

IMPORTANT NEWS

Strong Earthquake in Nepal's Mountainous Western Region Claims 157 Lives

Inside Story of the News:

Nepal has faced a devastating earthquake measuring 6.4 in magnitude, resulting in significant loss of life, widespread damage, and numerous injuries. This seismic event is the most impactful since the destructive quake of 2015, which had catastrophic repercussions.

- A powerful 6.4 magnitude earthquake, the most severe since 2015, struck Nepal's remote mountainous region.
- It results at least 157 fatalities and over 160 injuries.
- Nepal, located **at the convergence of the Tibetan and Indian tectonic plates**, frequently encounters earthquakes.
- The movement of these plates brings them two meters closer every century, releasing accumulated pressure in the form of seismic events.
- Friday's earthquake, occurring at 11:47 pm Nepal time, was the deadliest since 2015 when two earthquakes measuring 7.8 and 7.3 on the Richter scale claimed about 8,000 lives.
- The epicenter was in **Ramidanda, Jajarkot district, 550 km from Kathmandu**, and tremors were felt in **New Delhi and parts of northern India**.
- An earthquake, characterized by intense ground-shaking caused by subsurface movements, originates at the hypocenter beneath the earth's surface.
- The epicenter, directly above on the earth's surface, is the point corresponding to the earthquake's location.
- The slip of tectonic plates, releasing stored-up 'elastic strain' energy as seismic waves, leads to earthquakes.
- Earthquakes are measured on scales like **the Moment Magnitude Scale (Mw), Richter scale for magnitude, and the intensity/Mercalli scale** for visible damage.
- The **Western Himalayas** remain one of the **most perilous seismic zones globally**.
- Scientists anticipate a significant earthquake (with a magnitude exceeding 8 on the Richter scale) in the Himalayan region, covering a distance of 2500 km from the Hindu Kush mountains to Arunachal Pradesh.
- This seismic event is expected due to the accumulated energy resulting from interactions between tectonic plates.
- The epicenters, situated in the remote western regions of Nepal—Rukum and Jajarkot—are areas under Maoist control.
- These locations are believed to be the birthplace of the insurgency that occurred between 1996 and 2006.

NITI Aayog Contemplates Discontinuing Key Water Report Launched Five Years Ago

Inside Story of the News:

The NITI Aayog, in collaboration with the Ministries of Water Resources, Drinking Water & Sanitation, and Rural Development, published the CWMI report.

- The inaugural CWMI edition, covering 2015-16 and 2016-17, was succeeded by the **second edition in August 2019**, focusing on data from 2017-18.
- Gujarat leads the CWMI rankings for 2019-20,
- It is showcasing **consistent year-on-year improvements**, closely trailed by Rajasthan, Andhra Pradesh, and Madhya Pradesh **in terms of performance**.
- NITI Aayog recently reached out to the Union Ministry of Jal Shakti, seeking input on the "use and applicability" of the Index and whether the CWMI should continue.
- Regrettably, there has been no response, despite pending releases of the third and fourth editions.
- Reports on states' water management progress for 2018-19 and 2019-20 were marked for "internal use" by NITI Aayog, following public releases of previous editions.
- The 'Composite Water Management Index' report, **launched in June 2018, spotlighted India's water challenges, ranking states based on 28 parameters**.
- India faces its most severe water crisis in history, with millions of lives and livelihoods at risk.
- Currently, **600 million Indians experience high to extreme water stress**,
- It results approximately two lakh deaths annually due to insufficient access to safe water.
- The crisis is expected to **worsen by 2030**.
- The country's water demand projected to be doubled the available supply, leading to severe scarcity for millions and a potential ~6% GDP loss.
- Norms indicate water shortage with availability below 1,700 cubic meters/person/year, and scarcity below 1,000 cubic meters/capita/year.
- The UN University warns that India is approaching its groundwater risk tipping point, where environmental tipping points signify critical thresholds beyond which irreversible changes occur in Earth's systems.
- Therefore, there is an urgent need to deepen understanding of India's water resources and usage, implementing interventions for efficient and sustainable water use.

Overview of CWMI (Composite Water Management Index):

- In 2018, the National Institute for Transforming India (NITI) Aayog introduced the Composite Water Management Index (CWMI) to facilitate effective water management in Indian states amidst a growing crisis.
- The preparation of the CWMI report involves collaboration with three ministries:
 - Water Resources,
 - Drinking Water & Sanitation, and
 - Rural Development.
- The primary objective of the CWMI is
 - to instigate much-needed enhancements in water resource management and conservation across India in a coherent and collaborative manner.
 - Serving as a public platform, the CWMI provides an annual snapshot of the water sector's status and

- the water management performance of various states and Union Territories (UTs) in India.
- The CWMI assesses both the overall progress **made by states in water management and the incremental improvements** in performance over time.
- The Index comprises **nine themes**, each assigned a specific weight.
- These themes encompass **groundwater and surface water restoration, major and medium irrigation, watershed development, participatory irrigation management, on-farm water use, rural and urban water supply, and policy and governance**.
- Within these themes, the CWMI further **breaks down into 28 indicators**, offering a comprehensive evaluation of different facets of water management in the country.

Modi Extends Free Ration Scheme for Additional Five Years

Inside Story of the News:

Prime Minister Modi has declared **an extension of the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) free ration scheme for an additional five years**, beyond its initial end date in December 2023.

- The PMGKAY, launched in 2020 during the Covid-19 pandemic, aims to provide **free food grains to beneficiaries under the National Food Security Act, 2013**.
- Part of the Pradhan Mantri Garib Kalyan Package (PMGKP), **the PMGKAY is a food security welfare scheme introduced by the Central Government in March 2020 to aid the impoverished in combating the Covid-19 crisis**.
- The **scheme's objective** is to
 - feed the poorest citizens of India by distributing grain through the Public Distribution System,
 - benefiting all priority households, including ration card holders and those identified by the Antyodaya Anna Yojana scheme.
- **The Antyodaya Anna Yojana** was initiated in 2000.
- It is a Centrally Sponsored Scheme providing highly subsidized food to millions of the poorest families.
- In December 2022, the government **merged PMGKAY with NFSA** and decided to extend the scheme for an additional year until December 2023.
- Following the merger, the entire quantity of 5 kg and 35 kg under the NFSA became available free of cost, establishing a Central food security legislation granting the poor a 'right' to receive 5 kg of food grains without charge.
- Earlier, beneficiaries paid a nominal price of Rs 3 per kg for rice and Rs 2 per kg for wheat.
- Eligible ration cardholders under NFSA 2013 were entitled to 5 kg of free wheat or rice per person per month, in addition to the 5 kg of food grains already provided under the National Food Security Act, 2013.
- The NFSA covers approximately 20 Crore families, totaling 81.35 crore beneficiaries, constituting two-thirds of the population, with 50% in urban areas and 75% in rural areas.
- Since its inception in 2020, the government has allocated 1,118 lakh metric tonnes of food grains from its central procurement pool at a cost of Rs 3.9 lakh crore as part of the PMGKAY scheme.

India and Bhutan Pledge to Enhance Connectivity and Trade

Inside Story of the News:

On Monday, Prime Minister Narendra Modi reaffirmed India's robust dedication to its **distinctive friendship with Bhutan during a communication with Bhutan King Jigme Khesar Namgyel Wangchuck**. He emphasized **India's unwavering support for Bhutan's socio-economic development, aligning with the nation's identified priorities**.

- Diplomatic ties between **Bhutan and India** were formally established in **January 1968**.
- The foundation of the relationship is the **Indo-Bhutan Friendship treaty**, initially signed in 1949 and revised in 2007.
- According to **Article 2 of the treaty**, India pledges non-interference in Bhutan's administrative matters, and Bhutan agrees to consider India's advice in external relations.
- Post the **2007 revision**, Bhutan gained autonomy in importing arms without India's approval.
- India actively supports Bhutan's journey towards sovereignty and democracy.
- There are no longer restrictions on Bhutan's dealings with other nations.
- However, Bhutan cannot employ its territory for activities that pose a security threat to India.
- In 2014, the Prime Minister of India chose Bhutan as his first foreign destination, introducing the concept of 'Bharat to Bhutan' (B2B) to foster a stronger bilateral relationship.
- India holds the position of **being Bhutan's primary trade partner**, both as an importer and an exporter.
- Since 2014, **India-Bhutan trade has nearly tripled from USD 484 million in 2014-15 to USD 1422 million in 2021-22, constituting about 80% of Bhutan's overall trade, with a trade surplus in favor of India**.
- India stands as the **leading contributor to foreign direct investment (FDI) in Bhutan**, accounting for 50% of the country's total FDI.
- **The hydropower projects in Bhutan** exemplify a mutually beneficial collaboration, providing a dependable source of cost-effective and eco-friendly electricity to India.
- Simultaneously, these projects generate export revenue for Bhutan, further solidifying economic integration.
- The Government of India has successfully **implemented three Hydroelectric Projects (HEPs) in Bhutan**:
 - 336 MW Chukha HEP,
 - 60 MW Kurichhu HEP, and
 - 1020 MW Tala HEP.
- These projects are operational and contribute to the export of surplus power to India.

Takeaways of the visit by King of Bhutan to India:

- The two nations announced a set of **9 measures to bolster their relationship**, covering areas such as **trade, technology, cross-border connectivity, mutual investments, education, and people-to-people contacts**.
- India expressed its affirmative consideration of Bhutan's request for concessional financing in skill development and capacity-building.
- A joint decision was reached on conducting a final location survey for the proposed **cross-border rail link connecting Kokrajhar in Assam to Gelephu in Bhutan**.

- Additionally, both parties considered establishing a rail link between Banarhat in West Bengal and Samtse in Bhutan.
- **The Haldibari (West Bengal) to Chilahati (Bangladesh) rail route was designated as an additional trade route for Bhutan's trade with Bangladesh.**
- India committed to providing **bridge financing for Bhutan's India-assisted projects** and schemes during the transition between the 12th and 13th Five-Year Plans.
- **Darranga (Assam) and Samdrup Jongkhar (Bhutan)** were mutually designated as immigration check posts to facilitate the entry and exit of third-country nationals by land route, enhancing connectivity and promoting tourism.
- Plans include **upgrading the existing Land Customs station at Dadgiri (Assam)** to an Integrated Check Post through India's assistance, coupled with infrastructure development on the Bhutanese side at Gelephu.
- Both leaders concurred on extending the existing India-Bhutan energy partnership in **hydro to non-hydro renewables, encompassing solar energy, along with green initiatives for hydrogen and e-mobility.**

Chief Justice of India: Governors Must Act Before State Matters Reach Supreme Court

Inside Story of the News:

In the backdrop of three state governments challenging their Governors in the Supreme Court for withholding Bills, a three-Judge Bench headed by Chief Justice of India D Y Chandrachud emphasized on Monday that **Governors should take action before the issue escalates to the court.**

- The Punjab government has approached the Supreme Court, challenging the delay by Governor Banwarilal Purohit in giving assent to bills passed by the State assemblies or proposed to be tabled by them.
- The recent dispute between the Governor and the State government revolves around three money bills scheduled for presentation during a Special Session of the fourth Budget Session on October 20.
- Forwarded to the Governor for prior approval before the Special Session, the Money Bills faced a hurdle.
- The Governor, citing the concluded Budget Session on June 20, deemed the extended session and any business conducted during it as illegal.
- Consequently, the Session was adjourned due to the impasse.
- During the hearing of Punjab's plea, the Supreme Court expressed concern over Governors of various states hesitating to act on Bills passed by their respective State Assemblies.
- The Chief Justice of India (CJI) emphasized that Governors, as unelected representatives, cannot ignore their responsibilities.
- The Governor's options under Article 200 of the Constitution, when a Bill is presented, include withholding assent, referring it to the President, or returning it.
- Article 200 stipulates that these actions should be taken "as soon as possible," a phrase interpreted by the Supreme Court in 1972 to mean "as early as practicable without avoidable delay" (Durga Pada Ghosh versus State of West Bengal).

- States have urged the court to interpret the phrase in the proviso and establish a time limit for Governors to assent or return a Bill.
- The 1988 Sarkaria Commission report recommended consultation with the Governor during drafting and setting a deadline for disposal of the Bill.

PM 2.5, Sulphur Dioxide, and Beyond: Understanding Air Pollutants and Their Health Impacts

Inside Story of the News:

The **escalation of pollution levels in northern India** has brought attention back to the Air Quality Index (AQI) score, a metric gauging air pollution. On November 6, Delhi recorded an **AQI score exceeding 400**, **categorizing the air quality as 'severe.'**

- The AQI simplifies intricate air quality data, encompassing various pollutants, into a single numerical value for ease of comprehension.
- Pollutants taken into account for the AQI calculation include PM 10 (particulate matter with a diameter of 10 micrometers or less), PM 2.5 (particulate matter with a diameter of 2.5 micrometers or less), Nitrogen Dioxide, Ozone, Carbon, among others.

Understanding PM 10 and PM 2.5 Air Particles:

- Particulate matter (PM) particles, indicated by digits such as PM 10 and PM 2.5, denote their respective diameters, with **PM 10 being smaller than 10 microns and PM 2.5 being smaller than 2.5 microns.**
- A micron is approximately a thousandth of a millimeter.
- Due to their size, PM 2.5 particles can easily bypass the nose and throat, gaining entry into the circulatory system.
- **PM 2.5 particles pose health risks**, contributing to chronic ailments like asthma, heart attacks, bronchitis, and other respiratory issues.
- These particles, byproducts of **emissions from factories, vehicular pollution, construction activities, and road dust**, tend to linger in the air we breathe, remaining suspended rather than dispersing.

Nitrogen Dioxide (NO₂):

- Nitrogen dioxide (NO₂) enters the air through the combustion of fuel, originating from sources like vehicle emissions and power plants.
- Short-term exposure to elevated NO₂ levels can exacerbate respiratory conditions such as asthma, causing issues like coughing or breathing difficulties.
- Prolonged exposure to NO₂ may contribute **to the onset of asthma and elevate the risk of respiratory infections.**

Ozone (O₃):

- Ozone is a gas naturally found in the upper atmosphere, shielding human health from the Sun's UV rays.
- However, surface-level ozone emerges as a prominent air pollutant.

- This occurs through the reaction of atmospheric pollutants in the presence of sunlight.
- Elevated surface ozone levels **raise the likelihood of increased risks, including hospital admissions for Chronic Obstructive Pulmonary Diseases (COPD), as well as higher numbers of cardiovascular and respiratory deaths.**

Sulphur Dioxide (SO₂):

- The primary contributor to atmospheric sulfur dioxide (SO₂) **is the combustion of fossil fuels by power plants and various industrial facilities.**
- Other sources include industrial processes and natural occurrences like volcanic activity.
- Exposure to SO₂, like other gases, **poses risks to the cardiovascular system and can contribute to the onset of respiratory illnesses.**
- Additionally, SO₂ can react with other compounds, forming particulate matter.
- In high concentrations, gaseous sulfur oxides can **detrimentally impact trees and plants, causing harm by damaging foliage and impeding growth.**

Ammonia (NH₃):

- A 2017 study funded by NASA highlighted that in India, a widespread increase in **fertilizer use along with significant contributions from livestock waste has resulted in the highest concentrations of atmospheric ammonia globally.**
- While gaseous ammonia is a natural component of Earth's nitrogen cycle, excessive levels are detrimental to plants and lead to a decline in air and water quality.
- In the troposphere, where all weather occurs and human habitation is situated, ammonia gas reacts with nitric and sulfuric acids to form particles containing nitrate.
- These particles contribute to aerosol pollution, which poses health risks to humans.
- Ammonia gas has the potential **to descend to Earth and enter lakes, streams, and oceans, contributing to harmful algal blooms and the creation of "dead zones" characterized by dangerously low oxygen levels.**

Lead (Pb):

- Lead, a naturally occurring toxic metal present in the Earth's crust, becomes significantly **hazardous to health when exposure occurs at elevated levels.**
- Primary sources of environmental contamination include mining, smelting, manufacturing, and recycling activities.
- **Young children are particularly susceptible to lead poisoning, absorbing four to five times more ingested lead than adults from a given source.**
- Severe lead poisoning in children can result in permanent intellectual disability and behavioral disorders, even after surviving the initial exposure.

Carbon Monoxide (CO):

- Carbon monoxide (CO) is a **toxic, colorless, and odorless gas released during the combustion of carbon-containing fuels like wood, coal, and petrol.**
- Elevated levels of CO can lead to unconsciousness and, in extreme cases, death.

- Prolonged exposure to CO has been associated with an increased risk of heart disease.

India Tops Global Tuberculosis Cases in 2022: WHO Report

Inside Story of the News:

As per the World Health Organization's (WHO) Global TB Report for 2023, India held the unfortunate distinction of having the **highest number of tuberculosis (TB) cases globally in 2022**, constituting a significant 27% of the total global burden. The report also highlighted that the **top 30 high-burden TB countries, including nations like Indonesia (10%), China (7.1%), the Philippines (7.0%), and Pakistan (5.7%), collectively accounted for 87% of the world's TB cases in 2022.**

- Tuberculosis (TB), **caused by Mycobacterium tuberculosis bacteria**, is an infectious disease and **the world's deadliest infectious killer.**
- It primarily affects **the lungs (Pulmonary TB) but can also impact other parts of the body (Extrapulmonary).**
- TB spreads through the air when individuals with active TB in their lungs cough, spit, speak, or sneeze.
- Most infections display no symptoms, known as latent tuberculosis. People with latent TB do not transmit the disease.
- The WHO's Global TB Report for 2023, incorporating data from 192 countries and areas.
- The report discloses that 7.5 million individuals were diagnosed with TB in 2022, marking the highest figure recorded since global TB monitoring commenced in 1995.
- The TB incidence rate, representing **new cases per 100,000 population per year.**
- It **increased by 3.9% between 2020 and 2022**, reversing declines observed for most of the previous two decades.
- The report **highlights a substantial global recovery in the number of people diagnosed with and treated for TB in 2022, following two years of COVID-related disruptions.**
- This recovery is attributed to improved access to health services in many countries.
- Notably, India, Indonesia, and the Philippines, which collectively accounted for over 60% of the global reductions in newly diagnosed TB cases in 2020 and 2021, all surpassed pre-pandemic levels in 2022.
- This signals a **positive trend in reversing the adverse effects of COVID-19 disruptions on TB services.**
- The Global TB Report for this year acknowledges and publishes revised estimates for India.
- It reflects a downward revision of burden estimates, particularly in TB-related mortality figures.
- The report recognizes India's intensified case detection strategies, leading to the highest-ever notification of cases in 2022, surpassing pre-COVID levels, with over 24.22 lakh TB cases notified.
- Key government initiatives, such as **specialized active case finding drives, molecular diagnostics scaling, decentralization of screening services through Ayushman Bharat Health & Wellness Centres**, and **private sector engagement**, have significantly closed the gap in identifying missing cases.

UNESCO Designates Gwalior as the 'City of Music': Exploring Its Rich Musical Heritage

Inside Story of the News:

The city of Gwalior in Madhya Pradesh was officially included in **UNESCO's Creative Cities Network (UCCN)** on November 1, recognizing its "**strong commitment to harnessing culture and creativity.**" Additionally, Kozhikode from Kerala was among the 55 new cities to join the network.

- All the music gharanas in the country have **their roots in the Gwalior gharana.**
- A gharana in Hindustani music refers to a community of performers sharing a distinct musical style originating from a specific teacher or region.
- **The Gwalior gharana, the oldest musical gharana** and a significant chapter in the history of Hindustani classical music, thrived under the patronage of Raja Man Singh Tomar during the 15th century.
- Raja Man Singh's great-grandfather, Dungarendra Singh Tomar, a musician, played a role in the revival of Indian classical music through academic interest and patronage.
- He presented two music treatises in Sanskrit, Sangeet Shiromani and Sangeet Choodamani, to his friend and Sultan of Kashmir, Zain-ul-Abdin.
- These treatises delved into detailed discussions on music and musical instruments. Dungarendra also composed Vishnupadas (songs praising Vishnu) with a distinctive singing style, passing it down to Man Singh, who assumed the throne in 1486.
- It is believed that Raja Man Singh invented dhrupad in a classical genre sense. His Horis and Dhamars also gained significant popularity.
- Raja Man Singh sought advice from Sufi saints, many of whom were musicians themselves.
- **Man Singh authored "Manakutuhala"** (Quest for Learning), regarded as the first treatise of music in Hindi.
- This work aimed **to make high art performed in kings' courts** more accessible to a broader audience.
- The king constructed **large music halls in his palace and conducted regular music sessions.**
- His music found favor not only among Sufis but also among Muslim Sultans.

The Splendor of the Gwalior Gharana: Tansen:

- Before Hindustani classical music was categorized into various gharanas, Gwalior emerged as the **first proper gharana of music.**
- Therefore, the Gwalior gharana is regarded as the most ancient and **'Gangotri' (meaning origin) of Khyal raga.**
- Khayal singing, in its current form, evolved from dhrupad under the influence of the Gwalior gharana while incorporating elements of qawwali.
- **Ustad Naththan Pir Baksh was one of the early masters who developed khayal,** an orderly system of presenting a raga that gained immense popularity in the 18th and 19th centuries and remains significant today.
- Gwalior's unique aspect is the inclusion of Persian words in the compositions and the concepts of bandish ki thumri, a more structured style of thumri or love song.

Gwalior's Esteemed Musical Maestro:

- Mian Tansen, originally named Ramatanu and born to a poet and musician, was an early protege of Gwalior.
- In the early 16th century, he received training under Swami Haridas, a practitioner of dhrupad with poetry dedicated to Krishna instead of Vishnu.
- Tansen further honed the Gwalior gharana style under the guidance of the renowned Sufi saint Mohammad Ghous.
- He served as the court musician for King Ram Chandra Singh of Rewa, Madhya Pradesh, for many years.
- Recognizing Tansen's musical brilliance and knowledge, the story of his talent spread, leading to an invitation from Akbar to join the Mughal court's musicians.
- Initially, being a Vaishnava musician, Tansen declined, but upon insistence from King Ram Chandra, he eventually joined the court at the age of 60.
- According to Abul Fazl's Ain-i-Akbari, there were 36 imperial musicians, with 15 of them hailing from Gwalior.

Prominent Names from the Gwalior Gharana:

- Notable figures from the Gwalior gharana include:
 - Bade Inayat Hussain Khan (1852-1922), the son of Haddu Khan.
 - Vasudeva Buwa Joshi.
 - Balakrishnabuwa Ichalkaranjkar (1849–1926), who instructed Vishnu Digambar Paluskar.
 - Paluskar went on to establish the Gandharva Mahavidyalaya, which remains operational today.
 - Renowned educator BR Deodhar. Pakistani singer Farida Khanum.