

October - 17

## TNPSC BITS

- ❖ INS Talwar is participating in the eighth edition of IBSAMAR, a joint multinational maritime exercise among Indian, Brazilian, and South African Navy held at South Africa (Simon's Town).
- ❖ The India Digital Agri Conference 2024, co-organized by ICFA and IIT Ropar TIF – AwaDH was held at New Delhi.
- ❖ India took part in the 19th East Asia Summit (EAS) held in Vientiane, Lao.
- ❖ The central government has upgraded Hindustan Aeronautics Limited (HAL) as the 14th Maharatna Central Public Sector Enterprises (CPSE).
- ❖ The Director-General of UNESCO announced the designation of Rabat (Morocco) as World Book Capital for 2026.

## TAMIL NADU

### New GI tag applications - 2024



- ❖ The Tamil Nadu Food Processing and Agri Export Promotion Corporation (TNAPEX) has filed an application GI tag for three food products.
  - The Ramanathapuram panangkarkandu
  - Kovilpatti seeval, and
  - Ramanathapuram pattarai karuvadu.
- ❖ The NABARD Madurai Agri Business Incubation Forum (MABIF) was the facilitator.
- ❖ The Ramanathapuram panangkarkandu (crystal palm sugar) has been produced in this region for over 300 years.



- ❖ The pattarai karuvadu (dried fish) is a traditional dry fish preparation method that involves burying fish in mud after smearing them with turmeric powder.
- ❖ Kovilpatti seeval is a traditional deep-fried snack known for its crispy texture and unique flavour.

## **NATIONAL**

### **Oral cancer in India**

# **INDIA HAS THE HIGHEST NUMBER OF ORAL CANCER CASES IN SOUTH ASIA**

**IT'S DUE TO INCREASED USE OF  
SMOKELESS TOBACCO PRODUCTS  
(GUTKA, TOBACCO KHAINI, ETC)**

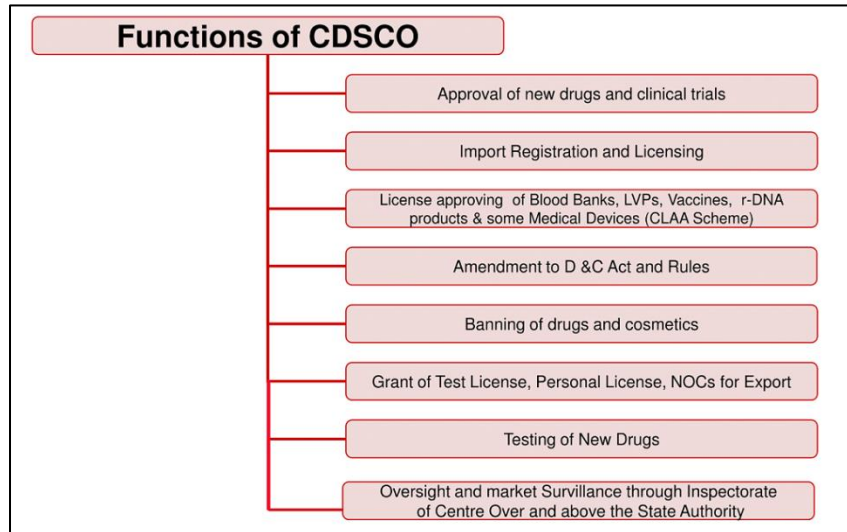
**INDIA REPORTED 83,400 OF THE TOTAL  
1,20,200 ORAL CANCER CASES GLOBALLY IN 2022**

- ❖ India has the largest number of oral cancer cases caused by smokeless tobacco (chewed, sucked on or sniffed) and areca nut (also called betel nut) use in South Asia.
- ❖ It was hosting up 83,400 of the 120,200 cases globally in 2022.
- ❖ Smokeless tobacco accounts for over 30 per cent of all oral cancer cases globally.
- ❖ The contributing regions of South-Central Asia (a total of 105,500 cases) are, with 83,400 - India, 9,700 - Bangladesh, 8,900 - Pakistan and in Sri Lanka 1,300).
- ❖ It is followed by South-East Asia (a total of 3,900 cases, with 1,600 in Myanmar, 990 in Indonesia, and 785 in Thailand).
- ❖ The East Asia hosts a total of 3,300 cases, with 3,200 in China.

### **India's Vaccine Regulatory System**

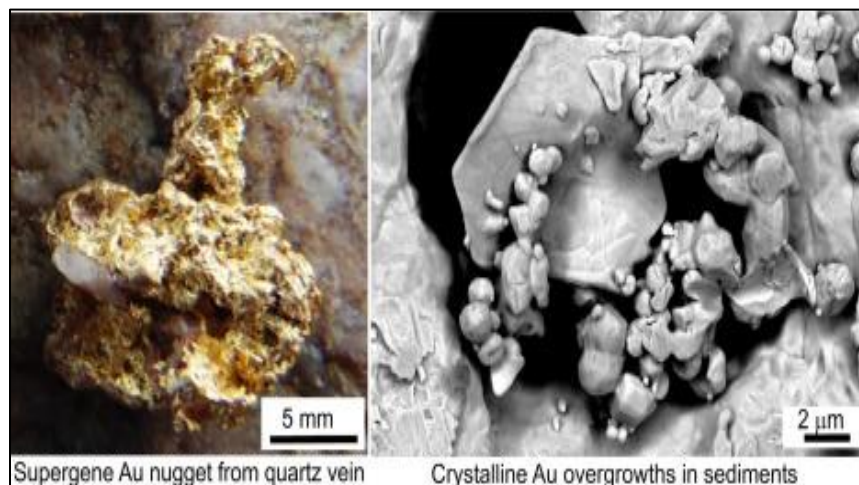
- ❖ Drug regulator CDSCO and the National Regulatory Authority of India have met the standards set up by the WHO for a functional vaccine regulatory system.
- ❖ Safety, efficacy, and quality were the three basic parameters of assessment of vaccines.

- ❖ India has been declared 'functional' against all the core regulatory functions of the WHO Global Benchmarking Tool Version VI.
- ❖ The WHO has established global standards and benchmarks for assurance of vaccine quality through the
  - Development of tools and guidelines,
  - Benchmarking of the National Regulatory Authorities (NRA) and
  - Pre-qualification programme of vaccines



## SCIENCE AND TECHNOLOGY

### Gold nuggets in orogenic quartz veins

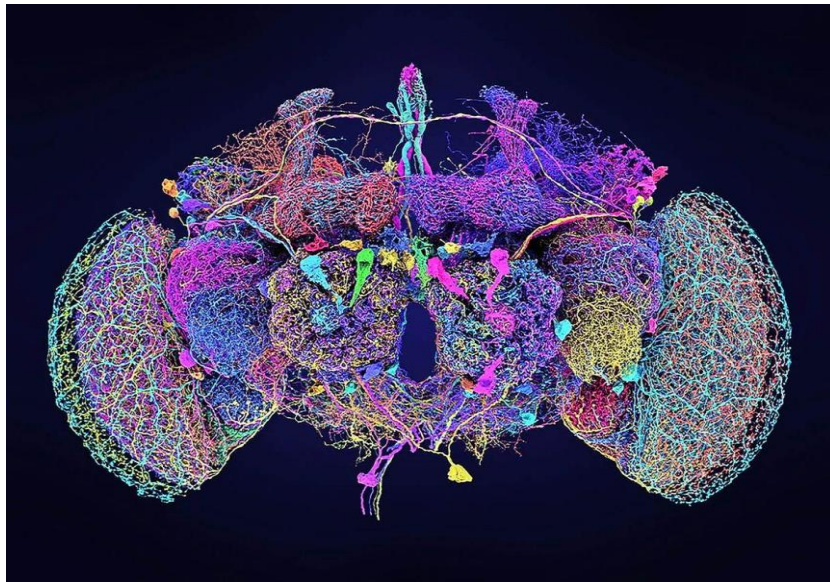


- ❖ The Researchers discovered that the piezo catalytic effect of quartz under seismic stress causes the accumulation of gold in quartz veins.

- ❖ Orogenic gold systems are commonly found in mountainous regions where large-scale geological processes, such as the collision of tectonic plates, have occurred.
- ❖ The Large gold nuggets are often found in orogenic quartz veins formed during the tectonic processes that create mountains.
- ❖ These nuggets form because, during earthquakes, the stress on quartz crystals causes a reaction that deposits gold on their surfaces.
- ❖ This process happens repeatedly leading to the accumulation of gold nuggets.

### **First complete map of brain**

- ❖ Researchers released the first complete wiring diagram of all 139,255 neurons in an adult fly brain — an animal capable of both walking and seeing.
- ❖ Previous studies have mapped smaller brain systems like fruit fly larva with 3,016 neurons, or the nematode worm with 302 neurons.
- ❖ Fruit flies have about 140,000 neurons, which is a tiny number compared to the 86 billion in the human brain.



## **ENVIRONMENT**

### **Rare Rain in Sahara Desert**

- ❖ A rare downpour has occurred in Sahara Desert, one of the world's most dry and arid regions.
- ❖ This rare extreme weather came after two days of continuous rainfall in the southeastern Morocco region of the North African desert.

- ❖ The ultimate influence of the event was the filling of Lake Iriqui.
- ❖ This lake had been dry since 1925, a period of 50 years.
- ❖ With over 9 million km<sup>2</sup> of territory, the Sahara Desert is at increased risk due to extreme weather associated with global warming.



### **India's Bird Population status 2024**



- ❖ WWF's Living Planet Report 2024 highlighting catastrophic 73 per cent decline in average size of wildlife populations in just 50 years.

- ❖ Between 1992 and 2002, the populations of white-rumped vulture and Indian vulture combined with the slender-billed vulture dropped by 98 per cent and 93 per cent respectively.
- ❖ 33 per cent decline in grassland butterfly species was reported in 22 countries over two decades.
- ❖ In Odisha, native bee populations have dropped by 80% since 2002.
- ❖ 35% decline witnessed in the population of neelkanthas or Indian rollers.

### **Extinction of 610 bird species**



- ❖ Researchers have documented the extinction of 610 bird species over a period of 130,000 years.
- ❖ This coincides with the spread of Homo sapiens across the globe.
- ❖ Dodo, the flightless bird was first discovered in 1598 by the Dutch sailors and became extinct by 1681.
- ❖ The birds were used to the isolated environment of the island of Mauritius.
- ❖ Of the 610 bird species, 90% of them went extinct at least partially due to the humans.
- ❖ The 610 species combined represented 3 billion years of the unique evolutionary history.
- ❖ About 11,000 bird species now exist, occupying a dizzying array of ecological niches.

- ❖ The researchers projected future extinctions of more than 1,000 species over the next two centuries.

## REPORTS AND INDICES

### Global Hunger Index 2024

Rank in 2024 ↑	Country	2000	2008	2016	2024
1-22 <sup>1</sup>	Belarus	<5	<5	<5	<5
1-22 <sup>1</sup>	Bosnia & Herzegovina	9.4	6.4	<5	<5
1-22 <sup>1</sup>	Chile	<5	<5	<5	<5
1-22 <sup>1</sup>	China	13.4	7.2	<5	<5
1-22 <sup>1</sup>	Costa Rica	6.6	<5	<5	<5
1-22 <sup>1</sup>	Croatia	5.5	<5	<5	<5
1-22 <sup>1</sup>	Estonia	<5	<5	<5	<5
1-22 <sup>1</sup>	Georgia	12.0	6.6	5.4	<5
1-22 <sup>1</sup>	Hungary	<5	<5	<5	<5
1-22 <sup>1</sup>	Kuwait	<5	<5	<5	<5
1-22 <sup>1</sup>	Latvia	<5	<5	<5	<5
1-22 <sup>1</sup>	Lithuania	<5	<5	<5	<5
1-22 <sup>1</sup>	Montenegro	—	5.7	<5	<5
1-22 <sup>1</sup>	North Macedonia	7.6	5.3	5.1	<5
1-22 <sup>1</sup>	Romania	7.9	5.7	5.0	<5
1-22 <sup>1</sup>	Russian Federation	10.4	5.9	5.4	<5
1-22 <sup>1</sup>	Serbia	—	5.9	<5	<5

- ❖ It is Jointly published by 'Concern Worldwide' and 'Welthungerhilfe'.
- ❖ The 19<sup>th</sup> Global Hunger Index (GHI) report for 2024 has ranked India 105<sup>th</sup> out of 127 countries.
- ❖ This is placing India among nations with 'serious' hunger problems.
- ❖ India lags behind its neighbours Sri Lanka, Nepal, Myanmar, and Bangladesh, while it ranks just above Pakistan and Afghanistan.
- ❖ The 2024 report is not directly comparable to the 2023 report due to a change in methodology and revised data.
- ❖ However, it provides comparative data for the years 2000, 2008, 2016, and 2024.
- ❖ India continues to face severe challenges in child malnutrition, with the highest child wasting rate (18.7%) globally.
- ❖ The country also has a child stunting rate of 35.5%, an under-five mortality rate of 2.9%, and a prevalence of undernourishment at 13.7%.
- ❖ Globally, around 733 million people face hunger each day due to a lack of access to a sufficient amount of food.
- ❖ Also, about 2.8 billion people cannot afford a healthy diet.

- ❖ South Sudan, Burundi, Somalia are the bottom three countries.

## STATES

### **Aurora Borealis - Leh**

- ❖ Auroras has appeared up the skies over Leh, India, as a severe geomagnetic storm struck Earth.
- ❖ This event was triggered by a powerful coronal mass ejection (CME) from the Sun, which reached Earth.
- ❖ The CME originated from an X1.8 solar flare, and it travelled at speeds exceeding 1.5 million miles per hour.
- ❖ The National Oceanic and Atmospheric Administration (NOAA) has classified the geomagnetic storm as G4.
- ❖ It was indicating the severe conditions that could disrupt power grids and satellite operations.
- ❖ Solar activity peaks in cycles of 11 years, reaching their solar maximum once per cycle, which is due in 2025, and the effects of which are likely to be felt till 2026.

