

July - 25

## TNPSC BITS

- ❖ The Department of Animal Husbandry & Dairying (DAHD) has established a Credit Guarantee Fund Trust to provide credit guarantee coverage to enabling improved access to finance for the underserved livestock sector.
- ❖ The Gujarat government signed a memorandum of understanding with OneWeb India Communications Pvt Ltd for setting up a India's 1<sup>st</sup> 'satellite network portal site' at Mehsana in Gujarat.
- ❖ Indian scientists have indigenously developed highly stable, low-cost Carbon-based perovskite solar cells with superior thermal and moisture stability which can help overcome the challenges of degradation during operation.
- ❖ The National Company Law Tribunal (NCLT) has cleared the sale of India's first private hill station - Lavasa in Maharashtra to Darwin Platform Infrastructure for Rs.1,800 crore.
- ❖ Nusrat Choudhury became the first female Muslim federal judge in the United States.

## TAMIL NADU

### MLA Constituency Development Scheme

- ❖ The Tamil Nadu government has rendered ₹702 crore for the implementation of the Member of Legislative Assembly Constituency Development Scheme (MLACDS) for 2023-24.
- ❖ 351 crore rupees (50% of the fund) for the MLACDS 2023-24 released recently.
- ❖ Rural Development Department has framed detailed guidelines for the scheme's implementation.
- ❖ A sum of ₹3 crore has been allocated for every MLA to undertake development works in his/her Assembly constituency.

### 6,000 crore Proposals for investments

- ❖ The Tamil Nadu Cabinet cleared 10 industrial projects, which will bring in ₹6,000 crore in investments.
- ❖ They have a potential to create 27,000 jobs.
- ❖ Of the 10 projects, two are electric-vehicle projects, three are in general manufacturing, and one in electronics hardware.

- ❖ There is one project in the technical textile space.
- ❖ Godrej Consumer Products Limited will set up a plant in Tamil Nadu.
- ❖ Last year, the government unveiled the Life Sciences Policy, 2022, and the Research & Development Policy, 2022.
- ❖ The main goal of the R&D Policy is to double the R&D expenditure from the government, higher education and private sectors by 2030.
- ❖ It will transform Tamil Nadu into a knowledge-based economy by 2030, driving manufacturing and services excellence.
- ❖ The Life Sciences Policy was aimed at attracting ₹20,000 crore in investments and generate 50,000 jobs.
- ❖ This will be transforming the State into the most preferred destination for researchers in biologics, biosimilars and medical technology.

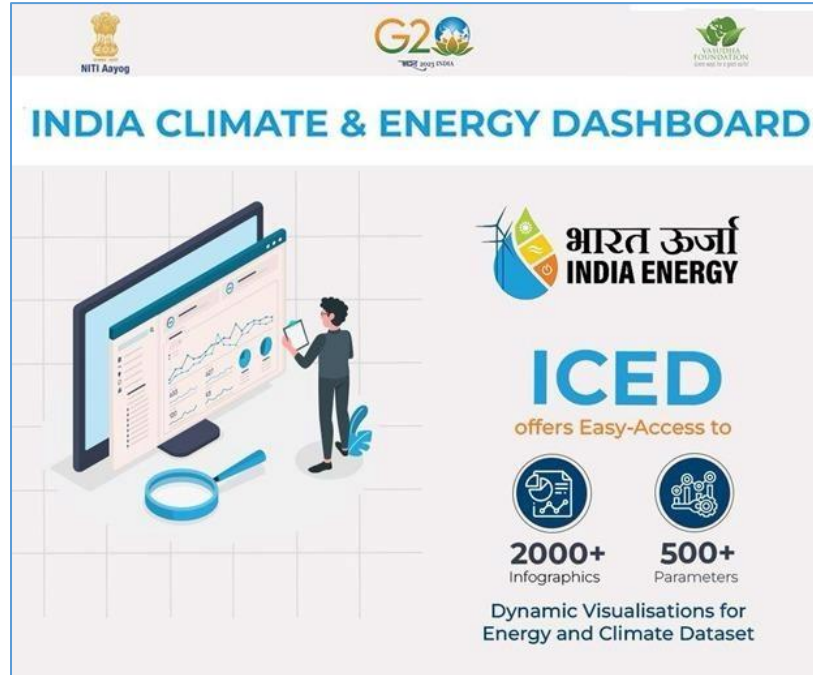


## **NATIONAL**

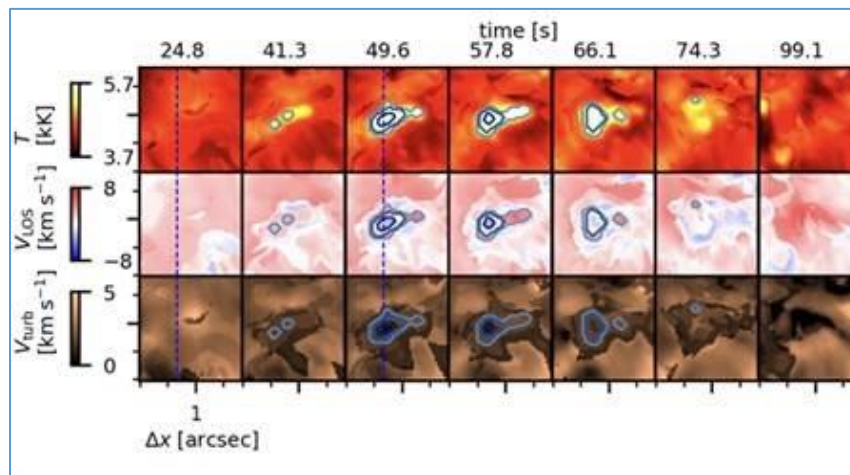
### **India Climate Energy Dashboard**

- ❖ NITI Aayog released the India Climate Energy Dashboard (ICED) 3.0.
- ❖ The ICED is the country's one-stop platform for near real-time data on the energy sector, climate, and related economic datasets based on government published sources.
- ❖ It enables users to freely access and analyse datasets using an analytical engine.

- ❖ It will facilitate insights and enhance understanding about the energy and climate sectors while identifying the key challenges.



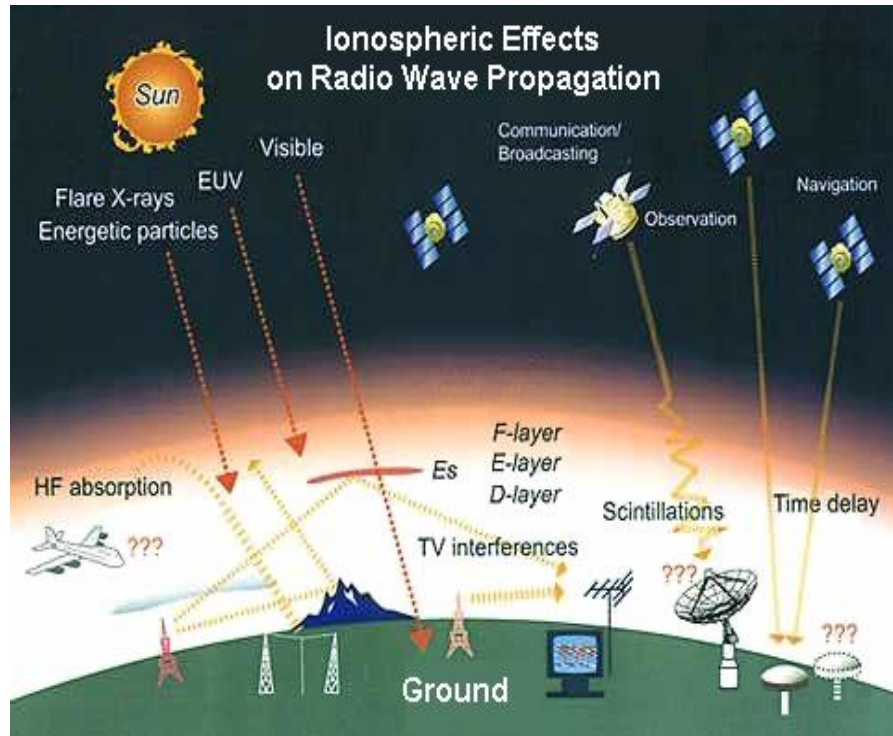
### Bright Grains in Chromosphere



- ❖ Indian Institute of Astrophysics (IIA) observed a bright grain in the chromosphere of the Sun.
- ❖ These grains are caused by upward propagating shocks in the solar plasma.
- ❖ It is leading to temperature enhancements that surpass previous estimates.

- ❖ The study can help improve understanding of the mechanism of heating of the chromosphere situated between the bright solar surface and the extremely hot corona.

## HF Radio Propagation Model



- ❖ The Indian Institute of Geomagnetism (IIG) have created an innovative model for the transmission of radio waves through the ionosphere.
- ❖ It has the potential to estimate the impact of space weather.
- ❖ Also, it plays a crucial role in facilitating the planning and operation of High Frequency (HF) radio communications.
- ❖ The development of such strategies is essential for ensuring reliable Skywave communication systems in the face of natural disasters and other emergencies.

## INTERNATIONAL

### Semiconductor pact with India

- ❖ Japan has become the second Quad partner after the United States to sign an agreement on semiconductor with India.
- ❖ This pact signed for the joint development of the semiconductor ecosystem and maintain the resilience of its global supply chain.



- ❖ With around 100 semiconductor manufacturing plants, Japan is among the top five countries to have a semiconductor ecosystem.
- ❖ The Semiconductor industry will become a USD 1 trillion industry from USD 650 billion at present.



### **Switzerland's Plan for carbon neutrality**



- ❖ Switzerland brought a new climate bill aimed at achieving carbon neutrality by 2050.
- ❖ The law seeks to reduce dependence on imported oil and gas and promote greener alternatives.

- ❖ The text promises financial support of two billion Swiss francs (\$2.2 billion) over a decade.
- ❖ The fund will be used to promote the replacement of gas or oil heating systems with climate-friendly alternatives, as well as aid to push businesses towards green innovation.

### **US-China Science and Technology Agreement (STA)**

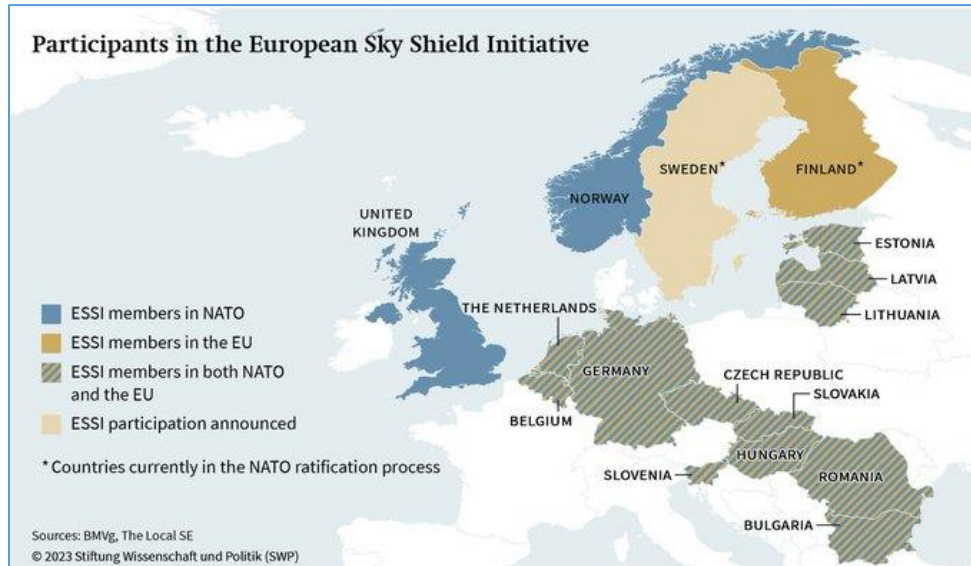


- ❖ US Lawmakers urged to state, not to renew a decades-old U.S-China agreement on scientific cooperation.
- ❖ The China-US Science and Technology Agreement (STA) was signed in 1979 and renewed about every five years since
- ❖ It has underpinned bilateral cooperation in science, technology and other areas for decades.
- ❖ This collaboration has encompassed disciplines such as atmospheric and agricultural science, physics, and chemistry.

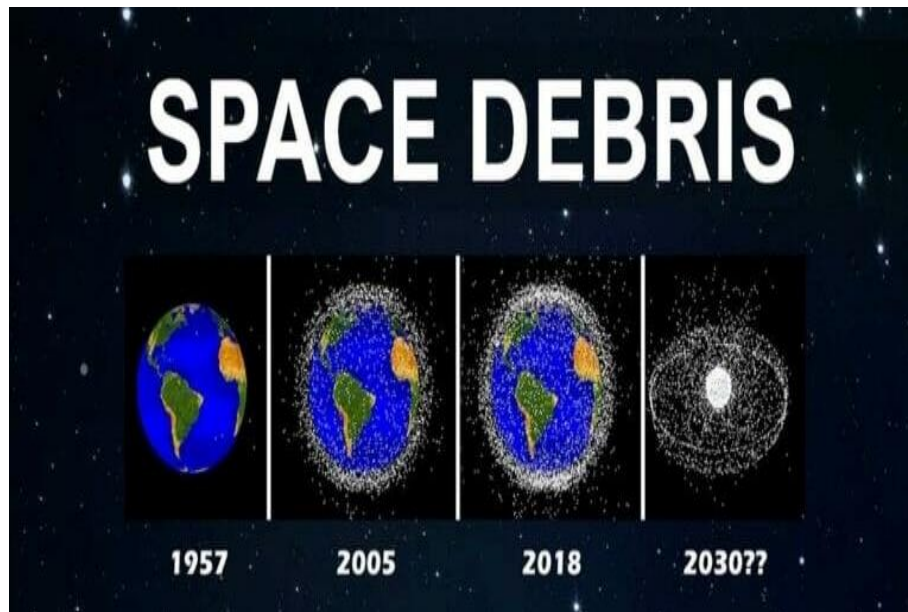
### **European Sky Shield Initiative**

- ❖ Austria and Switzerland have joined the 'European Sky Shield Initiative' (ESSI) for air defence in response to Russia's attack on Ukraine.
- ❖ The European Sky Shield Initiative (ESSI) is a regional grouping of European countries aimed at developing a common air and missile defence system.

- ❖ It focuses on acquiring air defence equipment and missiles collectively to strengthen NATO's Integrated Air and Missile Defence (IAMD).



## Space Industry Debris Mitigation Recommendations



- ❖ The World Economic Forum (WEF) and the European Space Agency (ESA) jointly released the Space Industry Debris Mitigation Recommendations.
- ❖ It aims to mitigate the space debris problem.
- ❖ The spacecraft operators try to get satellites removed from low-Earth orbit within 5 years after the end of the mission.



- ❖ Missions that orbit above an altitude of 375 kilometres should have an ability to actively manage the orbit.
- ❖ The guidelines encourage a propulsion-based system but other technologies could be more appropriate depending on the situation.
- ❖ Third-party liability insurance organizations should consider incentives for sustainable missions, and appropriate safety measures should be implemented
- ❖ It encourages industry players to further study the objects in orbit—the population, evolution, and the interaction between them.
- ❖ Russia has the most space debris with over 7000 rocket bodies floating in space.

## ECONOMY

### New categories of ESG Scheme



- ❖ The SEBI allowed mutual funds to introduce five new categories under ESG (environmental, social, and governance) and put in place a disclosure framework for them.
- ❖ The five new categories are -- exclusions, integration, best-in-class and positive screening, impact investing, and sustainable objectives.
- ❖ Presently, mutual funds can launch only one ESG scheme under the thematic category of equity schemes.

## SCIENCE AND TECHNOLOGY

### Service module propulsion system

- ❖ The ISRO successfully tested the Gaganyaan Service Module Propulsion System (SMPS) at ISRO Propulsion Complex in Mahendragiri, Tamil Nadu.



- ❖ With the successful completion of the hot test, the SMPS demonstrated its performance in the full configuration.
- ❖ ISRO plans to carry out Gaganyaan's first abort test in August.



### **X-ray Auroras in Mercury**



- ❖ The Bepi Colombo spacecraft made its first close flyby near the burning-hot planet on October 1, 2021.
- ❖ The spacecraft approached Mercury from the night side of the northern hemisphere and made a close approach in the morning side of the southern hemisphere.
- ❖ Using the observations made by the spacecraft, scientists discovered that electrons from the Sun raining down on the surface of the planet generates X-ray auroras on Mercury.

- ❖ Mercury has a very thin atmosphere, meaning that a lot of electrons from solar wind crash onto the surface.

## STATES

### 2nd-longest serving CM

1 <sup>[3]</sup>		Pawan Kumar Chamling (b. 22 Sept 1949)	Sikkim	12 December 1994	27 May 2019	24 years, 166 days	Sikkim Democratic Front
2 <sup>[4]</sup>		Naveen Patnaik (b. 16 Oct 1946)	Odisha	5 March 2000	<i>Incumbent</i>	23 years, 140 days	Biju Janata Dal
3 <sup>[5]</sup>		Jyoti Basu (8 Jul 1914 – 17 Jan 2010)	West Bengal	21 June 1977	6 November 2000	23 years, 138 days	Communist Party of India (Marxist)

- ❖ Odisha's Naveen Patnaik became the second longest-serving chief minister in the country.
- ❖ He took charge on March 5, 2000, and holds the post for 23 years and 138 days.
- ❖ He replaced West Bengal's Jyoti Basu.
- ❖ Jyoti Basu served as the chief minister of West Bengal from June 21, 1977 to November 5, 2000, which was 23 years and 137 days.
- ❖ Former Sikkim Chief Minister Pawan Kumar Chamling still holds the record of being the longest-serving Chief Minister in the country.
- ❖ He was the Chief Minister of the Himalayan state from December 12, 1994 till May 27, 2019 more than 24 years.

## IMPORTANT DAYS

### National Flag Adoption Day 2023 - July 22

- ❖ The day is observed to commemorate the Constituent Assembly's adoption of the tricolour in its current form in 1947.
- ❖ The National Flag was first designed in 1923 by Pingali Venkayya.
- ❖ The initial flag design by Venkayya had only two colours — red representing Hindus in the country and green representing the Muslim population.
- ❖ MK Gandhi asked Venkayya to add a white colour representing peace and the remaining communities of India.

- ❖ He also suggested adding a running wheel to symbolise the progress of the Nation.
- ❖ The Constituent Assembly on July 22, 1947, approved this final version of flag.

Freedom fighter **Pingali Venkayya** was born on Aug. 2, 1876

**THE MAN WHO DESIGNED THE Tricolour**

As a student, in 1921, designed the flag on which the **Indian national flag** was based

Joined the British Army at the age of 19 and took part in the **Anglo-Boer War in Africa**

Was nicknamed **'Diamond Venkayya'**, as he had a doctorate in geology and was an expert in diamond mining

Also called **'Patti Venkayya'** (Cotton) given his research on staple varieties of cotton

Presented a **red** (representing Hindus) and **green** (Muslims) flag; Lala Hansraj of Jalandhar suggested adding a **'charkha'**, while Mahatma Gandhi requested a white stripe

## Income Tax Day 2023 - July 24

**164<sup>th</sup> Income Tax Day**

**Boost in Revenue Collection:**  
There has been buoyancy in Revenue Collection in the Income Tax Department over the years with attendant decrease in the cost of collection.

- ▶ Net Direct Tax Collections have increased by 160.17% from Rs. 6.35 lakh crore in F.Y. 2015-14 to Rs. 16.61 lakh crore (provisional) in F.Y. 2022-23.
- ▶ Gross Direct Tax Collections have increased by over 172.53% in F.Y. 2022-23, reaching a figure of Rs. 19.68 lakh crore (provisional) from Gross Direct Tax Collections of Rs. 7.21 lakh crore in F.Y. 2015-14.
- ▶ Direct Tax Buoyancy at 2.52 in F.Y. 2021-22 is the highest Direct Tax Buoyancy recorded over last 15 years.
- ▶ Direct Tax-to-GDP ratio has increased from 5.62% in F.Y. 2015-14 to 5.97% in F.Y. 2021-22.
- ▶ The Cost of collection has decreased from 0.57% of total collection in the F.Y. 2015-14 to 0.53% of total collection in the F.Y. 2021-22.

- ❖ This year Income Tax Day or Aaykar Diwas to commemorate 164 years of this tax in India.
- ❖ Sir James Wilson implemented Income Tax in India on July 24, 1860.
- ❖ The scheme was introduced to recompense the British regime for losses sustained during the Revolt of 1857.



- ❖ The Income-tax Act of 1922 introduced a distinct nomenclature for the several Income-tax administrations.
- ❖ In 2010, the Finance Ministry declared July 24 as Income Tax Day to commemorate the establishment of this levy.

## MISCELLANEOUS

### Rock art in Rudragiri hillock



- ❖ Rudragiri hillock is located in the village of Orvakallu, Atchampet mandal in Guntur district of Andhra Pradesh.
- ❖ This site unveils a fascinating combination of prehistoric rock paintings from the Mesolithic period and exquisite artwork from the Kakatiya dynasty.
- ❖ These shelters served as living quarters for people during the Mesolithic age around 5000 B.C.
- ❖ They bear witness to the luminous rock paintings of that era.
- ❖ The paintings, adorned with a variety of color derived from white kaolin and different pigments, depict captivating scenes from the epic Ramayana.
- ❖ The third cave houses the prehistoric rock paintings from the Mesolithic era.

