

July - 31

## TNPSC BITS

- ❖ The Longwood Shola in Nilgiris accredited with the Queen's Commonwealth Canopy accreditation.

## TAMIL NADU

### Tamil Nadu tiger population

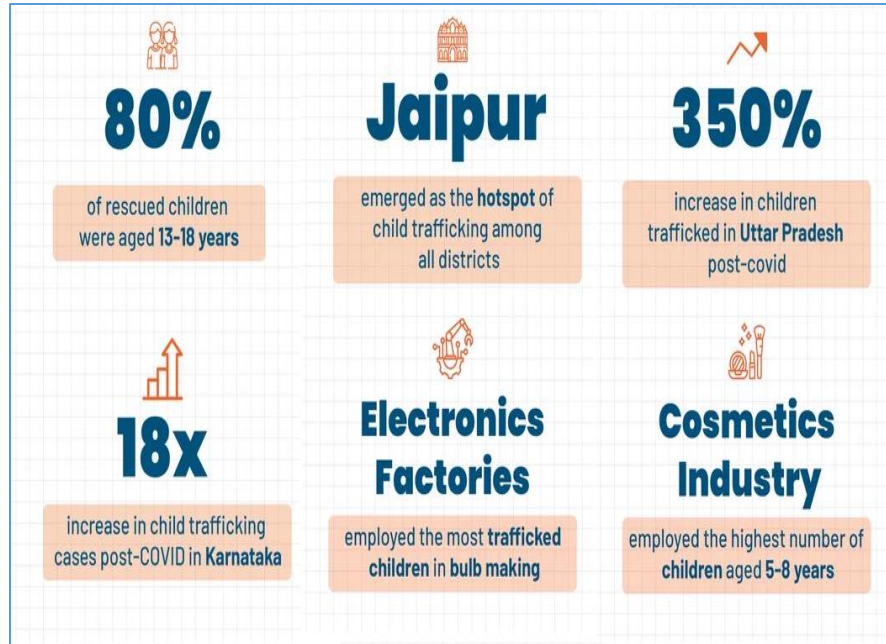


- ❖ The tiger population in Tamil Nadu has risen from 264 in 2018 to 306 in 2022.
- ❖ Among the southern states, Karnataka has the most tigers at 563 followed by TN with 306 and Kerala with 213.
- ❖ In the Western Ghats region that is spread across the three southern states, the tiger population in 2022 is at 1,087 against 981 in 2018.
- ❖ Compared to 2006, when 76 tigers were recorded in TN, there has been a four-fold increase, more than the other southern states.
- ❖ In Kerala, the number of tigers which was 190 during the 2018 census went up to 213 in 2022.

- ❖ In Karnataka, the big cat population went up from 524 in 2018 to 563 in 2022.

## NATIONAL

### Child Trafficking in India



- ❖ The report titled 'Child Trafficking in India: Insights from Situational Data Analysis and the Need for Tech-driven Intervention Strategies' was released recently.
- ❖ The new study was conducted by the NGO Games24x7 and the Kailash Satyarthi Children's Foundation (KSCF).
- ❖ Uttar Pradesh, Bihar, and Andhra Pradesh are the top three states with the highest number of children trafficked between 2016 and 2022.
- ❖ Delhi has experienced a 68 per cent rise in child trafficking cases from pre to post-Covid times.
- ❖ The number of reported incidents in the pre-Covid phase (2016-2019) was 267.
- ❖ But it rose intensely to 1214 in the post-Covid phase (2021-2022).
- ❖ Karnataka witnessed an 18-fold increase, increasing from 6 to 110 reported incidents of child trafficking.
- ❖ Jaipur City emerged as the top district in child trafficking, with four other districts in Delhi appeared in the top slots.
- ❖ As many as 13,549 children under the age of 18 were rescued during this period.

- ❖ Hotels and dhabas employ the maximum number of child labourers (15.6 per cent).
- ❖ It is followed by the automobile or transport industry (13 per cent), and garments (11.18 per cent).

### **600-million-year-old Himalayan River**

- ❖ Scientists have discovered water droplets in mineral deposits that are believed to be from an ancient ocean that existed around 600 million years ago.
- ❖ They believe that the Earth may have been covered by thick sheets of ice between 700 and 500 million years ago.
- ❖ This period is known as the Snowball Earth glaciation.
- ❖ This event was followed by the Second Great Oxygenation Event which led to an increase in the amount of oxygen in the Earth's atmosphere.
- ❖ This event led to the evolution of complex life forms.

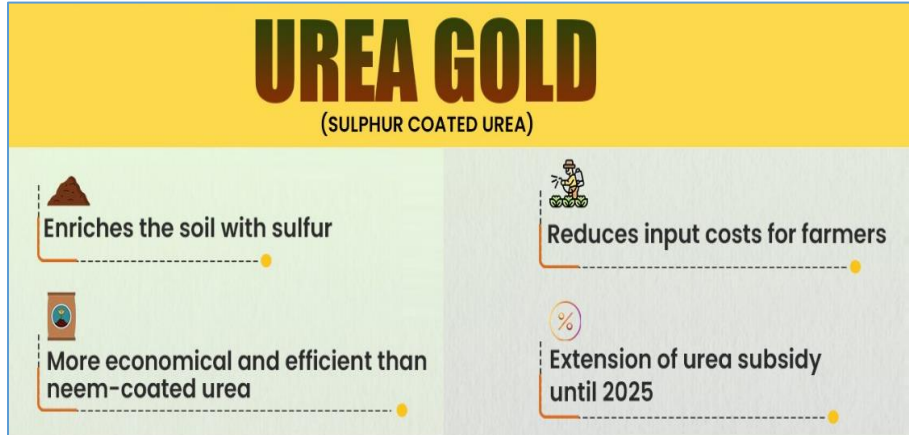


### **Urea Gold for farmers**

- ❖ The Urea Gold was launched in Rajasthan recently.
- ❖ "Urea Gold" is a new variety of urea that is coated with sulphur.
- ❖ It is expected to address sulphur deficiencies in the soil.
- ❖ This "innovative fertiliser" is more economical and efficient than neem-coated urea.
- ❖ It is ensuring improved nitrogen use efficiency, reduced consumption, and enhanced crop quality.



- ❖ Urea coated with sulphur helps in slow release of nitrogen, therefore increasing its availability and uptake.
- ❖ 15 kg of Urea Gold is comparable to 20 kg of conventional urea.
- ❖ A bag of urea, which is sold in India at Rs 266, is being sold at Rs 800 in Pakistan, Rs 720 in Bangladesh, Rs 2,100 in China and Rs 3,000 in the US."



**UREA GOLD**  
(SULPHUR COATED UREA)

- Enriches the soil with sulfur
- Reduces input costs for farmers
- More economical and efficient than neem-coated urea
- Extension of urea subsidy until 2025

## SCIENCE AND TECHNOLOGY

### PSLV-C56



- ❖ ISRO successfully launched the PSLV-C56 carrying Singapore's DS-SAR satellite and six other satellites.
- ❖ The DS-SAR satellite is developed under a partnership between DSTA (representing the Government of Singapore) and ST Engineering.

- ❖ The co-passengers on the missions are VELOX-AM, ARCADE, SCOOB-II, NuLloN, Galassia-2 and ORB-12 STRIDER.

### Jupiter 3

- ❖ SpaceX launched Hughes Network Systems' Jupiter 3 satellite.
- ❖ It is designed to modernize an old-school approach to space-based internet access.
- ❖ The nine-ton and a bus sized satellite Jupiter 3, also called EchoStar XXIV.
- ❖ It is the largest commercial communications satellite ever built.

**Hughes JUPITER™ 3 Next Generation Ultra High Density Satellite**  
*Launching a new era of connectivity.*

**JUPITER 3 Quick Facts**

- » Spectrum: Ka-band, Q- and V-band for gateways
- » Coverage: North & South America
- » Speed: Up to 100 Mbps
- » Capacity: More than 500 Gbps
- » Stowed Size: 26 feet long
- » Deployed Size: Solar arrays span 127 feet
- » Solar Arrays: 14 total
- » Position: 95° West longitude
- » Distance: 22,300 miles above the equator
- » Manufacturer: Maxar
- » Launcher: SpaceX
- » Service sectors: Consumer, small business, enterprise, government, service providers and aeronautical and maritime mobility
- » Spot beams: 300. Each beam carries 500 MHz or more, providing more than 1 Gbps to the VSAT users in each cell allowing faster service plans of up to 100 Mbps.

**JUPITER 3 Gateways**

- » Active Gateways: 18
- » Diverse Gateways for Service Continuity: 2
- » Each gateway transmits 11 GHz of V-band and Ka band and receives 4 GHz in Q-band.

**JUPITER Fleet**

- » JUPITER fleet total capacity: More than 1 Tbps
- » JUPITER 1 (EchoStar XVII): Launched July 2012 with 120 Gbps capacity
- » JUPITER 2 (EchoStar XIX): Launched December 2016 with 200 Gbps capacity
- » JUPITER 3 (EchoStar XXIV): Launching 2023 with more than 500 Gbps capacity

*Follow along with us on the journey to JUPITER 3.*  
Visit [hughes.com/JUPITER3](https://hughes.com/JUPITER3)

**HUGHES**  
An EchoStar Company

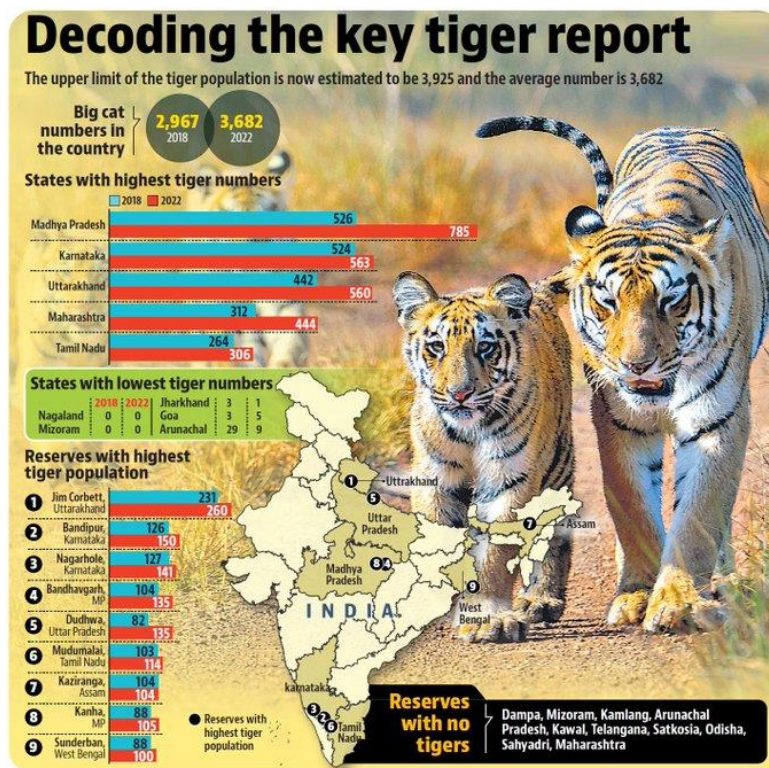
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## ENVIRONMENT

### Tiger Population of India in 2023

- ❖ India's tiger population increased to 3,682 in 2022, up from 2,967 in 2018.
- ❖ It was estimated by the Wildlife Institute of India (WII), which coordinates the quadrennial tiger census.
- ❖ India recorded a 23.5% increase in tiger population between 2018 and 2022.
- ❖ This also indicates significant growth over the last decade.
- ❖ There were 2,226 tigers reported in 2014, up from 1,706 in 2010.
- ❖ The country accounting for 75% of the tigers in the world.

- ❖ Around 80% of the tigers (2,885) now reside in eight of the 18 tiger states.
- ❖ It includes Madhya Pradesh, Karnataka, Uttarakhand, Maharashtra, Tamil Nadu and Assam.
- ❖ In 2022, the maximum number of tigers were reported in Madhya Pradesh (785).
- ❖ It was followed by Karnataka (563), Uttarakhand (560), and Maharashtra (444).
- ❖ The central Indian and Western Ghats landscapes have contributed 2,526 tigers to the total number.
- ❖ The reserves with the maximum number of tigers were at the Corbett National Park in Uttarakhand, which reported 260 animals.
- ❖ It is followed by Bandipur (150), and Nagarhole (141), both in Karnataka.
- ❖ Globally, the number of tigers increased from 3,890 in 2016 to 5,575 in 2023.
- ❖ India's tigers are largely concentrated in 53 dedicated tiger reserves spread across 75,796 square km, spanning about 2.3% of India's total land area.



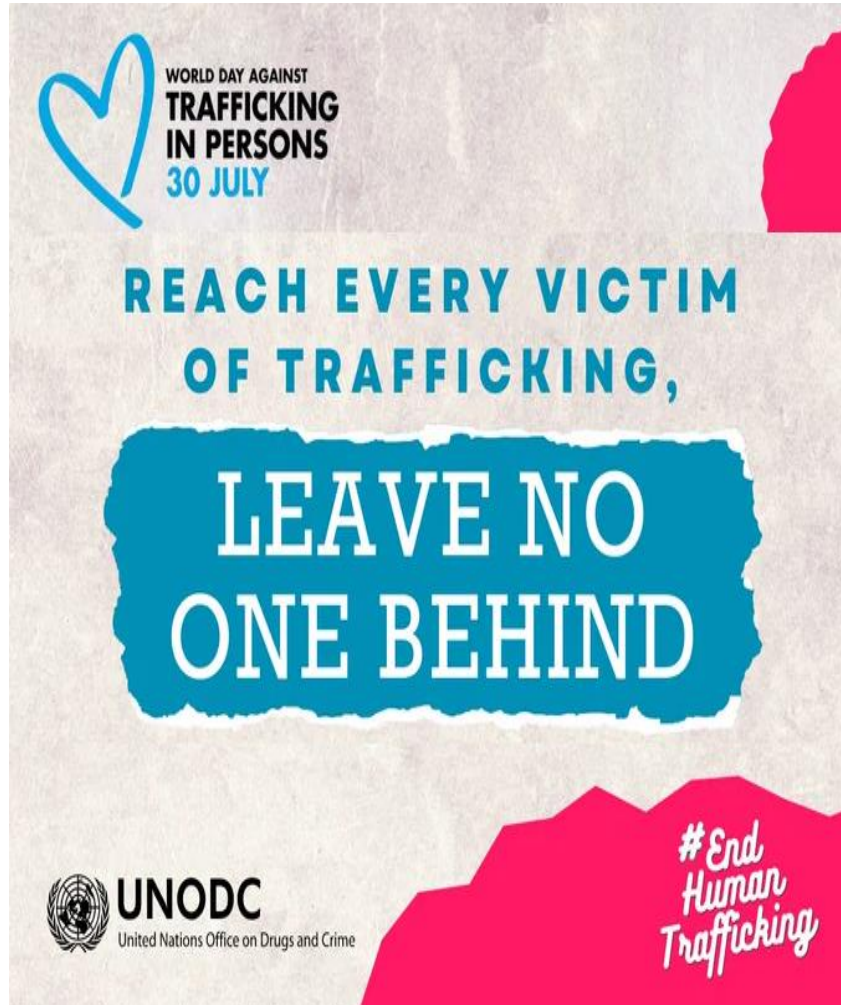
## IMPORTANT DAYS

### World Day Against Trafficking 2023 - July 30

- ❖ This day is observed to raise awareness about the trends in human trafficking identified by the United Nations Office on Drugs and Crime (UNODC).



- ❖ It aims to put pressure on governments, law enforcement agencies and civil society to strengthen the prevention of trafficking and the identification and support of victims.
- ❖ The theme of 2023 is "Reach every victim of trafficking, leave no one behind".



### **World Ranger Day 2023 - July 31**

- ❖ This day is observed in memory of eight rangers who tragically lost their lives while on duty in Virunga National Park, Democratic Republic of Congo.
- ❖ The term 'ranger' is to refer to any professional involved in the protection and management of national parks and natural areas.
- ❖ The theme of 2023 is "30 by 30" aiming to effectively conserve and manage at least 30 percent of the planet's areas by 2030.
- ❖ The International Ranger Federation (IRF) was established in 1992 to promote and support the work of park rangers worldwide.



- ❖ The day was first celebrated in 2007 marking the organisation's 15th foundation anniversary.

**WE STAND WITH THE  
WORLD'S RANGERS**

**WORLD RANGER DAY  
31 JULY**

