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Tiger Census

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Why is in news? All India Tiger Estimation -2022: Release of the detailed Report

Project Tiger, an ambitious, holistic conservation project, **aimed at safeguarding the nation's tiger population and preserving biodiversity** was launched **in 1973**.

Over the past fifty years, Project Tiger has achieved commendable success, making significant strides in tiger conservation.

Initially covering nine tiger reserves spanning 18,278 km², the project has flourished into a remarkable accomplishment with 53 reserves spread across 75,796 km², effectively covering 2.3% of India's total land area.

India currently **harbours almost 75% of the world's wild tiger population**.

The first phase of tiger conservation in the 1970s focused on enacting the Wildlife Protection Act and establishing protected areas for tigers and tropical forests. However, the 1980s saw a decline due to extensive poaching.

In response, the government initiated the **second phase in 2005**, adopting a **landscape-level approach**, community involvement & support, implementing strict law enforcement, and using modern technology for scientific monitoring to ensure tiger conservation.

This approach not only led to an increase in the tiger population, but also had several critical outcomes that included the designation of inviolate critical core and buffer areas, the identification of new tiger reserves, and the recognition of tiger landscapes and corridors.

The monitoring exercise inculcated scientific thinking amongst forest staff and employment of technology ensured transparency of data collection and analysis.

Tiger census highlights:

The number of tigers in India has increased by 6.74 percent from 2,967 in 2018 to 3,167 in 2022, according to the figures of the 5th cycle of India's Tiger Census.

The process of estimating the number of tigers in a given area is called '**Tiger estimation**.'

The census estimates are **done every four years** by the **National Tiger Conservation Authority (NTCA)** with **technical help from the Wildlife Institute of India**.

The **first countrywide assessment** was done in **2006**, followed by 2010, 2014, 2018, and the latest 2022.

In 2020, the 2018 census made it to the Guinness Book of World Records for being the largest camera-trapping exercise in the world.

India categorized tiger habitats into **five major landscapes** based on biogeography and interconnectivity, enabling effective ecological and management-based strategies.

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With significant changes in the spatial patterns of tiger occurrence and an increase in unique tiger sightings from 2461 in 2018 to 3080 in 2022, **now more than 3/4th of the tiger population is found within protected areas.**

Central India and the Shivalik Hills and Gangetic Plains witnessed a **notable increase** in tiger population, particularly in the states of Madhya Pradesh, Uttarakhand, and Maharashtra.

However, certain regions, such as the **Western Ghats**, experienced localized declines, necessitating targeted monitoring and conservation efforts.

Some states, including Mizoram, Nagaland, Jharkhand, Goa, Chhattisgarh, and Arunachal Pradesh, have reported **disquieting trends** with small tiger populations.

The **largest tiger population of 785 is in Madhya Pradesh**, followed by Karnataka (563) & Uttarakhand (560), and Maharashtra (444).

The **tiger abundance within the Tiger Reserve** is highest in Corbett (260), followed by Bandipur (150), Nagarhole (141), Bandhavgarh (135), Dudhwa (135), Mudumalai (114), Kanha (105), Kaziranga (104), Sundarbans (100), Tadoba (97), Sathyamangalam (85), and Pench-MP (77).

Methods for counting tigers:

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HOW TIGERS ARE COUNTED

AP Photo

Phase I

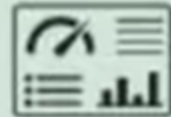
Frontline staff of state forest trained to **collect data in a digital format on the M-STRIPES mobile application**. They had to look out for carnivore sign encounters, ungulate abundance, vegetation, canopy cover, human disturbance and dung counts. For Sundarbans, protocol modified to allow sampling using a boat.



Phase II

Covariates of distribution and abundance of wildlife were obtained from **remotely sensed data and used to model**

tiger occupancy and abundance, in combination with Phase I data.



Phase III

Camera trap based capture-mark-recapture. This method has led to a greater clarity and precision in density estimation by integrating the spatial location information of animal photo-captures. **Camera traps were placed at 32,588 locations spread across 174 sites** for mark recapture analysis. Cameras were usually operated between 25 to 35 days at each site



National Tiger Conservation Authority (NTCA):

NTCA is a **statutory body** under the Ministry of Environment, Forests and Climate Change.

It was established **in 2005** following the recommendations of the Tiger Task Force.

It was constituted under enabling provisions of the **Wildlife Protection Act, 1972** as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it.

Measures to ensure tiger population:

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Enhanced protection measures, habitat restoration, ungulate augmentation, and subsequent tiger reintroduction.

Continue or promote eco-friendly development agenda, minimize mining impacts, and rehabilitate mining sites.

Fortifying protected area management, intensifying anti-poaching measures, employing scientific thinking and technology-driven data collection, and addressing human-wildlife conflict.

Project Tiger:

It was launched **in 1973** from the Jim Corbett National Park in Uttarakhand.

It is a **Centrally Sponsored Scheme** of the Ministry of Environment, Forests and Climate Change.

It was **initially launched in 9 Tiger reserves** (TRs) in different states of India.

Objective: To ensure the survival and maintenance of the tiger population in specially constituted Tiger reserves throughout India.

It provides central assistance to tiger range States for in-situ conservation of tigers in designated tiger reserves.

Implementing Agency: National Tiger Conservation Authority (NTCA) was established through Wildlife (Protection) Amendment Act, 2006 to provide statutory authority to Project Tiger.

Achievement/Milestones Reached: Project Tiger has achieved the following Milestones

Highest tiger population in the world: India hosts more than 75% of the global wild tiger population, with a current population of about 3,167 tigers, which is increasing at an annual rate of 6%.

Establishment and development of new Tiger Reserves: From nine tiger reserves covering 18,278 sq km in 1973, 'Project Tiger' has today expanded to 54 reserves covering over 75,000 sq km (2.4% of India's geographical area).

Anti-poaching initiatives: Special Tiger Protection Force (STPF) are deployed in several TRs for focused anti-poaching operations and a special strategy for monsoon patrolling.

Fostering awareness for eliciting local public support enabled by branding and marketing of project tiger.

Scientific research and monitoring: 'Project Tiger' has provided opportunities for scientific research and monitoring, which has led to a better understanding of the behavior, ecology, and population dynamics of tigers.