

## India signs 15-year Contract Polymetallic Sulphides (PMS) with ISA in Carlsberg Ridge

It is India's third exploration contract with International Seabed Authority (ISA), and second for PMS.

- Previous contracts are **Polymetallic Nodules in the Central Indian Ocean Basin** and **PMS in the Indian Ocean Ridge**.
  - ⊕ **Polymetallic nodules**, also called **manganese nodules**, are rock concretions formed of concentric layers of **iron and manganese hydroxides** around a core, such as a shark tooth or shell.
- This is the **first licence granted globally** for exploring polymetallic sulphur nodules in the Carlsberg Ridge.
- The Carlsberg Ridge is a **3,00,000 sq km** area in the **Arabian Sea, northwest Indian Ocean**.
  - ⊕ It forms the boundary between the **Indian and Arabian tectonic plates**, extending from near **Rodrigues Island** to the **Owen fracture zone**.
- Previously, India has also applied for the **Afanasy-Nikitin Sea (ANS) mount** which is yet to be approved.
  - ⊕ **ANS** is located in the **Central Indian Ocean** and the territory has been claimed by Sri Lanka for exploration rights.

### About Polymetallic Sulphides (PMS)

- These deposits are **rich sources of metals** such as copper, zinc, gold, and silver, found on the ocean floor.
- These deposits occur in regions where **hot, mineral-rich fluids from the Earth's mantle are expelled into the ocean**, leading to the precipitation of metal sulphides.

### About ISA

- **About:** It is an autonomous international organization established under the **1982 United Nations Convention on the Law of the Sea (UNCLOS)** and the **1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea (1994 Agreement)**.
  - ⊕ Through ISA States, Parties to UNCLOS organize and control all mineral-resources-related activities in the Area for the benefit of humankind as a whole.
- **Members:** 170 (Including India)
- **Headquarters:** Kingston, Jamaica.

## NITI Aayog Releases Report titled "AI for Viksit Bharat: The Opportunity for Accelerated Economic Growth"

According to report, AI can lead to **8% plus economic growth** to realize the vision of 'Viksit Bharat'.

- Further AI adoption can bridge nearly half of the growth gap needed to propel India from a projected **GDP of \$6.6 trillion** to an aspirational **\$8.3 trillion by 2035**.

### AI Opportunities for India: Three Major Unlocks Highlighted by the Report

- **Accelerating AI Adoption Across Industries:** This lever is projected to bridge 30-35% of the required growth step-up E.g., **Use of AI in Banking and manufacturing**.
- **Transforming R&D with Generative AI:** This unlock is expected to contribute at least 20-30% of the required uplift E.g., **AI-enabled drug discovery, software-assisted vehicles, etc.**
- **Innovation in Technology Services:** This could contribute another 15-20% to the step-up.






### Potential Outcomes for AI-Led Value Creation

- **India as Data Capital of the World:** Involves creating anonymized data collection frameworks, building marketplaces for certified non-personalized data, etc.
- **Adaptable and Efficient AI-Skilling Ecosystem:** By developing skilled professionals, advancing research, and contributing to AI models.
- **Unlocks Sectorial Growth:** Focusing on AI enablers in manufacturing, financial services, pharmaceuticals, and automotive industries.
- **Future Proofed Jobs and Industry Transformation:** By continuous worker up skilling, accelerates firm-level digital adoption, etc.

### Conclusion

The report concludes that with **robust infrastructure**, focus on **labor transitions**, responsible governance, and **industry-academia collaboration**, India can pioneer a new model of growth.

### Key Strategic enablers for Realizing Full AI Potential

-  **Critical AI Infrastructure:** Cloud platforms, GPUs, and datasets
-  **AI Governance:** Ethics guidelines and risk controls
-  **Private Sector Leadership:** Embedding AI in industry processes and reskilling the workforce.
-  **Role of Academia:** Driving research, workforce transformation, and AI safety sandboxes.
-  **Equitable Access:** Extending AI resources to MSMEs and underrepresented regions

## First National Conference of Parliamentary & Legislative Committees on Women Empowerment Held

It was held in Tirupati, Andhra Pradesh and adopted the Tirupati resolution which reaffirmed the centrality of **Women-led Development**.

### Tirupati Resolution Emphasised

- Applying a gender lens in governance.
- Institutionalizing gender **responsive budgeting**.
- Bridging the **digital divide and promoting women's participation** in STEM fields.

**Women-led Development:** It's a shift in approach where women are viewed as **active agents of empowerment**, rather than merely recipients of welfare programmes.

### India progress in Women-led Development

- **Grassroot Leadership:** 46% of elected representatives in local governments are women.
- **Education:** 43% of **STEMM** (Science, Technology, Engineering, Mathematics & Medicine) graduates in India are women.
- **Financial Empowerment:** 69% and 84% beneficiaries under Pradhan Mantri Mudra Yojana (PMMY) and stand up India are women boosting **women's entrepreneurship**.

### Challenges in Women-led Development

- **Political:** Only 14% MPs in India are women.
- **Economic:** Despite high female STEM graduates, women account for **only 27% of the STEM workforce** in India (**World Bank**).
- **Social & Cultural Norms:** Patriarchal attitudes, safety concerns, early marriage, and unequal division of household responsibilities restrict women's public participation.
- **Digital Divide:** According to NFHS-5 only 33% women in India, in the **15-49 age group** have used internet. (57%- men)

### Initiatives by government for women led development

- **Nari Shakti Vandan Adhiniyam, 2023**, was passed, reserving 33% seats for women in the Lok Sabha, State Assemblies.
- **The 73rd and 74th Constitutional Amendment Act of 1992** reserved 33% of seats in local government institutions for women.
- **Security-Mission Shakti** aims to enhance women's safety, through **One-Stop Centres (OSCs)** providing police, medical, and legal aid.
- **Educational and Social Empowerment** via Beti Bachao Beti Padhao (BBBP) scheme to promote girl child education and counter discrimination.

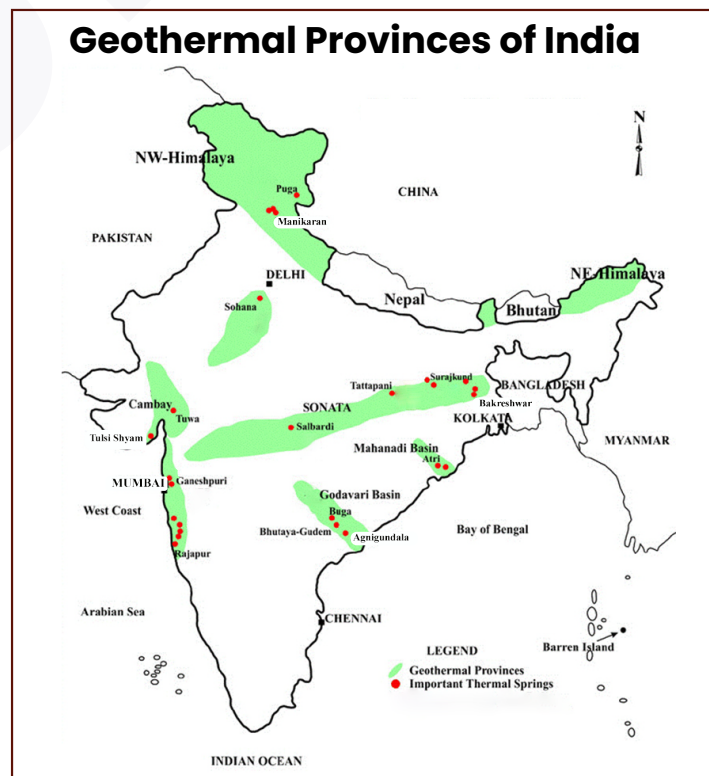
## Ministry of New and Renewable Energy Unveils first National Policy on Geothermal Energy

The policy is designed to make geothermal energy a key part of the country's renewable energy mix and achieve **India's ambitious target of net-zero emissions by 2070**.

### Key Features of the Policy

- **Recognition & Scope**
  - ⊕ Identifies **381 hot springs & 10 provinces** with potential.
  - ⊕ Supports **high-enthalpy** (electricity) and **low/medium enthalpy** (heating, cooling, agriculture, industry) uses.
  - ⊕ Covers **resource assessment to end-use** including hybrid systems, storage and repurposing oil/gas wells for geothermal energy.
- **Sustainability & Regulation**
  - ⊕ Ensures **safe reinjection, rules compliance, and stakeholder consultation in sensitive areas**.
  - ⊕ Provides **single-window clearances** via state nodal agencies.
- **Development & Financing Model**
  - ⊕ Allows **100% FDI**, promotes domestic innovation & oil-gas collaboration.
  - ⊕ Offers risk-sharing, **concessional loans, Viability Gap Financing, green bonds, feed-in tariffs, blended finance**.
  - ⊕ Proposes **Grants tax/GST exemptions, tax holidays, accelerated depreciation, property tax relief**.
- **Collaboration & Capacity Building:** Promotes **international cooperation & peer learning**.
- **Sites, Leases & Data Infrastructure**
  - ⊕ **Exploration leases:** 3–5 years; **Development leases:** Up to 30+ years with concessional land.
  - ⊕ Establishes a **centralized geothermal data repository with mandatory data submission**.

### Geothermal Provinces of India



### About Geothermal Energy

- Geothermal energy is the heat from the **Earth (geo = earth, thermal = heat)**.
- It comes from **natural or man-made reservoirs** of hot water/steam at different depths.
- By drilling wells, this heat can be tapped for **electricity generation, heating, cooling, and other applications**.

## Seven places from India Added in Tentative List of UNESCO's World Heritage Convention

Addition to the tentative list is a **mandatory requirement before the inscription of any property on the World Heritage List.**

➤ There are at present **69 Indian sites** in UNESCO's Tentative List.

### 7 Indian Sites added in Tentative List

Sites	Key Features
<b>Natural Heritage of Erra Matti Dibbalu or Red Sand Dunes</b> (Visakhapatnam, Andhra Pradesh)	<ul style="list-style-type: none"> <li>First documented in 1886 by <b>British geologist William King</b></li> <li>Represent unique <b>coastal geomorphological and paleo-climatic set up</b></li> <li>Declared a <b>GeoHeritage Monument</b> by the <b>Geological Survey of India (GSI)</b> in 2016.</li> <li>Composed of sand, silt, and clay with a reddish color from natural oxidation.</li> </ul>
<b>Meghalayan Age Caves (Meghalaya)</b>	<ul style="list-style-type: none"> <li>They are some of the world's longest caves and host impressive stalactites, stalagmites, fossils, and rare cave-dwelling species.</li> <li><b>Mawmluh cave is</b> listed among the <b>global first 100 geologically important sites</b> in the world.</li> </ul>
<b>Natural Heritage of Tirumala Hills</b> (Tirupati, Andhra Pradesh)	<ul style="list-style-type: none"> <li>The hills form part of the <b>Seshachalam Biosphere Reserve</b> and <b>Venkateswara National Park</b></li> </ul>
<b>Natural Heritage of Varkala</b> (Kerala)	<ul style="list-style-type: none"> <li>Varkala coast is noted for its scenic beauty, unique laterite formations, fossil-bearing rocks, and cultural significance as a pilgrimage destination.</li> </ul>
<b>Deccan Traps at Panchgani and Mahabaleshwar</b>	<ul style="list-style-type: none"> <li><b>Location:</b> Western Ghats of Maharashtra.</li> <li>They form a part of <b>Koyna Wildlife Sanctuary</b>.</li> </ul>
<b>Geological Heritage of St' Mary's Island Cluster</b> (Karnataka)	<ul style="list-style-type: none"> <li>The sites are protected by the <b>coastal regulation zones</b> of the government of India and have been declared as <b>National Geological Monument</b> by GSI.</li> </ul>
<b>Naga Hill Ophiolite</b> (Nagaland)	<ul style="list-style-type: none"> <li>This belt displays a section of oceanic crust and mantle thrust onto land, offering crucial evidence of tectonic plate movement and earth's internal processes.</li> </ul>

### Also in News



#### Section 3(d) of Indian Patent Act, 1970

Indian Patent Office (IPO) has revoked the patent on **Novartis's cardiac drug Vymada** **Section 3(d) of the Patents Act**.

**About Section 3(d) of the Patents Act**

➤ Aims to prevent "evergreening," i.e., extending drug patents through **minor modifications without substantial therapeutic improvement**.

**Significance**

- Ensure Affordable Access, supports India's role as "pharmacy of the world".
- Aligns with **Doha Declaration on TRIPS & Public Health (2001)**.
- Encourage **Genuine Innovation**.
- Balance **innovation incentives with affordability**.



#### East African Crude Oil Pipeline (EACOP)

A study highlighted that the EACOP could generate **34 million tons of carbon**.

**About EACOP**

➤ It is a **1443 km long pipeline** that connects the **Tilenga and Kingfisher oilfields** in **Western Uganda** with the port of **Tanga** in **Eastern Tanzania**.

➤ **Concerns:**

- ⊖ **Carbon emissions**
- ⊖ Impact on biodiversity in protected areas including **Murchison Falls National Park** (Oldest and largest National park of Uganda),
- ⊖ **Displacement of tribals, etc.**



#### Simlipal Tiger Reserve (STR)

The **Union Ministry of Environment** ordered a probe into allegations that the **villagers' consent for relocation** from the core areas of STR fraudulently obtained.

**About Simlipal Tiger Reserve**

- **Location:** Mayurbhanj district of Odisha.
- **Designation:** Declared a **Tiger Reserve** in **1956** and included under **Project Tiger** in **1973**.
  - ⊕ Recognised as part of the **World Network of Biosphere Reserves** by **UNESCO** in **2009**.
- **Waterfalls:** Joranda and Barehipani
- **Rivers:** Burhabalanga, Palpala Bandan, Salandi, Kahairi and Deo.
- **Tribes Found:** Kolha, Santhala, Bhumija, Bhatudi, Gondas, Khadia, Mankadia and Sahara.



#### Section 23 (4) of RPA

The Supreme Court stated that **Aadhaar can be used by voters**, as **Section 23(4) of the Representation of the People Act, 1950** allows it.

**About Section 23 (4) of RPA**

- The electoral registration officer may require a person to provide their **Aadhaar number** under the **Aadhaar Act, 2016**, for **verifying identity purposes during electoral registration**.
- This requirement applies to **new applicants as well as to individuals already on the electoral roll**, primarily for authenticating entries and to detect duplicate registrations within the same or different constituencies.





### Stablecoins

Recently, the **Bank of England** proposed to **restrict stablecoin ownership** in the country citing various risks.

#### About Stablecoins

- These are a **type of cryptocurrency** whose **value is pegged to another asset**, such as a **fiat currency or gold**, to maintain a stable price.
- There are **primarily three types of stablecoins**: Fiat-collateralized, crypto-collateralized, and non-collateralized (algorithmic).
- **Advantages**: Stable prices, cheap and fast cross border transactions, etc.
- **Disadvantages**: Risk of **mass withdrawal of holdings simultaneously**, **fail the test of elasticity** (cannot expand quickly to provide additional liquidity in case of high demand), **risk of money laundering**, etc.



### Rashtriya Gokul Mission

The PM inaugurated the **Sex Sorted Semen** facility established under the "**Rashtriya Gokul Mission**" scheme in Bihar.

- Semen-Sex Sorting is a technology that **increases the likelihood of birth of female calves** with about 90% accuracy.

#### About Rashtriya Gokul Mission (RGM)

- **Launch**: 2014
- **Ministry**: Ministry of Fisheries, Animal Husbandry and Dairying.
- **Type**: Central Sector Scheme
- **Objectives**:
  - ⊕ Development and **conservation of indigenous bovine breeds**.
  - ⊕ Genetic upgradation of bovine population.
  - ⊕ Enhancement of **milk production and productivity of bovines**.
- **Implemented by**: Department of Animal Husbandry and Dairying.



### Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (POSH Act)

The **Supreme Court** upheld that political parties cannot be treated as "**workplaces**" excluding them from **POSH act**.

#### About POSH act 2013

- **Judicial Precedent**: Based on **Vishaka judgement 1997**.
- **Scope**: Applies to all workplaces: government, private sector, NGOs, educational institutions, hospitals, sports facilities, etc.
  - ⊕ Covers domestic workers as well.
- **Internal Complaints committee (ICC)**: Mandatory in every workplace with 10 or more employees.
  - ⊕ At least 50% of members and presiding officer shall be a women.
- **Local Complaints Committee (LCC)**: In each district to deal with complaints in workplace with less than 10 employees.
- **Complaint**: To be made within a period of 3 months from the date of incident to ICC or LCC which are to complete inquiry within 90 days.



### Pacific Reach 2025

**Indian Navy's latest indigenously designed and constructed Diving Support Vessel (DSV) INS Nistar** is participating in Pacific Reach 2025 exercise in **Singapore**.

#### About Pacific Reach

- It is a **biennial, multilateral exercise**.
- The exercise is split into **two main phases**:
  - ⊕ **Harbour Phase**: Includes **subject matter expert exchanges (SMEE), medical symposium, cross-deck visits, and detailed discussions** on submarine rescue systems.
  - ⊕ **Sea Phase**: Involves **intervention and rescue operations at sea** with participating assets.

## Personality in News



### M.Visvesvaraya (1861-1962)

Recently, the **Birth Anniversary of M.Visvesvaraya** was celebrated as **National Engineers Day**.

#### About M.Visvesvaraya

- Born in **Muddenahalli, Karnataka**
- Studied civil engineering from **College of Engineering, Pune**.

#### Key Contributions

- **Engineering Contributions**
  - ⊕ He constructed **pipe syphon** across one of **Panjra river's channels** aiding **water management**.
  - ⊕ He introduced a **block system of irrigation** in the **Deccan canals** distributing benefits of irrigation to a wider population and solving the problem of muddy waters.
  - ⊕ Developed a system of **automatic water floodgates**.
  - ⊕ **Chief engineer** responsible for the construction of the **Krishna Raja Sagara Dam in Mysore**.
- **Administrator**: Served as **Diwan of Mysore** establishing university of Mysore.
- ⊕ **Scholar**: Published books, "**Reconstructing India**" and "**Planned Economy of India**" on Indian economy.
- ⊕ **Recognition**: He was conferred India's highest honour, the **Bharat Ratna in 1955**.

**Values**: Commitment to Public Service, Leadership, Professionalism, Integrity, Equality, etc.



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI