

## IR

PRE-CONTEXT

### INDIAN FOREIGN POLICY

THE HINDU, PG.NO: 6.

**News:** "The Budget pipeline and India's foreign policy ambitions."

**Vision of a 'Viksit Bharat' by 2047** hinges on sustained global partnerships. Here, India is positioning itself as a global leader: *from leading the Global South; strengthening ties with the Association of Southeast Asian Nations; enhancing regional connectivity, engaging with the Quad (India, Australia, Japan and the U.S.) and creating institutions such as the International Solar Alliance and the Coalition for Disaster Resilient Infrastructure.*

#### Leading Global South

##### India-Africa Cooperation:

- **India-Africa Forum Summit:** Held every three years (recent in 2022) saw participation from 54 African countries, reinforcing India's commitment to the continent.
- **Lines of Credit and Investments:** As of 2023, India had extended over USD 5 billion in lines of credit to African nations for **infrastructure, energy, and healthcare projects**. Eg. USD 500 million credit to Kenya for railway projects.
- **Capacity Building and Education:** Programs like the **Pan-African e-Network project**, which connects African institutions with Indian expertise, have trained over 10,000 African professionals.

##### Neighbourhood First Policy:

- Strengthening ties with South Asian neighbour's through infrastructure projects like roads, railways, and digital connectivity.
- **Approximately 50% of India's foreign grants** is directed to its neighbourhood. **Bhutan** remained the largest recipient of Indian aid.
- **Investment in Afghanistan** till 2021, for reconstruction and development projects.
- **45% of the Line of Credits** directed to the neighbourhood, **Bangladesh** being the largest recipient at \$7.86 billion.
- **Sri Lanka** saw a 63% increase in budgetary allocation in 2024.
- **Aiding Maldives** from BOP crisis in 2024.
- **South Asia Satellite (GSAT-9)**, launched in 2017, provides communication services to neighbouring countries.

##### Act East Policies:

- Enhancing economic and strategic ties with Southeast Asian countries. India signed 15 free trade agreements with **ASEAN nations** by 2023.
- **Regional Connectivity Projects:**
  - **Kaladan Multi-Modal Transit Transport Project** connecting India to **Myanmar and Bangladesh**.
  - **India-Myanmar-Thailand Trilateral Highway:** connect India's **Northeast with Southeast Asia**, with plans to extend to Laos, Cambodia, and Vietnam.
  - **Kaladan Multi-Modal Transit Transport Project:** Enhances connectivity between **India's eastern seaports and Myanmar's Sittwe port**.
  - **Mekong-India Economic Corridor:** integrates four countries **Myanmar-Thailand-Cambodia-Vietnam**.

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## QUAD

##### About Quadrilateral Security Dialogue:

- An **informal strategic forum** consisting of **India, USA, Australia and Japan**.
- Primary objective to work for a free, open, prosperous and inclusive Indo-Pacific region.
- **India is the only bordering country to China** in QUAD.

##### Quad Summit 2024 outcomes:

- **QUAD Cancer Moonshot:** This project aims to combat cervical cancer, with **India pledging \$10 million** for screenings.
- **Quad-at-Sea Ship Observer Mission 2025:** aims to enhance maritime interoperability and safety.
- **Logistics Network Pilot Project:** This involves sharing airlift capacity among Quad countries to support disaster response efforts.
- **Maritime Legal Dialogue:** Established to support the enforcement of the rules-based maritime order.
- **MAITRI Workshop (hosted by India in 2025):** Maritime Initiative for Training in the Indo-Pacific aims to train Quad partners in maritime security and law enforcement.

##### Creation of Institutions:

##### International Solar Alliance:

- **Co-founded by India and France at COP21 (2015) in Paris.**
- **Objective:** Promote solar energy deployment, reduce fossil fuel dependency, and mobilize \$1 trillion in solar investments by 2030.
- **Membership:** open to all UN members.
- **Headquarter:** Gurugram.
- **Key Initiatives:**
  - **One Sun One World One Grid (OSOWOG):** Transnational solar grid to connect 140 countries.
  - **Solar Technology Application Resource Centre (STAR-C):** Capacity-building program.
  - **Solar Risk Mitigation Initiative (SRMI):** Reduces financial risks in solar projects.

##### Coalition for Disaster Resilient Infrastructure.

- **Initiated by India at the 2019 UN Climate Action Summit.**
- **Objective:** Enhance climate and disaster resilience of infrastructure systems globally.
- **Membership:** 31 countries as of 2023, Includes UK, Australia, Japan, and Fiji.
- **Headquarter:** New Delhi.
- India as a founding member; contributed \$48 million to CDRI's corpus.
- **Initiatives:**
  - **Infrastructure Resilience Accelerator Fund:** Funds resilience projects.

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## GEOGRAPHY

PRE-CONTEXT

### TUNGSTEN MINING

THE HINDU, PG.NO: 6.

**News:** "Mining politics."

**Context:** The Ministry of Mines announced that it had granted tungsten mining rights in eight blocks, spanning 5,000 acres, through an auction, to Hindustan Zinc Limited, a subsidiary of Vedanta Limited, a listed company.

#### About Tungsten:

- **Rare, hard, heavy metal notable for its extremely high melting point (~3,422 °C) and tensile strength.**
- It is primarily obtained from the minerals **wolframite and scheelite**.
- **India has limited tungsten reserves**, found primarily in states like **Rajasthan (Degana) and south of Deccan plateau**.
- Classified as a **Critical Mineral** by the Govt of India.

Note:

Captive mining is a type of mining where a company owns a mine and uses the minerals produced for its own needs

#### Mines and Minerals (Development and Regulation) Act 1957:

##### Schedule 1:

- **Energy/ Hydrocarbon Minerals:** Coal and Lignite.
- **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.
  - Lithium and titanium, bauxite, and other critical minerals were **delisted** and allowed Private Sector to mine them.
- **Metallic and Non Metallic Minerals:**
  - **Private Sector is allowed** through auctions (post-2015 amendment).
  - **Metallic:** Bauxite, Chrome ore, Copper ore, Gold, Iron ore, Lead, Manganese ore, Zinc.
  - **Non-Metallic:** Asbestos, Precious stones.
- **Critical and Strategic Minerals.**
  - Critical minerals are essential for our country's economic development and national security.
    - Eg. such as **lithium, graphite, cobalt, titanium and rare earth elements (REE)**.
  - Identified by **Ministry of Mines**.

##### Schedule 2:

- Deals with **rates of Royalty of Minerals** payable to govt.

##### Schedule 3:

- Rates of **Dead rent** (A fixed charge a leaseholder must pay the state, regardless of mining operations or mineral production).

##### Schedule 4:

- Introduced in 2015, This schedule lists minerals for which **auction-based mining leases are mandatory**.
  - **Iron ore, bauxite, limestone, manganese ore, and other.**

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#### Power to grant Mineral licence:

- **Central Govt:** **Major Minerals under first schedule:** Coal and Lignite, Atomic Minerals, Critical minerals.
- **State Govt:** **Minor minerals** like building stones, gravel, ordinary clay, ordinary sand (not used for prescribed industrial purposes), and other minerals declared as minor minerals.

#### Major Amendments to MMDRA Act 1957

##### 2015: A comprehensive Amendment:

- **Auction-Based Allocation:**
  - Introduced competitive bidding (auction) for granting mining leases (MLs) and prospecting licenses (PLs) to ensure transparency and curb corruption.
- **District Mineral Foundation (DMF):**
  - Mandated creation of DMFs in mining districts **to address local welfare** (health, education, infrastructure) **using 10-30% of royalty** paid by miners.
- **National Mineral Exploration Trust (NMET):** established to **fund regional and detailed mineral exploration**.
- **Removal of First-Come-First-Served (FCFS):** **Ended discretionary allocation of mining leases**.
- **Exemptions:** Minor minerals (e.g., sand) and atomic minerals (e.g., uranium).
- **Fixed Lease Periods:** for 50 years (previously indefinite).

##### 2020 Amendment:

- **Allowed commercial mining of coal** (previously restricted to captive use).
- **Removal of Distinction Between Captive and Non-Captive Mines:** Enabled companies to sell unused minerals from captive mines (e.g., coal).

##### 2021 Amendment:

- **Permitted transfer of valid mining leases** to new operators, promoting efficiency and investment.
- **Allowed captive mines (e.g., iron ore, bauxite) to sell up to 50% of their annual production in the open market.**

##### 2023 Amendment:

- **Empowered the central govt. to auction critical mineral blocks** (e.g., lithium, cobalt, graphite).
- **Delisted lithium, titanium, bauxite, and other critical minerals** were delisted and allowed Private Sector to mine them.

#### Offshore Minerals (Development and Regulation) Amendment Act 2023:

- **E.g., titanium, rare earths in coastal waters:** Governed by the **Offshore Areas Mineral Act, 2002**, and require central government approval.
- **Introduced auction regime for offshore minerals** (e.g., titanium, rare earths) to attract private players.

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## DISEASES

PRE-CONTEXT

### GUILLAIN-BARRÉ SYNDROME

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**News:** "A question of hygiene."

#### About Guillain-Barré Syndrome:

- **Linked to food borne illness.** Caused by **Bacteria** *Campylobacter jejuni*, can also be caused by virus.
- **Autoimmune disorder:** where the immune system attacks peripheral nerves, causing muscle weakness, paralysis, and loss of reflexes.
- **Patients are treated with plasma exchange or intravenous immunoglobulin therapy**, and most recover.

#### Bacteria and Virus:

##### Cellular structure:

- **Bacteria:** **Prokaryotic**, unicellular organisms with cell walls (peptidoglycan), cell membrane, and cytoplasm, **No nucleus**.
- **Virus:** Acellular particles.

##### Genetic Material:

- **Bacteria:** contain both DNA and RNA in **nucleoid**.
- **Virus:** either DNA or RNA enclosed in a protein coat (capsid).

##### Living status:

- **Bacteria:** reproduce, metabolise independently.
- **Viruses:** require **host** machinery to replicate.

##### Reproduction:

- **Bacteria:** **Asexual** reproduction (binary fission).
- **Viruses:** Replicate by hijacking host cells.

##### Diseases:

- **Bacterial:** **Tuberculosis** (*Mycobacterium*), **Cholera** (*Vibrio*), **Typhoid** (*Salmonella*).
- **Viral:** COVID-19 (SARS-CoV-2), HIV/AIDS, Influenza, Rabies, **Dengue**.

##### Treatment:

- **Bacteria:** Treated with **antibiotics** (e.g., penicillin targets cell walls).
- **Viruses:** **Antivirals** (e.g., oseltamivir for flu) or vaccines; antibiotics are ineffective.

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**Thank you!**