Survey finds 306 tigers in T.N. in 2022, a jump from 264 in 2018

The Hindu Bureau
CHENNAI

As many as 306 tigers were recorded in Tamil Nadu in the nation-wide census by the National Tiger Conservation Authority (NTCA) for the year 2022. This is an increase from the figure 264, recorded in the 2018 survey.

The NTCA report also showed a population of 3,682 tigers across India, an increase from a mere 1,411 in 2006. According to the NTCA's 'Management Effectiveness Evaluation' (MEE) report released in April, Tamil Nadu's Anamalai Tiger Reserve and Mudumalai Tiger Reserve were among the top 12 tiger reserves, out of 51 surveyed in the country, ranked 'excellent'.

As per the report, only the Western Ghats showed a decline in tiger numbers with the "major population being stable". As of 2018, the tiger population was estimated at 981 in the region and the number dropped to 824 in 2022.

The NTCA report showed a population of 3,682 tigers across India, an increase from 1,411 in 2006. FILE PHOTO

However, experts say that once the population rises, it is normal to wane and plateau. "It is high time we move away from just numbers. We have a healthy population now," said Jose Louies, Chief of Enforcement, Wildlife Trust of India.

"The focus should be on building connecting corridors along tiger movement areas to handle human-wildlife conflict," he said.

Conservation issues

The MEE report noted that the region faces several conservation issues due to human activities, including habitat loss and fragmentation, poaching, illegal wildlife trade, human-wildlife conflict and invasive species.

On Thursday, a day before International Tiger Day, seven people were arrested in connection with the death of a five-year-old male tiger in the Bhavanisagar Forest Range on July 25. The big cat reportedly got caught in a snare that was laid out for a deer.

Srinivas R. Reddy, Chief Wildlife Warden, said following the tiger's death, a team at the Sathyamangalam Tiger Reserve has been informed to intensify surveillance and check for snares.

Stating that the tiger population had increased, Chief Minister M.K. Stalin tweeted on Saturday: "On International Tiger Day, let's roar for the preservation of our magnificent tigers!"

India's tiger population goes up, M.P. has most big cats

Tiger numbers increased in Uttarakhand, Maharashtra; localised declines in the Western Ghats; disquieting trends in Mizoram, Nagaland, Jharkhand, Goa, Chhattisgarh, and Arunachal Pradesh

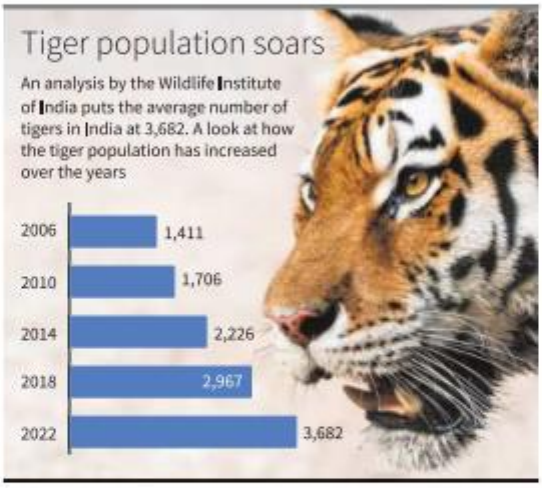
Jacob Koshy
NEW DELHI

India's tiger population increased to 3,682 in 2022, up from 2,967 in 2018, show an estimate released on Saturday. This is an upward revision from April, when a minimum of 3,167 animals were estimated by the Wildlife Institute of India (WII), which coordinates the quadrennial tiger census.

This also indicates growth over the past decade – there were 2,226 tigers reported in 2014, up from 1,706 in 2010.

In 2022, the highest number of tigers, 785, were reported to be in Madhya Pradesh, followed by Karnataka (563), Uttarakhand (560), and Maharashtra (444). Nearly a quarter of the tigers were reportedly outside protected areas.

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. The reserves with the most number of tigers were the Corbett National Park in Uttarakhand, which reported 260 animals, followed by Bandipur (150), and Nagarhole (141), both in Karnataka.



'Disquieting trends'

Central India, the Shivalik Hills, and the Gangetic plains witnessed increases in tiger population, particularly in the States of Madhya Pradesh, Uttarakhand, and Maharashtra. Certain regions, such as the Western Ghats, experienced localised declines, needing targeted monitoring and conservation efforts. Some States, including Mizoram, Nagaland, Jharkhand, Goa, Chhattisgarh, and Arunachal Pradesh, have reported "disquieting trends" with smaller tiger populations, according to a press statement from the Ministry of Environment and Forests.

"In general, reserves that have applied good conservation practices, such as ensuring enough prey is available for tigers, have done well," said Qamar Qureshi, a senior scientist at the WII who is closely associated with the tiger surveys.

Approximately 35% of the tiger reserves urgently required enhanced protection measures, habitat restoration, ungulate (deer, chital, blackbuck) augmentation, and subsequent tiger reintroduction, the Environment Ministry statement added.

The estimated number of 3,682 is an average figure for a population that likely ranges between 3,167 and 3,925. Tiger numbers are estimated based on the number of unique tigers captured on camera, plus an estimate of animals that may not have been photographed.

It is quite likely that future exercises may not see dramatic increases in tiger population, he cautioned. Since 2014, India's tiger numbers have been increasing at 5% to 6% each year.

Organ transplants improve in private sector, challenges need to be addressed

Organ donation rate is not as good as it should be. It should increase to 10 to 15 per million in India, says Swaminathan Sambandam, Lead, multiorgan transplant at Kauvery Group of Hospital

The Hindu Bureau
CHENNAI

Post-pandemic, organ transplantations are back on track in private hospitals, with the figures even surpassing pre-COVID for some centres. Still, there are certain issues and challenges that need to be addressed.

Preetha Reddy, executive vice chairperson of Apollo Hospitals Enterprise, which recently announced that it has completed over 23,000 transplants since the inception of its transplant programme in the country, said during the COVID-19 pandemic, around 800 transplants were performed across the country. Post-COVID and the lockdowns, the numbers went up, she said.

Noting that Tamil Nadu was doing really well with transplants, she raised the need to encourage organ donations.

New technology is aiding in better diagnostics and imaging modalities. FILE PHOTO

Swaminathan Sambandam, Lead, multiorgan transplant at Kauvery Group of Hospitals, said transplant activities fully resumed after COVID-19. "Our numbers have, in fact, increased compared to pre-COVID-19 numbers, with an almost 30% increase in liver and kidney transplants," he said.

Kauvery Group of Hospitals has performed 102 liver transplants, 143 kidney transplants, and 10 heart and lung transplants in the last year, according to hospital authorities.

He added that the organ donation rate was not as good as it should be. "It is population-based: 18 to 20 per million in the UK, 24 to 26 per million in the US, and 1.1 per million in India. It should increase to 10 to 15 per million in India," he said. Dr. Sambandam added that there were loads of patients with no access to transplants due to factors such as poor referral systems and finances; State governments such as Tamil Nadu support organ transplants through the health insurance scheme.

Suresh Rao KG, co-director, Institute of Heart and Lung Transplant and Mechanical Circulatory Support, MGM Healthcare, said that organ transplants have picked up and transportation and logistics have become slightly better. From July 2022 to June 2023, MGM Healthcare performed a total of 49 heart transplants, 35 dual lung transplants, and 10 heart and lung transplants, according to data from the hospital's heart and lung team.

New technology was aiding in better diagnostics and imaging modalities. "Organ maintenance is a big challenge. If an organ is wasted, the reasons should definitely be looked at," he said.

U.K. to assist Indian firms manufacture electrolysers to produce green hydrogen

The Green Hydrogen Electrolyser Manufacturing Ecosystem Assessment Project will develop a framework to expand production of green hydrogen to be used as a source of power and heating

The Hindu Bureau
CHENNAI

The Green Hydrogen Electrolyser Manufacturing Ecosystem Assessment Project was launched by Minister for Industries, Investment and Commerce T.R.B. Rajaa and U.K. Minister of State for Energy Security and Net Zero Graham Stuart on Saturday.

Through the project, the U.K. will help Indian companies develop a framework for manufacturing electrolysers in Tamil Nadu with a view to expand the production of green hydrogen as a source of power and heating in the State.

"Tamil Nadu has advantages in that it is a coastal state, a leader in renewable energy, has good connectivity and it can support the upswing in supply of renewable energy. Today's discussion is important because we can understand what we can do to promote electrolyser manufacturing," said S. Krishnan, Additional Chief Secretary, Industries Department.

Minister for Industries, Investment and Commerce T.R.B. Rajaa and U.K. Minister of State for Energy Security and Net Zero Graham Stuart participating in the discussion on Saturday. SPECIAL ARRANGEMENT

A fireside chat between the two Ministers shed light on both parties' commitments and interest in promoting this cause. "Tamil Nadu is the greenest State and the Chief Minister has a vision to increasing the tree cover from 23.69% to 33%. We are keen to use green hydrogen and our policy on the same will be rolled out soon," said Mr. Rajaa.

"I am impressed by Tamil Nadu's efforts to adopt low-carbon energy sources, boost green jobs and growth across the State while strengthening both its energy and climate security. The U.K. is delighted to partner with Tamil Nadu on both offshore wind and green hydrogen," said Mr. Stuart.

An open house gave industry participants the chance to share their views, the challenges and the support needed from the State government in this endeavour.

Plastic pollution widespread in water bodies across the world

The Hindu Bureau

Two papers published in *Nature* have found evidence for widespread plastic contamination of coral reefs and freshwater lakes. The reef study finds that larger fragments (mostly debris from the fishing industry) make up most of the plastic found, and these macroplastics are especially abundant in deep reefs. The assessment of freshwater lakes and reservoirs reveals that all assessed bodies of water were contaminated with microplastics.

Hudson Pinheiro from the California Academy of Sciences, San Francisco and colleagues surveyed global reefs for macroplastics (over 5 cm) and other debris in 84 shallow (less than 30 metres deep) and deep (30-150 metres) coral ecosystems at 25 locations across the Pacific, Atlantic and Indian Ocean basins. Debris was found in 77 of the 84 sites including in some of Earth's most remote and near-pristine reefs, such as in uninhabited central Pacific atolls. Macroplastics accounted for 88% of the debris found. Levels of macroplastics were highest in the deep reefs. In most surveyed areas, fishing vessels were identified as the main source of plastic, such as lines and discarded traps. The findings contrast with the global pattern observed in other nearshore marine ecosystems, where macroplastic densities decrease with depth and are dominated by consumer items.

In the second study, Veronica Nava from the University of Milano-Bicocca, Milan, Italy and others sampled the surface waters of 38 lakes and reservoirs in 23 countries mainly concentrated in the Northern Hemisphere. They found microplastics (over 250 microns) in all sample sites.

"Two types of lakes are particularly vulnerable to plastic contamination: lakes and reservoirs in densely populated and urbanised areas and large lakes and reservoirs with elevated deposition areas and high levels of anthropogenic influence," they write. They found plastic concentrations varying widely among lakes. In the most polluted lakes, plastic concentrations were found to "reach or even exceed those reported in the subtropical oceanic gyres, marine areas collecting large amounts of debris". "Our findings highlight the importance of including lakes and reservoirs when addressing plastic pollution, in the context of pollution management and for the continued provision of lake ecosystem services," they note. The two studies demonstrate the widespread contamination of water bodies with plastic debris, and underscore the urgent need for coordinated, systematic monitoring of plastic pollution.

Threat of dengue fever escalates globally

Bani Jolly
Vinod Scaria

The recent surge in dengue cases globally, including in new regions has been alarming and poses significant global health challenges. The WHO forecasts the possibility of record-level cases this year due to global warming favouring disease-transmitting mosquitoes.

Dengue fever, caused by the dengue virus (DENV), is a highly prevalent infectious disease estimated to be infecting over 400 million people each year as per the WHO. DENV is an RNA virus of the Flaviviridae family with four serotypes (DENV-1 to 4). Infection with one serotype provides lifelong immunity to that type, but subsequent infections with different serotypes can lead to severe, life-threatening forms of the disease.

There is no specific antiviral treatment for dengue, so prevention relies on controlling mosquito populations and raising public awareness. Despite global efforts, dengue cases continue to rise, with millions reported annually worldwide.

Outbreaks in 2023

Since the beginning of 2023, several regions in America have witnessed significant dengue outbreaks, reporting over two million cases till July, with Brazil, Peru, and Bolivia having recorded the highest number of cases this year. Although cases have been reported across all subregions of the Americas, a majority of cases stem from the Southern Cone, encompassing countries such as Argentina, Brazil, Chile, Uruguay, and Paraguay. Several countries in the Americas have reported a co-circulation of all four DENV serotypes, thus presenting several challenges for public health authorities in controlling and managing the outbreaks. Changing climatic conditions in Europe, such as increased heat waves, floods, and prolonged hot summers, have created favorable environments for dengue-causing mosquito species. The European Centre for Disease Prevention and Control (ECDC) has warned of an increase in DENV infections across the region. In 2022, Europe saw a significant rise in locally acquired dengue cases.

Soaring: Dengue cases have soared in India due to heavy rains and inadequate control measures. ISTOCKPHOTO

This month, there was an outbreak of dengue fever reported in Egypt's Qena province after several positive cases. Prior to this, Sudan recorded its first-ever dengue case in February, even though it is not considered endemic in the Middle East due to unfavorable climate conditions. While the Middle East has experienced some outbreaks, they have been relatively small in scale compared to countries in Asia.

Dengue cases have soared in India, mostly due to heavy rains and inadequate control measures, which create the ideal breeding environment for mosquitoes. States like Kerala, Odisha, Assam, Tamil Nadu, Maharashtra, West Bengal, and Karnataka are reporting large numbers of dengue cases. The recent surge in dengue cases worldwide including India demands immediate attention and action. While public health measures are being implemented to control the spread of the disease, individual awareness and responsibility play a crucial role in curbing dengue transmission. Recently, Takeda released the first vaccine for the disease, which has been approved in a few countries. The vaccine has modest efficacy in preventing severe disease but still has much ground to cover in terms of preventing infection, providing uniform protection against all serotypes, and ensuring long-term immunity.

Continued research and collaboration, including genomic surveillance of the virus, are essential to understanding the evolution and adaptation of the virus, developing effective strategies to combat dengue and other mosquito-borne diseases and safeguarding global health and well-being.

(Bani Jolly and Vinod Scaria are researchers at CSIR Institute of Genomics and Integrative Biology (CSIR-IGIB), Delhi)

Podium finishers: Manu Bhaker, flanked by Sara Fabian and Yu-Ju Chen in Chengdu on Saturday. SPECIAL ARRANGEMENT

Shooters Manu and Elavenil clinch gold

VARSITY GAMES

Sports Bureau

Young Olympians Manu Bhaker and Elavenil Valarivan helped the Indian team to three gold medals between them at the shooting range of the World University Games in Chengdu, China, on Saturday.

Both qualified for the final with ease and without excitement, but beat the qualification toppers for the individual gold medals.

Meanwhile, Pragati and Aman Saini entered the compound mixed team event final to ensure another archery medal for India.

The second-seeded pair received a first-round bye and defeated France 153-151 and host China 152-151 to set up a final with top-seeded Korea on Sunday. Other Indian archers disappointed by crashing out before the medal rounds.

In shooting, Manu shot 239.77 in the women's air pistol final and beat Sara Fabian of Hungary by 4.4 points. Manu, along with Olympian Yashaswini Singh Deswal who was placed fourth and Abhidnya Patil, also captured the team gold, three points ahead of China.

Elavenil was robust in women's air rifle qualification with 630 and the former world No.1 asserted her class in the final with 252.5, beating Mary Tucker of USA by 2.1 points. There was no scope for a team medal as Ayushi Podder and Manini Kaushik were placed 26th and 45th.

The results:
Shooting: 10m air pistol:
Women: 1. Manu Bhaker 239.7 (570); 2. Sara Fabian (Hun) 235.3 (579); 3. Yu-Ju Chen (Tpe) 215.0 (569); 4. Yashaswini Deswal 193.5 (577); 13. Abhidnya Patil 567.
Team: 1. India (Abhidnya, Yashaswini, Manu) 1714; 2. China 1711; 3. Iran 1707.
10m air rifle: Women: 1. Elavenil Valarivan 252.5 (630.0); 2. Mary Tucker (USA) 250.4 (631.2); 3. Xing Hang (Chn) 229.3 (630.3); 26. Ayushi Podder 625.3; 45. Manini Kaushik 620.6. **Team:** 1. Korea 1883.0; 2. Hungary 1882.2; 3. China 1880.8; 8. India (Elavenil, Ayushi, Manini) 1875.9.

EVA STALIN IAS ACADEMY - BEST IAS COACHING IN CHENNAI
12/24, Muthurangan Muthali St, West Tambaram, Chennai - 600045
https://www.evastaliniasacademy.in/
Contact Number - +91-8678969915, +91-9940332851