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Current Affairs - 02 March 2026



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INDIA METEOROLOGICAL DEPARTMENT (IMD)



India Meteorological
Department (IMD)

An above-normal number of heatwave days are expected over most parts of the country between March and May, the India Meteorological Department (IMD) said in its monthly forecast.

- Established in 1875, IMD is the National Meteorological Service of the country and the principal government agency in all matters relating to meteorology and allied subjects.
- It functions under the Ministry of Earth Sciences (MoES).
- It is headquartered in Delhi and operates hundreds of observation stations across India and Antarctica.
- There are 6 Regional Meteorological Centres, each under a Deputy Director General, with headquarters at Mumbai, Chennai, New Delhi, Calcutta, Nagpur, and Guwahati.
- **IMD Mandate:**
 - To take meteorological observations and to provide current and forecast meteorological information for weather-sensitive activities like agriculture, shipping, aviation, offshore oil explorations, etc.
 - To warn against severe weather phenomena like tropical cyclones, norwesters, duststorms, heavy rains and snow, cold and heat waves.
 - To provide meteorological statistics required for agriculture, water resource management, industries, oil exploration, and other nation-building activities.
 - To conduct and promote research in meteorology and allied disciplines.
- IMD is also one of the six Regional Specialized Meteorological Centres of the World Meteorological Organization (WMO).
- It is responsible for forecasting, naming, and distributing warnings for tropical cyclones in the Northern Indian Ocean region, including the Straits of Malacca, the Bay of Bengal, the Arabian Sea, and the Persian Gulf.



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BUREAU OF ENERGY EFFICIENCY



BUREAU OF ENERGY EFFICIENCY
Government of India, Ministry of Power

Recently, the 25th Foundation Day of the Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India, was celebrated in New Delhi.

- It is a **statutory body**, established in 2002 under the provisions of the **Energy Conservation Act, 2001**.
- **Primary objective:** To reduce energy intensity in the Indian economy.
- **Function and Duties of Bureau of Energy Efficiency:**
 - It coordinates with designated **consumers, designated agencies** and other organizations; recognizes, identifies and utilizes the existing resources and infrastructure, in performing the functions assigned to it under the Energy Conservation Act.
 - The EC Act provides for regulatory and promotional functions which are assigned to the organisation.
- **Regulatory functions**
 - **Develop minimum energy performance standards** for Commercial Buildings, equipment and appliances under Standards and Labelling
 - Develop Energy Consumption Norms for Designated Consumers
- **Nodal Ministry:** Ministry of Power.

Schemes of Bureau of Energy Efficiency

- National Mission for Enhanced Energy Efficiency (NMEEE), Energy Conservation Building Code (ECBC), Standards and Labeling Scheme, Municipal Demand Side Management (MuDSM) Scheme, Agricultural Demand Side Management (AgDSM) Scheme.

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STRAIT OF HORMUZ DISRUPTION: INDIA'S ENERGY SUPPLIES SAFE FOR NOW

The growing conflict involving Iran, the United States, and Israel has disrupted oil and gas movement through the Strait of Hormuz, a key global energy corridor.

- The Strait of Hormuz is the world's most critical oil transit chokepoint.
- It connects the Persian Gulf with the Gulf of Oman and handles about **one-fifth** of global petroleum and LNG trade. Around **15 million barrels** of crude pass through it daily.
- Even if alternative Gulf pipelines operate at full capacity, a significant portion of global supply would remain at risk if the strait is closed.

Impact of Strait of Hormuz Disruption on India

- Any suspension or major curtailment of oil and gas flows through the Strait of Hormuz will affect global energy markets, including India, which relies heavily on this route for imports.
- Experts believe the disruption may not last long, but the longer it continues, the greater the impact on prices and supply.
- India is relatively well positioned to manage a short-term shock in crude oil supplies because it can source oil from alternative markets. However, it will likely face higher energy prices.
- The challenge is more serious for liquefied petroleum gas (LPG) and liquefied natural gas (LNG), where India's dependence on the Strait is higher.
- In these cases, India may struggle both to secure supplies and to manage rising import costs.

India's Near-Term Options Amid Strait of Hormuz Disruption

- About half of India's crude oil imports — roughly 2.5–2.7 million barrels per day — pass through the strait. India imports over 88% of its crude oil and depends heavily on West Asia for both oil and gas.
- India is the world's third-largest oil consumer, making uninterrupted energy flows vital for its economy.

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- **Crude Oil: Short-Term Cushion**
 - Indian refiners hold more than 10 days of crude inventory and about a week's worth of fuel stocks.
 - India also maintains strategic petroleum reserves that can be tapped in an emergency.
 - India can diversify supplies by increasing imports from Russia, the United States, West Africa, and Latin America. Russian cargoes, including those in floating storage, offer flexibility.
 - This diversified sourcing strategy reduces the risk of a prolonged crude supply crisis, though prices may rise.
 - **LPG: The Bigger Vulnerability**
 - India imports 80–85% of its LPG needs, mostly from Gulf suppliers via the Strait of Hormuz. Unlike crude oil, India does not maintain large strategic LPG reserves.
 - This makes LPG flows more vulnerable in case of prolonged disruption, as structural buffers are limited.
 - **LNG: Limited Safety Net**
 - Around 60% of India's LNG imports pass through the strait. Similar to LPG, there are no strong structural reserves.
 - Spot cargo availability for LNG is limited compared to crude oil. If the strait remains closed for long, securing LNG supplies could become difficult.
 - **Why a Full Closure Is Unlikely?**
 - Although Iran has often threatened to close the Strait of Hormuz, it has never done so.
 - Gulf energy producers, including Iran itself, rely heavily on uninterrupted exports through the strait for revenue.
 - This mutual dependence reduces the likelihood of a long-term, complete shutdown.
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SKILL INDIA AS HERCULEAN CHALLENGES, GALGOTIAN BLUNDERS

- India stands at a decisive moment in its development journey. Its **demographic dividend**, lasting until 2040, offers a rare opportunity to transform a youthful population into productive human capital. However, this opportunity demands systemic reform in vocational education and **skill development**.
- Despite ambitious initiatives such as the 2020 **National Education Policy**, structural weaknesses in financing, governance, and industry participation continue to limit outcomes.
- Without a shift toward a **demand-driven**, accountable, and employer-owned model, the demographic advantage risks turning into a demographic burden.

Historical Neglect of Vocational Education

- **International Comparisons**
 - In many advanced economies, vocational education receives around 2% of the education budget; in China and Germany, it reaches 11%. India, by contrast, enrolls only 1.3% of its secondary students in vocational education.
 - This reflects decades of **policy neglect**, delayed focus on school education, and insufficient prioritisation of skill pathways.
 - Limited public data and **fragmented schemes** across ministries further weaken transparency and coordination.

The Way Forward: The Need for Real-Time Labour Market Intelligence

- Effective skills planning requires accurate and continuous labour market data. Periodic **skill gap studies** are insufficient in a rapidly evolving economy.
- A modern labour market information system should integrate anonymised data from online job platforms, use **data analytics** and AI modelling, and make aggregated insights available through the National Career Service portal.
- Real-time intelligence would align training supply with actual demand, enhance transparency, and support evidence-based policymaking.

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Conclusion

- India's demographic window is narrowing. Harnessing the **demographic dividend** requires bold structural reform in vocational education and skill development.
 - Sustainable financing, institutional accountability, employer ownership, and real-time **labour market intelligence** are central to transformation.
 - With decisive action, India can convert its demographic advantage into **long-term economic strength** and global competitiveness. Without reform, the opportunity may pass unfulfilled.
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SIXTEENTH FINANCE COMMISSION — MISSES AND CONCERNS

- The Sixteenth Finance Commission (SFC) operated with considerable autonomy, drawing its mandate directly from constitutional provisions.
- It examined the two core pillars of India's fiscal federalism: **vertical** devolution (distribution between Centre and States) and **horizontal devolution** (distribution among States).
- While it preserved certain structural features of earlier commissions, it introduced important shifts affecting **fiscal balance**, constitutional responsibility, and the principle of equalisation.

Distributional Impact: Gains and Losses

- **States Experiencing Losses**
 - Compared to the Fifteenth Commission, significant States such as Madhya Pradesh, Uttar Pradesh, West Bengal, Bihar, Odisha, Chhattisgarh, and Rajasthan faced reductions.
 - Several smaller and north-eastern States, including Arunachal Pradesh, Meghalaya, Manipur, Nagaland, Tripura, Sikkim, and Goa also experienced losses. Gains among richer States were uneven.

- **The Case for Equalisation Grants**

- Article 275 provides for grants-in-aid addressing State-specific needs, particularly in health and education.
- Well-designed equalisation grants can offset disparities arising from formula changes.
- The complete withdrawal of such mechanisms limits corrective capacity and risks widening inter-State disparities.

Conclusion

- The Sixteenth Finance Commission preserved the 41% devolution benchmark but avoided assertive intervention on expanding cesses and surcharges.
- The reduction in effective transfers, optimistic growth assumptions, and discontinuation of revenue gap grants signal a cautious recalibration of fiscal federalism.
- In horizontal distribution, the adoption of a GSDP-based contribution measure introduces tension between **performance incentives** and the constitutional goal of balanced development. The long-term impact on **cooperative federalism**, regional equity, and sustainable public finance will unfold over time.

KOSI RIVER



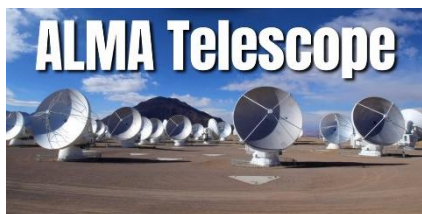
- It is a **transboundary river** which flows through **China, Nepal, and India**. It is a prominent **tributary of the Ganges**, also known as "**Sorrow of Bihar**" because of the **big floods** it can cause, especially in the Indian state of **Bihar**.

- The river Kosi is **formed by the confluence of three streams**, namely the **Sun Kosi**, the **Arun Kosi**, and the **Tamur Kosi**, all of which have their **origin** in the **Himalayan region** of Nepal and Tibet.
- About 48 km north of the **Indian-Nepalese frontier**, the Kosi is joined by several major tributaries and **breaks southward through the Siwalik Hills** at the **narrow Chatra Gorge**.

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- The river then **emerges on the great plain of northern India in Bihar state** on its way to the Ganges River, which enters south of Purnea after a course of about **724 km**.
- **Over the last 250 years, the Kosi has shifted its course over 100 kilometres** from East to West and the unstable nature of the river is **attributed to the heavy silt it carries** during the monsoon season.
- **Corn (maize) is extensively cultivated** on the sandy soils of the Kosi's basin.
- **Tributaries:** It has seven major tributaries: **Sun Koshi, Tama Koshi or Tamba Koshi, Dudh Koshi, Indravati, Likhu, Arun, and Tamore or Tamar.**

ALMA TELESCOPE



- It is a **state-of-the-art radio-telescope**, located in the Atacama Desert in Chile that studies **celestial objects at millimetre and submillimetre wavelengths**.
- It has been fully functional since 2013.
- It was designed, planned and constructed by the US's **National Radio Astronomy Observatory (NRAO)**, the **National Astronomical Observatory of Japan (NAOJ)** and the **European Southern Observatory (ESO)**.
- **Properties of ALMA Telescope:**
 - It also has **extraordinary sensitivity**, which allows it to detect even extremely faint radio signals.
 - It consists of **66 high-precision antennas**, spread over a **distance of up to 16 km** in the Atacama Desert of northern Chile.
 - These antennas can be moved closer together or farther apart for different perspectives – like the zoom lens of a camera.
- **Major Discoveries of ALMA Telescope:**
 - In 2013 it discovered **starburst galaxies** earlier in the universe's history than they were previously thought to have existed.



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- It provided detailed images of the **protoplanetary disc surrounding HL Tauri** — a very young T Tauri star in the constellation Taurus, approximately 450 light years from Earth.
- It helped scientists observe a **phenomenon known as the Einstein ring**.
 - **Einstein ring** occurs when light from a galaxy or star passes by a massive object en route to the Earth, in extraordinary detail.

PILIBHIT TIGER RESERVE



- **Location:** It is located in the **state of Uttar Pradesh**, forming part of the Terai Arc Landscape, in the upper Gangetic Plain Biogeographic Province.
 - It lies **along the India-Nepal border** in the foothills of the Himalayas.
- **Rivers:** The **River Gomti originates from the PTR**, which is also the catchment of several others like Sharda, Chuka, and Mala Khannot.
 - The **Sharda Sagar Dam**, is **on the boundary** of the reserve.
- **Climate:** It has a **dry and hot climate**, which brings a combination of dry teak forest and Vindhya Mountain soils.
- **Vegetation:** It consists of **Tropical Moist Deciduous Forests, Tropical Dry Deciduous Forests, Seasonal Swamp Forests and Tropical Semi-evergreen Forests**.
- **Flora:** The **Sal woodland** is very dense with good natural regeneration, amounting to almost 76% of the reserve area.
 - The forest patches are interspersed with grass meadows with several species like Sacchrum, Sclerostachya, Imperata, Themeda, Bothriochloa, Vetiveria, Apluda, Dichanthium, Digitaria and Cyperus.
- **Fauna:** It is home to a myriad of wild animals, including the endangered tiger, swamp deer, Bengal florican, hog deer, leopard, etc.