

## UPSC Daily Current Affairs| Prelim Bits 21-01-2025

### Genome India Database

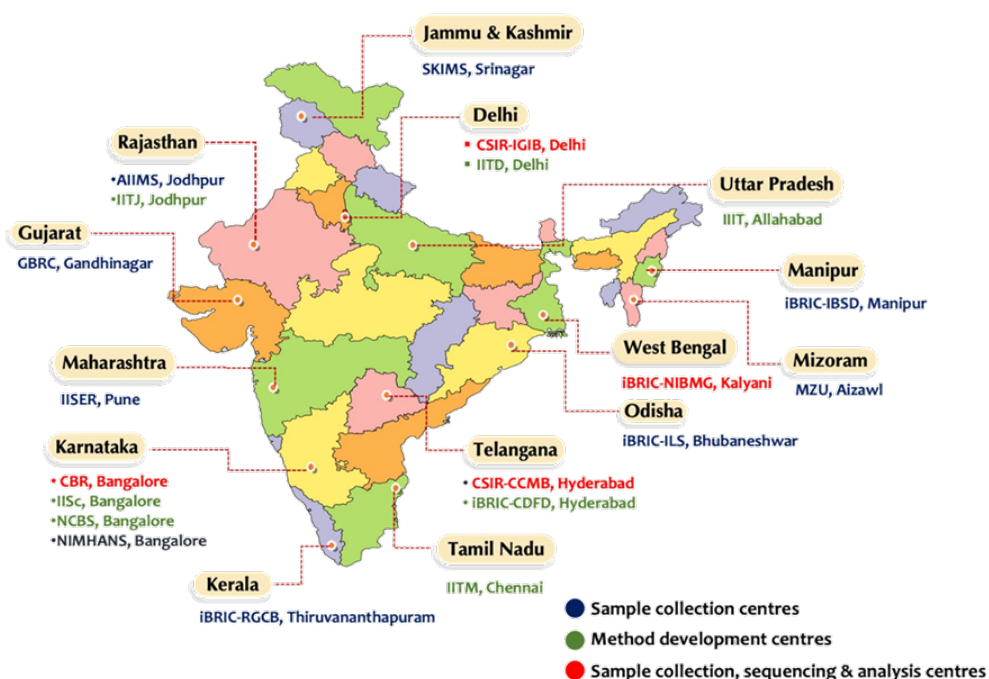
#### Why in News?

Recently, India has completed the 'Genome India' database'.

- **Aim** – To create a robust and comprehensive database of India's genetic diversity.
- **Housed at** – Indian Biological Data Centre (IBDC), Haryana.
- **Indian Genomic Data Set** – It is the entire collection of **10,000 Whole Genome Sequencing (WGS) samples** accessible to researchers across within India and globally.

A **genome** is the complete set of genetic information in living organisms, which is stored in long molecules of DNA called Chromosomes.

- **Catalog of genetic variations** – The samples come from diverse Indian populations and provide a rich genetic diversity.
- It represents 83 population groups or about 2% of the country's 4,600 population groups as a database.



- **Analysis** – The genomes estimate around 27 million low-frequency (or relatively rare) variants, 7 million of them not found in similar reference databases around the world.
- Certain population groups show higher frequencies or different versions of the same

gene.

- **Data privacy** – The database isn't classified by the names of castes or tribes but it is numerically coded.
- Researchers must send a proposal to access the data.
- **Significance** – It holds the potential targeted clinical interventions and advancing precision medicine for better healthcare.

*In Biotech, India now ranks 12<sup>th</sup> globally and 3<sup>rd</sup> in the Asia-Pacific region.*

## References

1. [The Hindu| 10,000 Human Genomes Database](#)
2. [PIB| India's Genomic Revolution](#)

## Kalaripayattu

### Why in News?

*The Indian Kalaripayattu Federation (IKF) accuses the Indian Olympics Association (IOA) for placing Kalaripayattu in the demonstration section in the 38<sup>th</sup> National Games to be held in Uttarakhand.*

- **Kalaripayattu** – It is an Indian martial art and fighting style.
- **Purpose** – To develop the individual with an extraordinary level of awareness and super-sensitive body-mind co-ordination to keep them ever-prepared for attack & defense.
- **Origin** – It is an ancient martial art indigenous to Kerala, a small state in the southern tip of India, during the 11<sup>th</sup> -12<sup>th</sup> century CE.
- **Historical references** – It is mentioned in the Vadakkan Pattukal ballads written about the Chekavar from the Malabar region of Kerala.
- It is with a legacy of more than 3000 years.

*Kalaripayattu is the oldest and most scientific of all martial arts in the world.*



- **Training** – It takes place in a Kalari, an Arena in natural soil ground.

- It ensures *cooling of the body* as the students engage themselves in the gruelling, heat-generating exercises.
- It *lessens the threat of skin infection* from bites of insects that inhabit the top soil.
- *Children at 7 years*, are initiated into Kalaripayattu.
- **Poothara** - A small, upwardly tapering, 7-tiered structure stands at the south-western corner of the training.
- **Oral commands** - It is called as *Vaaythaari*, a set of technical words or phrases which don't convey much to the ordinary people.

### Indian Kalarippayattu Federation (IKF)

- **Established in** - 1995.
- **Aim** - To promote Kalarippayattu, the Martial Arts of Kerala and propagates its values.
- **Motto** - Unity in Diversity.
- **Nodal Ministry** - Ministry and Youth Affairs and Sports.
- **Association in** - 25 states.
- **Recognized as** - National Federation in 2015.
- **Role** - It offers a disciplined and cultured youth for the welfare and progress of the Nation.

### References

1. [The Indian Express| Kalaripayattu's removal from competition](#)
2. [Kerala Tourism| Kalaripayattu](#)
3. [Indian Kalaripayattu Federation| Origin and History of Kalaripayattu](#)

### Culicoides

#### Why in News?

Recently, researchers from the Zoological Survey of India (ZSI) have identified 23 species of blood-sucking flies in the Andaman & Nicobar Islands.

- **Culicoides** - They are *tiny insects* similar in appearance to flies.
- They are *more closely related to mosquitoes* in their feeding habits.
- They are called Midges and are locally called Bhusi Files in Andaman and Nicobar.
- **Taxonomy**
  - **Scientific name** - Culicoides.
  - **Order** - Diptera, the smallest haematophagous member.

**Haematophagous** means especially an insect or tick feeding on blood.

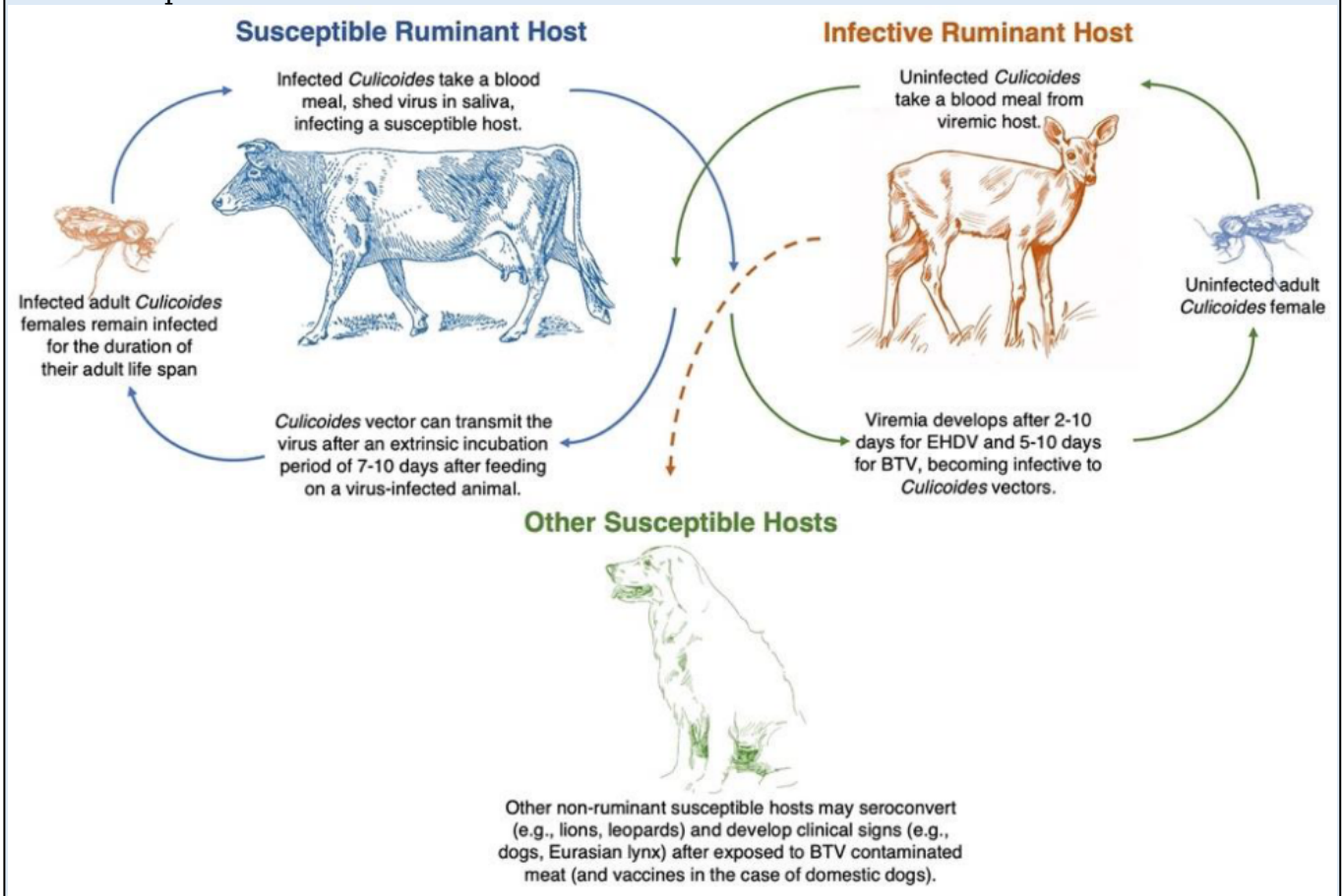


- **Distribution** - Africa, North and South America and Europe.
  - **India** - Includes 93 valid species, recognized as potential vectors of important pathogens of animal health.
  - 13 new species recorded for the 1<sup>st</sup> time in India, in the Andaman and Nicobar Islands.
- **Feeds on** - The blood of livestock such as sheep, goats, cattle and wild animals like deer.
- **Transmitting agents** - 5 of the species are known to transmit the **Bluetongue (BT) disease.**

*A study conducted in 2022 and 2023, revealed that 17 of the 23 species identified are known to bite humans, although no human disease transmission has been reported.*

## Bluetongue (BT)

- It is an infectious, non-contagious, vector-borne viral disease.
- **Symptoms** – Blue discolouration of the tongue, fever, facial swelling and excessive salivation.
- **Causes** – It can potentially lead to death in affected animals.
- It poses a significant threat to livestock farming and the agricultural economy.
- It also impacts humans.



## Reference

[The Hindu| 23 species recorded in Andaman & Nicobar Islands](#)

**Sewa Singh Thikriwala**

## Why in News?

Recently, January 20 marked the death anniversary of Sewa Singh Thikriwala.

- **Early life** - He was born in late 19<sup>th</sup> century in Thikriwala village, part of princely state Patiala, Punjab.
- His father Dewa Singh was a high-ranking official in the court of Maharaja Rajinder Singh.
- **Revolutionary phase** - He **spearheaded the self-rule movement** against the rulers of Punjab's erstwhile princely states.
- His direct criticism of the Patiala Maharaja's rule led the authorities to imprison him.
- His fellow Akali leader Kharak Singh launched a campaign against the state for demanding his release.

## Praja Mandal Movement

### • Objectives

- To protect the civil liberties of the masses.
- To protest against oppressive taxes.
- To seek reforms in the peasants' conditions.
- To open educational institutions.
- To have a responsible government.

• **Coverage** - It spread over 600 princely states of British India.

• **Important leaders** - Kharak Singh and Master Tara Singh.

• **Significance** - Now part of the Malwa region, with some parts in Haryana, these areas are politically active even today and were hotbeds of the recent farmers' agitations.

• **Punjab Riyasat Praja Mandal** - Was presided by the Sewa Singh Thikriwala.

• It was largely run by Akali leaders.

- **Meeting with Gandhi** - After his release in 1928, he **met Mahatma Gandhi** in 1931, to discuss the problems faced by the people of Punjab.
- **Negotiation** - Patiala Maharaja initiated negotiation with him but it failed over the demand for an elected assembly.
- **Last phase of his life** - He died in 1935, while he was on a hunger strike in jail over his mistreatment by jail authorities.
- **Memorial** - After his death, a memorial has been held annually in the Thikriwala Village from January 18 to January 20 with a statue of him in his native village.
- Government has announced that Sewa Singh's house would also be turned into a memorial.

## Reference

[The Indian Express| Story of Punjab's Sewa Singh Thikriwala](#)

## One Liners 21-01-2025

### History, Art and Culture

#### Excavations of a Buddhist complex in Ratnagiri, Odisha

- **Focus on** - Uncovering relics and evidence of ties to Southeast Asian cultures.
- **Recent Discoveries** - Colossal Buddha head, 5 foot palm, and inscribed relics from the 8th and 9th centuries.
- **Previous Excavations** - 1958 to 1961 excavations by Debala Mitra revealed a brick stupa, monastic complexes, and votive stupas.

#### History of Ratnagiri in Odisha

- **Time period** - 5th to 13th centuries.
- **Politically associated with** - Mauryan Emperor Ashoka.
- **Culturally significant for** - Buddhist learning, especially between the 7th and 10th centuries.

#### Maritime Trade of Odisha (Kalinga)

- **Trade ties with** - Southeast Asia, exchanging spices, silk, and metals.
- **Baliyatra festival** - It celebrates historical links to Bali and Sri Lanka.
- **Spread of Buddhism** - Merchant brothers Tapassu and Bhallika of kalinga were recognized as Buddha's early disciples.

### Social Issues



### **8th edition of Pariksha Pe Charcha**

- It is a nationwide movement to *transform exam-related stress into a festival of learning* and celebration.
- **Organized annually by** - Department of School Education & Literacy under the Ministry of Education.
- **Role** - It reinforces its message of resilience, positivity, and joy in learning, ensuring that education is celebrated as a journey rather than a pressure-driven task.
- **2025 Edition** - It concluded with a record-breaking over 3.5 crore participation from students, teachers and parents.

### **Economy**

#### **Centre for Development of Telematics (C-DOT)**

- It is the premier Telecom R&D centre of the Department of Telecommunications (DoT).
- **Role in 6G development** - It has signed an agreement with the IIT Delhi for the development of "Building Blocks for THz Communication Front Ends" for 6G.
- It is signed under the Telecom Technology Development Fund (TTDF).
- **Aim** - To develop basic devices and components for THz systems envisaged for 6G communications, as well as other THz systems such as military communications and material characterization.

### **Agriculture**

#### **India's Coffee Production Boom**

*India ranks 7<sup>th</sup> largest globally in coffee production, exports reaching \$1.29 billion in FY24.*

- **Top buyers** - Italy, Belgium, and Russia.
- **Production** - Arabica and Robusta beans make up three-fourths of India's coffee production.
- Karnataka leads in production, contributing 248,020 MT in 2022-23.
- **Consumption trends** - Domestic consumption increased to 91,000 tonnes in 2023 from 84,000 tonnes in 2012.
- **Integrated Coffee Development Project (ICDP)** - It focuses on improving yields, expanding cultivation, and ensuring sustainability.

### **Environment**

#### **Goby Fish Species**

- **Discovered by** - Zoological Survey of India (ZSI), about 2 unrecorded goby fish species.
- **Discovered at** - Coringa Wildlife Sanctuary, hosts 53 of the 95 goby species recorded in India.
- **2 species** - Hemigobius hoevenii and Mugilogobius tigrinus.

#### **Coringa Wildlife Sanctuary**

- **Located in** - Andhra Pradesh.
- Its mangroves, coastal trees, provide habitats for marine life and protect shorelines from erosion.
- It is *India's 3<sup>rd</sup> largest mangrove forest.*