

# CURRENT AFFAIRS

WEEKLY

WEEK: 1

SEPTEMBER  
2023

## MAINS

- GS- II**
- ANDHRA PRADESH REORGANISATION ACT, 2014
  - 'INDIA OR BHARAT' CAN BE INTERCHANGEABLY USED?
  - THE BHARATIYA NYAYA SANHITA, 2023
  - PANEL TO EXPLORE 'ONE NATION, ONE ELECTION'
  - SEVEN YEARS ON 'MISSION TO CLEAN THE GANGA'
  - RIGHT TO INFORMATION (RTI)
  - UNDERSTANDING LAÏCITÉ, THE FRENCH PRINCIPLE OF SECULARISM
  - PERSONALISED ADAPTIVE LEARNING (PAL) WITH AI
  - DISASTERS PUT FOCUS ON CITIES' 'CARRYING CAPACITY'

- GS- III**
- MINOR IRRIGATION CENSUS (MIC) REPORT
  - UNEMPLOYMENT MEASUREMENT VARIES FOR ECONOMIES
  - VIABILITY GAP FUNDING TO PROMOTE BATTERY ENERGY STORAGE SYSTEM
  - GREEN GROWTH
  - INVASIVE SPECIES THREATEN WORLD'S DIVERSITY
  - TOYOTA'S FLEX-FUEL PROTOTYPE

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- Pulikali festival

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- Tibetan Democracy Day

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- Special session of Parliament

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- Kakapo population (Strigops habroptilus)
- 'Atlantification' of the Arctic Ocean

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- PM-DAKSH
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- Gramodyog Vikas Yojana (GVY)
- Sandes app
- One-hour trade settlement
- International Finance Corporation
- Agriculture Infrastructure Development cess (AIDC)
- Toda community
- Mahendragiri
- IAF's annual training exercise- Trishul
- Scrub typhus
- Ramon Magsaysay Award
- Backward evolution
- Ecocide
- Tharman Shanmugaratnam
- Sree Narayana Guru
- Eritrea
- Stump-tailed macaque
- Kappaphycus alvarezii
- Schizostachyum andamanicum

## SPECIALS

- Aditya L1 Mission(Session)

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The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

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## THE MOST EXPERIENCED & SEASONED SUBJECT EXPERT

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## **Section A [MAINS]**

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- ☞ The Bharatiya Nyaya Sanhita, 2023
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- ☞ Toyota's flex-fuel prototype



## ANDHRA PRADESH REORGANISATION ACT, 2014

**Context:** As the validity of the Andhra Pradesh Reorganisation Act, which had come into force in May 2014, is going to end in 2024, the local students fear to lose reservation limit of 85% of seats in educational institutions in Andhra Pradesh as mentioned under Article 371D of the Constitution.

### State Reorganization in India:

- ◆ Before India gained independence in 1947, its map was marked by princely states and provinces with no clear linguistic or cultural basis.
- ◆ Post-independence, linguistic diversity emerged as a significant factor.
- ◆ People in different regions of India spoke various languages and felt the need for states where their language was predominant.
- ◆ To address these linguistic and cultural demands, the government appointed the States' Reorganization Commission in 1953, led by Justice Fazl Ali.
- ◆ The commission recommended the reorganization of states in India based on linguistic lines.

The commission submitted its report in September 1955 and acknowledged 4 major factors to be taken into account in any scheme of reorganization of states:

- Linguistic and Cultural homogeneity
- Preservation and strengthening of the unity and security of the nation.
- Financial, Economic and Administrative considerations.
- Planning and promotion of the welfare of the people in each state as well as of the Nation as a whole.

- ◆ In 1956, the Indian government implemented the recommendations of the SRC, which led to the reorganization of states along linguistic lines. This resulted in the creation of new states, including Andhra Pradesh, Kerala, Karnataka, and Maharashtra, among others.
- ◆ The demand for a separate Telangana state gained momentum over several decades due to political, economic, and cultural differences within Andhra Pradesh.
- ◆ In 2014, the Indian government passed the Andhra Pradesh Reorganization Act, creating the state of Telangana.

### About Article 371D:

- ◆ It is a part of the Indian Constitution that provides special protections for a certain region.
- ◆ Article 371 D, which was added in the Constitution after the 1969 struggle in the State, was reiterated in the A.P. Reorganisation Act, 2014
- ◆ In this case, it's related to Andhra Pradesh. It says that 85% of seats in educational institutions in Andhra Pradesh must be reserved for local students.
- ◆ Article 371 D, is incorporated under 32nd amendment to the Constitution in 1973. that allowed courts (other than the Supreme Court) and tribunals and other authorities to exercise certain jurisdictions, powers, and authorities, which the President may specify in an order with respect to the formation of an administrative tribunal for the state of Andhra Pradesh.
- ◆ The 32nd Amendment was promulgated to safeguard the rights of local students in education and employment, especially in Andhra Pradesh, as both the Andhra and Telangana regions had witnessed a spate of agitations in the early 1970s.

### What is the 32nd amendment of the Indian Constitution all about?

Special rules for enrollment in educational institutions were included in the amendment. In addition to public employment, particularly in civil services, there is the establishment of an administrative tribunal with the authority to handle disagreements and complaints involving public services.

### Andhra Pradesh Reorganisation Act, 2014:

The Andhra Pradesh Reorganisation Act, 2014, played a crucial role in the peaceful separation of Andhra Pradesh and Telangana, addressing various administrative, economic, and political aspects of the division.

- ◆ **Formation of Telangana:** The primary purpose of the act was to create the new state of Telangana by carving it out of the existing state of Andhra Pradesh. Telangana officially came into existence on June 2, 2014.
- ◆ **Proposed common capital:** The act designated Hyderabad as the common capital of both Andhra Pradesh and Telangana for a period of ten years,
- ◆ **Special Provisions:** The act contained special provisions to safeguard the interests of various groups, including the allocation of seats in educational institutions and government jobs for people from different regions.



- ◆ **Division of Assets and Liabilities:** It outlined the division of assets, liabilities, and resources between the two states, including the allocation of River waters and the division of government employees.
- ◆ **Legislative Changes:** The act also necessitated changes in the boundaries of the two states and led to adjustments in the legislative and administrative framework to accommodate the new political entities.
- ◆ **Legislative Assemblies:** the number of seats in the Legislative Assemblies of the States of Andhra Pradesh and Telangana, on and from the appointed day, shall be 175 and 119, respectively.
- ◆ **Proposed common High Court:** High Court of Judicature at Hyderabad for the State of Telangana and the State of Andhra Pradesh and served as a common High Court for both the states.

### What is the procedure to extend the Andhra Pradesh Reorganisation Act?

- ◆ To extend or amend the Andhra Pradesh Reorganisation Act, a new law or amendment bill needs to be introduced in the Parliament.
- ◆ This requires either the Central government or a member of parliament (MP) to propose the amendment.
- ◆ The Bill goes through the standard legislative process in the Indian Parliament. It must be introduced in either the Lok Sabha (House of the People) or the Rajya Sabha (Council of States), the two houses of Parliament.
- ◆ The bill is then examined by parliamentary committees, debated, and voted upon.
- ◆ To pass the amendment bill, it must receive a majority vote in both houses of Parliament. This means it should be approved by a majority of MPs present and voting in each house.
- ◆ Once the President gives assent, the amended act is notified and comes into effect. This process may involve extending the provisions of the Andhra Pradesh Reorganisation Act, 2014, or making specific amendments to it.

#### Important Articles

- Article 1 : Name and territory of the Union
- Article 2 : Admission or establishment of new States
- Article 3 : Formation of new States and alteration of areas, boundaries or names of existing States
- Article 4: Laws made under articles 2 and 3 to provide for the amendment of the First and the Fourth Schedule and supplemental, incidental and consequential matters.



### 'INDIA OR BHARAT' CAN BE INTERCHANGEABLY USED?

**Context:** An official invitation from President Droupadi Murmu to G-20 guests where Indian President was described as the "President of Bharat" has triggered speculation that the central government could officially change the name of "India" to "Bharat".

#### Background:

- ◆ The Constituent Assembly formed in 1949 debated on how India will be mentioned in Article 1 at the time the Constitution was being drafted.
- ◆ Before the Constitutional Assembly, the country was known as Bharat, India, and Hindustan.
- ◆ The committee was divided into two groups, one portion preferred 'Bharat', and the other favoured 'India'.
- ◆ The Constituent Assembly then decided to use both the terms in the statement.

#### About:

- ◆ Article 1 of the constitution mentions India, that is Bharat, shall be a Union of States.
- ◆ The article serves as a foundational statement that establishes India as a Union comprising individual state.
- ◆ It clarifies the name of the country in both English (India) and Hindi (Bharat) and sets the tone for the federal structure of the Indian state, where power is divided between the central government and the states.

#### Debate around 'Bharat' or 'India':

- ◆ The first debate on Article 1 was to begin on November 17, 1948. However, on the suggestion of Govind Ballabh Pant, the discussion on the name was postponed to a later date.
- ◆ On September 17, 1949 Dr. B R Ambedkar presented to the House the final version of the provision, which included both 'Bharat' and 'India'.
- ◆ Several members expressed themselves against the use of 'India', which they saw as a reminder of the colonial past.
- ◆ "Bharat" is a term that resonates with many Indian languages and is viewed as more inclusive than "India," which is of foreign origin.

### History of names denoting today's India:

- ◆ The roots of "Bharat", "Bharata", or "Bharatvarsha" are traced back to Puranic literature, and to the epic Mahabharata.
- ◆ The Puranas describe Bharata as the land between the "sea in the south and the abode of snow in the north".
- ◆ Bharata is also the name of the ancient king of legend who was the ancestor of the Rig Vedic tribe of the Bharatas, and by extension, the progenitor of all peoples of the subcontinent.
- ◆ The name Hindustan is thought to have derived from 'Hindu', the Persian cognate form of the Sanskrit 'Sindhu' (Indus), which came into light with the Achaemenid Persian conquest of the Indus valley (northwestern parts of the subcontinent).
- ◆ By the time of the early Mughals (16th century), the name 'Hindustan' was used to describe the entire Indo-Gangetic plain.
- ◆ From the late 18th century onwards, British maps increasingly began to use the name 'India', and 'Hindustan'.

### Arguments in favour of Bharat:

- ◆ "Bharat" emphasizes a sense of national pride and identity, distinguishing India from its colonial past when it was referred to as "India."
- ◆ Proponents of using "Bharat" argue that it has deep historical and cultural significance, tracing back to ancient Indian civilization. It is seen as a way to connect with India's rich heritage and traditions.

### Arguments against the use of term 'Bharat':

- ◆ Article 348(1) of the Constitution states that all proceedings in the Supreme Court and in every High Court shall be in English language until Parliament passes a law.
- ◆ Any change of name of a country would require a constitutional amendment under Article 368.
- ◆ Former Chairman of the Parliamentary Standing Committee on Law and Justice mentioned that, an amendment would be required only if the government insisted on the use of any one term or wanted to remove a particular term.
- ◆ Critics of using "Bharat" contend that it may not be as recognizable internationally as "India."
  - ▶ They argue that maintaining the name "India" simplifies international communication and relations.

- ◆ The use of "Bharat" may symbolize a more federal and state-centric approach, while "India" emphasizes the unity of the nation.

### Do they can be used interchangeably?

- ◆ India, that is Bharat' written in Article 1 of the Constitution is only descriptive and the two cannot be used interchangeably. It will require amendments in the Constitution.

### Who has the powers to change the names?

- ◆ India is our official name, and changing that will require a Constitutional amendment, requiring two-third majority votes from both the Houses of Parliament.
- ◆ Also changing of names does not touch upon the basic structure doctrine.



### THE BHARATIYA NYAYA SANHITA, 2023

**Context:** Recently, the government introduced the Bharatiya Nyaya Sanhita, 2023, reforming three penal Bills in the Lok Sabha, to improve the Indian justice system. However they also need to ensure effective implementation of it.

### Background

- ◆ In 2020, the Ministry of Home Affairs established a committee led by Prof. (Dr.) Ranbir Singh, former Vice Chancellor of National Law University (NLU), Delhi.
  - ▶ This committee was tasked with reviewing the three codes of criminal law.
- ◆ The primary objective of the committee was to propose comprehensive reforms to the country's criminal laws in a manner that is both principled and effective.
- ◆ The committee's focus was on ensuring the safety and security of individuals, communities, and the nation as a whole.
- ◆ Throughout its deliberations, the committee aimed to uphold constitutional values such as justice, dignity, and the intrinsic value of each individual.
- ◆ In February 2023, the committee successfully submitted its recommendations regarding amendments to the criminal law.
- ◆ These recommendations are intended to serve as a foundation for enhancing the current legal framework.

### About the Bill

- ◆ The Bharatiya Nyaya Sanhita, 2023 was introduced in Lok Sabha on August 11, 2023.
- ◆ Objective: The Bill repeals the Indian Penal Code, 1860 (IPC). Indian Penal Code (IPC) is the principal law on criminal offences.
- ◆ Categories of offences covered under it include those affecting:
  - ▶ Human body such as assault and murder,
  - ▶ Property such as extortion and theft,
  - ▶ Public order such as unlawful assembly and rioting,
  - ▶ Public health, safety, decency, morality, and religion,
  - ▶ Defamation, and
  - ▶ Offences against the state.
- ◆ The Bill retains several parts of the IPC. The Changes include;
  - ▶ Introduction of offences of organised crime and terrorism,
  - ▶ Enhancement in penalties for certain existing offences, and
  - ▶ Introduction of community service as a punishment for certain petty offences.
- ◆ Certain offences under the IPC that have been struck down or read down by courts have been omitted. These include offences of adultery and same-sex intercourse (Section 377).

### Key points in the Bill

The amendments made under IPC are as follows:

- ◆ **Sedition Definition Amendment:** Now, IPC replaces sedition with offenses related to secession, separatism, or endangering India's unity, punishable up to seven years or life imprisonment.
- ◆ **Terrorism Act Definition:** As per the amendments made, Terrorism covers acts threatening India's unity, using deadly means, punishable by death or life imprisonment, and fines.
- ◆ **Organized Crime Offenses:** Organized crime, will involve violence for financial gain, leads to death penalty or life imprisonment and fines.
- ◆ **For less recognized Organized Crime:** Lesser organized crimes causing insecurity are punishable with up to seven years imprisonment and fines.
- ◆ **Caste/Race-Based Murder:** Multiple offenders in caste or race-based murder will face 7-year to life imprisonment or death penalty and fines.
- ◆ **Death Penalty for Minor Gang Rape:** Gang rape of minors below 18 results in the death penalty.
- ◆ **Sexual Intercourse by Deceit:** Deceitful sexual intercourse attracts up to 10 years imprisonment and fines.
- ◆ Offences against Boys: Importing boys under 18 for illicit activities is an offense, paralleling existing laws for girls under 21.

### Need for changes

- ◆ **Colonial Penal Law Reform:** Replacing colonial laws isn't because they were flawed, but lacked input from those they affected.
- ◆ **Macaulay's Approach:** Macaulay stressed uniformity with diversity where necessary and certainty in law.
- ◆ **Reassessing "Undesirable" Behavior:** Laws must adapt to changing perceptions, as seen with suicide and adultery. A social audit is needed to define undesirable behavior impartially.
- ◆ **Managing Offenses Efficiently:** Special laws for new and serious crimes could be separate or consolidated to prevent complexity in the legal system.


### Challenges associated

- ◆ **Rape Laws and Marital Exception:** The Bill's rape definition still excludes sexual intercourse between spouses if the wife is above 18, still the not a gender friendly law.
- ◆ **Conflict between General and Special Laws:** Retaining clauses in the general exceptions section conflicts with the philosophy of specific laws for children outlined in the Juvenile Justice Act of 2015.
- ◆ **Legal complexity:** These challenges encompass not only potential opposition and resistance but also legal complexities, practical hurdles, and the need to anticipate unforeseen consequences.

### Way forward

- ◆ **Harmonizing Special and General Laws:** Ensure consistency and alignment between general and special laws, especially concerning children's rights.
  - ▶ This requires revisiting and amending conflicting clauses to prioritize the welfare and protection of children.
- ◆ **Promoting Constitutional Vision:** Implement legal reforms that reflect and fulfill the constitutional vision enshrined in Article 13(2), Article 15(3), Article 51A (e), and the Preamble.

- ▶ This includes promoting gender equality, dignity, and the rights of women and children in the legal framework.
- ◆ **Societal Awareness and Education:** Launch awareness campaigns and educational programs to sensitize society about the importance of legal reforms and gender equality. Encourage discussions on these issues to challenge traditional norms and beliefs.

 **PANEL TO EXPLORE ‘ONE NATION, ONE ELECTION’**

**Context:** The Central government recently set up a panel headed by former President Ram Nath Kovind to explore the feasibility of the ‘one nation, one election’ (ONOE) plan.

**Brief History**

- ◆ Simultaneous elections for the state assemblies and the Lok Sabha were held till 1967.
- ◆ However, in 1968 and 1969 some legislative assemblies were dissolved prematurely followed by the dissolution of the Lok Sabha in 1970. This forced a change in electoral schedules for the states and the country.

**Other Major Committees to examine the possibility of simultaneous elections**

The present committee, headed by former president Ram Nath Kovind, will be the fourth to examine the possibility of simultaneous elections. Earlier, the prospect was discussed by the:

- ◆ **Law Commission:** The Law Commission studied the issue in 1999 and again in 2018. In August 2018, the Law Commission of India released its draft report on simultaneous elections. Its draft report noted that simultaneous elections cannot be held within the existing framework of the constitution.
  - ▶ In order to conduct such simultaneous elections, it said that there needs to be made appropriate amendments to the constitution, the Representation of the People Act 1951, and the Rules of Procedure of Lok Sabha and state Assemblies.
- ◆ **Parliamentary standing committee:** The department-related Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice, Rajya Sabha in its 79th report in 2015 also studied the possibility of holding simultaneous elections. It recommended holding simultaneous elections in two phases with elections of some assemblies at the midterm of the Lok Sabha and the remaining at the end of the tenure of the Lok Sabha.
- ◆ **NITI Aayog:** In 2017, the NITI Aayog also submitted a paper on the benefits of simultaneous polls.

Benefits:	Challenges and Concerns:
<ul style="list-style-type: none"> <li>● <b>Cost Reduction:</b> Conducting all elections concurrently would save significant resources spent on separate state and national elections.</li> <li>● <b>Time saving:</b> It may save time and the government can get five stable years to focus on governance instead of winning polls.</li> <li>● <b>Single Election Season:</b> It would streamline the electoral calendar, eliminating frequent disruptions due to elections in different states.</li> <li>● <b>Policy Continuity:</b> The Model Code of Conduct often hampers government initiatives and project announcements, which could be avoided with synchronized elections.</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Complexity:</b> Coordinating elections at various levels of government—national, state, and local—poses logistical and administrative challenges.</li> <li>● <b>Dominance of National Parties:</b> Critics suggest that it could favor nationally dominant parties over regional ones, potentially undermining federalism.</li> <li>● <b>Government Instability:</b> If any government, whether at the state or national level, were to collapse before its term, it could lead to complicated scenarios and potential governance issues.</li> <li>● <b>Additional cost:</b> The exercise would also need an additional number of EVMs/VVPATs, which would cost a huge amount</li> </ul>

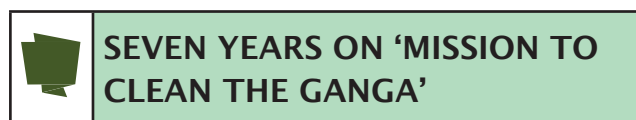
**What would it take?**

- ◆ **Amendment:** It requires bringing amendments in not less than five articles of Constitution, namely,
  - ▶ Article 83 relating to duration of Houses of Parliament
  - ▶ Article 85 relating to dissolution of the House of the People by the President

- ▶ Article 172 relating to duration of the State Legislatures
- ▶ Article 174 relating to dissolution of the State Legislatures
- ▶ Article 356 relating to the imposition of President’s Rule in the States.
- ◆ **Political consensus:** The consensus of all political parties and state governments would be essential with regard to India’s federal structure of governance.

**Way forward:**

- ◆ 'One Nation One Election' is a good idea for Indian polity but its feasibility needs to be thoroughly examined by involving all the stakeholders in debate and discussion. Also, the desired goal of having only one election every five years cannot be achieved overnight in the prevailing circumstances. It has to be achieved in stages.
- ◆ Constitutional amendment(s) can provide for extending or curtailing the term of one or more Legislative Assemblies, say for/by six months or so, wherever it is necessary to achieve the said goal. But it will require unprecedented political will and support.
- ◆ The latest Law Commission report should, therefore, be considered a good place to start the national debate on Simultaneous Elections.



**Context:** In seven years of 'Clean Ganga Mission', only 20% of sewage in major states along the Ganga is treated which is estimated to increase to 60% by 2026.

**About National Mission to Clean Ganga (NMCG):**

- ◆ The National Mission to Clean Ganga (NMCG) is a flagship programme developed by the National Council for the Rejuvenation, Protection and Management of the Ganga River, also known as the National Ganga Council.
- ◆ **Objective:** To ensure that no untreated sewage enters the river.
- ◆ This mission was established on 12th August 2011 under the Societies Registration Act, 1860 as a registered society.
- ◆ **Vision:**
  - ▶ The Vision for Ganga Rejuvenation constitutes restoring the wholeness of the river defined in terms of ensuring "Aviral Dhara" (Continuous Flow), "Nirmal Dhara" ("Unpolluted Flow"), for Geologic and ecological integrity.
- ◆ **Objectives:**
  - ▶ The mission incorporates rehabilitating and boosting the existing STPs (Sewage Treatment Plants) and instant short-term steps to curb pollution at exit points on the riverfront in order to check the inflow of sewage.

- ▶ To maintain the continuity of the water flow without changing the natural season variations.
- ▶ To restore and maintain the surface flow and groundwater.
- ▶ To regenerate and maintain the natural vegetation of the area.
- ▶ To conserve and regenerate the aquatic biodiversity as well as the riparian biodiversity of the river Ganga basin.
- ▶ To allow participation of the public in the process of protection, rejuvenation and management of the river.

**Parameters:**

The Central Pollution Control Board uses various parameters to assess water quality along different stretches of the river.

- ▶ Uses Various Parameters Like
- ▶ Dissolved Oxygen Levels
- ▶ Biochemical Oxygen Demand
- ▶ Faecal Coliform Levels

**What are the challenges?**

- ◆ **Major Pollution contributor states:** Most of the Ganga's pollution is due to five States on the river's main stem — Uttarakhand, Uttar Pradesh, Jharkhand, Bihar and West Bengal.
- ◆ **Industrial pollution:** Large numbers of textile industries, slaughterhouses, hospitals, distilleries, and chemical plants dispose of their untreated waste into the river. Industrial pollution from tanneries in Kanpur, distilleries, paper and sugar mills in the Kosi, Ramganga and Kali river catchments is a major contributor.
- ◆ **Untreated Sewage:** A tremendous amount of sewage that is majorly untreated Approximately 12,000 million litres a day (MLD) of sewage is generated in the Ganga basin, for which there is currently a treatment capacity of just 4,000 MLD.
- ◆ **River Flow:** Cutting off the natural flow of the river, dams are responsible for the pollution of Ganga as well.
- ◆ **Religious cause:** Being a river that is worshipped by people belonging to a larger religious group, every year, and countless people dispose of the ashes of their dead ones into the river.

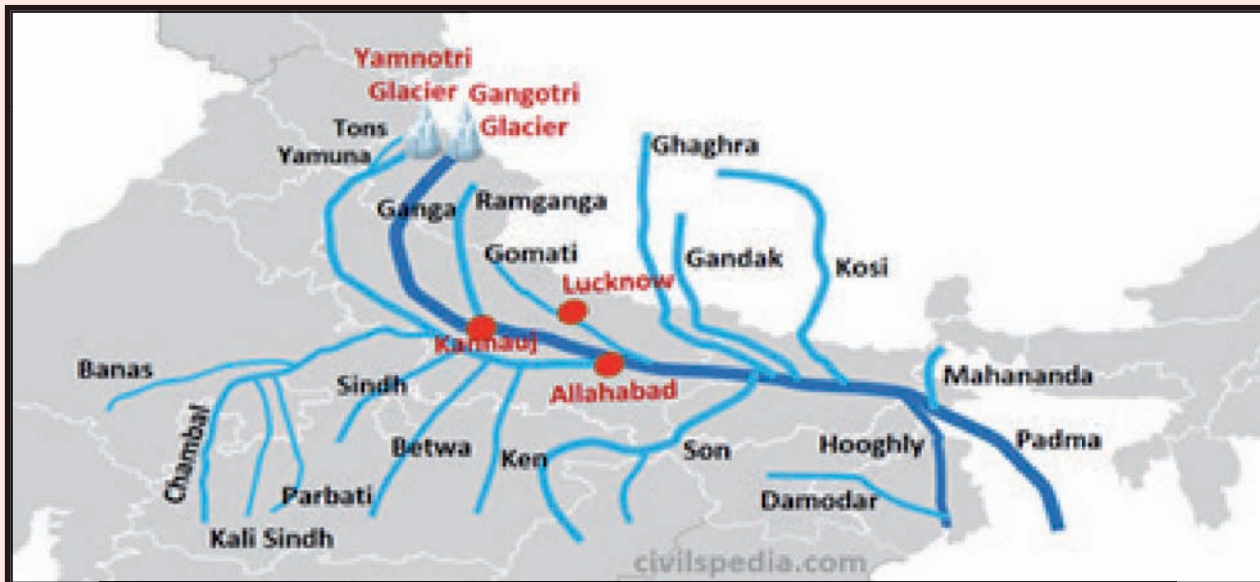
The Ganga - Bhagirathi - Hooghly river system between Haldia (Sagar) and Allahabad (1620 km) was declared as National Waterway-1 (NW-1)

**Initiatives related to Ganga:**

- ◆ **Namami Gange Programme:** It is an Integrated Conservation Mission, approved as a 'Flagship Programme' by the Union Government in June 2014 to accomplish the twin objectives of effective abatement of pollution and conservation and rejuvenation of National River Ganga.
- ◆ **Ganga Action Plan:** It was the first River Action Plan that was taken up by the Ministry of Environment, Forest and Climate Change in 1985, to improve the water quality by the interception, diversion, and treatment of domestic sewage.
- ◆ The National River Conservation Plan is an extension to the Ganga Action Plan. It aims at cleaning the Ganga River under Ganga Action Plan phase-2.
- ◆ **National River Ganga Basin Authority (NRGBA):** It was formed by the Government of India in the year 2009 under Section-3 of the Environment Protection Act, 1986.
- ◆ Ganga was declared as the 'National River' of India in 2008.
- ◆ **Clean Ganga Fund:** In 2014, it was formed for cleaning up of the Ganga, setting up of waste treatment plants, and conservation of biotic diversity of the river.
- ◆ **Bhuvan-Ganga Web App:** It ensures involvement of the public in monitoring of pollution entering into the river Ganga.
- ◆ **Arth Ganga** was launched with the aim of harnessing the economic potential of the Ganga.

**Ganga River System:**

- The Ganges River originates in the Himalaya Mountains at Gomukh, the terminus of the Gongotri Glacier.
- When the ice of this glacier melts, it forms the clear waters of the Bhagirathi River.
- As the Bhagirathi River flows down the Himalayas, it joins the Alaknanda River, officially forming the Ganges River.
- The Ganges River Basin is sometimes considered part of a larger river basin consisting of the nearby Brahmaputra and Meghna rivers.
- Known as the Ganges-Brahmaputra-Meghna (GBM) River Basin, it is one of the largest river systems in the world.

**Key facts:**

- It crosses five states of India namely Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal.
- Major tributaries of River Ganga are Yamuna, Ramganga, Gomti, Ghaghara, Gandak, Damodar, Kosi and Kali-East. Flowing through major cities/towns like Srinagar, Rishikesh, Haridwar, Roorkee (in Uttarakhand), Bijnor, Narora, Kannauj, Kanpur, Allahabad, Varanasi, Mirzapur (in Uttar Pradesh), Patna, Bhagalpur (in Bihar) and Beharampore, Serampore, Howrah and Kolkata (in West Bengal).
- It drains into the Bay of Bengal.

**RIGHT TO INFORMATION (RTI)**

**Context:** Right to Information Act, 2005 in India, empowered citizens to access government information, exposing delays, flaws in welfare schemes, and decision-making insights for 13 years now. However, the Digital Personal Data Protection Act, 2023 puts a total prohibition on disclosure of personal information which can hinder the purpose of RTI.

**What is Right to Information?**

- ◆ The RTI Act allows any citizen to make requests for access to data, documents, and other information in the government's possession. India's RTI Act has been commonly cited as among the most comprehensive public records access legislations in the world

**Right to Information Act 2005:**

- ◆ Right to Information Act 2005 mandates timely response to citizen requests for government information. It is an initiative taken by Department of Personnel and Training, Ministry of Personnel, Public Grievances and Pensions to provide a- RTI Portal Gateway to the citizens for quick search of information on the details of first Appellate Authorities, PIOs etc.
- ◆ Objective: The basic object of the Right to Information Act is to empower the citizens, promote transparency and accountability in the working of the Government, contain corruption, and make our democracy work for the people in real sense.
- ◆ It goes without saying that an informed citizen is better equipped to keep necessary vigil on the instruments of governance and make the government more accountable to the governed.
- ◆ The Act is a big step towards making the citizens informed about the activities of the Government.

**Constitutional Provisions related to RTI**

- ◆ **Article 19(1) (a):** This article guarantees the fundamental right to freedom of speech and expression, which includes the right to seek and receive information. It forms the constitutional basis for the right to information.
- ◆ **Article 21:** The right to life and personal liberty under Article 21 has been interpreted by the courts to include the right to information. Access to information is seen as essential for the meaningful exercise of one's rights and liberties.
- ◆ **Article 12:** While not directly related to RTI, Article 12 defines the term "State" for the purposes of

fundamental rights. Public authorities and government agencies are considered "State" under this article, and they are subject to the constitutional principles of transparency and accountability.

- ◆ **Article 51A:** Part of the Fundamental Duties, Article 51A (h) places a duty on every citizen to develop a scientific temper, humanism, and the spirit of inquiry and reform, which align with the objectives of the RTI Act in promoting informed citizenry.

**Hurdles to implement RTI:**

- ◆ **Rising Appeals:** The increasing number of first appeals being filed indicates growing dissatisfaction with the information provided by public officials.
- ◆ **Institutional Challenges:** Activists highlight that the RTI Act's effectiveness is compromised not only by changes in the law but also by institutional challenges. These include limited avenues for convenient information requests and understaffed appeal bodies.
- ◆ **Implementation Issues:** The RTI Act's implementation depends on subordinate rules set by the Union and State Governments.
- ◆ The payment methods for public authorities are subject to state-level decisions, impacting uniformity and effectiveness.

**Who is covered under RTI?**

- ◆ The Central RTI Act extends to the whole of India. i.e.
  - ▶ All bodies, which are constituted under the Constitution or under any law or under any Government notification or all bodies, including NGOs, which are owned, controlled or substantially financed by the Government are covered.
  - ▶ All private bodies, which are owned, controlled or substantially financed by the Government, are directly covered.

**Challenges in Online RTIs:**


- ◆ **Limited State Portals:** Many Indian states lack online RTI portals, creating barriers for citizens. Even when portals exist, some government bodies are not registered, hindering accessibility.
- ◆ **Union Government Portal Issues:** The Union Government's RTI portal, launched in 2013, faces usability issues.
  - ▶ Account creation, which simplified the filing process, has been removed, requiring users to enter their details a new each time.
- ◆ **Data Discrepancies:** The portal has experienced data glitches, with past application data disappearing and slow site performance. These technical issues undermine the efficiency of the RTI filing process.

**Why RTI is a success?**

- ◆ This is because, or the first time in the history of independent India, there is a law which casts a direct accountability on the officer for non-performance.
- ◆ For example; if the concerned officer does not provide information in time, a penalty of Rs 250 per day of delay can be imposed by the Information Commissioner.
  - ▶ If the information provided is false, a penalty of a maximum of Rs.25,000/- can be imposed. A penalty can also be imposed for providing incomplete or for rejecting your application for malafide reasons. This fine is deducted from the officer’s personal salary.

**The Digital Personal Data Protection Act, 2023:**

- **Aim:** To enhance data protection and accountability for internet companies, mobile apps, and businesses handling citizens’ data.
- It prioritizes the “Right to Privacy” and includes provisions for explicit consent, data fiduciaries’ responsibilities, cross-border data transfers, and individual rights.
- **Formation of Data Protection Board of India (DPB):** The latest draft proposes a new regulatory framework that was present in previous versions, which now significantly limits the scope of the envisioned Data Protection Board of India (DPB) vested with significant regulatory-making, enforcement, and adjudication powers.
- Government’s procession of personal data and exemptions allocated: The present Bill also includes significant exemptions to the state’s handling of personal data.
- **Scope:** The scope of the Bill encompasses digital personal data within India but also extends its jurisdiction to cover data processing activities outside the country.

 **UNDERSTANDING LAÏCITÉ, THE FRENCH PRINCIPLE OF SECULARISM**

**Context:** Recently, the French government announced that the practice of wearing

**abaya would be banned in state-run schools as it violated the principle of Laïcité, which is the French idea of secularism.**

**What is the meaning of Laïcité?**

- ◆ Coined in the 19th century, Laïcité is a complicated and politically charged term. It is understood as a formal separation of the State and Church.
- ◆ It involves the complete removal of religious values from the public sphere and their replacement with secular values such as liberty, equality, and fraternity.
- ◆ The word itself derives from the ancient Greek term for “the people,” or “the laity,” as opposed to the priestly class
- ◆ Underlying goal: to implant tolerance and assimilate people.
- ◆ As per the principle, religion is to be confined to the private sphere. It is important to note here that the state plays an important role in ensuring that affairs are run according to the principle of Laïcité.

**Origin:**  
Laïcité, a product of the struggle of anti-clerical Republicans against the power of the Catholic Church, was an abstract idea following the French Revolution in 1789.

**How Secularism is managed in a nation of 1.25 billion people?**

- ◆ Like the French, Indians tend to consider secularism as part of their national identity.
- ◆ But while the foundation of French laïcité is to keep the government neutral in religious affairs, the Indian version of secularism “allows state intervention in the dominant religion”— and recognizes minority rights.

**Secularism in India vs. the Western World: A Comparative Exploration**

- ◆ Secularism, a crucial component of contemporary governance, takes on distinct forms in India compared to Western nations.

	Western Secularism	Indian Secularism
<b>Definition</b>	<ul style="list-style-type: none"> <li>● In Western countries, secularism primarily revolves around the Enlightenment principles, advocating for a strict separation between religious institutions and state affairs. The primary aim is to maintain religious neutrality in government functions.</li> </ul>	<ul style="list-style-type: none"> <li>● India’s brand of secularism is characterized by an inclusive approach that accommodates religious diversity. It is rooted in the idea of respecting and safeguarding the right to religious freedom for all citizens.</li> </ul>



<b>Basis</b>	<ul style="list-style-type: none"> <li>The Western concept of secularism is based on the ideas of Thomas Jefferson.</li> </ul>	<ul style="list-style-type: none"> <li>The Constituent Assembly emphasized the secular foundation of India.</li> </ul>
<b>Historical Evolution</b>	<ul style="list-style-type: none"> <li>Western secularism traces its roots to the Enlightenment era, marked by the emancipation from religious dogma and the eventual disestablishment of state religions.</li> </ul>	<ul style="list-style-type: none"> <li>India's journey is closely tied to its struggle for independence and the subsequent framing of its constitution.</li> </ul>
<b>Legal Framework</b>	<ul style="list-style-type: none"> <li>Western countries often codify secularism within their constitutions and legal systems.</li> <li>These legal provisions enshrine the separation of church and state and protect the freedom of religion for all citizens.</li> </ul>	<ul style="list-style-type: none"> <li>India's Constitution embodies its approach to secularism by guaranteeing equal protection of religious freedom and prohibiting discrimination based on religion.</li> <li>The Indian Constitution has spelled out several provisions in Part III (Articles 14, 15, 16, 25, 26, 27, 28, 29, 30), Part IV (Article 44), and IVA (clause (e)) that reflects the existence of secularism.</li> </ul>



### PERSONALISED ADAPTIVE LEARNING (PAL) WITH AI

**Context:** The National eGovernance Division (NeGD) under MeitY, plans to incorporate Personalised Adaptive Learning (PAL) into DIKSHA, offering individualised learning experience to students.

#### National eGovernance Division (NeGD):

- ◆ The National e-Governance Division was created by the Ministry of Electronics & Information Technology as an Independent Business Division under the Digital India Corporation (erstwhile Media Lab Asia).
- ◆ It was created in 2009.
- ◆ Since then, NeGD has been playing a pivotal role in supporting MeitY in Programme Management and implementation of the e-Governance Projects; provide technical and advisory support to Ministries/ Departments, both at Central and State levels along with other Government organisations.

NeGD has developed and is managing several National Public Digital Platforms such as DigiLocker, UMANG, Rapid Assessment System, OpenForge, API Setu, Poshan Tracker, etc.

#### About the information:

- ◆ To facilitate the implementation of PAL, the MeitY has sought the expertise of the National Council of Educational Research and Training (NCERT).
- ◆ PAL works on AI (Artificial Intelligence) and uses software-based approaches to personalize the learning journey of each student.

- ◆ The development of PAL involves categorizing content from various subjects and creating tags for different learning segments. Additionally, new content may need to be created.
- ◆ The initial focus will be on building PAL for Chemistry, Mathematics, and Physics for Classes 9 to 12, which are often perceived as challenging subjects.
- ◆ The Ministry of Education aims to improve learning outcomes and school retention through digital learning, especially considering the large number of students dropping out after Class 10.
- ◆ Objective: DIKSHA offers digital textbooks and educational content but is currently static.
  - ▶ The goal is to make DIKSHA more dynamic and personalized for students with the help of PAL.
- ◆ The MeitY is also considering the introduction of voice commands in DIKSHA 2.0 as part of AI-enabled learning. This would allow students to access chapter summaries through voice commands.
- ◆ The NeGD plans to assess the market for edtech companies through an Expression of Interest and potentially integrate PAL with DIKSHA 2.0.

#### DIKSHA:

- DIKSHA is the platform for providing quality e-content for school education in States/UTs and QR coded Energized Textbooks for all grades.
- This scheme is come under 'one nation, one digital platform'.
- DIKSHA will enable people with visual impairments to access the website using assistive technologies, such as screen readers.
- It is compiled by World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0 level AA.

Benefits of Personalised Adaptive Learning (PAL):	
<p><b>Benefits of Personalised Adaptive Learning (PAL):</b></p> <ul style="list-style-type: none"> <li>• <b>Customized Learning:</b> PAL tailors the learning experience to individual students, addressing their unique needs, pace, and abilities. This promotes better understanding and retention.</li> <li>• <b>Improved Engagement:</b> Personalized learning engages students more effectively as it aligns with their interests and capabilities, making learning enjoyable and motivating.</li> <li>• <b>Higher Learning Outcomes:</b> By adapting content to each student's proficiency level, PAL can lead to improved academic performance and a deeper understanding of subjects.</li> <li>• <b>Efficiency:</b> PAL can identify areas where students need more help and provide additional resources or guidance, making the learning process more efficient.</li> <li>• <b>Accessibility:</b> It can be a valuable tool for learners with disabilities, as it can provide customized support and adapt content to suit their specific needs</li> </ul>	<p><b>Challenges of Implementing PAL in DIKSHA:</b></p> <ul style="list-style-type: none"> <li>• <b>Infrastructure and Connectivity:</b> Effective PAL implementation requires reliable internet connectivity and access to devices, which may be a challenge in remote or underserved areas.</li> <li>• <b>Teacher Training:</b> Teachers need training to effectively use PAL tools and integrate them into the curriculum. This requires time and resources.</li> <li>• <b>Data Privacy:</b> Personalized learning involves collecting and analyzing student data, raising concerns about data privacy and security.</li> <li>• <b>Content Development:</b> Creating personalized content for PAL can be resource-intensive and time-consuming.</li> <li>• <b>Equity:</b> PAL may exacerbate educational inequalities if not all students have access to the necessary technology or support.</li> <li>• <b>Resistance to Change:</b> Implementing PAL may face resistance from traditional teaching methods and educators who are not familiar with technology-based learning.</li> <li>• <b>Cost:</b> Developing and maintaining PAL systems can be costly, and budget constraints may limit its adoption in educational institutions.</li> </ul>

### DISASTERS PUT FOCUS ON CITIES' 'CARRYING CAPACITY'

**Context:** The Centre proposed before the Supreme Court forming a 13-member technical committee to evaluate the "carrying capacity" of 13 Himalayan States.

**What is the need?**

- ◆ Frequent landslips leading to deaths and destruction had led the Supreme Court to moot a re-evaluation of the load-carrying capacity of hill towns and cities.
- ◆ Significantly, these states have faced flash floods, landslides, and acute water shortages in the past, especially in popular tourist destinations.
- ◆ In March 2021, the National Green Tribunal had directed all state governments to undertake carrying capacity studies of ecologically sensitive areas.

**What is carrying capacity?**

◆ The carrying capacity of an area can be defined as the "maximum number of population that can be supported by the environment of that area through optimum utilisation of the available resources".

◆ Factors Influencing Carrying Capacity:

- ▶ Terrain
- ▶ Water availability
- ▶ Waste management
- ▶ Resilience of local communities

**Are hill stations not prepared?**

- ◆ Master plans for most Indian cities — including hill stations —are not prepared based on their carrying capacity.
  - ▶ Master plan finds mention in the Urban and Regional Development Plans Formulation and Implementation (URDPFI) guidelines notified by the Ministry of Housing and Urban Affairs in 2015.
- ◆ It should be an integral part of city and town planning, especially in hill states .

**Why carrying capacity is out of focus?**

Although carrying capacity has been taught in planning schools, it has rarely been used by urban planners while planning for cities' development. It is due to:

- ◆ **Economic Imperatives:** Tourism generates substantial revenue for these regions, making policymakers hesitant to limit tourist numbers or impose stringent regulations.

- ❖ **Lack of Planning:** Hill stations often lack comprehensive development plans that consider environmental sustainability and carrying capacity. This lack of foresight exacerbates the problem.
- ❖ **Lack of manpower:** There is an acute shortage of experienced urban planners in the states.
- ❖ **Political Considerations:** Political interests and pressure from the tourism industry can sideline discussions about carrying capacity and environmental concerns.

**How to Mitigate the Impact of Infrastructure Damage from a Landslide**

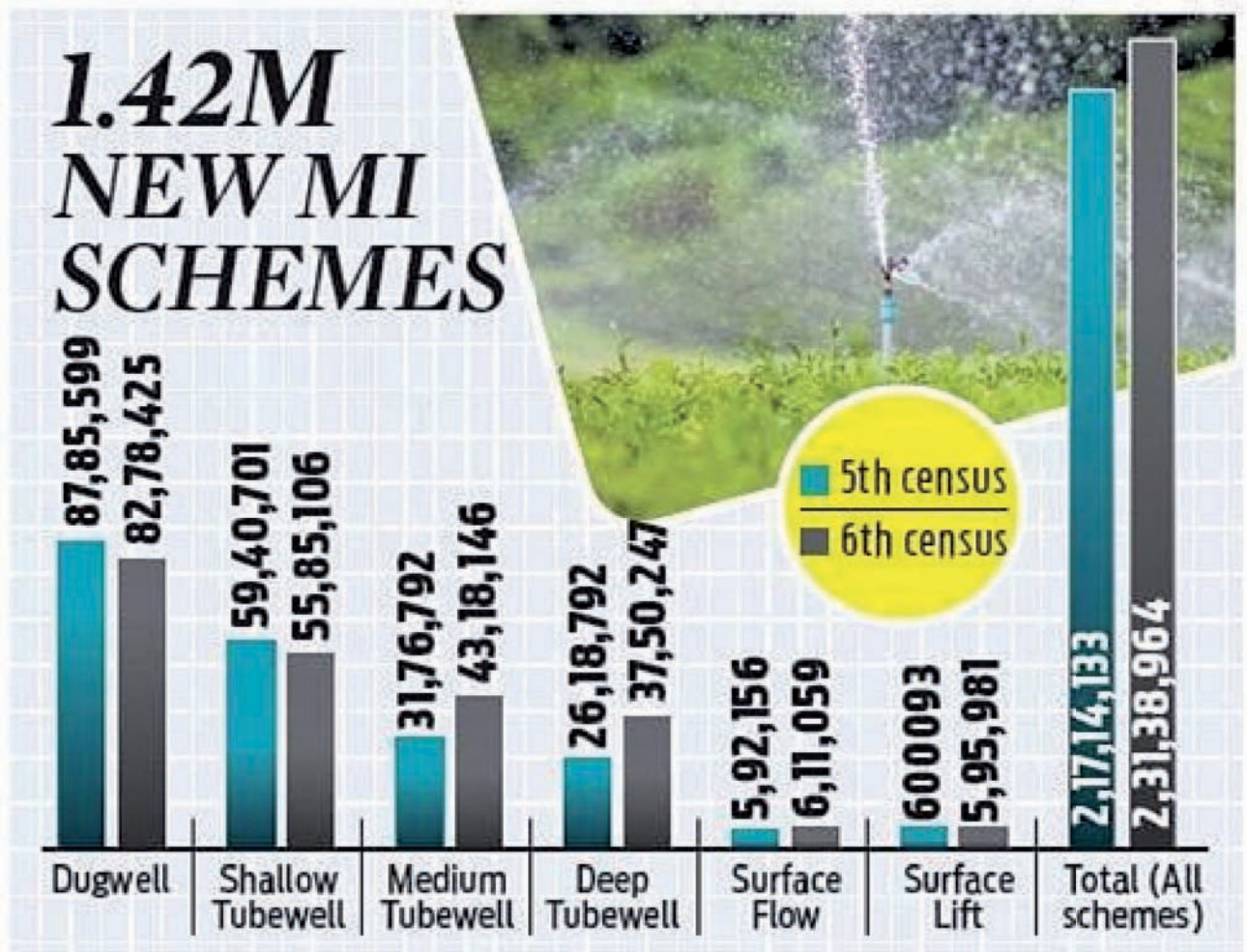
- ❖ **Landslide Hazard Zonation** - It covers aspects of reliability and validation of landslide zoning maps in Indian scenario and proposes future plan of activities for landslide zoning.
- ❖ **Landslide Monitoring and Early Warning System:** For future prospects, technical recommendation for developing and implementing rainfall thresholds, Numerical Weather Prediction (NWP), Automatic

Rain Gauges, Wireless Sensor Network (WSN), Micro-Electro Mechanical Sensors (MEMS) etc have been included.

- ❖ **Awareness Programmes:** It aims towards a culture of awareness generation and preparedness so that people in the society become alert and aware in case of an emergency or take some preventive measures before the disaster strikes.
- ❖ **Capacity Building and Training of Stakeholders:** focuses on identifying targets group for training on landslide DRR and most importantly, strengthening the response framework through capacity building and training of vulnerable communities at grass root level.

**MINOR IRRIGATION CENSUS (MIC) REPORT**

**Context: Ministry of Jal Shakti Releases the 6th Census Report On Minor Irrigation (MI).**



**Highlights of the Report:**

- ◆ The report reflects irrigation trends for the year 2017-18. As per the report, electricity is the primary power source for water extraction in private irrigation, surpassing diesel, wind, and solar pumps in majority of States in India.
- ◆ While the use of electricity showed a jump from powering only 56% of sources in 2011 to 70% in 2017.
- ◆ Out of all Micro Irrigation (MI) schemes, 21.93 million (94.8%) were for groundwater (GW) and 1.21 million (5.2%) for surface-water (SW) extraction.

**Census Report On Minor Irrigation:**

- ◆ The First Census of Minor Irrigation schemes were conducted with reference year 1986-87.
- ◆ The Second Census with reference year 1993-94.
- ◆ The Third Minor Irrigation Census with reference year 2000-01.
- ◆ The fourth Census in the series was conducted with reference year 2006-07.
- ◆ The Fifth MI Census was conducted with reference year 2013-14.
- ◆ The Sixth MI Census has been conducted with reference year 2017-18.
- ◆ Dominant source of groundwater:
  - ▶ While 'dug-wells' or ponds remain the dominant source of groundwater, their number has declined from 87 lakh to 82 lakh between the 5th and 6th editions.
  - ▶ 'Shallow' tube wells have declined from 59 lakh to 55 lakh.
  - ▶ However, 'medium-sized' wells grew from 31 lakh to 43 lakh and 'deep' wells rose from 26 lakh to 37 lakh.
- ◆ State-based data:
  - ▶ Uttar Pradesh had the largest number of MI schemes in the country (17.2%) followed by Maharashtra (15.4%), Madhya Pradesh (9.9%) and Tamil Nadu (9.1%).
  - ▶ Leading States in these schemes are Uttar Pradesh, Maharashtra, Madhya Pradesh, Tamil Nadu and Telangana whereas Maharashtra, Karnataka, Telangana, Odisha and Jharkhand have the highest share in SW schemes.
- ◆ Causes for the increase of more powerful and deep-reaching tubewells:
  - ▶ While excessive groundwater withdrawal has been a matter of long-standing concern, the report doesn't discuss the causes for such increase.
  - ▶ State governments announce schemes where

farmers are incentivised or get access to loans to buy such tubewells, could be an explanation.

- ▶ However, the lower growth in electrification is also likely to be a result of greater emphasis on energy efficient water extraction.

**Concerns:**

- ◆ Electrification of groundwater withdrawal corresponds to a rise in the use of tubewells and borewells that are capable of extracting water at greater depths.
- ◆ There were 23.14 million schemes in the country, with Uttar Pradesh possessing the largest share, followed by Maharashtra and Madhya Pradesh



### UNEMPLOYMENT MEASUREMENT VARIES FOR ECONOMIES

**Context:** Comparing unemployment rates between the U.S. and India is challenging due to economic disparities and distinct labor force characteristics, including a substantial informal sector in India and varying measurement methodologies.

**Perspectives of defining Unemployment**

- ◆ The International Labour Organization (ILO) defines unemployment as being out of a job; being available to take a job; and actively engaged in searching for work.
  - ▶ Therefore, an individual who has lost work but does not look for another job is not unemployed.
- ◆ The labour force is defined as the sum of the employed and the unemployed.
  - ▶ Those neither employed nor unemployed — such as students and those engaged in unpaid domestic work — are considered out of the labour force.
- ◆ The unemployment rate is measured as the ratio of the unemployed to the labour force.
  - ▶ The unemployment rate could also fall if an economy is not generating enough jobs, or if people decide not to search for work.

**The Unemployment paradox:**

In the U.S., the employment-to-population ratio (EPR) in 2019 was 60.8, while the unemployment rate was 3.7%. Even though there were fewer jobs (as a proportion of the total population), the unemployment rate was lower because many individuals had exited the labour force.

## Measuring unemployment in India

- ◆ The NSSO (National Sample Survey Office) in India employs two primary measures to classify an individual's working status:
  - ▶ The Usual Principal and Subsidiary Status (UPSS): It categorizes an individual's principal working status based on the activity they spent a significant amount of time on in the previous year.
  - ▶ Even if someone is not considered a primary worker, they are counted as employed under UPSS if they engaged in some economic activity for a period of not less than 30 days.
  - ▶ This means that a person who was unemployed for a shorter duration but worked for at least 30 days in a subsidiary role during the previous year would be classified as a worker according to UPSS, even if their primary status is unemployed.
  - ▶ The Current Weekly Status (CWS): The CWS adopts a shorter reference period of a week.
    - An individual is counted as being employed if they have worked for at least one hour on at least one day during the seven days preceding the date of survey.
    - UPSS unemployment rates will always be lower than CWS rates because there is a greater probability that an individual would find work over a year as compared to a week.

## Unemployment in India

As per the recent Periodic Labour Force Survey (PLFS), 2022;

- ◆ **Unemployment Ratio:**
  - ▶ The unemployment ratio is defined as the percentage of persons unemployed among the persons in the labour force.
  - ▶ The unemployment rate was 6.6% for men and 9.4% for women (9.3% and 11.6% in July-September 2021).
- ◆ **Worker-Population Ratio (WPR):**
  - ▶ The WPR is defined as the percentage of employed persons in the population.
  - ▶ The WPR in urban areas for persons aged 15 and above stood at 44.5% (42.3% in July-September 2021).
  - ▶ The WPR among men was 68.6% and 19.7% among women (66.6% and 17.6% in 2021).
- ◆ **Labour Force Participation Rate (LFPR):**
  - ▶ It is defined as the percentage of persons in the labour force who are working or seeking or

available for work in the population, in urban areas for persons aged 15 and above.

- ▶ It increased to 47.9% (46.9% in July-September 2021).
- ▶ The LFPR among men was 73.4% and 21.7% among women (73.5% and 19.9%, in July-September 2021).

## What are the concerns in Unemployment measurement in India?

- ◆ Measuring unemployment in India is difficult due to the informal nature of jobs.
- ◆ Unlike developed economies, individuals do not hold one job year-round.
- ◆ The low threshold for classifying individuals as employed, particularly in rural areas, contributes to the phenomenon of lower reported unemployment rates in rural regions compared to urban areas.
- ◆ These definitions, although they may lead to an underestimation of unemployment, were primarily designed to account for the prevalence of informal and sporadic employment in agrarian economies, where individuals often have access to family farms or casual agrarian work, increasing the likelihood of some level of economic activity even during periods of joblessness.

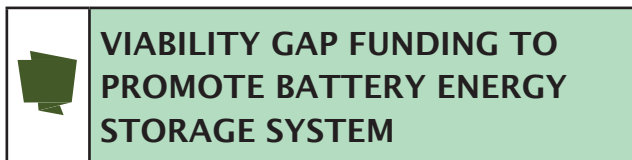
## Way forward

- ◆ Addressing Measurement Lacunae:
  - ▶ Broaden Definitions: Consider broader definitions of employment to account for various forms of work, including gig work, part-time, and informal employment.
  - ▶ Quality of Employment: Include measures of job quality, such as income levels, working conditions, and job security, alongside traditional unemployment rates.
  - ▶ Use Technology: Leverage technology and data analytics to enhance the accuracy and speed of employment data collection and analysis.
  - ▶ Standardize Definitions: Work towards standardizing employment definitions and methodologies across different surveys and agencies for consistency and comparability.

## Suggestive measures:

- ◆ **Skill Development and Education:** Invest in skill development programs and education to equip the workforce with the skills required for emerging industries and technologies.

- ◆ **Promote Entrepreneurship:** Encourage entrepreneurship by providing incentives, access to credit, and a conducive regulatory environment to foster job creation.
- ◆ **Labor Market Reforms:** Implement labor market reforms to strike a balance between worker rights and flexibility for employers, making it easier for businesses to hire.
- ◆ **Invest in Infrastructure:** Develop infrastructure projects that create jobs, stimulate economic growth, and improve overall productivity.
- ◆ **Encourage Manufacturing:** Promote the manufacturing sector to generate employment opportunities, as it has the potential to create a significant number of jobs.
- ◆ **Support Informal Sector:** Recognize the importance of the informal sector and implement policies that provide social security and skill development opportunities for informal workers.



**Context:** Recently, the Union Cabinet approved Rs.3, 760 crore in viability gap funding for establishing a battery energy storage system in India.

### About the initiative:

- ◆ The entire amount for viability gap funding will be borne by the central government.
- ◆ The fund will be released in five tranches till 2030-31 and help in creation of 4,000 MW hours storage.
- ◆ The viability gap funding will lead to an investment of Rs.9, 500 crore.
- ◆ Objective: India aims to meet its 50 per cent of energy requirements through renewable energy and non-fossil energy sources.

### What is Viability Gap Funding?

- ◆ The Viability Gap Funding (VGF) Scheme aims at supporting infrastructure projects that are economically justified but fall marginally short of financial viability.
- ◆ Support under this scheme is available only for infrastructure projects where private sector sponsors are selected through a process of competitive bidding.
- ◆ The total VGF under the scheme does not exceed 20%

of the total project cost; however, the Government may decide to provide additional grants up to a limit of a further 20%.

### What is the process of getting VGF?

The process for availing viability gap funding (VGF) involves:

- ◆ Submission of project proposals that include requisite information by the Government/ statutory entity owning the underlying asset Projects based-on model documents would be preferred over standalone documents Empowered Institution (EI) may seek required details for satisfying eligibility criteria.
- ◆ The EI shall inform the sponsoring Government/ statutory entity whether the project is eligible for financial assistance within 30 to 60 days.
- ◆ The EI may refer the case to Empowered Committee (EC) for further clarity on eligibility Projects shall be approved and implemented in accordance with the procedures specified from time to time.
- ◆ The inter-se allocation of VGF between an ongoing scheme and this scheme shall be determined by the EC.

### Battery Energy Storage System (BESS) Project

- ◆ This is the joint effort of both the Ministry of New and Renewable energy and the Ministry of Power who have been working on this to provide a road map for the installation of the energy storage system in the country.
- ◆ Objective:
  - ▶ In order to support the ambitious goal of achieving 450 GW renewable energy target by 2030, it is important that it gets duly supported with installation of energy storage systems (battery energy storage system, hydro pump storage plants etc.).
- ◆ Battery Energy Storage System (BESS) is a technology developed for storing electric charge by using specially developed batteries.
- ◆ The underlying idea being that such stored energy can be utilized at a later time.
- ◆ Enormous amount of research has led to battery advances that have shaped the concept of Battery Energy Storage System into a commercial reality.
- ◆ Battery Energy Storage Systems (BESSs) are a sub-set of Energy Storage Systems (ESSs).
- ◆ Energy Storage System is a general term for the ability of a system to store energy using thermal, electro-mechanical or electro-chemical solutions.

- ◆ A BESS typically utilizes an electro-chemical solution.
- ◆ Essentially, all Energy Storage Systems capture energy and store it for use at a later time or date.
- ◆ Examples of these systems include pumped hydro, compressed air storage, mechanical flywheels, and now BESSs.
- ◆ These systems complement intermittent sources of energy such as wind, tidal and solar power in an attempt to balance energy production and consumption.

### Why battery storage system is beneficial?

- ◆ **Decreasing Cost:** A major factor in the rapid increase in the use of BESS technology has been a 50% decrease in costs of energy storage over the last two years.
- ◆ **Security of supply:** Storage technologies are also popular because they improve energy security by optimizing energy supply and demand, reducing the need to import electricity via inter-connectors, and also reducing the need to continuously adjust generation unit output.
- ◆ **Financial Incentive:** Many governments and utility regulators are actively encouraging the development of battery storage systems with financial incentives, which is likely to lead to further growth.

### Concerns associated:

- ◆ **Risk involved in using BESS:** While the use of batteries is nothing new, what is new is the size, complexity, energy density of the systems and the Li-ion battery chemistry involved — which can lead to significant fire risks.
- ◆ **Difficulty of fighting battery fires:** Battery fires are often very intense and difficult to control. They can take days or even weeks to extinguish properly, and may seem fully extinguished when they are not.
- ◆ **Failure of control systems:** Another issue can be failure of protection and control systems. For example, a Battery Management System (BMS) failure can lead to overcharging and an inability to monitor the operating environment, such as temperature or cell voltage.



## GREEN GROWTH

**Context:** According to a study, Emission reductions highly insufficient for 11 high income countries including Canada and Australia; calling there 'green growth' is misleading and greenwashing.

### Greenwashing:

- ◆ Greenwashing is the process of conveying a false impression or misleading information about how a company's products are environmentally sound.

### What is 'Green Growth'?

- ◆ Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.

### Green Growth vs. Sustainable Growth:

- ◆ Green growth is not a replacement for sustainable development. Rather, it provides a practical and flexible approach for achieving concrete, measurable progress across its economic and environmental pillars.
- ◆ The focus of green growth strategies is ensuring that natural assets can deliver their full economic potential on a sustainable basis.
- ◆ That potential includes the provision of critical life support services – clean air and water, and the resilient biodiversity needed to support food production and human health.
- ◆ Natural assets are not infinitely substitutable and green growth policies take account of that.

### Key findings of the study

- ◆ The study analyses 11 developed and high income countries namely, Australia, Austria, Belgium, Canada, Denmark, France, Germany, Luxembourg, the Netherlands, Sweden and the United Kingdom.
- ◆ The analysis suggested that none of the 11 high-income countries that have "decoupled" emissions from growth have achieved emission reductions that are consistent with the Paris Agreement goals.
- ◆ The researchers first identified 11 countries that achieved "absolute decoupling", which means those that decreased their CO2 emissions alongside increasing GDP between 2013 and 2019.
- ◆ To do this, they collected GDP data from the World Bank and CO2 emissions data from the Global Carbon Project.

The Paris Agreement is a treaty signed by 196 countries to limit "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels."

- ◆ Scientists have warned that green growth can only occur if decoupling is fast enough to reduce emissions consistent with the Paris Agreement.
- ◆ Decoupling, according to the study, is a decrease in CO<sub>2</sub> emissions per unit of gross domestic product (GDP).

### What do decoupling means?

- ◆ The term decoupling refers to breaking the link between “environmental bads” and “economic goods.”
- ◆ Decoupling occurs when the growth rate of an environmental pressure is less than that of its economic driving force (e.g. GDP) over a given period.
- ◆ Decoupling can be either absolute or relative.

Decoupling environmental pressures from economic growth is one of the main objectives of the OECD Environmental Strategy for the First Decade of the 21st Century, adopted by OECD Environment Ministers in 2001.

- ◆ Indicators of decoupling are;
  - ▶ The factors include the country size, population density, natural resource endowments, energy profile, (changes in) economic structure and stage of economic development.
- ◆ Significance: When decoupling indicators are used to compare environmental performance among countries, the national circumstances of each country must also be taken into account.

### Green Growth and India's stand

- ◆ The vision for “LiFE or Lifestyle for Environment,” set forward by the India’s aims to inspire a trend towards living sustainably.
- ◆ To lead the world into a green industrial and economic transition, India is vigorously pursuing the “Pancharit” and net-zero carbon emissions by 2070.
- ◆ Additionally, India is putting into practice numerous policies and programmes for the effective use of energy across various economic sectors, including green buildings, green equipment, green farming, green mobility, and green fuels.
- ◆ Large-scale green job opportunities are facilitated by these green growth initiatives, which also contribute in diminishing the economy’s carbon intensity.

### Government Interventions:

- ◆ **National Green Hydrogen Mission:** It will support the transition of the economy to low carbon intensity,

lessen reliance on fossil fuel imports, and enable the nation to assume technological and market leadership in this emerging industry.

- ◆ **GOBARdhan Scheme:** 500 new “waste to wealth” plants (200 compressed biogas (CBG) plants and 300 community/cluster-based plants) were built as part of the GOBARdhan Scheme to support the circular economy. 10,000 crores were invested in total.
- ◆ **Bhartiya Prakritik Kheti Bio-Input Resource Centers:** Over the course of the next three years, the Center will help 1 crore farmer’s transition to natural farming by establishing 10,000 Bio-Input Resource Centers, establishing a distributed national network for the production of micro-fertilizers and pesticides.
- ◆ **MISHTI:** The MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes), which will be run by combining resources from MGNREGS, Campa Fund, and other sources, will revolutionize mangrove protection.
  - ▶ MISHTI will help with mangrove planting on saltpan areas and along India’s coastline.



### INVASIVE SPECIES THREATEN WORLD'S DIVERSITY

**Context:** According to a UN assessment, invasive species are costing the world at least \$423bn every year and have become a leading threat to the diversity of life on Earth.

### About the Report

- ◆ The assessment, produced by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), was produced over four and a half years.
- ◆ The findings follow a 2019 report that warned 1m species were at risk of going extinct, threatened by pollution, climate change, invasive species, the direct exploitation of organisms, and land-use change.
  - ▶ Invasive species have contributed to 40% of all known animal extinctions.

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES):

- ◆ Established in: 2012
- ◆ IPBES is the leading UN body on biodiversity science
- ◆ It is an international organization committed to strengthening the role of science in public decision-making on biodiversity and ecosystem services.



### Key-highlights of the Report

- ◆ Invasive alien species are a major threat to biodiversity and can cause irreversible damage to nature, including local and global species extinctions, and also threaten human wellbeing.
- ◆ **Top species:** The top three invasive species include
  - ▶ Water hyacinth, an aquatic plant native to tropical South America that blocks waterways and damages fisheries, the flowering shrub lantana, and the black rat
  - ▶ *Aedes albopictus* (spread West Nile virus)
  - ▶ *Aedes aegypti* (spread Zika virus)
- ◆ **Dominant areas:** Most invasive species reports were noted in the Americas with 34% of all reports, followed by Europe and Central Asia (31%), the Asia Pacific (25%) and Africa (7%).

### What is invasive species?

- ◆ An invasive species is an organism that is not indigenous, or native, to a particular area.
- ◆ Pathways: An invasive species can be introduced to a new area via the ballast water of oceangoing ships, intentional and accidental releases of aquaculture species, aquarium specimens or bait, and other means.
- ◆ Not all non-native species are invasive.
  - ▶ For example, most of the food crops grown in the United States, including popular varieties of wheat, tomatoes, and rice, are not native to the region.
- ◆ Features: To be invasive, a species must
  - ▶ It must adapt to the new area easily.
  - ▶ It must reproduce quickly.
  - ▶ It must harm property, the economy, or the native plants and animals of the region.

List of invasive flora and fauna in India		
Name	State / Region	Native to
African apple snail	Andaman and Nicobar	
Papaya Mealy Bug	Assam	Mexico and Central America,
Cotton Mealy Bug	Deccan	North America
Amazon sailfin catfish	West Bengal	
Black Wattle	Western Ghats	South East Australia
Water Hyacinth	It is found throughout India	Tropical America
Black Mimosa	Himalaya, Western Ghats	Tropical North America
Parthenium/ Congress grass, Parthenium	It is found throughout India	Tropical North America
Cannibal Snail / Rosy wolf snail	–	Native to the southeastern United States.
Indian Bullfrog	Andaman and Nicobar	Afghanistan, Bangladesh, India, Myanmar, Nepal, Pakistan
Lantana camara	In the Bandipur National Park, Karnataka	South America

### Additional examples:

- ◆ Cogongrass is an Asian plant that arrived in the United States as seeds in packing material.
- ◆ Feral pigs will eat almost anything, including native birds. They compete with native wildlife for food sources such as acorns.
- ◆ Feral pigs spread diseases, such as brucellosis, to people and livestock. *E. coli* from their feces was implicated in the *E. coli* contamination of baby spinach in 2006.
- ◆ European green crabs found their way into the San Francisco Bay area in 1989. They out-compete native

species for food and habitat and eat huge quantities of native shellfish, threatening commercial fisheries.

- ◆ Dutch elm disease (caused by the fungus *Ophiostoma ulmi*) is transmitted to trees by elm bark beetles. Since 1930, the disease has spread from Ohio through most of the country, killing over half of the elm trees in the northern United States.
- ◆ Emerald ash borer beetles: Emerald ash borer beetles are invasive insects first discovered in Michigan in 2002 and most likely brought over on packing material from East Asia.



## TOYOTA'S FLEX-FUEL PROTOTYPE

**Context:** Toyota recently unveiled a prototype of the Innova Hycross with a flex-fuel hybrid powertrain, its first car in India with this option, and one that the Japanese carmaker claims is the world's first BS6 Stage II-compliant flex-fuel vehicle.

### What is flex fuel technology?

- ◆ A flex fuel, or flexible fuel, vehicle has an internal combustion engine (ICE), but unlike a regular petrol or diesel vehicle, this can run on more than one type of fuel, or even a mixture of fuels.
- ◆ The most common versions use a blend of petrol and ethanol or methanol, but these engines are also equipped to run on 100 per cent petrol or ethanol as well.
- ◆ This is made possible by equipping the engine with a fuel mix sensor and an engine control module (ECM) programming that senses and automatically adjusts for any ratio of designated fuels.
- ◆ It was first developed in the early 1990s and used in the mass-produced 1994 Ford Taurus, according to Car Bibles. By 2017, there were approximately 21 million flex-fuel vehicles on the road.

#### Hycross prototype:

- The Hycross flex-fuel prototype has a 2-litre Atkinson Cycle petrol engine coupled with an electric motor, the same as in the hybrid version of the standard Hycross.
- The prototype can run on petrol with more than 20% ethanol blending that is currently mandated in India, and that its performance would be at par with the standard Hycross hybrid, even with ethanol-blended petrol.

### Key Components of a Flex Fuel Car

- ◆ **Battery:** The battery provides electricity to start the engine and power vehicle electronics/accessories.
- ◆ **Electronic control module (ECM):** The ECM controls the fuel mixture, ignition timing, and emissions system; monitors the operation of the vehicle; safeguards the engine from abuse; and detects and troubleshoots problems.
- ◆ **Exhaust system:** The exhaust system channels the exhaust gases from the engine out through the tailpipe.
- ◆ **Fuel filler:** A nozzle from a fuel dispenser attaches to the receptacle on the vehicle to fill the tank.
- ◆ **Fuel injection system:** This system introduces fuel into the engine's combustion chambers for ignition.
- ◆ **Fuel line:** A metal tube or flexible hose (or a combination of these) transfers fuel from the tank to the engine's fuel injection system.
- ◆ **Fuel pump:** A pump that transfers fuel from the tank to the engine's fuel injection system via the fuel line.
- ◆ **Fuel tank (ethanol/gasoline blend):** Stores fuel on board the vehicle to power the engine.
- ◆ **Internal combustion engine (spark-ignited):** In this configuration, fuel is injected into either the intake manifold or the combustion chamber, where it is combined with air, and the air/fuel mixture is ignited by the spark from a spark plug.
- ◆ **Transmission:** The transmission transfers mechanical power from the engine and/or electric traction motor to drive the wheels.

### How flex fuel cars work?

- ◆ Flex fuel vehicles have one fuel system, and most components are the same as those found in a conventional petrol-only car.
- ◆ Some special ethanol-compatible components are required to adjust to the different chemical properties and energy content in ethanol or methanol, such as modifications to the fuel pump and fuel injection system.
- ◆ The ECM is also calibrated to accommodate the higher oxygen content of ethanol.

Advantages of Flex-Fuel	Disadvantages of Flex-Fuel
Cleaner Fuel	Nationwide Adoption: The greatest barrier to flex-fuel adoption is the infrastructure investment required to make the switch.
Flexible Usage	Increased Engine Wear: While the engines will be designed to adjust to the blend of fuel used, the ethanol component in the flex-fuel will cause greater wear and stress on the engines. This might translate to higher maintenance costs during the time the technology matures and improves reliability.
Sustainable Source	Lower Mileage: While ethanol burns cleaner, it also contains less energy than pure petrol.
Provides similar, and sometimes better, performance than pure petrol cars	



## *Section B*

### [CONTEMPORARY ISSUES BASED ESSAY]

Topic

Aditya L1 Mission

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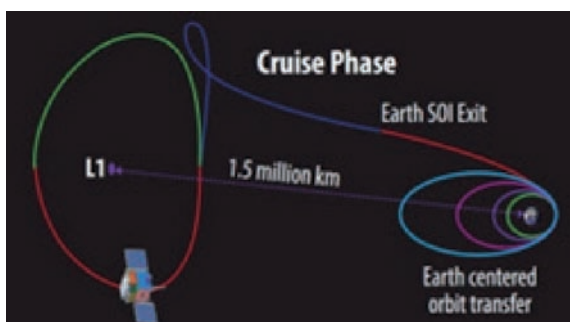
## ADITYA L1 MISSION

**Context:** India took its first step towards the completion of its first-ever solar mission. Recently, Aditya L1 launched successfully, that could revolutionise the understanding of the Sun's dynamics and space weather.

- ◆ Aditya L1 successfully launched on September 2, 2023 from Sriharikota.

### About the Mission:

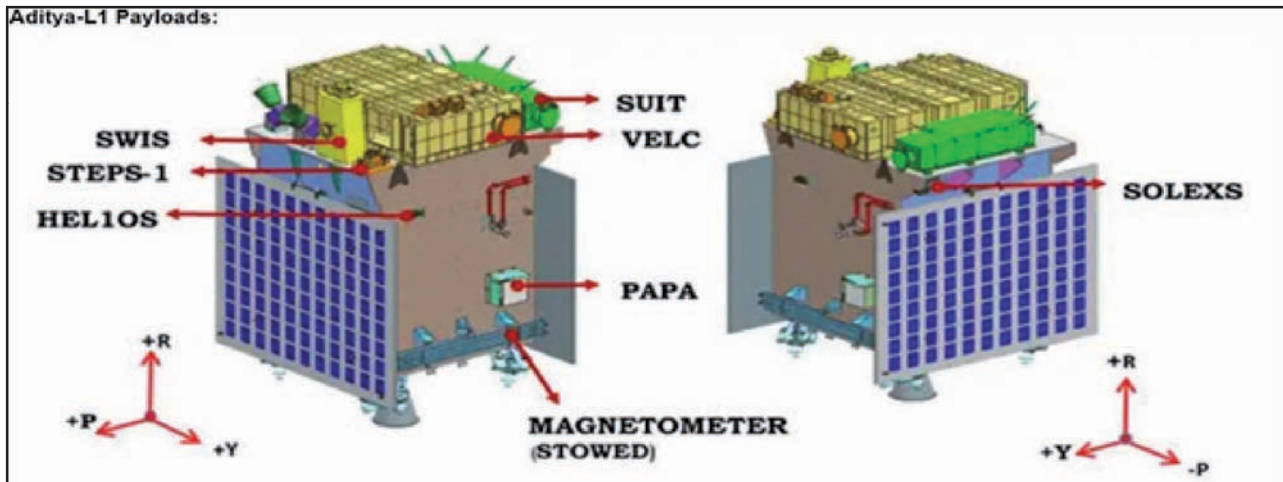
- ◆ The Aditya-L1 mission is the first space-based observatory-class Indian solar mission to study the Sun.
- ◆ **Objective:** The major objectives of Aditya-L1 mission are:
  - ▶ Study of Solar upper atmospheric (chromosphere and corona) dynamics.
  - ▶ Study of chromospheric and coronal heating, physics of the partially ionized plasma, initiation of the coronal mass ejections, and flares
  - ▶ Observe the in-situ particle and plasma environment providing data for the study of particle dynamics from the Sun.
  - ▶ Physics of solar corona and its heating mechanism.
  - ▶ Diagnostics of the coronal and coronal loops plasma: Temperature, velocity and density.
  - ▶ Development, dynamics and origin of CMEs.
  - ▶ Identify the sequence of processes that occur at multiple layers (chromosphere, base and extended corona) which eventually leads to solar eruptive events.
  - ▶ Magnetic field topology and magnetic field measurements in the solar corona.
  - ▶ Drivers for space weather (origin, composition and dynamics of solar wind).
- ◆ **Launch details:**
- ◆ Four months from now, the spacecraft will be successfully placed on its Halo orbit, L1, near the Sun.



- ◆ Soon after that, its seven payloads will come into action to find out answers to some of the most intriguing questions about the Sun.
- ◆ It will revolve around the Sun with the same relative position and hence can see the Sun continuously.
- ◆ **Payloads:** The spacecraft carries seven payloads to observe the photosphere, chromosphere and the outermost layers of the Sun (the corona) using electromagnetic and particle and magnetic field detectors
- ◆ The seven payloads are-
  - ▶ Visible Emission Line Coronagraph(VELC)
  - ▶ Solar Ultraviolet Imaging Telescope (SUIT)
  - ▶ Solar Low Energy X-ray Spectrometer (SoLEXS)
  - ▶ High Energy L1 Orbiting X-ray Spectrometer (HEL1OS)
  - ▶ Aditya Solar wind Particle Experiment(ASPEX)
  - ▶ Plasma Analyser Package For Aditya (PAPA)
  - ▶ Advanced Tri-axial High Resolution Digital Magnetometers
- ◆ Among those seven payloads, four of which will observe the light from the Sun and the remaining three will measure insitu parameters of the plasma and magnetic fields.
- ◆ **Details of payload aims:**
- ◆ The Visible Emission Line Coronagraph (VELC), the primary payload of Aditya L1 will be sending 1,440 images per day to the ground station for analysis on reaching the intended orbit.
- ◆ **SoLEXS payload:** It is a soft X-ray spectrometer onboard Aditya-L1. The payload is designed to measure the solar soft X-ray flux to study solar fares.
- ◆ **SUIT payload:** The Solar Ultra-violet Imaging Telescope (SUIT) payload images the Solar Photosphere and Chromosphere in near Ultra-violet (UV) and also measures the solar irradiance variations in near UV.

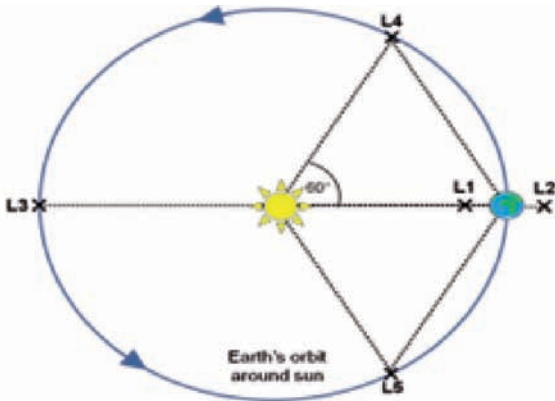
### What is L1 point?

- ◆ L1 is among the five Lagrange points in the Earth-Sun system.
- ◆ At this point, the gravitational forces of the two bodies balance the centrifugal force felt by a smaller object.



Due to the balance of force, the object is not attracted by the Sun, hence would be able to effectively “hover” in a stable position relative to the two larger bodies.

- The chromosphere is also the location of solar activity. For example, solar prominences rise up through the chromosphere from the photosphere.
- The corona is the outermost region of the Sun’s atmosphere.



- Sunspots are regions with temperatures about 1500 K cooler than the photosphere, making them appear darker than their surroundings.
- Solar Winds: The solar wind is nothing more than a stream of charged particles flowing outward from the Sun with an average velocity of about 400 km/sec. It is a natural consequence of the Sun being so hot – the corona gas has too much energy to be gravitationally bound to the Sun.

**Significance:**

- This point is located on the line connecting the two bodies. It is situated in the Earth’s orbital path around the Sun.
- A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the Sun without any occultation/eclipses.

**Why study of Sun is significant?**

- To identify magnetic phenomenon:** Studying the Sun in detail can shed light on the eruptive thermal and magnetic phenomena which if directed towards the Earth could cause severe disturbances in the near-Earth space environment.

**The Sun and its components:**

- The Sun contains about 92% hydrogen and 8% helium.
- Compare that to Earth, where the most common elements are oxygen, magnesium, silicon, and iron.
- The Sun’s core is the hottest part, with temperatures reaching up to 15 million degrees Celsius.
- The Sun’s visible surface, called the photosphere, is much cooler, with a temperature of about 5,500 degrees Celsius.
- The chromosphere is the second layer of the Sun’s atmosphere, and extends from the photosphere about 2,000 kilometers out.

**OTHER ISRO Missions:**

- Shukrayaan-1: Venus orbiter
- Lunar Polar Exploration Mission: Lunar lander, rover

- To study charged particles:** The atmosphere of the Earth as well as its magnetic field acts as a protective shield and blocks a number of harmful wavelength radiations including particles and fields.
- Sun’s influence on Earth:** Without the solar energy the life on earth, cannot exist. The gravity of the sun holds all the objects of the solar system together.

**Other Solar Exploration Missions:**

- JAXA’s other solar exploratory missions are Yohkoh (SOLAR-A) launched in 1991.

- ◆ In 2006, Hinode (SOLAR-B) was launched, which was the successor to Yohkoh (SOLAR-A), the orbiting solar observatory.
- ◆ SOHO (along with NASA and ESA) in 1995; and Transient Region and Coronal Explorer (TRACE), along with NASA, in 1998.

### Key facts about Sun:

- ◆ Sun is the nearest star and the largest object in the solar system.
- ◆ **Age of Sun:** The estimated age of sun is about 4.5 billion years.
- ◆ **Distance:** The distance to the Sun from the earth is about 150 million kilometres, and is the source of energy for the solar system.

### Why Sun is known as a Star?

- ◆ Planets do not twinkle or shine. They remain constant in their brightness and their overall appearance in the night sky due to some other brightness.
- ◆ Any object that blinks, twinkles, or shimmers is a star.
- ◆ Stars have their own brightness.
- ◆ Sun- the star of our solar system is a star because it produces energy by the fusion reaction of Helium turning into Hydrogen.

### Why India needs to gain an edge in solar exploration?

- ◆ **Increasing Global Space economy:** A 2015 report

from the Space Foundation estimated the global space economy to be worth \$323 billion.

- ◆ **Growing commercialization:** ISRO has been actively promoting private participation in the space sector. Collectively domestic private companies in the space sector have raised more than \$245.35 million in funding.
- ◆ **Development of new technologies:** ISRO has been working on developing new technologies such as reusable launch vehicles and Inflatable Aerodynamic Decelerator (IAD).
  - ▶ Agnikul, a domestic startup in the country has successfully completed the test firing of 3D-printed rocket engines.
- ◆ **Expansion of satellite-based services:** ISRO provides satellite-based services in areas such as remote sensing, satellite-based navigation, and satellite-based meteorology, and is looking to expand these services in the future. ISRO has also decided to lend out high-quality satellite-derived data to students, startups, and tech companies at no /minimal costs to stimulate innovation.

### Indian Space Research Organization (ISRO):

- ◆ **The Indian Space Research Organization (ISRO)** was established in 1969 and launched India's first satellite, Aryabhata in 1975.
- ◆ Since then, Indian Space Research Organization (ISRO) has launched several successful missions, including the Mars Orbiter Mission and the Chandrayaan missions to the Moon, demonstrating India's capabilities in space technology.



## Section C [PRELIMS]

To Attempt

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- ☞ World Sanskrit Day
- ☞ Pulikali festival
- ☞ Tibetan Democracy Day
- ☞ Ladakh Autonomous Hill Development Council
- ☞ Special session of Parliament
- ☞ Kakrapar Atomic Power Project (KAPP3)
- ☞ Kakapo population (*Strigops habroptilus*)
- ☞ 'Atlantification' of the Arctic Ocean





## WORLD SANSKRIT DAY

**Context:** World Sanskrit Day, also referred to as International Sanskrit Day, Sanskrit Diwas and Vishva Samskrita Dinam is observed on the day of Shravana Poornima, i.e. 31st August 2023 this year.

### Background:

- World Sanskrit Day has a history that can be traced back, to 1969.
- It was during this year that the Indian Government decided to honor and celebrate the contributions of Pāṇini, a figure, in the realm of Sanskrit language and linguistics.
- The declaration was made to commemorate Pāṇini's work on the occasion of his birth anniversary. Since then this special day has been.



### Key Facts:

- Ashtadhyayi was a Sanskrit treatise (list of rules) on grammar written in the 6th to 5th century BCE by the Indian grammarian Panini.
- This work set the linguistic standards for Classical Sanskrit.
- It sums up in 4,000 sutras the science of phonetics and grammar that had evolved in the Vedic religion.
- Panini divided his work into eight chapters, each of which is further divided into quarter chapters.
- Beyond defining the morphology and syntax of Sanskrit language, Ashtadhyayi distinguishes between usage in the spoken language and usage that is proper to the language of the sacred texts.

### About the day:

- The purpose of this day is to raise awareness and promote Sanskrit, one of India's oldest languages.
- Sanskrit holds importance as it serves as the foundation, for classical texts in disciplines such, as Literature, Philosophy, Mathematics and Science.
- Sanskrit is one of the oldest languages in the world, and it is considered to be the mother of all Indo-Aryan languages.
- It is a highly inflected language, with a complex system of grammar and morphology.



## PULIKALI FESTIVAL

**Context:** As part of the Onam 2023 celebration in Kerala, people across state performed Pulikali (tiger dance).

### The Pulikali festival:

- Pulikali is a traditional folk art form and festival celebrated in the southern Indian state of Kerala.
- On the fourth day of Onam festival, artists paint their bodies like tigers with stripes of yellow, red and black and dance to the rhythm of traditional percussion instruments such as thakil, udukku and chenda.



- The main theme of this folk art is tiger hunting with participants playing the role of tiger and hunter.
- The word "Pulikali" translates to "Tiger Play" in Malayalam, the local language.
- Participants, known as "Pulikali artists," wear colorful costumes resembling tigers and dance through the streets of Kerala's cities and towns.
- The festival is usually part of Onam celebrations, Kerala's harvest festival, and is performed to entertain people and showcase the rich cultural heritage of the state.

**Other Art forms of Kerala:**

- Kathakali
- Kalaripayattu
- Theyyam
- Koodiyattam

- Pulikali involves lively and energetic performances, with drummers accompanying the artists, creating a vibrant and captivating spectacle that attracts both locals and tourists.

**About Onam:**

- Onam is the most important and widely celebrated harvest festival in the southern Indian state of Kerala.
- The festival typically lasts for ten days, with the main celebrations taking place in the month of Chingam, which falls in August or September of the Gregorian calendar.



- Onam is associated with the mythological King Mahabali, who is believed to have been a wise and benevolent ruler. People celebrate his return to Kerala during Onam.
- During Onam, people wear traditional clothing known as "Mundu" for men and "Kasavu saree" for women. These outfits are elegant and white with gold borders.
- Onam is known for its grand feasts called "Onasadya," which includes a variety of vegetarian dishes served on banana leaves.
- Folk dance forms like "Kathakali" and "Pulikali" are performed during Onam, along with other cultural events and competitions.
- The "Vallamkali" or snake boat races are a major highlight of Onam, with beautifully decorated long boats competing in thrilling races.
- Onam is often referred to as the "State Festival of Kerala" and holds a special place in the hearts of Keralites. It reflects the state's cultural diversity and traditions.

**TIBETAN DEMOCRACY DAY**

**Context:** More than 60 years now, Tibetan Democracy Day is globally celebrated on September 2, every year.

**Background:**

- Tibetan Democracy Day, or 'Mangsto Duchen', signifies the start of the Tibetan exile community's democratic system.
- On September 2, 1960, a year after thousands of Tibetans had been forced to flee their home.
- The first elected representatives of the Tibetan Parliament-in-exile took their oaths in Bodh Gaya to inaugurate the Tibetan democratic system.
- The Central Tibetan Administration (CTA), headquartered in Dharamshala, India was also established to oversee the Tibetan diaspora and their democratic governance which serves over 100,000 refugees.
- In 1963, the Dalai Lama enacted the Tibetan constitution based on the ideals of democracy and universal values.
- In 1975, Kashag, the apex body of CTA, declared September 2 as the founding day of Tibetan democracy.
- The Kashag upholds that the rule of law stands as a cornerstone in guaranteeing equality and justice, which are the embodiment of democratic values.

**How the CTA (the Tibetan government-in-exile) works?**

- The CTA, which is based in Dharamshala in Himachal Pradesh, has a branch office in every Tibetan settlement spread across India and abroad.
- The President, Penpa Tsering, CTA runs seven departments: Religion and Culture, Home, Finance, Education, Security, Information and International Relations, and Health.
- The President is directly elected every five years.
- The Tibetan Parliament-in-exile, the highest legislative body of the CTA, comprises 45 members:
  - ▶ 10 representatives from each of the traditional provinces of Tibet, U-Tsang, Dhotoe, and Dhomey;
  - ▶ Two from each of the four schools of Tibetan Buddhism;
  - ▶ Two representing each of the Tibetan communities in North America and Europe; and
  - ▶ One each from Australasia and Asia (excluding India, Nepal and Bhutan).

Every Tibetan above 18 with their Green Book, the main document of identity, is allowed to register in the voter's list.

### India's official policy towards the CTA:

- India considers the Dalai Lama as a revered religious leader and an honoured guest, but it does not encourage political activities by Tibetans.
- It does not recognise any separate government of Tibet functioning in India.
- Although, Tibetan refugees across the world recognise the CTA as their legitimate government.

### The Global stance:

- US is the only government in the world which is politically upfront in supporting the Tibetan issue like on Policies on Tibet (Tibet Policy Act 2002, and Tibet Policy and Support Act 2020), and an appointment of special coordinator on Tibet.
- However, the CTA is not officially recognised by any country.



**Context:** The Supreme Court invalidated Ladakh Autonomous Hill Development Council (LAHDC) election process from a notification recently, ordering a fresh notification within seven days i.e. till September 10.

### About Ladakh Autonomous Hill Development Council:

- LAHDC, Leh is an autonomous district council that administers the Leh district of Ladakh.
- The council was created under the Ladakh Autonomous Hill Development Council Act of 1995.
- LAHDC-Leh has a total of 30 seats and four councillors are nominated by the government.
- The executive arm of the council consists of an executive committee composed of a Chief Executive Councillor and four other executive councillors.
- The autonomous hill council work with village panchayats to take decisions on economic development, healthcare, education, land use, taxation, and local governance which are further reviewed at the block headquarters in the presence of the chief executive councillor and executive councilors.

### Constitutional Provisions

- **Sixth Schedule:** The Sixth Schedule under Article 244 provides for the formation of autonomous administrative divisions — Autonomous District Councils (ADCs) — that have some legislative, judicial, and administrative autonomy within a state.

- ▶ The Sixth Schedule contains special provisions for the administration of tribal areas in the four north-eastern states of Assam, Meghalaya, Tripura and Mizoram.
- ▶ **Autonomous Districts:** The tribal areas in these four states have been constituted as autonomous districts.
- ▶ The governor is empowered to organise and re-organise the autonomous districts.
- ▶ The acts of Parliament or the state legislature do not apply to autonomous districts or apply with specified modifications and exceptions.
- ▶ The power of direction, in this regard, lies either with the President or Governor.
- **District Council:** Each autonomous district has a district council consisting of 30 members, of whom four are nominated by the Governor and the remaining 26 are elected on the basis of adult franchise.
- ▶ The elected members hold office for a term of five years (unless the council is dissolved earlier) and nominated members hold office during the pleasure of the governor.
- ▶ Each autonomous region also has a separate regional council.

### Powers of the Council

- The district and regional councils administer the areas under their jurisdiction.
- They can make laws on certain specified matters like land, forests, canal water, shifting cultivation, village administration, and the inheritance of property, marriage and divorce, social customs and so on. But all such laws require the assent of the Governor.
- They can constitute village councils or courts for trial of suits and cases between the tribes. They hear appeals from them. The jurisdiction of the high court over these suits and cases is specified by the governor.
- The district council can establish, construct or manage primary schools, dispensaries, markets, ferries, fisheries, roads and so on in the district.
- They are empowered to assess and collect land revenue and to impose certain specified taxes.



**Context:** Special Session of Parliament (13th Session of 17th Lok Sabha and 261st Session of Rajya Sabha) has been called from September 18-22 having 5 sittings.

### What does a Special session mean?

- The Constitution does not mention the term “special session.” The President, who summons a regular Parliamentary session will summon this session also as per provisions of Article 85(1) of the Constitution.

The Constitution does not define a ‘special session’; however, Article 352 (Proclamation of Emergency) of the Constitution does refer to a “special sitting of the House”.

- The government determines the date and duration of parliamentary sessions.
- The Cabinet Committee on Parliamentary Affairs takes this decision.
- It currently has ten Ministers, including those for Defence, Home, Finance, Agriculture, Tribal Affairs, Parliamentary Affairs, and Information and Broadcasting.
- The Law Minister and the Minister of State for External Affairs are special invitees to the Committee.
- The President is informed about the Committee’s decision, who then summons Members of Parliament to meet for the session.

### Constitutional Provisions:

- The Constitution specifies that six months should not elapse between two parliamentary sessions.
- This provision is a colonial legacy. The framers of the Constitution borrowed it from the Government of India Act of 1935.
- It allowed the British Governor General to call a session of the central legislature at his discretion, requiring that the gap between two sessions should not be more than 12 months.



### KAKRAPAR ATOMIC POWER PROJECT (KAPP3)

**Context:** Recently, the third unit of the indigenously developed 700-megawatt electric (MWe) nuclear power reactor at the Kakrapar Atomic Power Project (KAPP3) in Tapi district of Gujarat has commenced operations at full capacity.

### Background:

- The foundation of KAPP-3 happened in November 2010 and this unit was originally expected to be commissioned in 2015.

- State-owned Nuclear Power Corporation of India Ltd (NPCIL) is responsible for construction and management of the plant.
- The capital investment for these nuclear power projects is being funded with a debt-to-equity ratio of 70:30, with the equity part of NPCIL being funded from internal resources and through budgetary support.
- The reactor at the Kakrapar Atomic Power Project (KAPP) had started commercial operations on June 30 but was operating at 90 per cent of its capacity till now.

Before the inauguration of KAPP, the biggest reactor of indigenous design was the 540 MWe PHWR, two of which have been deployed in Tarapur, Maharashtra.

### About:

- KAPP-3 is the country’s first and the biggest indigenously developed variant of the Pressurised Heavy Water Reactor (PHWR).
- A PHWR is a nuclear power reactor, commonly using unenriched natural uranium as its fuel that uses heavy water (deuterium oxide D<sub>2</sub>O) as its coolant and moderator.
- PHWR technology was started in India in the late 1960s with the construction of the first 220 MWe reactors, Rajasthan Atomic Power Station (RAPS-1).
- Significance:
  - ▶ The new 700MWe unit addresses the excess thermal margins (thermal margin refers to the extent to which the operating temperature of the reactor is below its maximum operating temperature) — and also marks an improvement in the economies-of-scale, without significant design changes to the 540 MWe reactor.

Currently, KAPP3 nuclear power capacity constitutes around 2 per cent of the total installed capacity of 4,17,668 MW.

### Nuclear Power Corporation of India Limited:

- The Nuclear Power Corporation of India Limited (NPCIL) is an Indian public sector undertaking, Headquartered at Mumbai.
- It is wholly owned by the Government of India and is responsible for the generation of nuclear power for electricity.
- NPCIL is administered by the Department of Atomic Energy (DAE).



## KAKAPO POPULATION (STRIGOPS HABROPTILUS)

**Context:** The genetic mapping of almost the entire kākāpō population has discovered some specific traits that will help conservation biologists in their efforts to save these parrot species.

### About the Species:

- The Kakapo (*Strigops habroptilus*), also called owl parrot is a giant flightless nocturnal parrot (family Psittacidae) of New Zealand.
- It is the heaviest parrot in the world, weighing up to 4 kilograms. It is also the only living species of parrots that cannot fly.
- With a face like an owl, a posture like a penguin, and a walk like a duck, the extraordinarily tame and gentle kakapo is one of strangest and rarest birds on Earth.



The total known population of living individuals is 247 as of 2023.

- They only breed every few years, triggered by the availability of certain forest foods such as the fruits of the native rimu tree.
- Threats to their population:
  - ▶ kākāpō suffer from diseases such as the fungal infection aspergillosis.
  - ▶ Their eggs are also infertile, due to less breeding.
- Conservation status:
  - ▶ IUCN: Critically Endangered (IUCN Red List)
  - ▶ CITES: Appendix I

### The Rimu fruit (*Dacrydium cupressinum*):

- The mature Rimu tree towers over the canopy with its weeping leaves and shedding bark.

- Rimu plays an integral role in the mating cycle of the Kākāpō.
- The periodic mast-seeding of Rimu every couple of years helps synchronise Kākāpō mating efforts.
- Unripe Rimu fruit acts as ‘kākāpō viagra’ stimulating birds of both sexes into breeding, whereas the ripe fruit contains the perfect combination of nutrients and energy for growing chicks.



## ‘ATLANTIFICATION’ OF THE ARCTIC OCEAN

**Context:** In a recent study published in the journal *Science*, an international team of scientists has shed new light on the “Atlantification” of the Arctic Ocean. This phenomenon explains the trend in Arctic Ocean sea ice loss that seems to have plateaued since 2007.

### Key-highlights of the Study

- The study delves into the multifaceted influence of the Arctic dipole on the Arctic Ocean climate.
- The researchers discovered that the Arctic dipole follows an approximately 15-year cycle.
  - ▶ They surmise that we’re nearing the end of the present regime.
- When broken down, the current “positive” regime of the Arctic dipole, which has persisted since 2007, is characterized by high pressure centered over the Canadian sector of the Arctic producing clockwise winds, and low pressure over the Siberian Arctic, with counter-clockwise winds.

### Arctic Dipole:

- The Arctic dipole, also known as the Dipole Anomaly, is a relatively recent climate pattern characterized by atmospheric pressure variations in the Arctic region.
- It has garnered increased attention due to its pronounced impact on the sea ice extent and its potential linkage with mid-latitude weather patterns.
- This specific wind configuration affects upper ocean currents and has a wide-ranging influence, from air temperatures to sea-ice drift, heat exchanges, and even ecological implications.
- Switchgear mechanism: The research also unveils a “switchgear mechanism” responsible for the alternating changes in the Farm Strait and the Barents Sea. These alterations, triggered by the Arctic dipole mechanisms, have profound effects.

- An influx of warmer Atlantic water to the Arctic is changing the makeup of this ocean stratification.
- Driven by climate change, the Arctic Ocean is seeing;
  - ▶ sea ice reductions
  - ▶ weakening of the halocline
  - ▶ reduction in the depth of the Atlantic warm waters
  - ▶ Atlantic water is having an increasing influence on the Arctic Ocean

- ▶ **Arctic halocline:** In between these two layers, there is an intermediate layer known as the Arctic halocline where the warm, salty water mixes with the cold, fresh surface layer above.
- ▶ **Arctic deep water:** Beyond the warm and salty Atlantic layer, there is another water mass of cold and slightly saltier water, known as Arctic deep water.

### Major Layers of the Arctic Ocean

- ◆ The Arctic Ocean is formed of numerous water layers that remain in place due to the differences in salt concentration, which affect the buoyancy of the water.
  - ▶ **Top Layer:** The top layer is freshwater with a low salinity, held at near freezing point, which comes from the melting of sea ice and from Arctic rivers that release into the ocean.
  - ▶ **Layer of Salt:** Beneath this layer comes a layer of saltier and warmer water from the Atlantic.

### What are factor is responsible for maintaining the layered structure?

- ◆ Thermohaline circulation, also known as the "Great Ocean Conveyor Belt," is a key factor in maintaining the layered structure of the Arctic Ocean.
- ◆ It involves the movement of ocean water based on differences in temperature (thermo) and salinity (haline).
- ◆ In the Arctic Ocean, cold and dense water sinks beneath warmer and less dense water, creating a layered structure that helps in retaining the various water layers in place.



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## Section D [QUIK BYTE]

- ☞ PM Modi to attend ASEAN, East Asia Summit
- ☞ United Nations World Tourism Organization (UNWTO)
- ☞ PM-DAKSH
- ☞ Competition Commission of India
- ☞ Deemed University
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- ☞ Gramodyog Vikas Yojana (GVY)
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- ☞ Backward evolution
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- ☞ Tharman Shanmugaratnam
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- ☞ Eritrea

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- ☞ Stump-tailed macaque
- ☞ *Kappaphycus alvarezii*
- ☞ *Schizostachyum andamanicum*

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## PM Modi to attend ASEAN, East Asia Summit



Prime Minister is going to Indonesia to attend the 20th ASEAN-India Summit and 18th East Asia Summit.

### About Organisations:

- **ASEAN**

- ▶ Founded in: 1967
- ▶ Headquarters: Jakarta, Indonesia
- ▶ The ASEAN (Association of Southeast Asian Nations) is considered one of the most influential groupings in the region, and India and several other countries including the US, China, Japan and Australia are its dialogue partners.

### East Asia Summit (EAS)

- **Established in:** 2005
- **Headquarters:** Kuala Lumpur, Malaysia
- EAS is the Indo-Pacific's premier forum for strategic dialogue.
- It is the only leader-led forum at which all key Indo-Pacific partners meet to discuss political, security and economic challenges facing the region,
- The EAS has 18 members –
  - ▶ the ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam) along with Australia, China, India, Japan, New Zealand, the Republic of Korea, Russia and the United States.
- ASEAN leads the forum, and the chair position rotates between ASEAN Member States annually.

## United Nations World Tourism Organization (UNWTO)



Ministry of Tourism, Government of India, in collaboration with the United Nations World Tourism Organization (UNWTO), unveiled the G20 Tourism and SDG Dashboard.

### About:

- UN agency responsible for promotion of responsible, sustainable and universally accessible tourism.
- **Objectives:**
  - ▶ Mainstreaming tourism in the global agenda
  - ▶ Promoting sustainable tourism development
  - ▶ Fostering knowledge, education and capacity building
  - ▶ Improving tourism competitiveness
- ▶ Structure:
  - ▶ General Assembly acts as a supreme body and
  - ▶ Executive Council takes all measures, in consultation with Secretary-General.
- It has 159 Member States and over 500 Affiliate Members. India is also a member to it.

## PM-DAKSH



During last three years of implementation from 2020-21 to 2022-23, a total of 107156 beneficiaries have been trained and an amount of Rs. 213.83 crore has been spent under PM-DAKSH.

**What is PM-DAKSH Yojana?**

- PM-DAKSH (Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi) Yojana is a Central Sector Scheme.
- It was launched by the Ministry of Social Justice & Empowerment (MoSJ&E) in 2020-21.
- It is a National Action Plan for skilling marginalized persons covering SCs, OBCs, EBCs, DNTs, Sanitation workers including waste pickers.
- Objective: to increase the skill levels of the target youth by providing them short term and long term skills, followed by assistance in wage/self-employment.

**Eligibility:**

Candidates of age group 18-45 years belonging to any of the following categories can apply for the training programme under PM-DAKSH:

- Persons belonging to Scheduled Castes.
- Other Backward Classes (OBCs) having annual family income below Rs. 3 lakh.
- Economically Backward Classes (EBCs) having annual family income below Rs. 1 lakh.
- De-Notified, Nomadic and Semi-Nomadic Tribe (DNT).
- Safai Karamcharis (including waste pickers) and their dependants.

## Competition Commission of India



Recently, the Competition Commission has approved Tata Group's proposed acquisition of debt-laden Air India as well as its two subsidiaries.

**About the deal:**

- The Rs.18,000 crore-deal that includes the winning bidder Talace taking over Rs.15,300 crore-worth debt, is a major step in the government's efforts over the years to revive the ailing airline.

**The Competition Commission of India:**

- CCI is a statutory body responsible for enforcing the Competition Act, of 2002; it was duly constituted in March 2009.
- The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act) was repealed and replaced by the Competition Act, 2002, on the recommendations of the Raghavan committee.

- ◆ Composition:
  - ▶ The Commission consists of one Chairperson and six Members who shall be appointed by the Central Government.
  - ▶ The Chairperson and every other Member shall hold office as such for a term of five years from the date on which he enters upon his office and shall be eligible for re-appointment
  - ▶ The Chairperson or other Members shall not hold office as such after he has attained the age of sixty-five years.

### Deemed University



The National Council of Educational Research and Training (NCERT) has been bestowed with the status of a deemed-to-be university.

#### What is a deemed university?

- A deemed university is recognised under Section 3 of the University Grants Commission (UGC) Act, 1956.
- The Centre can on the recommendation of the University Grants Commission declare an institute of higher learning (other than universities) as a 'Deemed-to-be-university'.
- The tag allows such institutes that work at an extremely high level in a specific area – the same academic status and privileges as a university.

#### About NCERT:

- NCERT was founded in 1961 under the Society Act.
- The organisation advises the Centre on education.

### Pradhan Mantri Jan-Dhan Yojana (PMJDY)



The PMJDY has completed Nine years recently.

#### About PMJDY

- Pradhan Mantri Jan-Dhan Yojana (PMJDY) is a national mission for financial inclusion to ensure access to financial services, namely, banking/ savings and deposit accounts, remittance, credit, insurance, pension in an affordable manner.
- Account can be opened in any bank branch or business correspondent (Bank Mitra) outlet.
- PMJDY accounts are being opened with zero balance.
- All citizens of Indian nationality are eligible.

#### Progress so far:

- More than 50 crore people have been brought into the formal banking system through the opening of Jan Dhan Accounts.
  - ▶ Among these accounts, approximately 55.5% belong to women, and 67% have been opened in rural / semi-urban areas.
- The cumulative deposits in these accounts have surpassed Rs.2 lakh crore.

## Gramodyog Vikas Yojana (GVY)



The Chairman of the Khadi and Village Industries Commission (KVIC), recently, distributed toolkits and machinery to artisans in Bhubaneswar, Odisha, as part of the Gramodyog Vikas Yojana.

### About Gramodyog Vikas Yojana:

- **Launched in:** 2020
- Gramodyog Vikas Yojana (GVY) scheme is for promotion and development of village industries through common facilities, technological modernization, training etc. & other support and services for promotion of village Industries.
- It is one of the two components of the Khadi Gramodyog Vikas Yojana which is a Central Sector Scheme (CSS).
- GVY has the following components/ verticals from the activities under Village Industries:
  - ▶ Wellness & Cosmetics Industry (WCI)
  - ▶ Handmade Paper, Leather & Plastic Industry (HPLPI)
  - ▶ Agro Based & Food Processing Industry (ABFPI)
  - ▶ Mineral Based Industry (MBI)
  - ▶ Rural Engineering & New Technology Industry (RENTI)
  - ▶ Service Industry

### About KVIC:

- The Khadi and Village Industries Commission (KVIC) is a statutory body.
- It functions under the Ministry of Micro, Small and Medium Enterprises.
- Objective: to promote Khadi and other micro to medium scale industries in the rural areas.

## Sandes app



Delhi Police has chosen 'Sandes' app, an Indian instant messaging service, even for communication security breaches for the upcoming G20 Summit.

### About the app:

- The mobile application, developed by the National Informatics Centre (NIC), was launched in August 2020.
- The app, an upgrade to the Government Instant Messaging System (GIMS), has undergone major updates making the platform more secure. GIMS was created for government officials only to provide them messaging software similar to WhatsApp.

- However, the Sandes app provides versions for Android, iOS, and desktop for both individuals and government employees.
- The app enables safe information transmission.
- Users can only access the documents they share on the app as they do so over a secure internet protocol.
- A message can be marked as Confidential, on Priority, or Auto Delete, according to the Sandes platform's official website.

### One-hour trade settlement



SEBI plans to reduce trade settlement time from T+1 to just one hour for faster transactions.

#### About One-hour trade settlement:

- Settlement is a two-way process which involves the transfer of funds and securities on the settlement date.
- A trade settlement is said to be complete once purchased securities of a listed company are delivered to the buyer and the seller gets the money.
- The current cycle of T+1 means trade-related settlements happen within a day, or 24 hours of the actual transactions.
- India became the second country in the world to start the T+1 settlement cycle in top-listed securities after China.
- The technology for implementation of one-hour trade settlement exists but for instantaneous trade settlement, the system needs some additional technology development, which may take more time.

#### Benefits of One-hour trade settlement:

- Under the current T+1 settlement cycle, if an investor sells securities, the money gets credited into the person's account the next day.
- In one-hour settlement, if an investor sells a share, the money will be credited to their account in an hour, and the buyer will get the shares in their demat account within an hour.

### International Finance Corporation

Shriram Housing Finance Limited (SHFL), an affordable housing finance company, and International Finance Corporation (IFC), a member of the World Bank, announced a partnership to launch an affordable green housing lending product for self-constructed homes.

#### About:

- Founded in: 1956
- Parent Organisation: World Bank Group
- Headquarters: Washington, D.C. (United States)

- IFC provides financing of private-enterprise investment in developing countries around the world, through both loans and direct investments.
- It also provides advisory services to encourage the development of private enterprise in nations that might be lacking the necessary infrastructure or liquidity for businesses to secure financing.

### Agriculture Infrastructure Development cess (AIDC)



- The finance ministry notified that imports of LPG, liquified propane and liquified butane have been fully exempted from Agriculture Infrastructure Development cess (AIDC).

#### What is AIDC?

- AIDC is a tax that the government of India levies on commercial agricultural production in the country.
- The production capacity determines the charge rates.
- The government of India uses the amount collected through the Agriculture Infrastructure and Development Cess for infrastructure building all over the country.

#### About Cess:

- Cess is a kind of special-purpose tax which is levied over and above basic tax rates.
- Cess and surcharges are levied by the Central government for the purposes of the Union under Article 271 of the Constitution of India.
- The proceeds of such surcharge and cess go towards meeting certain specific needs such as financing of centrally-sponsored schemes.

### Mahendragiri



- The Indian Navy's new warship, Mahendragiri has been launched recently in Mumbai.

#### About:

- Developed by: Mazagon Dock Shipbuilders Limited (MDL).
- Mahendragiri is named after a mountain peak in the Eastern Ghats of Odisha. It is the seventh ship of Project 17A frigates series.
- These warships follow the Project 17 Class Frigates (Shivalik Class) and boast enhanced stealth features, advanced weapons, sensors, and platform management systems.

#### Project 17A:

- Under the Project 17A program, a total of four ships by M/s MDL and three ships by M/s GRSE are under construction.
- The first six ships of the project have been launched so far by MDL & GRSE, between 2019-2023.

### IAF's annual training exercise- Trishul



- The annual training exercise, Trishul, of the Indian Air Force's (IAF) Western Air Command (WAC) began.

#### Key-highlights

- Organised by: IAF's Western Command
- Aim: to test the combat capabilities of the force and assess various operational dimensions.
- It is said to be one of the largest air exercises to be carried out by the Indian Air Force (IAF) in recent times.
- The fighter jets to be part of the drills include Rafales, Su-30 MKIs, Jaguars, Mirage-2000s, MiG-29s and MiG-21 Bisons.

### Scrub typhus



- Scrub typhus has been detected in as many as 732 people, and five deaths from the illness have been recorded in Himachal Pradesh so far this year.

#### About:

- Scrub typhus is a form of bush typhus brought on by the bacteria *Orientia tsutsugamush*.
- It is a rickettsial illness. It is transmitted to people via the bites of infected chiggers (larval mites).
- It is a systemic illness and can present as a vasculitis-like infection.
- Chiggers, sometimes known as larval mites, are microscopic mites that can be found in rural and forested areas of Asia, the Pacific Islands, and some regions of Australia.
- It can be caused by fleas, mites, lice, and other pest bites.
- The typhus bacteria are spread by anthropods.
- Scratching the bite site makes the skin more susceptible to infection.

## MISCELLANEOUS

### Ramon Magsaysay Award



Oncologist Ravi Kannan, a recipient of India's fourth-highest civilian award Padma Shri and the director of Assam's Cachar Cancer Hospital and Research Centre (CCHRC), has been named one of the four winners of the 2023 Ramon Magsaysay Award.

#### Ravi Kannan's contribution:

- He got this award for Strong devotion to his medical profession, focusing on what medicine is truly for: pro-health and people-centred treatment.

#### About the award:

- The Ramon Magsaysay Award is often called the 'Nobel Prize of Asia'.
- This year, in the ceremony's 65th edition, four Asians were given the Ramon Magsaysay Award.
- The award carries a certificate, a medallion bearing the likeness of the late President, and a cash prize of USD 50,000.

## CONCEPT IN NEWS

## Backward evolution



The Ulas family in Turkey's Hatay has baffled scientists for quite a long time because some of its members walk on using all hands and legs. Turkish scientists have called the family as proof of 'backward evolution'.

**What is backward evolution?**

- Devolution, de-evolution, or backward evolution is the notion that species can revert to supposedly more primitive forms over time.
- One of the examples of this is Penguins, as their ancestors were able to fly, but they lost that ability quickly after the demise of the large dinosaurs.
- Research shows that, the increased evolution of selfless traits, such as sharing food and keeping watch for one another, is mathematically equivalent to the decreased evolution of individually beneficial traits.

## Ecocide



Mexico has recently considered, passing a law to make ecocide a crime.

**About:**

- Ecocide refers to the severe and widespread harm or destruction of the environment, often due to human activities.
- Ecocide or 'killing one's home' or 'environment' refers to acts like port expansion projects, deforestation, illegal sand mining, polluting rivers and releasing untreated sewage, etc., that destroy fragile natural ecosystems and local livelihoods.
- Ecocide is not yet recognized as an international crime but is gaining traction as a concept.
- It involves acts that result in the extensive damage or destruction of ecosystems, biodiversity, or the natural environment.

## PERSONALITY IN NEWS

## Tharman Shanmugaratnam

Indian-origin economist Tharman Shanmugaratnam has won the Presidential election in Singapore.

- Tharman Shanmugaratnam defeated two contenders of Chinese origin in the country's first contested presidential polls since 2011.

**About:**

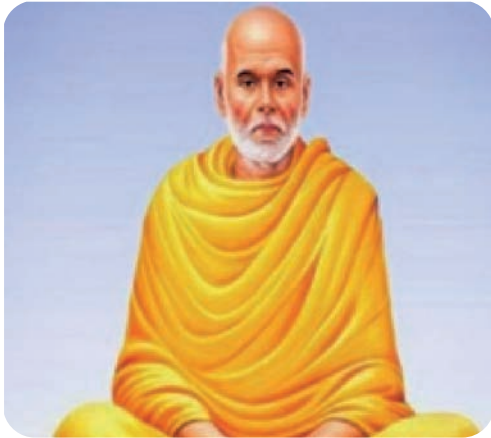
- As head of state, he will represent us at home and abroad, and exercise custodial powers, including over the reserves and key appointments.





- He will be the ninth president of Singapore and the third India-origin.
- He joined politics in 2001.
- Tharman Shanmugaratnam had served as Singapore's Deputy prime minister from 2011 to 2019.
- He has also worked in the public sector and held ministerial positions.
- From 2011 to 2014, he chaired the International Monetary and financial committee acted as first Asian to hold that position.

## Sree Narayana Guru



The 169th birth anniversary celebrations of Sree Narayana Guru has recently commenced at Chempazhanthu in Thiruvananthapuram.

### About Sree Narayana Guru (1856-1928):

- Sree Narayana Guru was born on 22nd August, 1856 to Madan Asan in a village near Thiruvananthapuram, Kerala.
- His family belonged to the Ezhava caste and was considered 'avarna' according to the social mores of the time.
- Right from his childhood he loved solitude and always indulged himself in deep contemplation.
- He was intensely drawn to worship at the local temples and composed hymns and several devotional songs.
- From an early age, he was drawn towards asceticism. He lived as a hermit in a forest for eight years.
- He learned Vedas, Upanishads, literature, logical rhetoric of Sanskrit, Hatha Yoga and other philosophies.
- In 1903, Dr. Padmanabhan Palpu he established the Sree Narayana Dharma Paripalana Yogam (SNDP), a charitable society and the Sree Narayana Guru become a First president.
- The organisation continues to mark its strong presence to this day.
- In 1924, the Sivagiri pilgrimage was established to promote the virtues of cleanliness, education, devotion, agriculture, handicrafts, and trade.
- The Philosophy of Sree Narayana Guru: Was became one of the greatest proponents and re-evaluators of Advaita Vedanta, the principle of non-duality put forward by Adi Shankara.
- He also has many contributions during freedom struggle of India.
- He died on 20th September, 1928 and the day is observed as Sree Narayana Guru Samadhi in Kerala.

## LOCATION IN NEWS

## Eritrea

Amnesty report mentioned recently that Eritrean soldiers extrajudicially executed civilians and sexually enslaved women for months after a peace agreement last year.

**About:**

- Location: East African country located on Horn of Africa on the Red sea.
- Bordered by: Sudan, Ethiopia, Djibouti.
- Maritime border: Saudi Arabia and Yemen
- Geographic features:
  - ▶ Major Rivers: Gash, Tekezē (Satit), Baraka, and Anseba.
  - ▶ Highest point: Mount Soira.

## SPECIES IN NEWS

## Stump-tailed macaque



The Delhi zoo now houses a new animal species – the stump-tailed macaque.

**Scientific name: *Macaca arctoides***

- The stump-tailed macaque, also called the bear macaque, is a species of macaque native to South Asia and Southeast Asia.
- In India, it occurs south of the Brahmaputra River, in the northeastern part of the country.
  - ▶ Its range in India extends from Assam and Meghalaya to eastern Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura.
- IUCN Red List: Vulnerable

## Kappaphycus alvarezii



The government plans a seaweed park in Tamil Nadu, ignoring the threat that *Kappaphycus alvarezii* which is widely grown invasive seaweed, poses to corals in the Gulf of Mannar Marine National Park running along the state's coastline.

**About:**

- It is seaweed (alga) which is native to the Indo-Pacific region.
- The International Union for Conservation of Nature lists it as one of the world's 100 most invasive species.
- It is one of the prime threats that killed the corals near Kurusadai which was deliberately introduced in Ramanathapuram for commercial cultivation some two decades ago.

**The Gulf of Mannar National park:**

- The Gulf of Mannar is one of the biologically richest coastal regions in the entire mainland of India.
- It is the first Marine Biosphere Reserve in South and South East Asia.
- In India, the Gulf of Mannar region in Tamil Nadu is one of the four major coral reef areas and the others are the Gulf of Kutch in Gujarat, Lakhsadweep and Andaman and Nicobar islands.
- This Biosphere Reserve encompasses a chain of 21 islands (2 islands already submerged) and adjoining coral reefs off the coasts of the Ramanathapuram and the Tuticorin districts.

**Schizostachyum andamanicum**



The patent office of Government of India has granted a patent to Botanical Survey of India for 'reusable straw and its manufacturing'.

- The reusable straw is developed from a species of endemic bamboo plant which is found in the Andamans and Nicobar Islands

**About the bamboo species:**

- The bamboo species *Schizostachyum andamanicum* was discovered on the island about three decades ago and now its economic potential has received a boost with the patent for reusable straw and its manufacturing.
- *Schizostachyum andamanicum* is a tropical grass that is native to India, Sri Lanka, and Myanmar.
- It has a tufted habit and grows to a height of 0.3-1.2 m.
- It is found in open grasslands, scrub and dry deciduous forests.

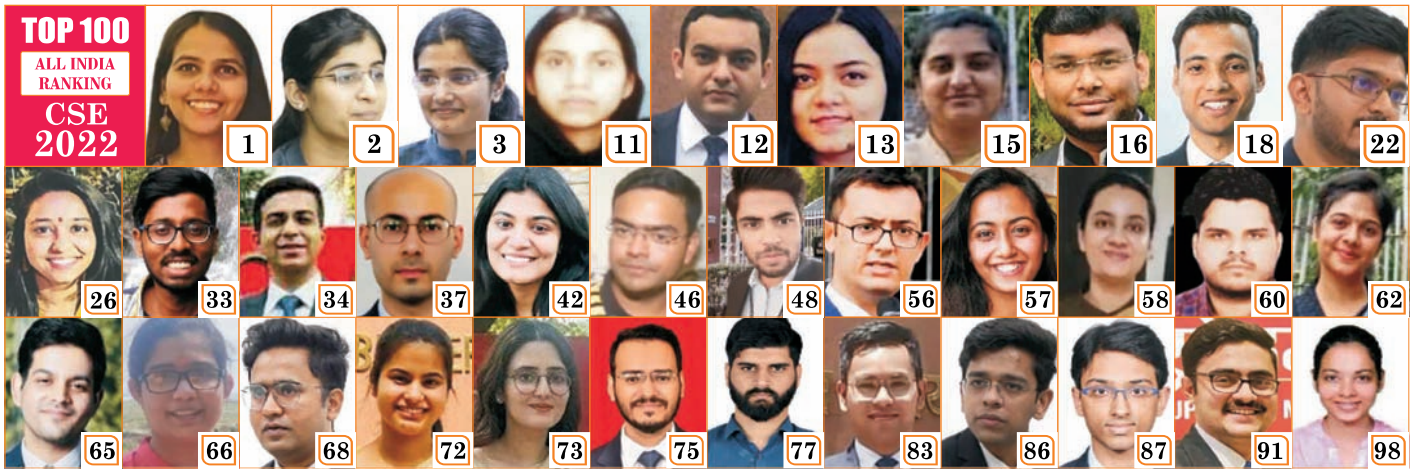
**Uses:**

- *Schizostachyum andamanicum* is used as an ornamental grass in landscaping, and its seeds are used as bird feed.
- It is also used as a fodder grass for livestock and as a soil stabilizer.

**Significance:**

- The germplasm of the bamboo species is only found in some forested areas of Andamans and large-scale production of the straw will be dependent on commercial cultivation of the species.





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