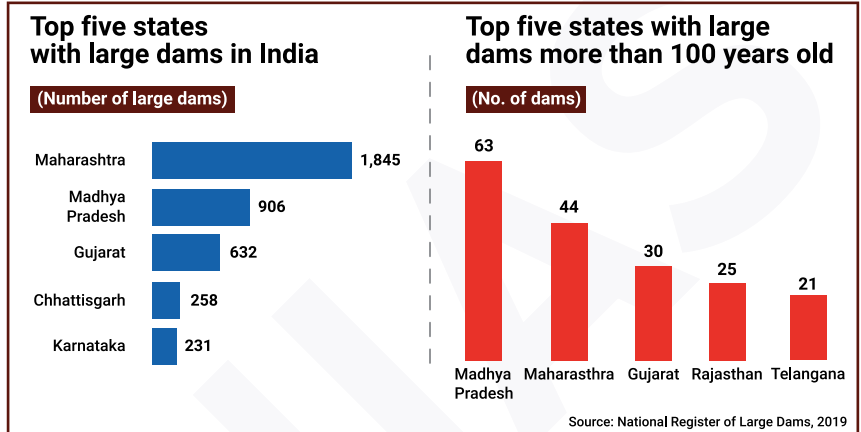


## Dam collapsed in Sikkim due to Floods

- **Damage to Chungthang Dam in Sikkim** (source for hydropower plant) highlighted the **risks of dam failures** in India.
  - ⊕ Floods were caused by a **glacial lake outburst of South Lhonak Lake in North Sikkim**.
- Dam is a **structure built across a stream or river to hold water back**. Dams can be used to **store water, control flooding, and generate electricity**.
- **Top dam failures globally**
  - ⊕ **1975: Banqiao dam failure in China** resulted in collapse of 60 other downstream dams and killed more than 80,000 people.
  - ⊕ **1979: Machchhu Dam failure in Morbi, Gujarat** claimed over 2,000 lives.
- **Concerns associated with dams**
  - ⊕ 293 large dams are over **100 years old**.
  - ⊕ **Lack of funds** for repair and maintenance of dams.
  - ⊕ Extinction of **fish and other aquatic species**, losses of forest, wetland and farmland etc.
  - ⊕ Siltation **reduces water storage capacity of reservoir**, undermines its effectiveness for **power-generation**, irrigation and flood control.
- **Steps taken for dam safety**
  - ⊕ **Dam Safety Act, 2021** provides for **proper surveillance, inspection, operation and maintenance** of specified dams.
  - ⊕ **Dam Rehabilitation and Improvement Project (DRIP)** with external funding for improving dam safety and operational performances.



## Armed Palestinian group Hamas launched unprecedented attack under 'Operation Al-Aqsa Storm' on Israel on 50<sup>th</sup> year of Yom Kippur war

- Hamas are **Militant organization** that politically **controls Gaza Strip** and **does not recognised Israel's statehood**.
  - ⊕ Hamas violently opposes the **Oslo peace accords** (1993) under which Palestine Liberation Organization (PLO) **formally recognised state of Israel**.
    - ◆ Founded in 1964 PLO sits at the UN as a **non-member state, Palestine**.
  - ⊕ In return Israel allowed **Palestinians some form of limited self-governance in Gaza and the West Bank**.
- **About conflict between Arab Palestinians and Jews**
  - ⊕ Roots of the conflict lie in the **first World War** and disintegration of the Ottoman Empire.
  - ⊕ **Balfour declaration in 1917** by Britain supported establishing a national home for **Jewish people in Palestine**.
  - ⊕ In **1947 the UN voted to split** Palestine between Arabs and Jews.
    - ◆ Jewish residents accepted the agreement and **declared independence of Israel in 1948** while **Arabs rejected the agreement** leading to the 4 wars.
  - ⊕ Yom Kippur or Ramadan War of 1973 **was the 4<sup>th</sup> Arab-Israeli war fought between Israel on one side and Arabs led by Egypt and Syria on the other over the dispute on Palestinian territory**.
  - ⊕ It led to **Camp David Accords in 1978** which marked the **first instance of an Arab country recognising Israel as a state** and Israel returned the Sinai Peninsula to Egypt.



- **India's stand on conflict:** India has traditionally supported **Two-state solution** and the **right of self-determination of the Palestinian people**.

## 52<sup>nd</sup> Goods and Services Tax Council (GST) Council Meeting held

### Key recommendation

- ⊕ **District Mineral Foundations Trusts** are **Governmental Authorities** and eligible for the **exemptions from GST**.
- ⊕ Reduction of GST rate **from 28% to 5%**, on **molasses**.
  - ◆ It will facilitate faster payments to sugarcane farmers from sugar mills.
- ⊕ **Keep Extra Neutral Alcohol (ENA)** used for manufacture of alcoholic liquor **for human consumption outside GST**.
  - ◆ ENA is **highly concentrated alcohol** and key ingredient for pharmaceuticals, perfumes, toiletries etc.
- ⊕ **Qualification of members of GSTAT**: Alignment of provisions of the CGST Act, 2017 with **Tribunal Reforms Act, 2021** to ensure
  - ◆ **Minimum age of President and Member** should be **50 years** and their **tenure** should be upto **age of 70 years** and **67 years** respectively.

### About GST Council

- ⊕ It is a **constitutional body** under **Article 279A** (101 Constitution Amendment Act, 2016).
- ⊕ **Chairperson**: Union Finance Minister
- ⊕ **Members**:
  - ◆ Union Minister of State, in-charge of Revenue
  - ◆ Minister in charge of finance or taxation or any other Minister nominated by each State Government
- ⊕ **Function**: Making recommendations on issues related to implementation of GST
- ⊕ **Decision-making through voting**: Decision requires a **3/4 th majority** of members present and voting.
  - ◆ Centre's share is 33% of votes cast.

### About GST Appellate Tribunals (GSTAT)

- GSTAT is a **statutory body** under the **Central GST Act, 2017**.
- It is the **forum of second appeal** in GST laws and the **first common forum of dispute resolution** between **Centre and States**.
  - ⊕ It is mandated to **hear appeals against orders passed by Appellate Authority or Revisional Authority**.

## India Meteorological Department (IMD) and Christ University sign a Memorandum of Understanding (MoU) to collaborate on climate research

- Scope of the MoU extends to **human resource training, development, research** and publications in **climate sciences**.
- It will facilitate the **capacity-building programme**, one of the **main goals** of the **proposed National Framework for Climate Services (NFCS)**.

### About NFCS:

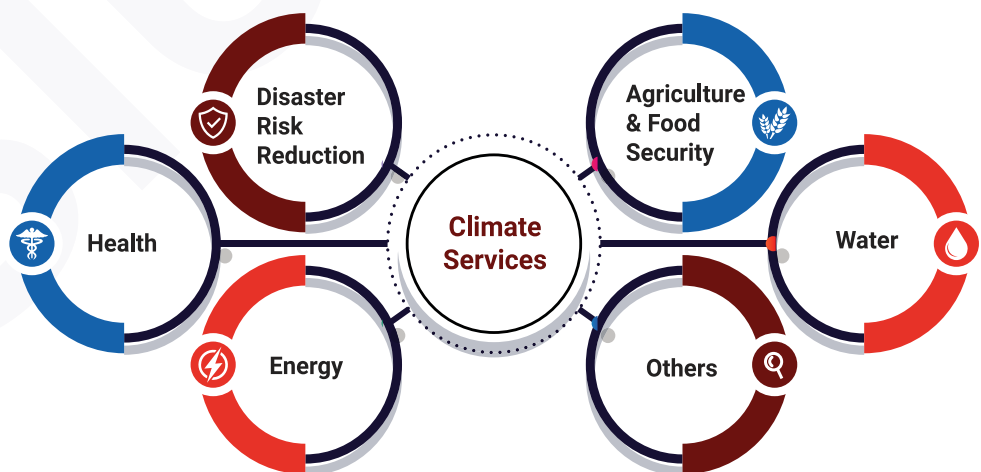
- ⊕ **NFCS - India** is proposed under **Global Framework for Climate Services (GFCS)**.
  - ◆ **Switzerland, China, Germany and UK** have also launched the NFCS.
- ⊕ It is premised on strengthening the production, availability, delivery and application of **science-based climate monitoring and prediction services** (refer to infographics).
- ⊕ **Nodal agency** for formulation and implementation of the national framework in India will be **IMD**.

### Need

- ◆ To **identify agricultural production, health trends, population distribution** in high-risk areas, road and infrastructure mapping, etc.
- ◆ To **prepare for new climate conditions** and **adapt to their impacts** on water supplies, extreme events, etc.

### About GFCS

- ⊕ It was launched at **World Climate Conference-3 in 2009** and coordinated by **World Meteorological Organization (WMO)**.
- ⊕ It is a global **partnership of governments** (India is a founding Member) and **organisations**.
- ⊕ It aims to **help all climate services stakeholders** to work together to achieve a **climate-smart society**.



### National Framework for Climate Services for India (NFCS - INDIA)

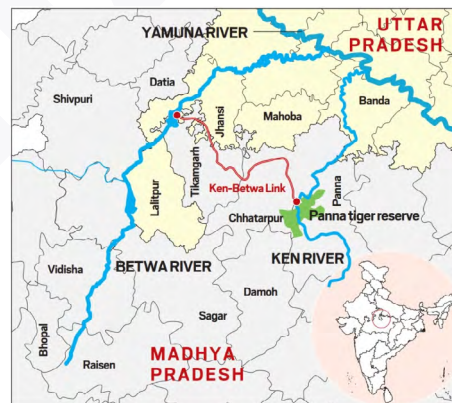
## 19<sup>th</sup> Asian Games come to end in Hangzhou, China

- India secures **rank four** with **107 medal** (28 gold, 38 silver, and 41 bronze) at 19th Asian Games.
  - This feat **surpassed India's previous best of 70 medals** at 18 th Asian games in Jakarta, Indonesia.
  - Reason for performance spike:** Steady rise of in government funding of Olympic disciplines, primarily under Target Olympic Podium Scheme (TOPS).
- China topped the list with 383 medals** followed by Japan, and Republic of Korea.
- Medals were contested across **61 disciplines**, including **non-Olympic** ones such as kabaddi, sepaktakraw, cricket, Go board game and **newcomers like breaking, sport climbing and e-sports**.
- Asian Games are the **oldest and most prestigious event** on **Olympic Council of Asia calendar**.
  - Asian Games is recognised by **International Olympic Committee** and is **second largest multi-sport event** after Olympics. **Like Olympic Games**, they are held **every four years**.
  - Motto of **Asian games 2023** is 'Heart to heart, @ Future'.
  - 20th Asian Games** will be held in **Japan in 2027**.
- India and Asian Games**
  - First and ninth** edition were held in **New Delhi in 1951 and 1982 respectively**.
  - India has **always ranked in top 10** in medals tally, **except in 1990 games**.
  - India have **participated in all editions and won at-least one gold medal in every event** of Asian Games.

➤ **TOPS:** Flagship program of Ministry of Youth Affairs and Sports to provide assistance to India's top athletes so that they can win medals in Olympics.

## Ken-Betwa Link Project (KBLP) secured final forest clearance

- In 2021, Union Cabinet approved the implementation of KBLP - first interlinking of rivers project under **National Perspective Plan (NPP)**.
- KBLP lies in **Bundelkhand**, a **drought-prone region**, which spreads across **13 districts** of **Uttar Pradesh and Madhya Pradesh**.
- KBLP envisages **transfer of water from Ken River to Betwa River** (water deficit). Both rivers are **tributaries of river Yamuna**.
- KBLP has two phases**
  - Phase I:** Construction of **Daudhan dam complex** and subsidiary units such as Low-level Tunnel, **Ken-Betwa Link canal**, and **powerhouses**.
  - Phase II:** Construction of **Lower Orr dam**, **Bina Complex project**, and **Kotha Barrage**.
- Significance of KBLP:** Address **water scarcity in Bundelkhand region** for water supply and irrigation; **Power generation** (103 MW of hydropower and 27 MW solar power) etc.
- Concerns with KBLP:** **Loss of 20 lakh trees**; **Submergence** of areas of **Panna Tiger Reserve**; **threat to wildlife** like gharials of Ken Gharial Sanctuary etc.
- NPP was **formulated by the then Ministry of Irrigation (now Ministry of Jal Shakti)** to transfer water from surplus basin to **water deficit basin**.
  - Based on NPP, National Water Development Agency (NWDA) identified 30 river links—**16 under Peninsular component** (including KBLP) and **14 under Himalayan Component**.



## Also in News



### Cotton

- Ministry of Textiles celebrates 'World Cotton Day' 2023.
- Cotton is a **Kharif crop and grows well in black cotton soil** (high water retention capacity) of **Deccan plateau**.
- Climatic conditions**
  - Annual temperature requirement:** 20-28 degree Celsius.
  - Rainfall:** 55-110 cm is ideal.
  - Minimum 180 frost-free days**.
- Cotton-producing states:** Maharashtra, Gujarat, MP, Karnataka, Andhra Pradesh, Telangana, Tamil Nadu, Punjab, Haryana and UP.
- India grows all four species of cultivated cotton** *Gossypium arboreum* and *herbaceum* (Asian cotton), *G. barbadense* (Egyptian cotton) and *G. hirsutum* (American Upland cotton).



### Asiatic Wild Dog (Dhole)

- As per study, **overlapping prey availability or habitat suitability** could dictate a **positive association between dholes and tigers**, facilitating co-existence between two species of carnivores.
  - Sympatric refers to animals, plant species, and populations within the same or overlapping geographical areas.
- About Asiatic Wild Dog**
  - Habitat:** Wide variety of climates and habitats like **dense forests, scrub, steppes, and alpine regions**.
  - Range:** Found in Central, South, East and Southeast Asia.
  - IUCN status:** Endangered.
  - Threats:** Habitat loss, declining prey availability, persecution, disease, and interspecific competition.





### New Indian Air Force (IAF) Ensign

- It was unveiled as IAF marked its **91<sup>st</sup> anniversary**.
- New ensign includes the **Air Force Crest in the top right corner**.
  - IAF Crest has **national symbol**, the **Ashoka lion on the top** with the words "**Satyamev Jayate**" in Devanagari below it.
  - Below the Ashoka lion is a **Himalayan eagle with its wings spread**, denoting the **fighting qualities of the IAF**.
  - A **ring in light blue colour encircles Himalayan eagle** with the words "**Bhartiya Vayu Sena**"
  - IAF's motto, "**Touching the sky with glory**", is inspired by the **Bhagavad Gita**.



### Trajectory Correction Maneuvers (TCM)

- ISRO performed **TCM for spacecraft of Aditya L1** for about 16 seconds.
- TCM ensures that the **spacecraft is on its intended path towards the Halo orbit insertion** around Lagrangian point 1 (L1).
  - Earlier, ISRO performed **trans-Lagrangian point 1** insertion after which scientists found that there could be trajectory errors that needed correction.
  - Trajectory corrections involve **firing of engines on the spacecraft** as needed.



### Amazon River Basin

- As **Lake Puraquequara dried up**, **floating village** have turned to **mud flats**.
- Lake lies on **Amazon river basin** which is facing severe drought due to **El Niño** and the **warming of northern tropical Atlantic Ocean waters**.
  - These climate phenomena are aggravated by **global warming**, and **burning of fossil fuels**.
- Amazon river basin:**
  - Largest drainage basin in the world**.
  - Covers about **34% of South America**.
  - Harbours **~60% of world's rainforest** and harbors **10% of planet's known forms of life**.
- Countries covered:** **Brazil** (equator and tropic of capricorn both pass through it), **Bolivia, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela**.



### Territorial army (TA)

- TA inducted first batch of **Mandarin** (Chinese language)-trained **officers** along Line of Actual Control.
- TA, established under **TA Act 1948**, is a **part of the Regular Army**.
  - It enables **young citizens** (18 to 42 years age) to **serve in a military environment without** having to **sacrifice their primary professions**.
  - It **relieves Regular Army** from **static duties** and assist **Civil Administration** in dealing with natural calamities etc.
  - TA personnel can be **decorated for their gallantry services** through **Kirti Chakra, Vir Chakra, Shourya Chakra, etc.**



### Watermeal

- Thailand's Scientists are exploring the **potential of watermeal**, as a **source of nutrition and oxygen for astronauts**.
- About Watermeal**
  - World's **smallest flowering plant**.
  - It is a **rootless, stemless plant** and **floats on water bodies**.
  - Its **simplicity and rapid growth rate** make it an **ideal candidate for studying the effects of altered gravity** on plant development.
  - It's a **prolific producer of oxygen** through photosynthesis and a **rich source of protein**.



### National Mission on Inter-disciplinary Cyber Physical System (NM-ICPS)

- National Workshop of Technology Innovation in CPS highlighted the **importance of Technology Innovation Hubs** set up under NM-ICPS.
- CPS are **collection of computing devices** communicating with one another and interacting with the physical world via sensors and actuators in a feedback loop.
  - It includes technologies like **Artificial Intelligence, Internet of Things, Machine Learning, Robotics, etc.**
  - Application areas:** Healthcare, precision agriculture, energy infrastructure etc.
- NM-ICPS was **launched in 2018 by Department of Science & Technology**.
  - Vision:** Make India a leading player in CPS technologies.
  - Objective:** Promote translational research in CPS and associated technologies.

## Personality in News



### Dr Gopalasamudram Narayana Ramachandran aka GNR (1922-2001)

- GNR along with Gopinath Kartha, proposed the '**Madras triple helix model**', for deciphering the structure of **collagen**.
  - Collagen, **present in the connective tissue of animals**, gives strength and form to all creatures, humans included
- Other Contributions:**
  - Developed a number of **new methods in X-ray crystallography** including the **beta synthesis**.
  - Established school of research in **molecular biology at Madras University**.
- Awards:** **Shanti Swarup Bhatnagar award**
- Value:** Scientific temper, leadership etc.



G. N. Ramachandran  
(1922-2001)



AHMEDABAD



BHOPAL



CHANDIGARH



DELHI



JAIPUR



JODHPUR



GUWAHATI



HYDERABAD



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI



SIKAR