ **Kilonova:** A kilonova is a powerful explosion that occurs when two **neutron stars collide**.





Kuttanad Wetland Agricultural System

Soil tests in Kuttanad paddy fields (part of Kuttanad Wetland Agricultural System) show increased aluminium levels above safe limits.

- **Aluminium** becomes more soluble and toxic as soil pH drops below five.
- Excessive levels damage roots and disrupts uptake of key nutrients like phosphorus, calcium, potassium and magnesium.

About Kuttanad Wetland Agricultural System (Kerala)

- The system is a complex mosaic of fragmented agricultural landscapes divided in three structures:
 - ⊕ Wetlands used for paddy activities and fish catching
 - ⊕ Garden lands used for food crops plantation
 - ⊕ Water areas used as inland fishing and shells.
- It is the **only system** in India that favours rice cultivation below sea level in the land created by draining delta swamps in brackish waters.
- It comes under **Globally Important Agricultural Heritage Systems** (GIAHS) of FAO.



Southern Ocean

A new study has reported that the deep waters in Southern Ocean are rising; this has increased carbon dioxide pressure in the subsurface layer.

About Southern Ocean

- It is one of the five great ocean basins on Earth.
- It is also known as the **Antarctic Ocean**.
- It lies between 60 degrees south latitude and the coast of Antarctica and encompasses 360 degrees of longitude
- It includes Amundsen Sea, Bellingshausen Sea, part of the Drake Passage, Ross Sea, a small part of the Scotia Sea, Weddell Sea, and other tributary water bodies
- It plays an important role in the **circulation of water around the globe**.



National Maritime Heritage Complex (NMHC)

India, Netherlands signed a MoU to collaborate on NMHC.

About NMHC

- **Location:** Lothal, Gujarat to showcase **4,500 years old maritime heritage of India**.
 - ⊕ Lothal (or Mound of the Dead) is the site of the **Indus Valley Civilisation** where the **earliest man-made dockyard** was discovered.
- **Development:** Under Projects category of **Sagarmala** programme under **Ministry of Shipping, Ports, and Waterways**.
- **Projects under NHMC Master Plan:** National Maritime Museum; Monuments Theme Parks, State Pavilion, etc.



Great Indian Bustard (GIB)

Supreme Court tightened **safeguards** for protecting **GIB** by revising conservation areas with respect to **Green Energy Corridor (GEC) projects** in Rajasthan and Gujarat.

About GIB

- **Habitat:** Ground-dwelling bird of **grasslands and semi-arid regions**.
- **Distribution:** **Endemic to Indian Subcontinent**, mainly **Rajasthan and Gujarat**, with small populations in **Maharashtra, Karnataka, and Andhra Pradesh**.
- **Characteristics:** Feeds on **grass seeds, insects** like grasshoppers and beetles, and sometimes **small rodents and reptiles**.
- **Threats:** Habitat loss due to infrastructure development like electricity lines.
- **Protection Status:**
 - ⊕ **IUCN:** Critically Endangered
 - ⊕ **Wildlife (Protection) Act, 1972:** Schedule I
 - ⊕ **CITES:** Appendix I
 - ⊕ One of the species for recovery programme under **Integrated Development of Wildlife Habitats**.



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI