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## Governors Powers on Bills

**Context:** The Supreme Court has raised concerns about Governors in different states delaying their approval of bills passed by State Assemblies, prompting Supreme Court intervention.

➤ **Article 200:**

- Describes the process for a Bill passed by a State Legislative Assembly.
- The Governor can **give assent, withhold assent, or reserve the Bill for the President's consideration.**
- The Governor **can also return the Bill** with a message for reconsideration by the State Assembly.

➤ **Article 201:**

- **Addresses the President's role** in bills reserved for their consideration.
- The **President can give assent, withhold assent, or direct the Governor to send the Bill back** to the State Legislature for reconsideration.

➤ **Options for the Governor:**

- **Assent:** The Governor can approve the Bill.
- **Reconsideration:** The Governor can send the Bill back to the State Assembly for certain provisions or the entire Bill to be reconsidered.
- **Reservation:** The Governor must reserve the Bill for the President's consideration in specific cases:
  - When the bill **violates the Constitution.**
  - When it **opposes Directive Principles of State Policy (DPSP).**
  - When it goes **against the national interest.**
  - When it deals with **grave national matters.**
  - When it relates to the **compulsory acquisition of property under Article 31A** of the Constitution.
- **Withholding assent:** This option is rarely used by Governors due to its unpopularity.

➤ **Scenario around the World:**

- **United Kingdom:**
  - In the United Kingdom, the tradition of obtaining royal assent for a Bill to become law is in place.
  - However, it's important to note that, in practice, the Crown does not exercise any power of veto, and rejecting royal assent on controversial grounds is viewed as unconstitutional.
- **United States:**
  - In the United States, the President has the authority to deny assent to a Bill.
  - Nevertheless, if **both Houses of Congress pass the Bill again with a two-thirds majority in each House, it becomes law.**

➤ **Supreme Court Ruling:**

- **Article 361** of the Constitution **grants Governors immunity** from legal proceedings for actions taken in the exercise of their powers.
- This immunity can create a unique situation when a government needs to challenge a Governor's decision to withhold assent to a Bill.
- When a **Governor refuses to provide assent to a Bill, they must disclose the reason** for their refusal since they are a high constitutional authority and cannot act arbitrarily.
- If the **grounds for refusal indicate malice, extraneous factors**, or are beyond the scope of authority, the **Governor's refusal may be declared unconstitutional.**
- The Supreme Court, in the case of **Rameshwar Prasad vs. Union Of India and Anr.**, established that **"the immunity granted by Article 361(1) does not eliminate the Court's power to examine the validity of the action, including on the grounds of malice."**

## Mission Vatsalya

**Context:** NIPCCD organized an Awareness Programme on the 'Importance of Care and Education for Pre-School Children' under Mission Vatsalya in Rampur.

- Before 2009, the **Ministry of Women and Child Development had three schemes** for child protection.
- These schemes included the **juvenile justice program**, the **integrated program for street children**, and the **scheme for assistance to children's homes.**
- In 2010, these schemes were **merged** into the Integrated Child Protection Scheme.
- In 2017, it was **renamed as the "Child Protection Services Scheme."**
- In 2021-22, it was renamed as **"Mission Vatsalya."**
- Mission Vatsalya is an umbrella scheme for child protection services.
- It comprises components such as improving statutory bodies, enhancing service delivery, expanding institutional care, promoting community-based care, providing outreach services, and offering training and capacity building.
- **Objectives of Mission Vatsalya:**
  - Ensure a happy and healthy childhood for all children.
  - Provide opportunities for children to reach their full potential.

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- Foster a supportive environment for child development.
- Help states and territories implement the Juvenile Justice Act and achieve Sustainable Development Goals.
- Promote non-institutional family-based care for children in need.

➤ **Key Features/ Guidelines:**

- **Implementing Authority:** The Ministry of Women and Child Development is responsible for implementing the Mission Vatsalya scheme.
- **Monthly Grant:** The scheme provides a monthly grant of Rs. 4,000 per child for family-based non-institutional care, including Sponsorship (kinship), Foster Care, or After Care.
- **24x7 Helpline:** Mission Vatsalya supports a 24x7 helpline service for children, as defined under the Juvenile Justice Act, 2015, in collaboration with States and Districts.
- **Cradle Baby Reception Centers:** The mission aims to establish Cradle Baby Reception Centers in at least one **Specialized Adoption Agency (SAA)** in each district to provide care for abandoned children.
- **Focus on Special Needs Children:** States and Union Territories are encouraged to focus on special needs children in **Child Care Institutions (CCIs)** who are physically or mentally disabled and unable to attend school.
- **Assistance for Adoption:** Mission Vatsalya assists **State Adoption Resource Agency (SARA)**, which, in turn, supports the **Central Adoption Resource Authority (CARA)** in promoting adoption.
- **Separate Children's Homes:** The mission plans to establish separate children's homes based on gender (including separate homes for transgender children) and age for children in need of care, including those with special needs.
- **Open Shelters:** State governments are encouraged to establish open shelters to provide care for various categories of children, including the homeless, missing, trafficked, working children, those living on the streets, beggars, and substance abusers.

## Indian Security Architecture

**Context:** After a prolonged wait, the National Security Council Secretariat (NSCS) is now working on drafting India's first written National Security Strategy (NSS).

- **NSS Definition:** A National Security Strategy (NSS) document specifies a nation's security objectives and the methods to attain them. It identifies traditional and non-traditional threats and opportunities while establishing accountability for agencies responsible for implementation.
- **Historical Context:** India has not officially defined its NSS since gaining independence in 1947.
- **Previous Attempts:** There have been **three prior attempts** (in 2007, 2019, and 2021) to formulate a national security strategy. However, political hesitancy hindered the process.
- **India's Security Structure:**
  - **Nuclear Status Impact:**
    - After India's declaration as a nuclear-weapon state in 1998, significant changes occurred in the national security architecture.
  - **National Security Council (NSC):**
    - Established with the Prime Minister (PM) serving as the Chairman.
    - Permanent members included the ministers of Home Affairs, Defence, External Affairs, and Finance.
  - **National Security Advisor (NSA):**
    - The role of National Security Advisor was created, serving as the Secretary of the NSC.
  - **Strategic Planning Group (SPG):**
    - The SPG was formed, with the Cabinet Secretary as its chairperson.
  - **National Security Advisory Board (NSAB):**
    - NSAB was established, comprising retired civil and military officials with direct access to the PM.
  - **Post-Kargil War Developments (1999):**
    - A Defence Intelligence Agency was set up to coordinate military-related intelligence.
    - The Nuclear Command Authority (NCA) was established to manage India's nuclear weapon arsenal.
- Major Powers like **USA, UK, Russia, China** and countries like **Pakistan** also have a written National Security Strategy.

## Oldest Black hole Discovered

**Context:** Astronomers have discovered the **oldest black hole** ever about 13.2 billion years old.

- This black hole, detected in X-rays using NASA's **Chandra X-ray telescope and the James Webb Space Telescope**, formed **approximately 470 million years after the Big Bang**.
- There is compelling evidence that **it was born as a massive black hole**, estimated to weigh between 10% and 100% of the total mass of stars in its galaxy.
- NASA noted that this black hole is in an early stage of growth, which is a phenomenon never before observed. This observation may shed light on how some of the first supermassive black holes in the universe originated.
- These findings provide **confirmation for theories suggesting the existence of supermassive black holes at the universe's very beginning**.

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- Scientists estimate the **age of the universe to be 13.7 billion years**, making this black hole roughly 13.2 billion years old.
- The black hole, **located in a galaxy called UHZ1**, is significantly larger than the one in our Milky Way, with a diameter of about 10 times that of our own, which measures approximately 14.6 million miles.
- **What are Black holes?**
  - Black holes are **incredibly dense points** in space with **intense gravity, even trapping light**.
  - They **form from massive star deaths**, taking up **zero space but having mass from the collapsed star's remains**. They grow as they consume nearby matter.
  - The larger they are, the wider their "**point of no return**" called the **event horizon**, where objects are irreversibly lost to the black hole.
  - **Massive stars (over 8 times bigger than the Sun)** run out of fuel, causing their core to collapse, creating a singularity of infinite density within zero volume.
  - **Albert Einstein introduced the concept in 1915**, and the term "**black hole**" was coined by physicist **John Archibald Wheeler** in the 1960s.
- **James Webb Space Telescope**
  - A collaborative effort of **NASA, ESA, and the Canadian Space Agency**, the telescope was launched in **December 2021**.
  - Currently **positioned at the Sun-Earth L2 Lagrange point**, 1.5 million km beyond Earth's orbit.
  - Lagrange Point 2 is one of five orbital points in the Earth-Sun system with enhanced gravitational forces.
  - It's the **largest and most powerful infrared space telescope**, succeeding the Hubble Telescope.
  - It can observe distant galaxies, allowing us to see back in time to just after the Big Bang.
- **Chandra X-Ray Telescope**
  - Chandra X-ray Observatory, a **NASA flagship mission** for X-ray astronomy, launched on **July 23, 1999**.
  - It's **designed to detect X-ray emissions** from hot cosmic regions like exploded stars, galaxy clusters, and black hole surroundings.
  - To avoid Earth's X-ray absorption, it orbits at an **altitude of 139,000 kilometres (86,500 miles)**.
  - The Smithsonian Institution's Astrophysical Observatory in Cambridge, MA, operates Chandra, processes its data, and shares it with scientists worldwide.
  - Chandra features **four nested, highly sensitive mirrors** directing X-rays onto electronic detectors at the end of a **9.2-meter optical bench**.
  - Different detectors allow the creation and analysis of detailed images or spectra of cosmic sources.

## NEWS IN BETWEEN THE LINES

### Subansiri Dam Project



Recently, the **Subansiri Lower Hydroelectric Project** faced a setback as a hill collapse blocked the diversion tunnel and halted water flow into the Subansiri river.

**About Subansiri Dam Project:**

- The Subansiri Dam Project is the **largest hydroelectric project** undertaken in India.
- It is a run-of-river hydroelectric scheme located on the Subansiri River.
- The project is situated near North **Lakhimpur**, on the border of **Arunachal Pradesh and Assam**.
- The dam has a capacity of **2,000 megawatts (MW)**, making it a major power generation project.
- The Subansiri Dam is a **concrete gravity dam**, with a height of 116 meters from the river bed level.
- The project is being developed by the **National Hydro Power Corporation (NHPC)**, which is a state-run entity.

**Subansiri River:**

- The Subansiri River **originates in the Tibet Plateau** and is known as the **largest tributary of the Brahmaputra River**.
- It contributes **7.92%** of the Brahmaputra's total flow, making it a significant river in the region.
- The river is formed by the confluence of **Nye Chu** and **Loro Chu** near Chayul Dzong.
- Nye Chu originates in the Tsom County, while Loro Chu is formed by the merger of Loro Karpo Chu and Loro Nakpo Chu in **Tsona County**.

### Section 437A of the CrPC



Recently, the **Supreme Court** issued notice to the Union of India on a plea challenging the constitutionality of **Section 437A of the Code of Criminal Procedure**.

**About the Section 437A of CrPC:**

- Section 437A of the Code of Criminal Procedure (CrPC) **deals with the requirement for a person** who has been acquitted to furnish a bail bond and sureties for release from custody.
- This provision **ensures the appearance of the accused** in case an appeal is filed before a higher court against the acquittal.
- Section **437A mandates that accused persons execute bail bonds** with sureties to appear before the higher court when an appeal or petition is filed against the judgment of the respective court.
- The **bail bonds furnished** under Section 437A are valid for six months.

**Applicability of Section 437A:**

- Section **437A CrPC is not applicable** before the trial court or the appellate court in cases where the accused is convicted.
- This provision is specifically relevant **when the court has acquitted the accused**.

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## Klyuchevskaya Volcano



Recently, the Klyuchevskoy volcano erupted in Russia's northern Kamchatka Peninsula.

**About Klyuchevskaya Volcano:**

- Klyuchevskaya Volcano is an **active volcano** located on the **Kamchatka Peninsula** in far eastern Russia.
- It is one of the **highest active volcanoes in the world**, with an elevation of 15,584 feet (4,750 meters).
- The volcano features a truncated cone with a **central crater**.
- There are approximately **70 lateral craters** and **cones** on its lower slopes.
- Klyuchevskaya Volcano has erupted more than **50 times** since **1700**.

## WHO Global TB Report



Recently, the WHO Global TB Report revealed a significant global recovery in TB diagnoses and treatment in 2022, following two years of COVID-related disruptions.

**About:**

- The WHO (World Health Organisation) Global TB Report for **2022** reveals a major global recovery in the number of people diagnosed with **tuberculosis (TB)** and treated, after two years of COVID-related disruptions.
- TB remains the **world's second leading** cause of death from a single infectious agent.
- The net reduction in TB cases from **2015 to 2022** was **only 8.7%**, falling far short of the WHO's End TB Strategy milestone of a 50% reduction by 2025.
- In 2022, the reported global number of people newly diagnosed with TB reached **7.5 million**, marking the highest number since global TB monitoring began in **1995**.
- **India, Indonesia** and the **Philippines**, which collectively accounted for nearly **60%** of the reduction in newly diagnosed TB cases in **2020** and **2021**, experienced a recovery in 2022, surpassing 2019 levels.
- TB caused an estimated **1.30 million deaths in 2022**, which is almost back to the level of 2019.

## Robotic Capsule Initiative



Recently, the European Space Agency (ESA) has launched a competition to develop a robotic capsule for cargo transportation to and from the International Space Station (ISS).

**About Robotic Capsule Initiative:**

- The robotic capsule is expected to make its first operational voyage in **2028**.
- Unlike traditional ESA projects, the winning company in the competition will be required to **operate the robotic capsule on a commercial basis**.
- The design of the capsule is intended to be **adaptable for future missions**, potentially including **lunar missions**.
- ESA aims to replicate the competitive procurement model that has worked effectively for **NASA**, fostering **innovation and reducing costs**.
- This model has led to the emergence of private space companies like **SpaceX**.
- Several potential contenders for the competition already exist in Europe, including start-up companies like **The Exploration Company** and **Rocket Factory Augsburg**.

## Bombyx Mori (Silk Moth)



**About Bombyx Mori:**

- Bombyx mori is a domesticated **silk moth** belonging to the **order Lepidoptera** and family **Bombycidae**.
- It is believed to have **originated in China** more than **5,000 years ago**, where it was initially domesticated from the **wild silk moth Bombyx mandarina**.
- Bombyx mori caterpillars, also known as silkworms, feed exclusively on the leaves of **mulberry plants (genus Morus)**.
- They produce long silk fibers, which can be up to 900 meters in length, used for cocoon construction.
- Domesticated Bombyx mori moths are reared in many countries, including **India, China** and **Japan**.
- **India is the world's second-largest producer** of raw silk after China.
- Bombyx mori plays a significant role in the production of **high-quality silk**, which is valued for its texture and appearance in the textile industry.
- Mutations in genes related to **carotenoid** and **flavonoid** uptake and modification in Bombyx mori lead to **variations in cocoon colours**.

## Correlated Colour Temperature



**About Correlated Colour Temperature?**

- Correlated Colour Temperature (CCT) is a **parameter** used to describe the color appearance of light sources, such as **bulbs** and **lamps**.
- It represents the temperature at which a **theoretical black body radiator** would emit light of a similar colour to the light source being measured.
- Black body radiators emit different colors at different temperatures, with lower temperatures producing warm colors (e.g., **red**) and higher temperatures producing cool colors (e.g., **blue**).
- **Lower CCT values (e.g., 2,000K)** correspond to warm colors, such as **red** or **yellowish** light.
- **Intermediate CCT values (e.g., 4,000K)** produce neutral or daylight-like **white light**.
- **Higher CCT values (e.g., 6,500K)** give the impression of cool colors, resembling cool **daylight**.

**Practical Application:**

- It is used in **lighting design** and **engineering** to determine the color appearance and ambiance created by different light sources.
- It helps select **lighting solutions** that match the intended environment and purpose, such as warm lighting for a **cozy atmosphere** and **cool lighting** for a clinical or task-oriented setting.

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## Place in News

### Kalgoorlie (Australia)

Recently, National Mineral Development Corporation, a State-owned Steel CPSE, inaugurated the Mount Celia Gold Operation in Western Australia, expanding its mineral portfolio.

**Kalgoorlie:**

**Location:** It is located in **Western Australia**, specifically 180km northeast of **Kalgoorlie**.

**NMDC's First Venture into Gold Mining:**

- The project marks the National Mineral Development Corporation's (NMDC) first foray into gold mining.
- NMDC is a State-owned Steel CPSE (Central Public Sector Enterprise).

**Rich Gold Mining History:** Kalgoorlie, the region where **Mount Celia** is located, has a rich history in gold mining and played a crucial role in the Western Australian gold rush of the **late 19th century**.

**Golden Mile:** Kalgoorlie is home to the "**Golden Mile**," which is a vast stretch of gold-bearing land, making it one of the most productive gold mining regions globally.



## POINTS TO PONDER

- ❖ Which country is the host of World Telecommunication Standardisation Assembly (WTSA) 2024? - **India**
- ❖ When is the 'International Day for Biosphere Reserves'? - **November 3**
- ❖ Which country is funding India's 'Hunger Project' and promote food security in Uttarakhand? - **Norway**
- ❖ Which Indian state bagged the Global Responsible Tourism Award 2023? - **Kerala**
- ❖ Who is nominated as the next Regional Director for the World Health Organization's South-East Asia region? - **Saima Wazed**

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