

December - 27

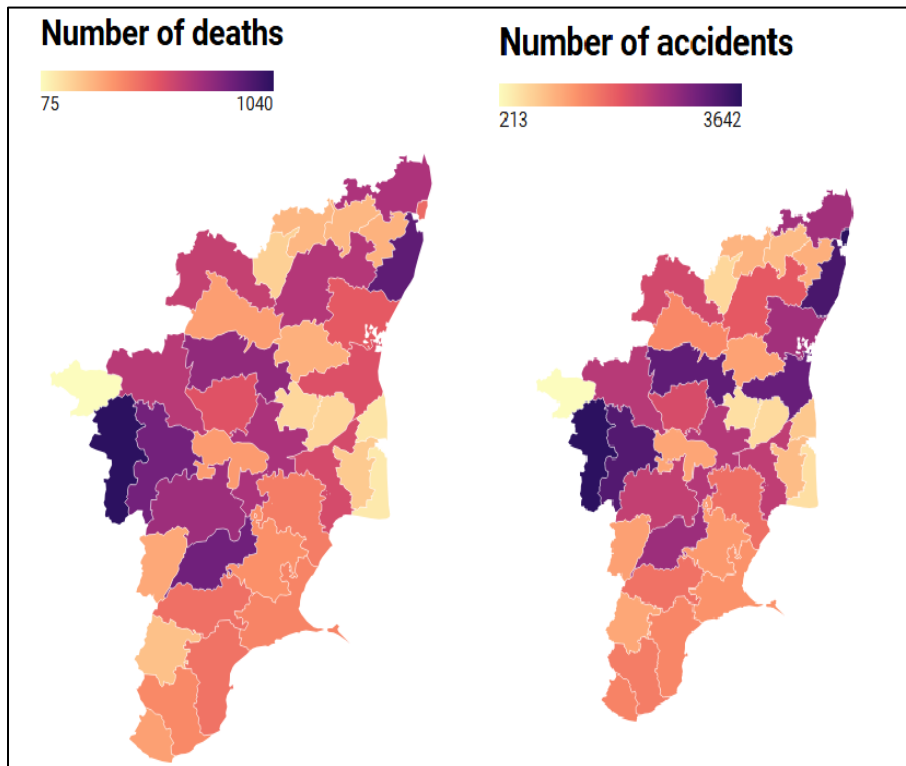
## TNPSC BITS

- ❖ Tamil Nadu have set a target of 50% of energy consumption coming from the renewable energy sources by 2030.
- ❖ The National Institute of Siddha (NIS) has set a Guinness World Record for providing Varmam therapy to 567 individuals simultaneously in Tambaram, Chennai.
- ❖ Masali in Gujarat's Banaskantha district has become the country's first "border solar village" after solar rooftop work in all 199 houses there was completed under the Pradhan Mantri Surya Ghar Muft Bijli Yojana.
- ❖ TRAI has successfully implemented a framework to ensure the traceability of all commercial SMS, a major step towards creating a safer and spam-free messaging ecosystem.
- ❖ REC Limited, a Maharatna PSU under Ministry of Power, has been honoured with Golden Peacock Award 2024 for Excellence in Corporate Governance.
- ❖ Hindi writer Suryabala won the 34th Vyas Samman 2024 for her novel 'Kaun Des Ko Vasi: Venu Ki Diary'.
- ❖ India's Ministry of Textiles, in collaboration with SASMIRA, has launched a climate-smart Agro-textile demonstration centre in Navsari, Gujarat.
- ❖ The 10th International Forest Fair was held in Bhopal, Madhya Pradesh.
- ❖ Gujarat-based semiconductor company Suchi Semicon inaugurated the state's first Outsourced Semiconductor Assembly and Test (OSAT) facility in Surat.
- ❖ The Himachal Pradesh National Law University (HPNLU), Vice-Chancellor Priti Saxena has been conferred the prestigious 'Saraswati Samman-2024' by the Saraswati Sangeet Academy, Lucknow, in recognition of her contributions to the field of higher education and academic leadership.
- ❖ In collaboration between Atal Innovation Mission (AIM), NITI Aayog, UNDP, and Citi Foundation, the seventh 'Youth Co: Lab National Innovation Challenge' has been launched for 2024-2025.
- ❖ Sri Lanka has introduced a new visa policy effective from January 2025, granting free visa travel to citizens from 39 countries, including India.
- ❖ Renowned Indian educationist Arun Kapur has been conferred the 'Bura Marp' (red scarf) and 'Patang' (ceremonial sword) by the Bhutan's King Jigme Khesar Namgyel at the 117th Bhutanese National Day celebrations.
- ❖ For the First time in India, New Delhi is going to host the 12<sup>th</sup> Para Athletics World Championships in 2025.

- ❖ Bollywood star Salman Khan has been appointed as the brand ambassador for the inaugural Kho-Kho World Cup 2025, New Delhi.

## TAMIL NADU

### Road accidents in 2022



- ❖ In Tamil Nadu, a total of 18,074 persons died in 66,841 road accidents that were reported in 2023.
- ❖ In 2022, 17,884 fatalities were reported from 64,105 accidents.
- ❖ A total of 18,129 fatalities were reported from 62,685 accidents in 2019 while 18,392 deaths from 67,279 accidents were recorded in 2018.
- ❖ In Tamil Nadu, a fatality is reported in every fourth accident and 25% of accidents are turning into fatal accidents.
- ❖ Chennai and Coimbatore cities stand at top positions with 3,642 accidents and contribute to 5.45% each of accidents.
- ❖ In the next level, Chengalpattu has 3,387 accidents (5.07%), Tiruppur has 3,292 (4.93%) and Salem 3,174 (4.75%).
- ❖ In terms of fatalities, Coimbatore stands first with 1,040 persons killed last year - 5.75% out of the total 18,074 fatalities.

- ❖ Chengalpattu district witnessed 912 persons killed in road accidents (5.05% of total fatalities), Madurai recorded 864 (4.80%), Tiruppur, 861 (4.76%) and Salem 787 (4.35%).

### **LPG and petrol-diesel dealership – Tamilnadu**



- ❖ The State Consumer Co-operative Wholesale Stores are operating 26 LPG supply units.
- ❖ The Nilgiris Co-operative Marketing Society (NCMS) is running a liquefied petroleum gas (LPG) agency business.
- ❖ In addition, 58 outlets are being operated by the different types of cooperative societies, including PACCS for petrol/diesel dealership.
- ❖ During 2023-24, it sold about 9,135 KL worth ₹91.09 crore of petrol and diesel in the year 2023-24.

### **Re-examination of tungsten block**

- ❖ The Union Ministry of Mines has asked the Geological Survey of India (GSI) to “reexamine” the tungsten block awarded to Hindustan Zinc Limited in Arittapatti.
- ❖ It also asked to explore the possibility of redefining its boundary by excluding the state’s first bio-diversity site from the mining block.
- ❖ Hillocks in Arittapatti village have rich biological and historical significance with the presence of around 250 bird species.
- ❖ It was including 3 flagship Raptor species – Laggar Falcon (*Falco jugger*), Shaheen Falcon (*Falco peregrines*), and Bonelli's Eagle (*Aquila fasciata*).

- ❖ The village also features the various types of megalithic structures, Tamil Brahmi inscriptions, Jain Beds, and 2200-year-old rock-cut temples.



## NATIONAL

### PVTG sub-quota in Eklavya

### Eklavya Model Residential Schools (EMRS)

*Highlights*

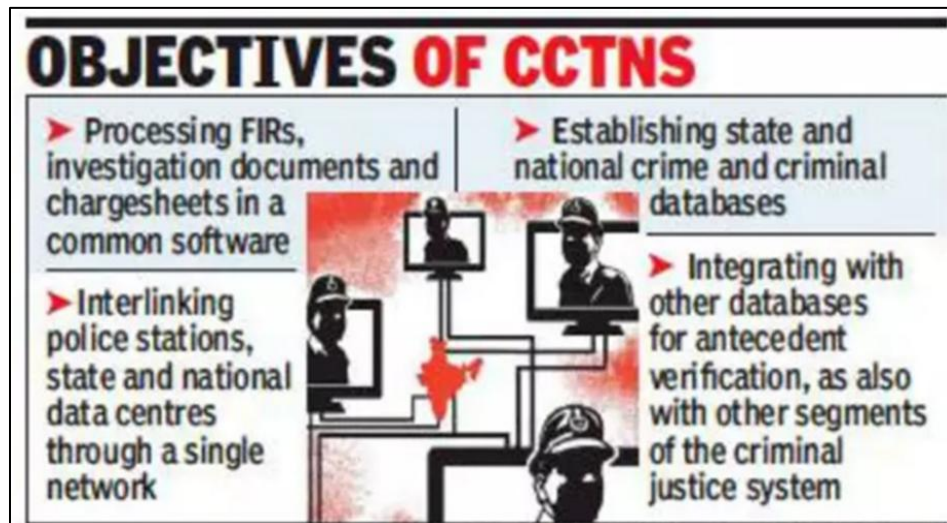
- 📅 Introduced in the year 1997-98 to impart Quality education to children from Scheduled Tribes in remote areas
- 🏃 Co-educational in nature with a provision for sports quota
- 📖 Focuses on academic education and all round development of the students
- 👤 Each school has a capacity of 480 students from class VI-XII



- ❖ In 2019, Centre introduced a sub-quota of 5% for the Particularly Vulnerable Tribal Groups (PVTG) in admissions to Eklavya Model Residential Schools.
- ❖ But the recent data show that schools are struggling to meet this quota with just 3.4% of all EMRS students belonging to PVTG communities.
- ❖ Of the 1,30,101 students enrolled into all 407 functional EMRSs as of October this year, 4,480 belong to PVTG communities.

- ❖ Madhya Pradesh, Chhattisgarh, Odisha, Gujarat were struggling to meet the 5% PVTG student quota.
- ❖ In Madhya Pradesh, PVTG students account for 3.8% of the total students, in Chhattisgarh they comprise 2.74% of the student population.
- ❖ In Gujarat, just 21 students out of the total 10,688 students belong to PVTG communities.
- ❖ In Tamil Nadu's EMRSs, PVTGs comprise 8.36% of total students; in Jharkhand, this percentage is at 7.48%; and in Andhra Pradesh, it is 12.91%.
- ❖ According to the very latest available population estimates, Madhya Pradesh, Maharashtra, Andhra Pradesh, Jharkhand, and Tamil Nadu are the States with the greatest number of PVTGs.

### **CCTNS integration**

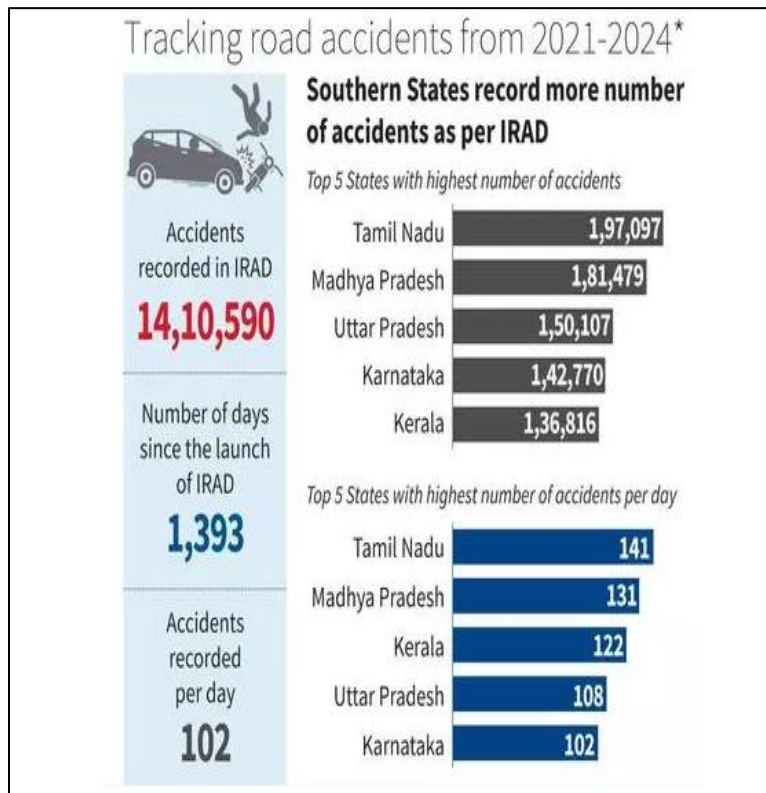


- ❖ Nearly 15 years after it was launched, all 17,130 police stations in the country have been linked through the Crime and Criminal Tracking Network and Systems (CCTNS).
- ❖ CCTNS is a centralised online platform to file first information reports (FIRs), chargesheets, and investigation reports.
- ❖ The online database can be accessed by law enforcement authorities across the country.
- ❖ It was launched in 2009 with a budget of ₹2,000 crore.

### **Road accidents in India 2018-2022**

- ❖ Over 7.77 lakh fatalities across India in the 2018-2022 period.

- ❖ Uttar Pradesh, Maharashtra and Tamil Nadu have witnessed the highest number of road accidents in the last five years.
- ❖ The total number of road accident fatalities in the country reached 1,68,491 in 2022.
- ❖ It is a noticeable increase from 1,53,972 in 2021.
- ❖ Uttar Pradesh recorded the highest number of road accidents with 22,595 deaths in 2022 alone.
- ❖ Maharashtra followed with 15,224 deaths in 2022, while Tamil Nadu reported 17,884 deaths in the same year.
- ❖ Over 23 crore e-challans, amounting to over ₹ 36,700 crore, have been issued since 2020.



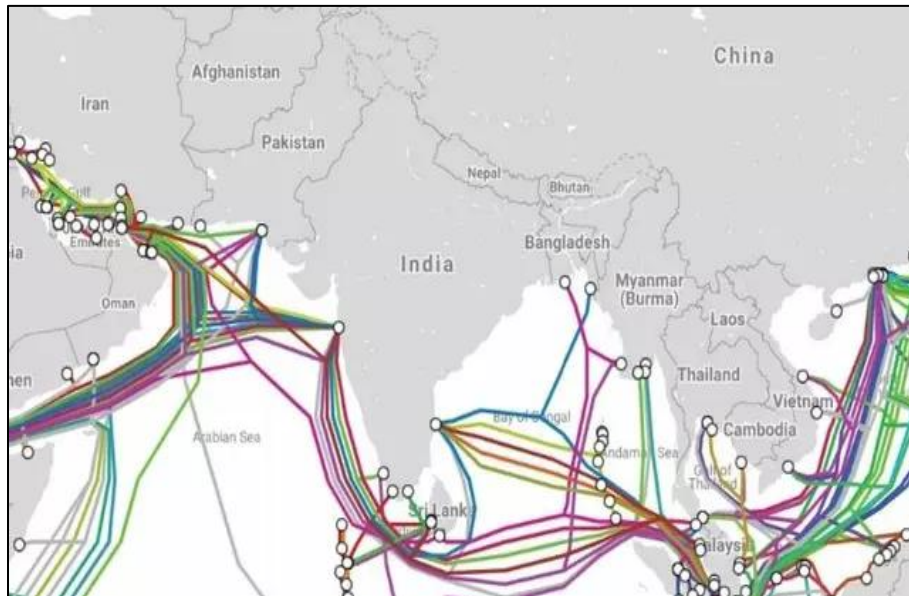
### **SMILE program - ADB Loan**

- ❖ The Indian government and the Asian Development Bank (ADB) (December 20) signed a landmark \$350 million policy-based loan.
- ❖ It aims to Strengthening Multimodal and Integrated Logistics Ecosystem (SMILE) programme.
- ❖ The SMILE programme is a flagship policy-based initiative and it also adopts a comprehensive approach to logistics reforms.

- ❖ Spanning two sub programmes, it is designed to enhance the competitiveness of India's manufacturing sector and strengthen the resilience of supply chains.



### **Undersea cable network**

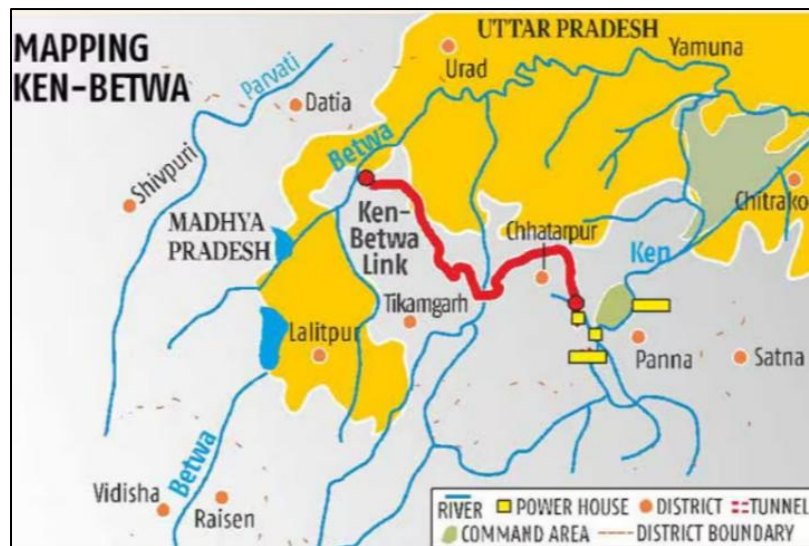


- ❖ The India Asia Xpress (IAX), and the India Europe Xpress (IEX), both connecting India with additional internet links to the two continents is set to launch soon.
- ❖ Both cable systems, cumulatively over 15,000 kilometres in length, are owned by Reliance Jio, with a strategic investment from China Mobile.

- ❖ IAX connects Chennai and Mumbai with Singapore, Thailand and Malaysia in Asia, and IEX connects them with France, Greece, Saudi Arabia, Egypt and Djibouti.
- ❖ This adds to the dozens of cables landing in India, mainly in Mumbai and Chennai.

### **Ken-Betwa Link Project 2024**

- ❖ Prime Minister laid the foundation stone for India's first interlinking of rivers project - Ken-Betwa river-linking project in Madhya Pradesh's Khajuraho.
- ❖ The KBLP envisages transferring the water from the Ken River to the Betwa river, both tributaries of the Yamuna.
- ❖ It aimed at solving the water woes of the Bundelkhand region, spread across parts of Uttar Pradesh and Madhya Pradesh.
- ❖ The Ken-Betwa River linking project is expected to address the drinking and irrigation water needs of at least 10 districts of Madhya Pradesh and the various districts of Uttar Pradesh.
- ❖ The project is also aimed at generating more than 100 MW of hydropower and 27 MW of solar energy.
- ❖ He also virtually inaugurated a floating solar energy project in Madhya Pradesh's Omkareshwar, the State's first solar power plant.



### **INS Nilgiri and Surat**

- ❖ The Mazagon Docks Shipbuilders Ltd delivered two indigenously built, modern Capital Warships 'Nilgiri' and 'Surat' to the Indian Navy.



- ❖ 'Nilgiri' is the First of Class (FoC) ship of Project 17A
- ❖ 'Surat' is the fourth ship of Project 15B and is a potent platform capable of undertaking a variety of tasks and missions.
- ❖ It is armed with supersonic Surface-to-Surface 'Brahmos' missiles and 'Barak-8' Medium Range Surface to Air Missiles.



## INTERNATIONAL

### mRNA Cancer Vaccine – Russia



- ❖ Russia has developed its own mRNA vaccine against cancer.

- ❖ The vaccine is expected to be launched in early 2025.
- ❖ Vaccines can combat cancer by stimulating the immune system to recognize and attack cancer cells.
- ❖ The mRNA vaccines work by introducing a piece of messenger RNA to the body, prompting cells to produce a specific protein.
- ❖ Cancer rates in Russia have been rising steadily, with over 635,000 new cases reported in 2022.
- ❖ Colon, breast, and lung cancers are among the most common types diagnosed in the country.

### **US national bird**



- ❖ The bald eagle, a symbol of the United States' power and strength for more than 240 years, is now officially the national bird of the country.
- ❖ The bald eagle has been a national emblem in the US for years, appearing on the Great Seal of the US - used on US documents - since 1782.
- ❖ The bald eagle is indigenous to North America.
- ❖ The Great Seal of the United States is a national symbol used in the official documents such as treaties and commissions.
- ❖ The final design was approved in 1782 and includes a bald eagle, an olive branch, arrows, a flag-like shield, the motto E Pluribus Unum (which translates to "out of many, one") and a constellation of stars.

- ❖ The bald eagle is also protected under the National Emblem Act of 1940, which makes it illegal to sell or hunt the creature.

### **Phewa dialogue series**

- ❖ The Nepal and China governments have launched the “Phewa Dialogue” series together.
- ❖ It follows an earlier initiative by the K P Sharma Oli government to launch the Sagarmatha Dialogue series.
- ❖ The dialogue aims to encourage the policies that promote regional prosperity and peace.
- ❖ It marks Nepal’s commitment to encouraging South Asian economic integration through collaborative discussions.



## **ECONOMY**

### **55<sup>th</sup> GST Council Meeting**

- ❖ The 55th GST Council met under the Union Finance Minister for in Jaisalmer, Rajasthan.
- ❖ The Council recommended a reduction in the GST rate on Fortified Rice Kernel (FRK) to 5%.
- ❖ It also announced a full exemption of GST on gene therapy.
- ❖ The Council clarified that no GST would be levied on the transactions involving vouchers, as they are neither classified as goods nor services.
- ❖ The penal charges levied by the banks and NBFCs for non-compliance with loan terms would not attract GST.

- ❖ It proposed lowering the pre-deposit amount required for appeals related solely to penalties, reducing it to 10% from the earlier 25%.
- ❖ The concessional 5% GST rate on food inputs used for free distribution under government programs will continue.
- ❖ Increased the GST rate from 12% to 18 % on sale of all old and used vehicles.

### WHAT'S CHEAPER & DEARER?

CHEAPER ITEMS	DEARER ITEMS
<ul style="list-style-type: none"> <li>Fortified rice kernels (for public distribution): <b>5% GST (down ▼ from 18%)</b></li> <li>Black pepper &amp; raisins (supplied by farmers): <b>Exempt</b></li> <li>ACC blocks (50% fly ash): <b>12% GST</b></li> </ul>	<ul style="list-style-type: none"> <li>Used EVs (business sales): <b>18% GST on margin value</b></li> <li>Pre-packaged &amp; spiced popcorn: <b>12% GST</b></li> <li>Caramel popcorn: <b>18% GST (unchanged)</b></li> <li>Used vehicles (by registered sellers): <b>18% GST</b></li> </ul>

#### OTHER KEY NOTES

- Gene therapy: **Exempt from GST**
- Penal charges by banks/NBFCs: **Exempt from GST**
- ATF: **Excluded from GST**
- Deferred: **Tax rate cuts on life/health insurance premiums & food delivery platforms**

## Specialized Investment Fund

### Specialized Investment Fund (SIF)



- **New Asset Class:** SIF offers more flexibility than regular mutual funds and requires a lower minimum investment compared to Portfolio Management Services (PMS) and Alternative Investment Funds (AIFs).
- **Minimum Investment:** ₹10 lakh for regular investors. No limit for accredited investors with higher financial capacity and risk understanding.

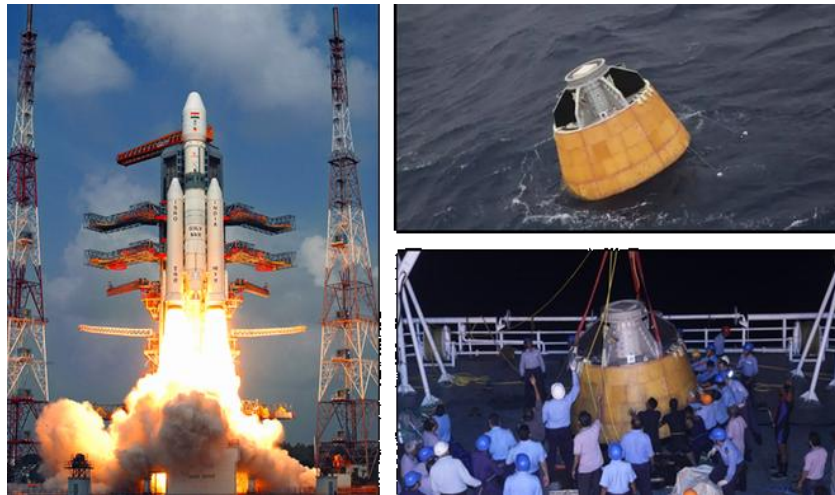
- ❖ SEBI has introduced a new asset class called Specialised Investment Fund (SIF).

- ❖ It is designed for informed investors willing to take on riskier investments.
- ❖ The SIF bridges the gap between mutual funds (MFs) and portfolio management services (PMS).
- ❖ It requires a minimum investment of Rs 10 lakh, with the lower thresholds for accredited investors.

## SCIENCE AND TECHNOLOGY

### Human Rated Launch Vehicle Mark-3

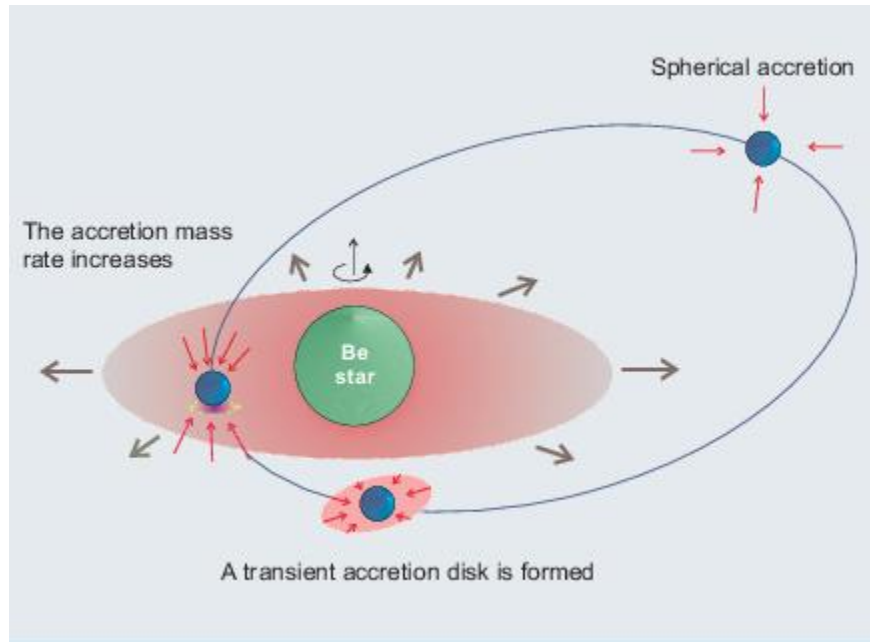
- ❖ The ISRO commenced the assembly of the Human Rated Launch Vehicle Mark-3 (HLVM3) for the Gaganyaan mission's maiden uncrewed flight.
- ❖ The event coincides with the 10th anniversary of the Launch Vehicle Mark-3 (LVM3-X/CARE (Crew module Atmospheric Re-entry Experiment)) mission, conducted in December 2014.
- ❖ HLVM3 is a three-stage vehicle with a payload capacity of about 10 tonnes to Low Earth Orbit (LEO).



### New X-ray Binary System

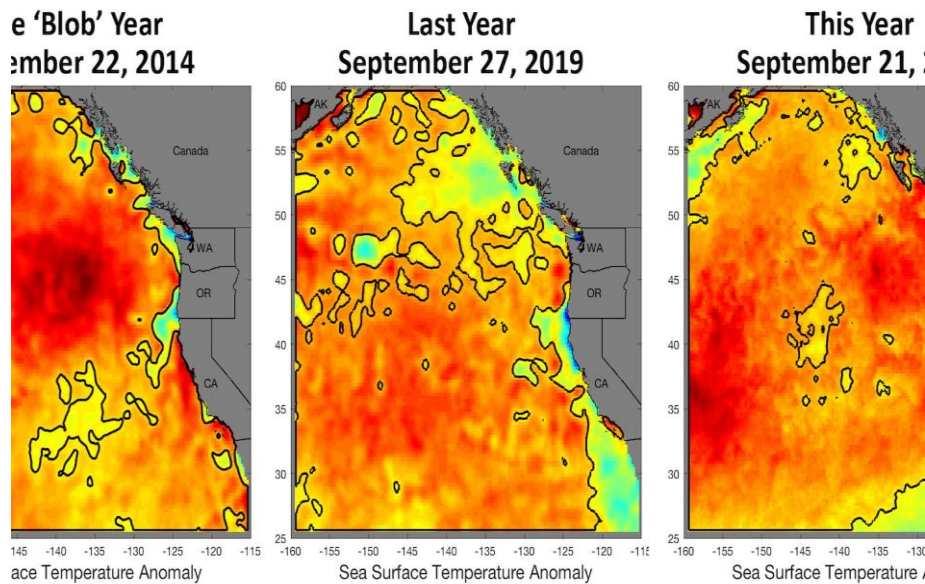
- ❖ NASA's IXPE (Imaging X-ray Polarimetry Explorer) has helped astronomers better understand the shapes of structures essential to a black hole.
- ❖ The stellar-mass black hole, part of the binary system Swift J1727.8-1613, was discovered in the summer of 2023.
- ❖ The X-ray binary system formed when one star underwent a supernova explosion.
- ❖ The X-ray binary systems typically include two close-proximity stars at different stages of their lifecycle.

- ❖ This system consists of two stars in orbit, one collapsed into a black hole after exhausting its nuclear fuel.



## ENVIRONMENT

### Marine Heat Wave 2024

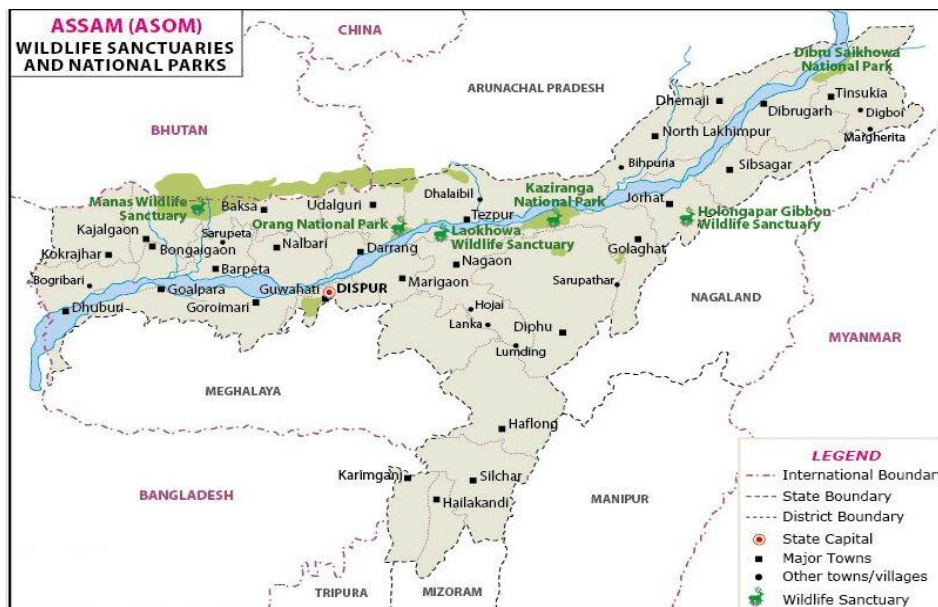


- ❖ Approximately 4 million common murrelets in Alaska of the USA were killed by an unprecedented marine heatwave, nicknamed 'The Blob'.

- ❖ 'The Blob' was an unusually warm patch of surface water in the northeast Pacific Ocean from late 2014 through 2016.
- ❖ It affected marine ecosystems from California to Alaska.
- ❖ Phytoplankton populations dwindled, which, in turn, triggered a collapse in fish stocks, the murre's primary food source.
- ❖ Common murre, known as guillemots in Europe, are seabirds that look a bit like flying penguins.

## STATES

### Bordoibam - Bilmukh Bird Sanctuary



- ❖ The number of avian species at a major wetland in north-eastern Assam declined by almost 72% in 27 years.
- ❖ A total of 167 avian species were recorded in 1997.
- ❖ But 47 species under 16 orders and 29 families were only observed during our 18-month study in the sanctuary.
- ❖ The drop in the bird species count since 1997 works out to 71.85%.
- ❖ 2011 survey during which 133 species of birds belonging to 41 families were recorded in the sanctuary.
- ❖ Out of 133, 86 species were the resident, 23 were the migratory and 24 were local migrants.
- ❖ Assam is one of the most biodiversity-rich States in India and home to about 950 bird species, including 17 endemic species.

- ❖ The State has 55 Important Bird and Biodiversity Areas that act as the hotspots for various avian species.

### **New Governors for Five States**

- ❖ President Droupadi Murmu appointed two new governors and reassigned three others, reorganising the leadership in five states.
- ❖ Ajay Kumar Bhalla has been appointed as the new Governor of Manipur, replacing Anusuiya Uikey.
- ❖ Arif Mohammed Khan, the governor of Kerala, has been reassigned to Bihar.
- ❖ Hari Babu Kambhampati, the Governor of Mizoram, has been transferred to Odisha.
- ❖ General (Dr.) Vijay Kumar Singh will now serve as the Governor of Mizoram.
- ❖ Rajendra Vishwanath Arlekar, the Governor of Bihar, has been reassigned to Kerala.




## **PERSONALITIES, AWARDS, AND EVENTS**

### **M T Vasudevan Nair**

- ❖ Renowned Malayalam writer M T Vasudevan Nair passed away recently.
- ❖ He made his directorial debut in 1973 with the film Nirmalyam, which won that year's national award for best feature film.
- ❖ In 1995, MT was conferred with the Jnanpith and in 2005 the Padma Bhushan.



- ❖ The Kerala Jyothi Award, the highest civilian award given by the Kerala state government, was conferred to him in 2022.



**Towering figure**

MT authored nine novels and 19 collections of short stories, directed six films, wrote over 50 screenplays, and published several collections of essays and memoirs over a career spanning seven decades

- His novel *Noalukettu* is considered a classic in Malayalam literature. He penned acclaimed works, such as *Randamoozham*, *Asuravithu*, *Manju*, and *Kaalam*
- In 1970, *Kaalam* won the Sahitya Akademi award for the best novel
- His directorial ventures include the national award-winning *Nirmalyam* (1973), *Bandhonam* (1978), *Kadavu* (1991), and *Oru Cherupunchiri* (2000)

**1995:** Jnanpith Award

**2005:** Padma Bhushan

**2013:** J.C. Daniel Award for lifetime achievement in Malayalam cinema

**2022:** Kerala Jyothi Award, the highest civilian award given by the Kerala government

**21** State Film Awards

**7** National Film Awards

**M.T. VASUDEVAN NAIR**  
(1933 - 2024)

## Rann Utsav 2025



- ❖ Rann Utsav is the festival that started out as a two-day festival and grew into the famed 100-day celebration of local art and culture.

- ❖ Rann of Kutch is the world's second largest salt marsh (7,500 square kilometres) and coarse salt that drapes the arid desert in a white veil.
- ❖ The festival showcases Kutch's rich cultural and artistic heritage, drawing the tourists from India and abroad.

## MISCELLANEOUS

### Yana discovery

- ❖ The Russian scientists have revealed the remains of a 50,000-year-old baby mammoth found in thawing permafrost in Siberia's remote Yakutia region.
- ❖ It is named "Yana" after the river basin where it was discovered.
- ❖ The mammoth is said to be the "best-preserved" mammoth carcass ever found.
- ❖ The Scientists unveiled a partial mummified body of a sabre-tooth cat, believed to be just under 32,000 years old.
- ❖ Earlier this year, the remains of a 44,000-year-old wolf were also uncovered.



### World's busiest domestic flight route in 2024

- ❖ India's busiest flight route—Mumbai-Delhi—has been ranked as the 8<sup>th</sup> busiest domestic route globally in the 2024 rankings.

- ❖ Within the Asia Pacific region, the Mumbai-Delhi route was ranked as the sixth busiest.
- ❖ Jeju International – Seoul Gimpo in south Korea route retained the top spot.

