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Commission for Air Quality Management (CAQM)

Context: The Commission for Air Quality in NCR has initiated a Stage-IV GRAP with an 8-point action plan to address the worsening air quality in the region.

- The Commission for Air Quality Management (CAQM) is a **statutory body** created under the **Commission for Air Quality Management in National Capital Region and Adjoining Areas, Act 2021**.
- The Act **replaced an earlier Ordinance** that was promulgated in April 2021 and **received presidential assent in August 2021**.
- The primary goal of the Commission is to **enhance coordination, research, identification, and resolution of air quality issues** in the NCR (National Capital Region) and its adjoining areas.
- "**Adjoining areas**" include regions in the neighboring states of NCR, such as **Punjab, Haryana, Uttar Pradesh, and Rajasthan**.
- Before the establishment of CAQM, air quality in Delhi-NCR was managed by various entities, including the **Central Pollution Control Board (CPCB), state pollution control boards, the Environment Pollution (Prevention and Control) Authority (EPCA) of NCR, and state governments**. These entities were monitored by the Union Ministry of Environment, Forests, and Climate Change, as well as the Supreme Court.
- The Act **consolidates these bodies under CAQM**, creating an overarching authority responsible for making decisions and issuing orders to protect and improve air quality in Delhi and NCR.
- The central aim is to enhance the efficiency and coordination of air quality management and reduce the need for the Supreme Court's continuous oversight.
- CAQM has **replaced EPCA**, which was **appointed by the Supreme Court and served for 22 years**. The Centre deemed EPCA redundant and ineffective. Unlike EPCA, CAQM possesses penal provisions.
- **Non-compliance** with the Commission's orders may result in a **prison term of up to five years and/or a fine of up to Rs. 1 crore**. Only the **National Green Tribunal has the authority to handle cases involving CAQM**, not civil courts.
- **Graded Rapid Action Plan**
 - The 8-point action plan **outlined in Stage-IV of the GRAP** (Graded Response Action Plan) for the entire NCR, to be immediately implemented by different agencies and Pollution Control Boards of NCR and DPCC:
 - **Restrict entry of truck traffic** into Delhi, with exceptions for trucks carrying essential goods and providing essential services, as well as LNG/CNG/electric trucks.
 - **Do not allow Light Commercial Vehicles (LCVs) registered outside Delhi to enter the city**, except for Electric Vehicles (EVs), CNG vehicles, and BS-VI diesel vehicles, which are also carrying essential goods or providing essential services.
 - **Impose a ban on diesel-operated Medium Goods Vehicles (MGVs) and Heavy Goods Vehicles (HGVs) registered in Delhi**, except those carrying essential goods or providing essential services.
 - **Prohibit Construction and Demolition (C&D) activities** in linear public projects, such as highways, roads, flyovers, overbridges, power transmission, pipelines, etc.
 - **Consider discontinuing physical classes** for students in classes VI to IX and class XI, and instead, conduct lessons online.
 - **Decide on allowing public, municipal, and private offices in NCR to operate at 50% capacity**, with the remainder working from home.
 - The **Central Government should consider allowing its employees to work from home** when feasible.
 - **State Governments may contemplate additional emergency measures**, such as closing colleges and educational institutions, as well as restricting non-essential commercial activities and implementing an odd-even vehicle registration number-based system for vehicle use.

Indian-Bhutan Relations

Context: On Sunday, November 5, the King of Bhutan, Jigme Khesar Namgyel Wangchuck, received a red carpet welcome upon his arrival in New Delhi.

- **Historical Ties**
 - The **Treaty of Perpetual Peace and Friendship** between India and Bhutan was signed on **August 8, 1949**.
 - The last governor-general of India, **C. Rajagopalachari**, **signed** the treaty.
 - It was **established after the British government's rule to maintain peace and cooperation**.
 - The treaty **allowed India to guide Bhutan in matters of external relations without interfering in its internal affairs**.
 - India **agreed to return the territory of Dewangiri to Bhutan** within one year of signing the treaty.
 - The **India-Bhutan Friendship Treaty** was signed on **February 8, 2007**, in New Delhi.
 - It **officially took effect on March 2, 2007**, following the exchange of ratification documents between the two governments.
 - Additionally, India and Bhutan committed to furthering and expanding their economic cooperation.

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➤ Present Scenario

- **Developmental Cooperation:**
 - India provides financial assistance for Bhutan's socio-economic development.
 - India has supported the construction of hydroelectric projects in Bhutan, resulting in surplus power exports to India.
- **Cultural Relations:**
 - Bhutanese pilgrims visit Buddhist sites in India.
 - India sponsored a visit of Bhutanese Buddhist monks to celebrate their peaceful diplomatic relations.
 - India gifted Bhutan a 3-foot bronze statue of Lord Buddha.
 - Bhutan and India share strong cultural ties as predominantly Buddhist nations.
 - India has assisted Bhutan in preserving its cultural heritage.
- **Military Cooperation:**
 - India offers Bhutan protection against external threats.
 - Defense of Bhutan is integrated into the responsibilities of the Eastern Command of the Indian Army and Air Force.
 - Indian Military Training Teams train Bhutanese security personnel.
- **Education:**
 - Bhutanese students receive scholarships to study in Indian universities through various schemes, including the Ambassador's Scholarship.
- **Strategic Importance:**
 - Bhutan's strategic location as a buffer state is crucial for India's security interests.
 - India's assistance in defense, infrastructure, and communication ensures Bhutan's sovereignty and territorial integrity.
 - India has helped build Bhutan's border infrastructure.
- **Economic Importance:**
 - India is Bhutan's largest trading partner and a major destination for Bhutan's exports.
 - India supports Bhutan's hydropower projects, contributing significantly to Bhutan's revenue.
 - India provides financial assistance for Bhutan's development projects.
- **Environmental Importance:**
 - Bhutan's commitment to carbon neutrality is supported by India in areas such as renewable energy, forest conservation, and sustainable tourism.

Protection of Women from Domestic Violence Act, 2005

Context: The Supreme Court will decide if a trans woman post-sex reassignment surgery qualifies as an 'aggrieved person' under Section 2(a) of the Domestic Violence Act, 2005.

- The court will consider whether a trans woman **who has undergone sex-reassignment surgery** can be defined as an "aggrieved person" under Section 2(a) of the Domestic Violence Act, 2005.
- The case stems from an appeal by the trans woman's husband against a Bombay High Court decision, which deemed a person who self-identifies their gender as an aggrieved person under the Act.
- **Domestic Violence:**
 - Domestic violence involves the misuse of power by one adult in a relationship to control another.
 - It is characterized by the establishment of control and fear within the relationship through various forms of abuse.
 - Domestic violence can manifest as physical assault, psychological abuse, social abuse, financial abuse, or sexual assault.
 - The frequency of domestic violence can vary, occurring intermittently, occasionally, or persistently.
- **Types of Domestic Violence under the Act:**
 - **Physical abuse**, which involves any act or conduct causing bodily pain, harm, danger to life, limb, or health, or impairing the health or development of the aggrieved person. It encompasses assault, criminal intimidation, and criminal force.
 - **Sexual abuse** comprises any conduct of a sexual nature that abuses, humiliates, degrades, or violates a woman's dignity.
 - **Verbal and emotional abuse** involves insults, ridicule, humiliation, name-calling, and threats to cause physical pain, particularly in the context of not having children or male offspring.
 - **Economic abuse** encompasses activities like withholding financial support for the woman and her children, denying essential provisions such as food, clothing, and medicines, restricting access to economic or financial resources, expelling the woman from the household, and obstructing her from employment.
- **Aggrieved Person:**
 - According to **Section 2(a)** of the Domestic Violence Act, 2005, an "**aggrieved person**" is defined as any woman who is, or has been, in a domestic relationship with the respondent and who alleges that she has been subjected to domestic violence by the respondent.
 - A "**domestic relationship**," as per **Section 2(f)** of the Act, is a relationship between two individuals who have lived together in a shared household, whether related by consanguinity, marriage, a relationship akin to marriage, adoption, or as family members living together as a joint family.
- **Salient Features of the Act:**
 - The Protection of Women from Domestic Violence Act, 2005 (PWDVA) has key features that **focus on supporting women facing domestic violence**.

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- The PWDVA acknowledges the **need for legal assistance** and **support services for women** and allows for the appointment of **Protection Officers** and the role of Service Providers, offering medical, shelter, legal, counselling, and other forms of support.
- A **Protection Officer** assists woman in accessing these services and obtaining appropriate orders under the Act.
- **Protection Officers can be government servants or social workers with post-graduate degrees in Humanities or Law.** Multiple Protection Officers are appointed within the jurisdiction of each Judicial Magistrate.
- The Act **provides temporary and emergency relief** and is responsive to the needs of women. It includes **elements of both civil and criminal law**, with violations of protection orders or Magistrate's orders falling under criminal law.
- **Shelter homes and medical facilities are legally obligated** to provide shelter and medical assistance to the aggrieved person.
- The PWDVA does not alter the existing personal law regime on family matters but offers additional relief to empower women during emergencies.
- **Women can seek relief under other laws even after obtaining relief under the PWDVA.**
- The Act **includes provisions for Domestic Incident Reports**, which serve as **important evidence records**.
- It **outlines the procedure for applying for orders** under the Act.
- The **breach of an order obtained is considered a criminal offense** under the Act.

NEWS IN BETWEEN THE LINES

Korai Grass



About Korai Grass:

- Korai grass is scientifically known as "**Cyperus Pangorei.**"
- It is primarily cultivated in the **Karur district of Tamil Nadu**, India.
- Korai grass is grown along the banks of the **Cauvery River** in Tamil Nadu.
- The grass is harvested when it reaches its full height and this is a **labor-intensive process**.
- Korai grass is used in the traditional craft of **mat-making**, particularly straw mats known as "**korai paai.**"
- Weavers use the harvested korai grass to create mats, dyeing them in various colors.
- **Aloe vera plant fibers** are traditionally used to bind the mats.
- The mats made from korai grass are known for being cool in the summer and warm in the winter, making them a popular choice for various seasons.

Tellurium



Recently, in a significant discovery, physicists have found evidence that tellurium is produced in neutron star mergers.

About the Tellurium:

- Tellurium is a **semi-metallic, lustrous, crystalline, brittle, silver-white element** that exhibits properties of both metals and nonmetals.
- It is identified by its atomic number, which is **52**.
- It forms various compounds, analogous to those of **sulfur** and **selenium**.
- It serves as a semiconductor material and has slight photosensitivity.
- One of its unique features is its readiness to combine with **gold (Au)**.
- More commonly, it is discovered in association with metals, such as in minerals like **calaverite (gold telluride, AuTe₂)** and **sylvanite (silver-gold telluride)**.

Applications:

- It is alloyed with **copper** and **stainless steel** to enhance their workability.
- It added in minimal quantities to **lead**.
- It is utilized in the **electronics industry**.
- It is used in rubber vulcanization, petroleum cracking catalysts and blasting caps for explosives.

Tomb of Balban



Recently, the tomb of Balban, originally built in the 13th century and situated within Mehrauli's Archaeological Park, was unveiled after extensive renovations.

About:

- The tomb of Balban is a valuable historical site located in **Mehrauli**, New Delhi, India, with origins tracing back to the year **1287 CE**.
- The tomb of Balban was discovered in the **mid-20th century**.
- This tomb played a pivotal role in the evolution of **Indo- Islamic architecture**.
- It was where the first Islamic arch and possibly the first Islamic dome in India were introduced.
- The dome has not survived, the nearby **Alai Darwaza**, built in **1311 CE**, boasts the earliest surviving dome in India.
- **Ghiyas-ud-din Balban**, a Sultan of the Mamluk (Slave) dynasty, was the ruler of the Delhi Sultanate's first dynasty.
- He reigned from **1266 AD to 1287 AD**.
- Balban was initially sold as a slave to **Iltumish in 1232 CE** but was later released.
- This period marked the rise of individuals from slavery to rulership.

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European Union



Recently, the European Union reported that the Dardia fire has become the largest wildfire in Europe's recorded history.

About the European Union:

- The European Union (EU) is a political and economic union of **27** European countries.
- **19 European** Union member states use the **euro (€)** as their official currency, while 8 do not use the euro. It plays a role in **external relations** and **defense** through the Common Foreign and Security Policy.
- It **maintains diplomatic missions** worldwide and participates in international organizations like **the UN, WTO, G7 and G20**.
- The EU was officially established with the **Maastricht Treaty in 1993**, achieving full legal personality with the **Treaty of Lisbon in 2009**.
- The EU was formed to promote peace and unity in Europe after **World War II** to prevent future conflicts.
- European Union awarded with **Nobel Peace Prize in 2012** for contributing to peace, reconciliation, democracy and human rights in Europe.

Imperator Alexander III



Recently, on November 5, 2023, Russia test-launched the Bulava ballistic missile from its new nuclear-powered submarine, Imperator Alexander III, in the White Sea.

About the Imperator Alexander III:

- The Imperator Alexander III is part of the **Borei-class strategic-missile** cruiser.
- The submarine is equipped with **16 Bulava missiles**, an intercontinental ballistic missile designed to carry nuclear warheads.
- In addition to its missile arsenal, Imperator Alexander III is equipped with modern **torpedo weapons**.

About Bulava Missile:

- The Bulava missile is an **intercontinental ballistic missile (ICBM)** developed by Russia.
- It is designed to carry multiple **nuclear warheads**.
- The Bulava missile has an estimated range of approximately **8,000 kilometers**.
- It has the capability to carry up to **six nuclear warheads**.
- The Bulava missile plays a significant role in the **naval component** of Russia's nuclear triad.

Wolbachia Bacteria



About:

- Wolbachia is a **genus of bacteria** known for its complex interactions with various insects.
- It was identified by **American pathologist Simeon Burt Wolbach** and **Marshall Hertig** in **1924**.
- **Male Culex mosquitoes** infected with Wolbachia bacteria are unable to fertilize healthy eggs from females.
- This leads to the death of eggs fertilized by infected males due to changes in the sperm cells caused by Wolbachia.
- In the case of uninfected female mosquitoes, their egg cells are damaged.
- Infected female mosquitoes gain a reproductive advantage over time as the Wolbachia population increases.
- Eggs from infected females are **viable** when males are either uninfected or infected by the same strain of Wolbachia.
- Wolbachia can reduce the multiplication rate of **chikungunya** and **yellow fever** viruses in infected mosquitoes.
- Some Wolbachia species provide strong protection to specific mosquito species against the malaria parasite.

Dead Sea

Iran-backed 'Islamic Resistance in Iraq' recently claimed responsibility for an attack targeting an Israeli installation situated on the Dead Sea Coastline.

About the Dead Sea:

- The Dead Sea, also known as the **Salt Sea**, is a salt lake located between **Jordan** to the east and **Israel** to the west.
- The southern half of its western shore belongs to Israel, while the northern half is situated in the West Bank, a disputed area claimed by both Israel and Palestine.
- It is situated to the east of the **Mediterranean Sea** and south of the **Sea of Galilee**.
- The Dead Sea is part of the **Jordan Rift Valley** and is primarily fed by the **Jordan River**, which flows into the lake from the north.
- The Dead Sea's water has a salinity of around **2%**, making it one of the saltiest bodies of water on Earth.
- It is notably saltier than most bodies of water, some locations like **Lake Vanda** in **Antarctica**, **Lake Assal** in Djibouti, **Lagoon Garabogazköl** in the Caspian Sea and certain hypersaline ponds and lakes in the McMurdo Dry Valleys of Antarctica have even higher reported salinities.
- Due to its high salinity, the Dead Sea's seawater has a **density of 1.240 kg/L**, causing anyone entering the water to **easily float**, providing a unique swimming experience.



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Place in News

Galápagos Islands

Recently, pristine coral reefs near the Galápagos Islands were discovered, revealing a world teeming with abundant marine life.

Geographical Location: The Galápagos Islands are located in the **Eastern Pacific Ocean**, approximately 900 km (560 mi) west of the South American continent.

Political Division: The province is divided into the **cantons of San Cristóbal, Santa Cruz, and Isabela**, which are the three most populated islands in the chain.

Geographical Features:

- The Galápagos consist of **19 main islands** (13 major and 6 smaller), including **Isabela**, Española, **Santa Cruz**, San Cristóbal and others.
- They are numerous smaller islets, **rocks and reefs** surrounding the main islands, which are essential to note for mapping purposes.
- **Equator** passes through the islands.
- The islands are formed of lava piles and dotted with **shield volcanoes**, some of which are periodically active.
- Its largest Island is Isabela.
- Highest Point is Peak of Wolf Volcano (on Isabela Island).



POINTS TO PONDER

- ❖ Which footballer player has won the for the best player? - **Lionel Messi**
- ❖ Which organisation released a report, which states that Indian Farmers faced \$169 Billion Implicit Tax due to Export Measures in 2022? - **OECD**
- ❖ Which TV Channel has teamed up with Ministry of Women and Child Development to boost "Beti Bachao, Beti Padhao"? - **Colors**
- ❖ Which European country announced to discontinue its 'Golden visa initiative' from 2024? - **The Netherlands**
- ❖ Which country is associated with 'Integral Field Ultraviolet Spectroscopy Experiment (INFUSE)'? - **USA**

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