

DAILY CURRENT AFFAIRS (DCA)

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DELAY IN CONDUCTING CENSUS IN INDIA

Context

- India is among a select few countries that have not conducted the latest Census.
 - ♦ The last census conducted in India was in 2011 and has been postponed indefinitely since 2021.

About

- India shares distinction of not conducting the census with conflict-ridden countries such as Ukraine, Yemen, Syria and Myanmar — impacted by civil wars, the Taliban-ruled Afghanistan, the economic crisis-affected Sri Lanka besides several sub-Saharan African countries that have also undergone turmoil.

What is the Census?

- The Census refers to a periodic and systematic collection of demographic, economic, and social data of a population within a specific region.
- It is typically conducted by governments to gather detailed information about the population's characteristics and living conditions.
- The Census provides crucial data that governments, businesses, researchers, and policymakers use for various purposes such as planning public services, allocating funding, and making informed decisions.

Census in India

- The Census in India has been conducted regularly since 1871. The first complete Census was conducted in 1881.
 - ♦ Initially, the Census was primarily aimed at assessing revenue and taxation needs under British colonial rule.
 - ♦ Over time, its scope expanded to include demographic, social, and economic data.
- **Constitutional Mandate:** The Census of India is conducted under the provisions of the Census Act of 1948, which empowers the Government of India to conduct periodic population surveys.
- **Frequency:** The Census of India is conducted decennially, meaning it takes place every ten years.
 - ♦ The most recent Censuses were conducted in 2011.

Significance of Census

- **Policy Formulation:** It provides crucial inputs for planning and formulating policies related to education, healthcare, infrastructure development, and social welfare.

- **Resource Allocation:** It helps in equitable distribution of resources by providing data on population distribution, demographics, and socio-economic conditions.
- **Demographic Trends:** It aids in understanding demographic trends, urbanization patterns, migration flows, and population growth rates.
- **Monitoring Development Goals:** The Census data is instrumental in monitoring progress towards national and international development goals, such as Sustainable Development Goals (SDGs).

Why There is a delay in conducting the Census in India?

- **COVID-19 Pandemic:** The COVID-19 pandemic significantly disrupted the scheduling and planning of various activities, including large-scale surveys like the Census.
- **Preparation and Planning:** Conducting a Census in a country as vast and populous as India requires meticulous planning, resource mobilization, and coordination across various government departments.
- **Political and Administrative Priorities:** Governments prioritize other activities or elections, leading to delays in the Census process.
- **Technological and Methodological Upgradation:** Periodic updates and improvements in technology and methodologies used for data collection, processing, and analysis require additional time and resources.
- **Complexity of Data Collection:** India's diversity in terms of geography, languages, cultures, and socio-economic conditions poses unique challenges in conducting a comprehensive Census.

Conclusion

- Census data should validate the various estimates on mortality based on 'excess deaths' analyses during the COVID-19 pandemic.
- It is imperative that decadal changes in India's demography related to urbanisation and migration of people across States are captured adequately.
- Welfare schemes such as the targeted Public Distribution System under the National Food Security Act depend on population estimates, and the government continues to rely on Census 2011, which is now outdated.
- Considering these and other imperatives for the smooth planning and implementation of administrative, welfare and statistical management for governance, the Union government must show eagerness in commencing the Census.

Source: TH

PROVISIONS OF THE TELECOMMUNICATIONS ACT 2023 CAME INTO FORCE

Context

- The Telecommunications Act 2023, will be implemented partially from June 2024.

About

- The Telecommunications Act, 2023 aims to amend and consolidate the law relating to development, expansion and operation of telecommunication services and telecommunication networks; assignment of spectrum.
- It also seeks to repeal existing legislative framework like Indian Telegraph Act, 1885 and Indian Wireless Telegraph Act, 1933 owing to huge technical advancements in the telecom sector and technologies.

The Salient Features:

- **Authorisation will be required from the central government to:**
 - ♦ establish and operate telecommunications networks,
 - ♦ provide telecommunications services, or
 - ♦ possess radio equipment.
- **Assignment of spectrum:** Spectrum will be assigned by auction, except for specified uses, where it will be allocated on an administrative basis.
- **Powers of interception and search:** Messages between two or more persons may be intercepted, monitored, or blocked on certain grounds.
 - ♦ Such actions must be necessary or expedient in the interest of public safety or public emergency.
- **Right of way:** Facility providers may seek a right of way over public or private property to establish telecom infrastructure.
 - ♦ Right of way must be provided on a non-discriminatory and nonexclusive basis to the extent possible.
- **Appointments to TRAI:** The Act amends the TRAI Act to also allow individuals with
 - ♦ at least 30 years of professional experience to serve as the chairperson, and
 - ♦ at least 25 years of professional experience to serve as members.
- **Digital Bharat Nidhi:** The Universal Service Obligation Fund has been established under the 1885 Act to provide for telecom services in underserved areas.

- **Protection of users:** The Act provides measures for protection of users from unsolicited commercial communication and create a grievance redressal mechanism.
- **Digital by design:** The Act provides that the implementation shall be digital by design bringing online dispute resolution and other framework.
- **Offences and penalties:** Providing telecom services without authorisation are punishable with imprisonment up to three years, a fine up to two crore rupees, or both.
 - ♦ Breaching terms and conditions of authorisation is punishable with a civil penalty up to five crore rupees.

Concerns

- The ability to decrypt encrypted messages, the lack of clear guidelines on data retention, and the potential for misuse of biometric identification pose threats to civil liberties.
- It gives the government unfettered power that can infringe on citizen privacy with little or no accountability for governing officers.
- The Act does not specify procedural safeguards with respect to powers to search premises and vehicles.
- The Act vests several regulatory functions with the central government.
 - ♦ This is distinct from sectors such as power and finance, where these functions have been delegated to the regulators.

Way Ahead

- There is a need for the legal and regulatory framework that focuses on a safe and secure telecommunication network that provides for digitally inclusive growth.
- It is important that users' sensitive personal information is not misused by any entity.
- It is important that any new player in the services market has non-discriminatory and non-exclusive access to infrastructure on a commercial basis for it to compete against integrated entities.
- A unified vision of the government of India should bring synergies in licensing, standards, skilling and governance across different departments.

Source: ET

EUROPEAN UNION'S 'CHAT CONTROL' LAW

In News

- The EU's proposed Chat Control law has become a bone of contention between members of the bloc.

About the law

- It was introduced in May 2022 by the European Commissioner for Home Affairs to combat child sexual abuse online
- Under the proposed legislation, technology companies would be required to implement automated tools to scan private messages for content indicative of child sexual abuse.
 - ◆ This proactive monitoring system aims to identify and report suspicious activities promptly, enabling law enforcement agencies to intervene and safeguard potential victims.
- Under it, messaging apps are required to scan “images and the visual components of videos and URLs” while the detection of audio communication and text is excluded.
 - ◆ Furthermore, it requires such apps to obtain the explicit consent of users before scanning their private communications as part of the terms and conditions of use.
- Interior Ministers of Spain and Ireland have supported the proposal.

Need and Purpose

- The proliferation of online platforms has revolutionized communication, offering unprecedented connectivity but also facilitating the dissemination of illegal content, including child sexual abuse material.
- EU officials cite a sharp rise in reports of such materials, necessitating more stringent measures to combat this grave issue effectively.
- Therefore, the EU’s proposed Chat Control law aims to mandate technology platforms to actively monitor private messages for suspected illicit content.

Challenges and Criticism

- **Scanning of Private Messages:** The proposal includes a clause allowing for mass scanning of private messages, even those protected by end-to-end encryption.
 - ◆ Critics argue that the law poses significant risks to privacy rights, as it mandates the scanning of private communications without explicit consent from users.
 - France, Germany, and Poland have particularly opposed this provision.
- **End-to-End Encryption Dilemma:** Scanning end-to-end encrypted messages poses a challenge.
 - ◆ Opening backdoors for scanning can compromise the promise of secure communication.

- Tech companies and privacy experts have vehemently opposed this regulation.
- The iPhone maker recognised in the process how authoritarian governments could potentially misuse the feature by using it as a tool to target individuals who oppose the regime.

Conclusion and Way Ahead

- The EU’s Chat Control law represents a pivotal moment in the global discourse on digital regulation and governance.
- It aims to protect children but must navigate the delicate terrain of privacy rights.
- Striking the right balance will be crucial as technology evolves and privacy concerns persist.
- Continued scrutiny, transparency, and informed dialogue will be essential in navigating the complexities of the Chat Control law and its broader implications for the digital age.

Source:TH

SIGHT PROGRAMME OF THE NATIONAL GREEN HYDROGEN MISSION (NGHM)

In News

- Government enhanced allocation for the Fertilizer Sector under SIGHT Programme of the National Green Hydrogen Mission (NGHM).

What is green hydrogen?

- Hydrogen is a key industrial fuel that has a variety of applications including the production of ammonia (a key fertilizer), steel, refineries and electricity.
- Depending on the nature of the method of its extraction, hydrogen is categorised into three categories, namely, Blue and Green.
 - ◆ Grey hydrogen is produced from natural gas while ‘Blue’ hydrogen is from fossil fuel sources where the ensuring carbon emitted is captured via carbon-capture processes.
 - ◆ Green hydrogen is when hydrogen is produced via electrolysis, the splitting of water into hydrogen and oxygen with electricity generated from renewable energy sources such as solar or wind.
 - This is the most environmentally sustainable way of producing hydrogen.

About National Green Hydrogen Mission (NGHM)

- The Union Cabinet has approved the National Green Hydrogen Mission in January in 2023 and The initial outlay for the Mission is Rs.19,744 crore, including an outlay of Rs.17,490 crore for the SIGHT programme, Rs.1,466 crore for pilot projects, Rs.400 crore for R&D, and Rs. 388 crore towards other Mission components.

The Mission will result in the following likely outcomes by 2030:

- Development of green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum with an associated renewable energy capacity addition of about 125 GW in the country
- Over Rs. Eight lakh crore in total investments
- Creation of over Six lakh jobs
- Cumulative reduction in fossil fuel imports over Rs. One lakh crore
- Abatement of nearly 50 MMT of annual greenhouse gas emissions

Latest Developments

- Under the Mission, MNRE had issued the Scheme Guidelines for implementation of SIGHT Programme – Component II:** Incentive for Procurement of Green Ammonia Production (under Mode 2A) of the NGHM in January 2024.
 - Mode 2A caters to the requirements of the fertilizer sector.
 - As per the said Guidelines, the capacity available for bidding under Tranche I of Mode 2A was 5,50,000 tonnes per annum of Green Ammonia.
- This is a significant step towards demand creation of Green Hydrogen and its derivatives in the country.

About SIGHT Programme

- The Strategic Interventions for Green Hydrogen Transition (SIGHT) Programme, is a major financial measure with an outlay of 17,490 crore.
- The programme consists of two distinct financial incentive mechanisms to support domestic manufacturing of electrolyzers and production of Green Hydrogen.
- Depending upon the markets and technology development, specific incentive schemes and programmes will continue to evolve as the Mission progresses.

Importance

- It will contribute to India's goal to become Aatmanirbhar (self-reliant) through clean energy and serve as an inspiration for the global Clean Energy Transition.
- It will lead to significant decarbonization of the economy, reduced dependence on fossil fuel imports, and enable India to assume technology and market leadership in Green Hydrogen.

Source: PIB

NEWS IN SHORT

DR. SYAMA PRASAD MOOKERJEE

In News

- The Prime Minister paid tributes to Dr. Syama Prasad Mookerjee on his martyrdom day.

About

- He was a great patriot, educationist, parliamentarian, statesman, humanitarian and above all, a campaigner for national unity and integrity.
- In 1934, Syama Prasad became the youngest Vice-Chancellor of Calcutta University, which gave him the opportunity to put his aims and ideals regarding education of his people in practice.
- He was the founder of Bharatiya Jana Sangh (The Bharatiya Janata Party -BJP is the successor of BJS).
- He had supported the Congress in 1946 elections because he was assured by Sardar Patel that the Congress would never accept partition.
- He became the finance minister of the Province of Bengal and was subsequently elected the national president of the All India Hindu Mahasabha, the Mahabodhi Society and the Royal Asiatic Society and he was also a member of the Constituent Assembly.

Source: TH

LOGISTICS AGREEMENT BETWEEN INDIA AND RUSSIA

Context

- In a significant development aimed at bolstering military cooperation, the Russian government has approved a draft logistics agreement with India.

About the Agreement

- It is a key step in increasing operational engagement between the armed forces of the two countries.
- **Purpose of the Agreement:** A logistics pact facilitates mutual logistical support during various military operations, including peacekeeping missions, humanitarian assistance, and joint military exercises.
 - ♦ It involves critical services like refuelling, maintenance, and supply provisions, enhancing interoperability.
- **Approval and Negotiations:** If accepted, the agreement will be effective for five years, subject to automatic renewal unless either party decides to terminate it.
- **Continuation of Military Relationship:** This draft logistics pact builds upon the longstanding military relationship between Russia and India.
 - ♦ In 2021, the two countries signed a comprehensive agreement on military-technical cooperation extending until 2030.

India's Strategic Reach

- India has similar logistics agreements with the United States, France, South Korea, Singapore, Australia, and Japan.
- These pacts enhance India's strategic reach and operational readiness, ensuring that its military can sustain longer and more complex deployments.

Source: TH

PUSHPAK

Context

- The Indian Space Research Organisation (ISRO) successfully demonstrated the landing of the Pushpak reusable launch vehicle (RLV LEX-03) for the third time.

About

- The third demonstration was to test the vehicle in more challenging conditions—when there is a higher degree of deviation from the intended orbit while the launch vehicle comes down and when there are more severe wind conditions.
- Pushpak reused the winged body and flight systems from the second experiment without any modifications.
- The vehicle uses multiple sensors such as inertial sensor, radar altimeter, pseudolite system (a ground-based positioning system), as well as the NavIC satellite-based positioning system.

- **Significance:** To bring down launch costs and to remain competitive, the reusable launch vehicle is designed to take satellites up to space and return and land on a runway like an aeroplane.
 - ♦ Demonstration validated one of the critical technologies needed for the reusable launch vehicle—an advanced algorithm for correcting longitudinal and lateral plane errors.

Source: IE

MICRORNAS FOR DETECTING BREAST CANCER

Context

- The CSIR-Centre for Cellular and Molecular Biology (CCMB) scientists have identified a potentially cost-effective and non-invasive method to detect various kinds of breast cancer from just a drop of blood.

About

- **microRNAs (miRNAs):** Most of the cellular processes in a body are regulated by miRNAs molecules which are 23-25 base small non-coding RNA molecules.
 - ♦ The researchers have analysed microRNA signatures in human cancer samples and identified miRNAs that are associated with invasive breast cancer.
 - ♦ 107 qualified to be potential biomarkers for the stratification of different types, grades and stages of invasive ductal carcinoma.
- **Biomarkers:** Cancer cells shed DNA/RNA into the circulation called 'Circulating Nucleic Acids (CNAs) and are detectable in plasma or other body fluids of cancer patients to identify the earlier stages of cancer development.
 - ♦ Based on this principle, the identified biomarkers could be made into a liquid biopsy system where cancer could be detected from one drop of blood.
- **Significance:** The study has paved the way for the application of miRNAs as biomarkers and would open up new vistas in developing a refined, cost-effective, and non-invasive method in breast cancer diagnosis.
 - ♦ The discovery of biomarkers has become essential for early detection, classification, and monitoring of cancer.

Source: TH

PARLIAMENTARY OATH

In News

- The first session of the 18th Lok Sabha began today with newly elected MPs taking oaths as members of the House.

About

- Article 99 states that every member of either House of Parliament shall, before taking their seat, subscribe to an oath or affirmation according to the Third Schedule of the Constitution.
- Oath or affirmation is taken in English or any of the 22 languages specified in the Constitution.

Importance

- By taking the oath, MPs commit themselves to upholding the Constitution.
- It is a solemn affirmation of the elected members' commitment to serving the nation and its people with integrity, honesty, and accountability.

Enforcement

- If an MP fails to take the oath or affirmation within the prescribed time, their seat may be declared vacant.
- The Constitution under Article 104, also specifies a financial penalty of Rs 500 if a person participates or votes in House proceedings without taking an oath.

Can MPs in jail take the oath?

- The Constitution specifies that if an MP does not attend Parliament for 60 days, their seat can be declared vacant.
- Courts have used this ground to allow MPs in jail to take an oath in Parliament.

Source: IE

CYBER MERCENARIES

Context

- Recently, the United Nations (UN) Secretary-General warned of 'Cyber Mercenaries' amid a spike in weaponising digital tools.

About the Cyber Mercenaries

- There is growing concern that a government's ability to control the cyberspace is eclipsed by the activities of so-called 'cyber mercenaries'—or private entities devoted to creating, promoting and assisting offensive cyber capabilities, and which enable spying on networks, computers, phones, or devices connected by the internet.

- There are numerous terms used to describe this growing sector, including 'cyber mercenaries', 'intrusion as a service', 'surveillance-for-hire' or simply 'private sector offensive actors'.

Key Threats

- Malicious Activity in Cyberspace:** Both state and non-state actors engage in malicious cyber activities. Essential services like healthcare, banking, and telecommunications are frequently breached, and criminal organisations, along with "cyber mercenaries," perpetrate relentless illicit actions.
- Blurry Lines:** Civilian "hacktivists" increasingly blur the line between combatants and civilians. Their actions contribute to fear and division online.
- New Vulnerabilities:** The integration of digital tools with weapon systems creates new vulnerabilities. Sophisticated malware proliferates, and AI-enabled cyber operations amplify the threat.
- Ransomware:** Ransomware, a significant menace, threatens public and private institutions, critical infrastructure, and financial stability. In 2023, total ransomware payments reached a staggering \$1.1 billion.

Impact and Challenges

- Undermining Trust:** Malicious cyber activities erode trust, undermine public institutions, and disrupt electoral processes. They sow the seeds of violence and conflict.
- Public and Private Sectors:** Both sectors face immense challenges. Governments must protect citizens, while businesses safeguard their operations and data.

Source: UN

PLUTONIUM ISOTOPE FISSION

In News

- Recently, Nuclear study provided a major update on plutonium isotope fission .

About Plutonium (Pu)

- It is a silvery-gray, radioactive metal that becomes yellowish when exposed to air.
- It has five "common" isotopes, Pu-238, Pu-239, Pu-240, Pu-241, and Pu-242.
 - All of the more common isotopes of plutonium are "fissionable"—which means the atom's nucleus can easily split apart if it is struck by a neutron.
- Applications :** The various isotopes of plutonium have been used in a number of applications.

- ◆ Plutonium-239 contains the highest quantities of fissile material, and is notably one of the primary fuels used in nuclear weapons.
 - Pu-239 is produced when U-238 is exposed to neutrons of certain energy in a reactor.
- ◆ Plutonium-238 has more benign applications and has been used to power batteries for some heart pacemakers, as well as provide a long-lived heat source to power NASA space missions.
- **Developments:** Researchers have published a unique measurement of the energy of neutrons produced by Pu-240 fission.
 - ◆ Pu-240 undergoes spontaneous fission, emitting alpha particles. Due to this behavior, it is considered a contaminant in weapons-grade plutonium, where its composition by weight is restricted to under 7%.
- **Progress in India:** In March 2024, India embarked on the second stage of its nuclear power program by initiating the core-loading process of the prototype fast breeder reactor (PFBR) in Kalpakkam.
 - ◆ In the initial stage, uranium isotopes serve as nuclear fuel in pressurized heavy-water reactors. These reactors produce plutonium-239 (Pu-239) along with energy.
 - ◆ The second stage focuses more on plutonium fission. When a Pu-239 nucleus captures a neutron, it has a 27-38% chance of becoming Pu-240 instead of undergoing fission.
 - ◆ Pu-240 is present in many nuclear reactors and even in the fallout of nuclear weapon tests. When Pu-240 captures a neutron, it often transforms into Pu-241.
 - However, if it does undergo fission, there remains uncertainty about the energy carried away by its fission products.

Source:TH

MIRAGE 2000

Context

- India is discussing the purchase of 12 used Mirage-2000 fighters aircraft from Qatar, enhancing combat strength amidst retiring MiG fighters.

About Mirage 2000

- It is a fourth-generation, multirole fighter aircraft, and has played a significant role in the Indian Air Force (IAF) for several decades.

- It was originally designed by the French company Dassault Aviation.
- India acquired around 51 Mirage 2000s in different batches, forming three squadrons based at the Gwalior Air Force station.

Key Features

- **Versatility:** The Mirage 2000 is a versatile platform capable of air-to-air combat, ground attack, reconnaissance, and nuclear strike missions.
- **Precision Strikes:** During the Kargil conflict, Mirage 2000s successfully hit enemy camps at high altitudes using laser-guided bombs.
 - ◆ It played a crucial role in the 2019 Balakot airstrikes, demonstrating its combat effectiveness.
- **Upgrades:** The ongoing upgrade program aims to enhance their capabilities, ensuring their relevance till 2035.

Source: ET

ESTONIA

In News

Estonia is looking to partner with India to collaborate on strengthening cybersecurity infrastructure.

- It was a former member of the Soviet Union, and faced one of the largest cyberattacks on its digital infrastructure in 2007 by means of a distributed denial of service (DDoS) attack



About Estonia

- It is a Baltic country in Northern Europe.
 - ♦ The Baltic countries are Estonia, Latvia and Lithuania
- It is located between Latvia and Russia.
- It is also bounded by the Gulf of Finland in the north, the Baltic Sea in the west and Lake Peipus in the east.
- Major Rivers include the Emajõgi and Parnu
- Suur Munamagi is the highest peak in Estonia

Do you know?

- India first recognised Estonia on 22 September 1921, when Estonia was admitted into the League of Nations.
- India re-recognised the Republic of Estonia as a sovereign country after the collapse of the Soviet Union on 9 September 1991 and diplomatic relations were established on 2 December of the same year in Helsinki.

Source:IE

