

**ENVIRONMENT**

TISSUE CULTURE LABORATORY  
HEATWAVE ALERT  
TAIWAN EARTHQUAKE  
SWELL WAVES  
TORNADOES WARNING IN BAY OF BENGAL

**POLITY**

90 YEARS OF RBI  
APPEAL AGAINST CAT  
SYMBOLS FOR POLITICAL PARTIES

**ECONOMY**

MHA EXTENDS VALIDITY FOR FRA REGISTRATIONS FOR NGOS  
EXTENDED FUND FACILITY  
IMPACT OF AI BOOM ON INTEREST RATES  
ANTIDUMPING

**INTERNATIONAL RELATIONS**

AFSPA  
75 YEARS OF NATO

**SCIENCE AND SPACE TECHNOLOGY**

125 YEARS OF KOSO  
NICES PROGRAMME OF ISRO  
SHALLOW FAKES  
ATOMIC CLOCKS

**HEALTH/ AGRICULTURE**

CARDAMOM  
HOMEGROWN GENE THERAPY FOR CANCER

**DEFENCE**

EXERCISE GAGAN SHAKTI

**MISC**

2026 COMMONWEALTH GAMES  
5200 YEAR OLD HARAPPAN SITE FOUND  
KONDA REDDI TRIBE  
100 YEARS OF VAIKOM SATYAGRAH  
MOHINIYATTAM

**PLACES IN NEWS**

ECUADOR  
SITWE PORT  
PARADIP PORT  
KATCHATHEEVU ISLAND

KUMITTIPATHI VILLAGE

**PERSONS IN NEWS**

KAMLA DEVI CHATTOPADHYAY

RUKMANI DEVI ARUNDALE

LAXMAN NAYAK

SHYAMAJI KRISHNA VARMA

**SPECIES IN NEWS**

BUTTERFLY CICADA

SPOTTED DEER

PELAGIA NOCTILUCA

## TISSUE CULTURE LABORATORY

The forest and wildlife department of Delhi is establishing a tissue culture laboratory at the Asola Bhatti Wildlife Sanctuary to generate saplings of threatened or rare native trees in the city.

- The species identified are **Hingot, Khair, Bistendu, Siri, Palash etc**
- The aim is to grow endangered native trees in a controlled environment and regenerate saplings for species facing regeneration challenges.

Tissue culture is a research tool that involves growing cells or tissues in an artificial environment. It's also called **micropropagation**.

### Animal tissue culture

This technique involves maintaining and growing isolated cells, tissues, or organs in an artificial environment. Its used in biomedical research to study the causes of disease.

### Plant tissue culture

This technique involves growing plant cells, tissues, or organs in a sterile environment. It's used to produce clones of a plant. Under the right conditions, a single cell can be used to regenerate an entire plant.

### Types of PTC

- **Organ Culture:** any part of the plant (root, stem, leaf, and flower) is used as an explant for culturing purposes.
- **Seed culture:** the explants are obtained from the plants that are already cultured and grown under in vitro conditions.
- **Embryo culture:** the embryo is isolated and cultured under in vitro conditions.

**Applications of PTC:** to obtain disease-free plants, to obtain rapid multiplication of plants, Large-scale fabrication of artificial seeds, etc

**Challenges with PTC:** Inadequate Infrastructure, lack of skilled manpower, lack of scientific knowledge about biotechnological principles, etc.

## HEATWAVE ALERT

IMD predicted that above normal heatwave days are likely to occur over most parts of south peninsula, central India, east India and plains of northwest India during April to June hot weather season.

- Heatwave is a condition of air temperature which becomes fatal to the human body when exposed.
- IMD declares a heatwave when the temperature of a place crosses 40 degrees Celsius (°C) in the plains, 37°C in the coastal areas and 30°C in the hills. Further, it uses following criterion-

#### **Based on departure from Normal Temperature**

- Heat Wave: Between 4.5°C to 6.4°C from normal
- Severe Heat Wave: >6.4°C

#### **Based on departure from Actual Maximum Temperature (for plains only)**

- Heat Wave:  $\geq 45^{\circ}\text{C}$
- Severe Heat Wave:  $\geq 47^{\circ}\text{C}$

#### **Favorable conditions:**

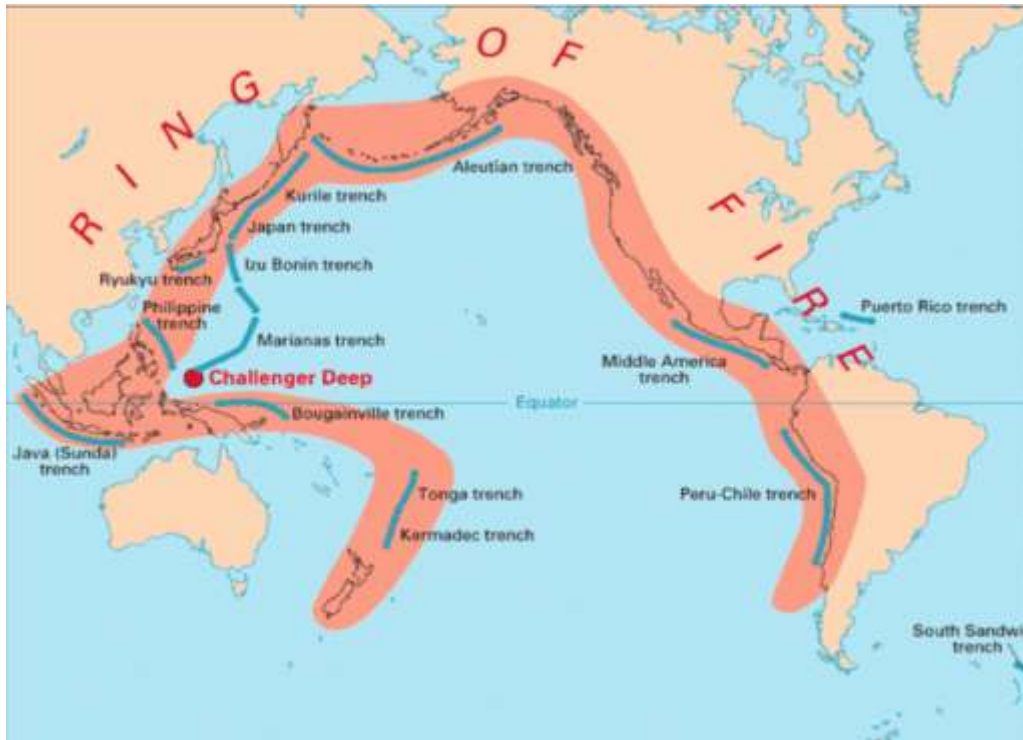
- Transportation / Prevalence of hot dry air over a region.
- Absence of moisture in the upper atmosphere.
- Sky should be cloudless (allows maximum insulation over the region).
- Large amplitude anti-cyclonic flow over the area.

**Impacts of Heatwaves:** Health hazards such as heat stroke; increase strain on water and energy sources, Food insecurity (as it can cause wilting, stunting or early ripening of crops), etc.

#### **TAIWAN EARTHQUAKE:**

Nine people died and more than 800 got injured in Taiwan after the island was hit by its biggest earthquake in at least 25 years

- Notably, Taiwan is prone to earthquakes as it lies along the Pacific “Ring of Fire” — where 90% of the world’s earthquakes take place.
- The island and its surrounding waters have registered about 2,000 earthquakes with a magnitude of 4.0 or greater since 1980, and more than 100 earthquakes with a magnitude above 5.5



## SWELL WAVES

Recently, Swell waves have inundated coastal areas in central and southern districts of Kerala, causing concern for coastal communities and prompting district-level disaster management authorities to be on high alert.

These swell waves flooded beaches along the coastal regions in Thiruvananthapuram, Kollam, Alappuzha, and Thrissur districts.

### About Swell waves:

- Swell waves refer to ocean waves that have travelled over long distances from their area of origin, usually generated by distant weather systems or storms.
- These waves typically have a consistent and smooth appearance and can travel thousands of kilometers across the ocean's surface without breaking.
- Swell waves are a significant factor in shaping coastal areas and can cause inundation and erosion when they reach shore.
- They are composed of a series of surface gravity waves.
- They occur not due to the local winds, but rather due to distant storms like hurricanes, or even long periods of fierce gale winds.
- During such storms, a huge energy transfer takes place from the air into the water, leading to the formation of very high waves.

- These waves can propagate in directions that differ from the direction of the wind, in contrast to a wind sea.
- Their wavelengths may rarely exceed more than 150 m.
- In India, early warning systems like the Swell Surge Forecast System launched by the Indian National Centre for Ocean Information Services (INCOIS) in 2020 gives forewarning seven days in advance

## IMD WARNS OF MORE TORNADOES IN THE BAY OF BENGAL

IMD warns of more tornadoes in West Bengal after a recent one killed 5 and over 100 injured in Jalpaiguri.

### About TORNADOS

- A tornado is a rapidly rotating column of air that extends from a thunderstorm to the ground. It is often visible as a funnel-shaped cloud and is capable of causing significant damage to structures and landscapes
- A tornado is a violently rotating column of air that forms a connection between the surface of the Earth and a cumulonimbus cloud (or, in rare cases, the base of a cumulus cloud).
- Tornadoes are funnel-shaped storms with very low pressure at the center.
- They are the smallest but most violent and disastrous of all the storms.
- Tornadoes generally occur in middle latitudes.
- Steep pressure gradients result in fast movement of air towards the center.

### Types of Tornadoes:

- **Multiple-Vortex Tornado:** Contains several smaller whirls rotating around a common center.
- **Landspout:** A non-supercellular tornado that develops over land.
- **Waterspout:** A spiraling funnel-shaped wind current that connects to a large cumulus or cumulonimbus cloud. Waterspouts generally form over bodies of water and are less common at high latitudes.

### Occurrence:

- Tornadoes are most common in the mid-latitudes of both the Northern and Southern Hemispheres in the spring and summer when thunderstorms are present.

- These storms convert potential and heat energy into kinetic energy, allowing the agitated atmosphere to settle back down.
- In India, tornadoes and cyclones occur, but tornadoes occur on a relatively infrequent basis.
- Tornadoes of moderate strength strike the country's northwestern and north-eastern regions, causing significant damage to people and property.

## 90 YEARS OF RBI

The Prime Minister addressed the opening ceremony of RBI@90 in Mumbai, marking 90 years of the Reserve Bank of India (RBI).

### History of RBI:

- Royal Commission on Indian Currency, **1926 (Hilton Young Commission)** recommended the establishment of the RBI, a suggestion reiterated by the Indian Central Banking Enquiry Committee in 1931.
- The RBI was **founded in 1935** under the Reserve Bank of India Act, 1934, with **Sir Osborne Smith** serving as its inaugural Governor.
- In **1949, the RBI was nationalized**, marking a pivotal moment in its institutional history.

The Reserve Bank of India (RBI) has evolved significantly in recent years:

- Inflation-targeting central bank
- Foreign exchange reserves
- Macroeconomic stability
- Reduction in NPAs
- Technology in payments
- Central bank digital currency

### Challenges faced by RBI:

- Banking Regulation and Supervision
- Transparency with Regulated Entities
- Regulating New-Age Fintech Firms
- Limited Powers over Public-Sector Banks
- Potential Fiscal Dominance of Monetary Policy

## APPEAL AGAINST CAT ORDER

Allahabad High Court held that appeal against an order of Central Administrative Tribunal (CAT) while exercising contempt jurisdiction under Administrative Tribunals (AT) Act 1985 lies before SC only, not the High Courts (HCs).

## Appeals against the orders of the Tribunals

- In *T. Sudhakar Prasad v. Government of A.P.* (2001), a Constitution bench of the SC held that the contempt jurisdiction is exclusively exercisable by the Tribunal.
- It was also held that even though the HCs exercised appellate jurisdiction under Article 226/ 227 of the Constitution of India for orders issued by CAT, the orders under Section 17 (Contempt) of the AT Act were appealable before SC only.
- Previously, in *L Chandra Kumar vs. UoI* (1997) the SC restored appellate jurisdiction of the HCs against the orders of the Tribunals.

### About CAT

- Established under Article 323 A, which was introduced through 42<sup>nd</sup> Constitutional Amendment (1976).
- Jurisdiction: Adjudication of disputes and complaints with respect to recruitment and conditions of service of persons appointed to public services and posts in connection with the affairs of the Union or other authorities under control of the Government.

## Tribunals in India

- Tribunals are **quasi-judicial** bodies.
- Objective: To reduce caseload of the judiciary and bring in subject expertise for technical matters.
- **Constitutional Recognition: Article 323A (Administrative Tribunals) and Article 323B (Tribunal for other matters).**
- Article 323A empowers only Parliament to establish Administrative Tribunals, whereas under Article 323B appropriate legislatures can establish tribunals.

## SYMBOLS FOR POLITICAL PARTIES

The Election Commission of India (ECI) allocates symbols to political parties and candidates based on the Election Symbols (Reservation and Allotment) Order, 1968.

- Recognized parties have reserved symbols, while unrecognised parties are allotted free symbols during elections.
- Unrecognised parties can apply for a common symbol if they meet certain criteria, including securing at least 1% of votes in the previous election or having elected representatives.



- The recent denial of a common symbol to Viduthalai Chiruthaigal Katchi (VCK) and the allotment of a new symbol to Naam Tamilar Katchi (NTK) have raised questions.

The current rules may need amendment to ensure fair treatment based on past electoral performance and representation.

## MHA EXTENDS VALIDITY OF FRA REGISTRATION FOR NGOS

Validity extended of all FCRA registered NGOs whose renewal applications are still under consideration and whose validity expires before 30 June.

### Key Provisions of FCRA

- **Registration:** NGOs that want to receive foreign donations must register with the MHA. Registration is valid for 5 years and can be applied for renewal.
- FCRA registrations are granted to individuals or associations with definite cultural, economic, educational, religious, and social programs.
- **Prohibited:** A candidate for election, editor or publisher of a newspaper, judges, government servants, etc are prohibited from receiving foreign donations.
- **Utilization of funds:** Organizations that receive foreign donations must use them for the purposes they were received and by the Act's regulations.
- **Reporting:** They are also required to file annual returns, and they must not transfer the funds to another NGO.

### Significance of FCRA

- FCRA regulates foreign donations and ensures that such contributions do not adversely affect internal security.
- Streamline the process for NGOs and other organizations to register and receive foreign donations.
- Ensure that foreign contribution is received from legitimate sources and utilized for legitimate purposes by any person.

## EXTENDED FUND FACILITY

The IMF Board increased the Extended Fund Facility (EFF) arrangement to \$8 billion for Egypt.

### About EFF

- It provides financial assistance to countries facing serious medium-term balance of payments problems because of structural weaknesses.
- It offers longer program engagement and a longer repayment period.

- EFF Support comprehensive programs with a focus on policies needed to correct structural imbalances over an extended period.
- All member countries facing actual or potential external financing needs are eligible under it.

## IMPACT OF AI BOOM ON INTEREST RATES

Interest rates represent the cost of borrowing money or the return earned on savings or investments.

AI boom increases demand for investment in technology. Companies will be willing to pay higher interest rates to banks, for increased capital investment. This raises interest rates for everyone.

The boom in AI could increase the Real (inflation-adjusted) interest rates due to several factors:

- Increased demand for capital expenditure (capex) to develop high-quality semiconductor chips for AI.
- Higher productivity of capital resulting from AI leads to higher real interest rates.
- Expansion of energy infrastructure to meet the growing demand for computation, driven by AI.
- Adoption of cost-effective technologies like water desalination, leads to increased investment in infrastructure and energy consumption.
- Investment in AI-driven warfare and drone combat technologies.
- Job losses from AI lead to investments in worker assistance programs, putting pressure on real interest rates

## ANTI DUMPING

India has initiated an anti-dumping probe into the import of a chemical used in the rubber industry from China and Japan.

- This investigation was prompted by a complaint filed by a domestic player. The specific chemical under scrutiny is 'Insoluble Sulphur'.
- The Directorate General of Trade Remedies (DGTR) is currently examining the alleged dumping of this chemical.

### **About ANTI DUMPING**

- Dumping occurs when a company exports a product at a price lower than what it typically charges in its own home market.

- In response to this unfair trade practice, countries may impose an anti-dumping duty (ADD) on foreign imports that are believed to be priced below fair market value.

### **Anti-Dumping Duty (ADD):**

- ADD is a customs duty applied to imports to protect domestic industries from dumped goods.
- It rectifies the situation arising from the dumping of goods and its trade-distortive effects.
- In the long term, ADD can reduce international competition for domestic companies producing similar goods.
- The World Trade Organization (WTO) permits the use of anti-dumping measures as an instrument of fair competition.
- ADD is different from countervailing duties, which target goods that have received government subsidies in the originating or exporting country.

### **Directorate General of Trade Remedies (DGTR):**

- The Directorate General of Trade Remedies (DGTR) operates under the Ministry of Commerce and Industry in India.
- It serves as the apex national authority responsible for administering various trade remedial measures, including anti-dumping investigations, countervailing duties, and safeguard measures.
- The DGTR plays a crucial role in providing trade defence support to domestic industries and exporters facing trade remedy investigations from other countries.
- Its objective is to ensure fair trade practices and protect the interests of Indian businesses in the global marketplace.

### **THE ARMED FORCES (SPECIAL POWERS) ACT (AFSPA)**

The Union Ministry of Home Affairs (MHA) has extended the Armed Forces (Special Powers) Act (AFSPA) in parts of Nagaland and Arunachal Pradesh for another six months

- The Armed Forces (Special Powers) Act (AFSPA) is an act of the Indian Parliament that gives the military special powers to maintain public order in “disturbed areas”.
- The act came into effect in 1958 and applies to the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

## **The AFSPA gives the military, para-military, and other security forces the power to:**

- Use force, including lethal force, against people who violate the law or are suspected of doing so
- Arrest people without a warrant
- Enter or search premises without a warrant
- Shoot to kill
- Search houses
- Destroy any property that is “likely” to be used by insurgents.

## **75 YEARS OF NATO**

NATO, founded in 1949, celebrates 75 years with recent expansion and renewed unity.

**NATO (North Atlantic Treaty Organization) is a military alliance of 32 countries from North America and Europe.**

- It aims to safeguard the freedom and security of its members through collective defence against aggression.
- Founded in 1949
- Headquarters: Brussels (Belgium)
- Currently has 32 countries from Europe and North America.
- Sweden is the latest to join.
- Founded on the principle of collective defense, meaning that if one NATO ally is attacked, then all NATO allies are attacked.
- Largest peacetime military alliance in the world.

## **125 YEARS OF KODAIKANAL SOLAR OBSERVATORY**

2024 marks the 125th Year of the Kodaikanal Solar Observatory (KoSO).

### **Kodaikanal Solar Observatory (KoSO)**

- It is a solar observatory owned and operated by the Indian Institute of Astrophysics.
- The concept of an Indian solar observatory began in the late 19th century, and the government approved the establishment of the Solar Physics Observatory in Kodaikanal in August 1893.
- **Location**– Kodaikanal in the Palani hills of Tamil Nadu was picked for the observatory because of its good atmospheric conditions, based on surveys by Charles Michie Smith (a Professor of Physics at the Madras Christian College).
- **Foundation**- Lord Wenlock, the Governor of Madras at the time, laid the foundation stone for KoSO in 1895.

- Systematic observations at KoSO commenced on March 14, 1901.
- Instruments at KoSO– Initially, KoSO had telescopes to study sunspots, prominences, and solar radiation.
- Now, it has advanced instruments like the H-alpha telescope and the White Light Active Region Monitor (WARM) for high solar imaging.

**Note:** About Kodaikanal Kodaikanal is a hill town in the southern Indian state of Tamil Nadu. It's set in an area of granite cliffs, forested valleys, lakes, waterfalls and grassy hills.

## NICES PROGRAMME OF ISRO

The National Information System for Climate and Environment Studies (**NICES**), **operated by ISRO** and other ministries, invites Indian researchers to combat climate change.

- Potential areas include Space-based ECVs, Climate Indicators, Climate Change Challenges, and Weather Extremes.
- The National Information System for Climate and Environment Studies (NICES) program was conceptualized in 2012 and is operated by the Indian Space Research Organisation (ISRO) and the Department of Space, along with other ministries, under the framework of the National Action Plan on Climate Change.
- Its primary objective is to generate and disseminate long-term Essential Climate Variables (ECVs) derived from Indian and other Earth observation satellites, which are essential for understanding Earth's climate.

## SHALLOW FAKES

A shallowfake video of the US Vice President has gone viral.

- Shallowfake refers to altered media (pictures, videos and voice clips, etc) created with conventional and affordable technologies without the help of AI technology. With Lok Sabha elections starting on April 19, social media is flooded with misinformation, mostly in shallow fakes forms.

### About Shallow fakes

- Shallowfakes, similar to deepfakes, involves altering people's images, videos, and voice clips for malicious purposes. However, unlike deepfakes, which requires advanced AI software, shallowfakes can be made using basic editing software like Photoshop.

- Shallow Fakes are called so because they involve lower-quality image and video editing compared to the sophisticated techniques used in Deep Fakes.
- Used for:
  - To fabricate false proof of identity or address, such as photo ID documents like passports and driver's licenses.
  - To produce counterfeit supporting evidence for claims or transactions, such as contracts, agreements, invoices for services, no claims discount certificates, etc.
  - Spreading political narratives and defaming opponents, for example, a video depicting AIMIM leader Asaduddin Owaisi singing Shiv Tandav stotra.
- Impact– Due to their simpler creation process, many experts see shallowfakes as posing greater threats than deepfakes.

## ATOMIC CLOCKS

Recently, India is taking a significant step by deploying atomic clocks across the nation to synchronize all digital devices with Indian Standard Time (IST).

This initiative aims for “one nation, one time,” enhancing uniformity and national security.

### About ATOMIC CLOCKS

- An atomic clock is a highly accurate timekeeping device that combines a quartz crystal oscillator with an atom (typically caesium or hydrogen).
- It uses the consistent frequency of atoms to maintain accurate time, making it more stable than conventional quartz clocks.
- These clocks were invented in 1955 by Louise Essen.

### How Do Atomic Clocks Work?

- Atomic clocks use atoms, specifically the electronic transition from one state to another, as their “pendulum.”
- The vibrations of atoms (such as caesium or rubidium) serve as the basis for precise time measurement.
- By sending microwaves to these atoms, we can make them vibrate even more regularly. We then compare these vibrations with the vibrations of a quartz crystal in a regular clock.

### Types of Atomic Clocks:

- **Caesium Atomic Clocks:** These are widely used and serve as the primary standard for defining the SI second.
- **Hydrogen Maser Atomic Clocks:** Even more accurate than caesium clocks, hydrogen maser clocks find applications in scientific research.

### Atomic Clocks in India:

- The Council of Industrial and Scientific Research (CSIR)-National Physical Laboratories (NPL) in New Delhi maintains Indian Standard Time (IST) using caesium and hydrogen maser clocks.
- To enhance uniformity and national security, India is deploying atomic clocks nationwide.
- New atomic clocks are being set up in Bhubaneswar, Jaipur, and Hyderabad, in addition to existing ones in Faridabad and Ahmedabad.
- By June, these new clocks will be installed, and the government will require all device manufacturers to sync with Indian Standard Time.
- The goal is to connect all atomic clocks using optical cables for enhanced security.

### Indian Standard Time (IST):

- IST was adopted on September 1, 1947, with only one time zone for the entire country.
- It is calculated from 82.5 degrees East longitude, near Mirzapur (Allahabad), Uttar Pradesh.
- IST is 5.30 hours ahead of Greenwich Mean Time (GMT)

### CARDAMOM

Large-scale damage to cardamom plantations has been reported in various regions of Kerala due to the drought.

- Farmers are facing significant losses, with many fearing the destruction of their crops if the drought persists.
- The Indian Council of Agricultural Research and Krishi Vigyan Kendra (KVK) Idukki recommend measures such as foliar application of **Pigmented Facultative Methylophilic Bacteria (PPFM)** and treating plants to decrease disease incidence to mitigate the impact of the drought on cardamom production.
- PPFMs are aerobic, Gram-negative bacteria that use one-carbon compounds like formate, formaldehyde, and methanol as their sole



carbon and energy source. They are **phylogenetically diverse and belong to the genus Methylobacterium.**

- PPFMs have been well studied in agricultural systems. They can be applied to seeds and crops as a foliar spray.
- Cardamom is a **spice made from the seeds of the Elettaria cardamomum plant**, also known as green cardamom or true cardamom.

### **About Cardamom**

- It is a monotype genus of plants found in the tropical Indo-Malaya region (native to the evergreen rainy forests of the Western Ghats).
- Mainly cultivated in **Kerala (58%), Karnataka, and Tamil Nadu.**

### **REQUIRED CLIMATIC CONDITIONS:**

- **Rainfall: 1500-2500mm.**
- **Temperature: 15°C to 35°C**
- **Height: 600-1200 m above mean sea level**
- **Soil: acidic forest loamy soils**

### **INDIA'S FIRST HOMEGROWN GENE THERAPY FOR CANCER**

It is developed through collaboration between the Indian Institute of Technology, Bombay, Tata Memorial Hospital, and ImmunoACT.

### **About Chimeric antigen receptor (CAR-T) cell therapy**

- It modifies immune cells, specifically T-cells, by turning them into potent cancer fighters known as CAR-T cells.
- T-cells are special cells (types of white blood cells) whose primary function is cytotoxic, meaning killing other cells.
- T cells are taken from patient blood and are changed in lab by adding a gene for a man-made receptor (called CAR).
- CARs are proteins that assist the T-cells to recognise and attach to a specific protein present on cancer cells.
- CAR-T cells are then given back to the patient.

### **Benefits of the CAR-T Cell therapy**

- Can treat cancer for an extended period.
- It has the potential to cure specific cancers completely.
- Short treatment time is needed and more rapid recovery.

**Challenges:** CAR-T cell therapy for one cancer won't work for another type of cancer, can have negative effects on the nervous system, risk of infection, etc



## EXERCISE GAGAN SHAKTI

- The Indian Air Force is conducting its biggest exercise 'Gagan Shakti' at the Pokhran Field Firing Range in Jaisalmer district.
- In the exercise, all the major fighter aircraft and modern helicopters of the Air Force will demonstrate their striking capabilities.

## 2026 COMMONWEALTH GAMES

Singapore has decided against hosting the 2026 Commonwealth Games, following Malaysia's lead.

- The Commonwealth Games Federation has been searching for a new host since Victoria, Australia withdrew due to escalating costs.
- Despite a £100 million incentive, Malaysia declined the opportunity last month due to financial concerns.

### **About Commonwealth Games:**

- The Commonwealth Games is a quadrennial (occurring every 4 years) international multi-sport event involving athletes from the Commonwealth of Nations.
- It originated in 1930 as the British Empire Games and evolved into its current format, embracing athletes with disabilities since 2002 and achieving gender equality in medal events in 2018.
- Hosted by various cities, Australia has held the Games the most times. The most recent Games were in Birmingham in 2022.
- India hosted the event in 2010 (in Delhi)

## 5,200-YEAR-OLD HARAPPAN SETTLEMENT FOUND IN GUJRAT

Archaeologists, have unearthed a 5,200-year-old Harappan settlement at Padta Bet in Gujarat's Kachchh district, near the Juna Khatiya necropolis.

- The excavation revealed evidence of Early Harappan to Late Harappan period occupation, including pottery, artefacts, animal bones, and structural remains.
- Unique ceramics suggest a local pottery tradition, while the site's strategic location atop a hillock offered a commanding view of the surrounding landscape and access to water from a nearby stream.
- Artefacts such as semi-precious stone beads, tools, and animal bones indicate animal domestication and shellfish exploitation.

## KONDA REDDI TRIBE

The indigenous knowledge of the Konda Reddi tribe regarding the Indian laurel tree's water-storing ability has been confirmed by forest officials in the **Papikonda National Park**.

- Forest authorities conducted an experiment by cutting the bark of the Indian laurel tree, revealing water splashing out, particularly in the summer, as claimed by the tribe.
- Indian Laurel Tree known as **Indian Silver Oak** and valued for its timber commercially.

### About Konda Reddis

- The Konda Reddi tribe, also known as the Konda Reddiyar or Konda Kapus, is an indigenous community primarily found in the hilly regions of southern India, particularly in the states of Andhra Pradesh and Telangana.
- Particularly Vulnerable Tribal Group inhabiting banks of river Godavari in Andhra Pradesh.
- They practise Podu cultivation, a type of shifting cultivation

## 100 YEARS OF VAIKOM SATYAGARH

It started in the princely state of Travancore (now in Kerala), and marked a pivotal moment in temple entry movements across India.

It was against the exclusion of "lower caste" Hindus from accessing the Vaikom Mahadeva temple and its surrounding roads.

### Background:

- The issue was first highlighted by Ezhava leader T.K. Madhavan in a 1917 editorial in his paper, Deshabhimani.
- In the 1923 Indian National Congress session in Kakinada, Kerala Provincial Congress Committee passed a resolution to prioritize the anti-untouchability cause.
- The movement advocated non-violent protests to ensure equal access to public spaces for all castes.
- Groups of three Satyagrahis, representing different communities (Nair, Ezhava, and Pulaya), would peacefully approach the restricted areas.
- The first group was led by **Kesava Menon**.
- Key leaders: **T.K. Madhavan, K. Kelappan (also known as Kerala Gandhi), K.P. Kesava Menon, and George Joseph. Mahatma**

**Gandhi, C. Rajagopalachari, and E.V. Ramasamy (Periyar) visited Vaikom to express their support.**

**Impact:**

- It persisted for 603 days, fostering unity across caste lines.
- Three of the four roads encircling the temples were opened to all in 1925.
- In 1936, the Maharaja of Travancore issued a Temple Entry Proclamation, granting access to marginalized castes.

Other temple entry movements

- **Kalaram Temple Entry Movement (1930) by Dr. B.R. Ambedkar.**
- **The Guruvayur satyagraha (1931) by K. Kelappan**

## MOHINIYATTAM

Kerala Kalamandalam, a prestigious deemed university for arts and culture, has lifted gender restrictions for boys to learn Mohiniyattam.

Starting from the next academic year, boys will be eligible for admission to the Mohiniyattam course, which was previously restricted to female students.

### About MOHINIYATTAM

- Mohiniyattam is an Indian classical dance form that originated in the state **of Kerala.**
- It derives its name from the **word 'Mohini', a female avatar of Lord Vishnu.**
- **Its roots date back to the age-old Sanskrit Hindu text on performing arts called 'Natya Shastra'.**
- Mohiniyattam used to be performed by Devadasis (temple dancers) in temples during the **rule of the Chera kings from 9 to 12 C.E.**
- The dance form developed further as a performing art during the 18th and 19th centuries due to the patronage of several princely states.
- It is **conventionally a solo dance performed by female artists.**
- It adheres to **the Lasya type** that showcases a more graceful, gentle, and feminine form of dancing.
- It emotes a play through dancing and singing, where the song is customarily in Manipravala, which is a mix of Sanskrit and Malayalam language.

- The dance is characterized by its **graceful swaying body movements** with **no abrupt jerks or sudden leaps**.
- More than the footwork, emphasis is given to hand gestures and Mukhabhinaya or subtle facial expressions.
- The hand gestures, 24 in number, are mainly adopted from 'Hastha Lakshana Deepika', a text followed by Kathakali.
- Costumes in Mohiniyattam include plain white or ivory cream traditional sari embroidered with bright gold-laced brocade.
- Musical **instruments include Mridangam, Madhalam, Idakka, flute, Veena, and Kuzhitalam(cymbals)**.

## ECUADOR

Mexico suspends diplomatic ties with Ecuador after police raid in Mexican embassy in Quito.

### About:

- Capital : Quito
- Located in North-western South America.
- Neighbouring countries: Colombia (North) and Peru(East and South),
- Situated on the Equator
- Galápagos Islands, west of the mainland of Ecuador, are part of Ecuador.
- Bounded to the West by Pacific Ocean.

### Geographical Features

- Equator passes through Ecuador.
- Andes mountain range crosses through Ecuador.
- Major Rivers: Amazon, Guayas, Putumayo, etc.
- Active Volcanoes: Cotopaxi, Tungurahua, etc.
- Highest Peak: Mount Chimborazo

## SITWE PORT MYNMAR

India has secured the right to operate its second overseas port (after Chabahar in Iran), Sittwe, after approval by Ministry of External Affairs (MEA).

### Sittwe Port

- Deep water port located at the estuary of Kaladan River in Rakhine State of Myanmar.
- Developed as a part of Kaladan Multi-Modal Transit Transport Project (KMTTP) funded under grant in aid assistance from GoI.

- **Significance:** Will open new opportunities for India's Northeast for trade and transit, enhance trade and commerce between India and Myanmar, etc

## PARADIP PORT

Paradip Port surpassed Kandla to emerge as the highest cargo handling major port of the country in FY 2023-2024.

### Paradip Port (in Odisha)

- It was the first major port on the East Coast commissioned after independence.
- Located near confluence of river Mahanadi and the Bay of Bengal.
- Administered by a Board of Trustees set up by the Government of India.
- In 2020, the Union Cabinet approved 'Deepening and Optimization of Inner Harbour Facilities including Development of Western Dock' to handle cape size vessels at Paradip Port'. Centre has announced to develop, Paradip Port along with Deendayal Port, and V.O. Chidambaranar (Tuticorin) Port as Green Hydrogen hubs

### Major Port

- They are overseen by port trusts and the central government.
- They handle international trade
- Example – Mumbai, Paradip

### Minor Port

- They are controlled, managed by the state government.
- They handle coastal and fishing trade
- Example- Kannur (Kerala)

## KATCHATHEEVU ISLAND

- Katchatheevu island, located in the narrow Palk Strait between India and Sri Lanka, lies approximately 20 kilometres from the Rameswaram coast of Tamil Nadu, India.
- Katchatheevu has been historically significant, hosting St. Anthony's Church, which conducts an annual festival attracting devotees from both India and Sri Lanka.

## KUMITTIPATHI VILLAGE

The rock paintings at Kumittipathi village near Coimbatore are significant testimonies to the prehistoric Kongu region.

- Believed to be around 3,000 years old, these cave paintings depict an elephant, a chariot, and scenes from the lives of early inhabitants. Despite their cultural and historical importance, the paintings are at risk due to damage caused by miscreants.
- Rock paintings are ancient artworks created by early humans on natural rock surfaces using natural pigments like ochre, charcoal, and clay. These paintings provide insights into the lives, beliefs, and cultures of ancient societies.

Other such sites in India:

- **Bhimbetka Rock Shelters Madhya Pradesh** One of the oldest rock art sites globally, dating back to the Paleolithic era. Features over 700 rock shelters with paintings depicting hunting scenes, rituals, and daily life.
- **Edakkal Caves Kerala** Situated in the Wayanad district, features Neolithic rock engravings and paintings dating back over 6,000 years. Depicts human and animal figures, symbols, and geometric patterns.
- **Rock Shelters of Padavayal, Kerala** Located in the Wayanad district, contains prehistoric petroglyphs and paintings from the Mesolithic and Neolithic periods. Artworks depict hunting scenes, human figures, and animals.
- **Rock Art Complex of Lakhudiyar Uttarakhand Near Almora**, contains petroglyphs and rock paintings dating back to the Mesolithic and Neolithic periods. Features images of animals, humans, and geometric patterns.
- **Rock Art Sites of Chaturbhujnath Nala, Chhattisgarh** Found in the Kanker district, these rock shelters contain prehistoric paintings dating back thousands of years, including images of animals, humans, and abstract symbols.

## KAMLA DEVI CHATTOPADHYAY

Recently, she was remembered on her birth anniversary.

- Born in Mangalore, she was a freedom fighter, social reformer, art enthusiast and politician.
- Played a key role in All India Women's Conference (AIWC).
- First woman to run for a legislative seat in India, in the Madras provincial elections.
- She convinced Mahatma Gandhi to give women equal opportunity in Salt Satyagraha of 1930.
- She joined Seva Dal and trained women activists.
- In 1936, she became President of Congress Socialist Party.

## RUKMINI DEVI ARUNDALE

Recently, a book titled 'Rukmini Devi Arundale: Arts Revivalist and Institution Builder' has been published.

### About Rukmini Devi

- Born in Madurai (Tamil Nadu)
- She was an Indian classical dancer and active member of Theosophical movement.
- Known for catalysing the renaissance of Bharatnatyam.
- Earlier, Bharatanatyam was associated with temple dancers (Devadasis) and looked down upon by society.
- Founder of Kalakshetra Foundation in Madras (Chennai) to impart the young true spirit of Art.
- Played instrumental role in enactment of Prevention of Cruelty to Animals Act, 1960 by the Parliament.
- She was the first women nominated to Rajya Sabha in 1952.
- Awarded Padma Bhushan in 1956, and the Sangeet Natak Akademi Fellowship in 1967.

## LAXMAN NAYAK

Ministry of Tribal Affairs highlighted contributions of freedom fighter Laxman Nayak.

### Laxman Nayak Bhumia

- He was a tribal leader of Bhumia community from Odisha.
- He was famous as the Gandhi of Malkangiri region because he believed and followed Gandhian principles of truth, non-violence and peaceful non-cooperation.
- Participated in individual Satyagraha in 1940.
- During Quit India Movement (1942), he asked his fellow tribesmen to respond to the call of 'Do or die' by Gandhiji.
- He strengthened the principle of Swaraj by advocating the use of Charkha through door-to-door campaigns.

## SHYAMJI KRISHNA VARMA

Prime Minister paid homage to revolutionary freedom fighter Shyamji Krishna Varma on his Punya Tithi.

### About Shyamji Krishna Varma (1857- 1930)

- Born in modern-day Gujarat, he founded Indian Home Rule Society, India House in London to carry out anti-British activities.



- Propagated the cause of India's independence through his writings in his publication journal called "**Indian Sociologist**".
- In 1905, he was barred from practicing law by Inner Temple (a professional associations for barristers in London) following charges of sedition for writing against colonial government.

## BUTTERFLY CICADA

A new species of cicada discovered in Meghalaya

### About Cicada

- It belongs to genus Becquartina and marks the first-ever record of this genus in the country
- The species in this genus are often called "Butterfly cicadas" because of their colourful wings.
- The present discovery extends the distributional range of the genus Becquartina from Southeast Asia into Northeast India.
- It increases the total number of known Becquartina species to seven.

## SPOTTED DEER

Netaji Subhash Chandra Bose Island (formerly Ross Island) is facing an invasion of chital deer.

### About Chital

- Distribution: Bangladesh, India, Nepal, Pakistan and Sri Lanka up to the geographical barrier of the Himalayas.
- Native to the Indian subcontinent
- Habitats: Riverine forest during the hot dry season while Sal forest during the monsoon season.

### Features:

- Gestation period: Around 231 - 235 days.
- Food and Feeding: Grasses, but also forbs, leaves, flowers, and fruits.
- Antlers are present only in males.
- Status: Least Concern( IUCN)
- **Threats:** Illegal hunting, habitat loss and degradation due to human encroachment and spread of invasive alien plant species.

## PELAGIA NOCTILUCA

In an unusual occurrence, a bloom of venomous jellyfish was reported by marine researchers across the Visakhapatnam coast on April 3 (Wednesday) morning.



Rarely seen in the East coast of India, scores of the venomous jellyfish species, with three to five centimetres long diameter of bell, were spotted across RK Beach and other parts of the coast, which are frequented by tourists and visitors.

**About *Pelagia noctiluca*:**

- *Pelagia noctiluca* is a venomous species of jellyfish.
- It is also known as the mauve stinger or purple-striped jellyfish.
- These are bioluminescent, having an ability to produce light in the dark.
- It has a painful sting and it can cause different degrees of illnesses such as diarrhoea, vomiting and anaphylactic shock(a severe allergic reaction that can develop quickly and be life-threatening).
- *Pelagia noctiluca* is found worldwide in tropical and warm-temperature seas. Unlike other jellyfish species, it has stingers not just on the tentacles, but on the bell too.
- A jellyfish bloom is when the population of the species increases dramatically within a short period of time, usually due to a higher reproduction rate.