Concerns with India's Tiger Surveys

What is the issue?

- The latest tiger census has revealed that India's tiger numbers have gone up by 6%, to roughly 3,000 animals. Click here to know more.
- However, all the four tiger surveys conducted so far failed to give details necessary to assess the reliability of the tiger numbers.

What was the traditional survey method?

- The tradition of reporting tiger numbers dates back to the 1970s.
- These numbers were based on the 'pugmark census method', which assumed that the pugmarks of every tiger could be found, recognised and tallied.
- Over time, these assumptions failed, rendering the numbers meaningless.
- However, the forest bureaucracy (the Ministry of Environment and allied institutions) ignored the problem for decades.

What are the new methods?

- In the 1990s, many tiger scientists and statistical ecologists working in collaboration developed robust new methods for tiger monitoring.
- These methods could estimate numbers using 'distance sampling' and the extent of tiger habitat employing 'occupancy sampling of tiger spoor'.
- [Spoor, here, refers to the track or scent of an animal.]
- Critically, they could even directly estimate numbers, survival rates and recruitment in each population employing 'photographic capture-recapture sampling'.
- These methods were independently worked upon in tiger reserves across India and over 25,000 sq km in the Western Ghats (with 20% of India's tigers).
- By 2004, the new methods had rapidly been adopted worldwide for assessing populations of threatened cat species - leopards and jaguars.

What was the case in India?

- The officials involved in India's Project Tiger ruled out the above arguments and relied on India's indigenous pugmark census.
- Then in 2005, it came to a revelation that all tigers in Sariska Reserve had

been poached, even as the pugmark censuses claimed all was well.
- A Tiger Task Force (TTF) appointed by the Prime Minister discarded the pugmark census.
- The dire situation demanded technically rigorous tiger population surveys conducted by independent, qualified scientists.

What happened thereafter?

- Instead of calling for better monitoring methods, TTF ended up further strengthening bureaucratic monopoly over tiger monitoring.
- Inevitably, the new National Tiger Estimation method, also created by the forest bureaucracy, ignored or distorted critical elements underpinning the new tiger survey methods.
- These flaws were masked by misleading technical jargon, the hype about advanced technologies and cursory reviews by 'foreign experts'.
- Consequently, in spite of all the effort and expenditure, four tiger surveys have not generated ecologically credible results.
- Despite huge expenditures on official tiger research and monitoring, the government has failed to estimate annual rates of changes in tiger numbers, survival or recruitment in tiger populations at key sites.

What is the way forward?

- India's remarkable conservation efforts had rescued the tiger from the brink of extinction.
- Now, the changes in tiger numbers, survival rates, and recruitment in key tiger populations have to be monitored every year to track the fate of tigers in real-time.
- Periodic assessments of colonisation and extinction of tiger populations across larger regions are required.
- Employing the cost-effective 'occupancy sampling of tiger spoor' method would help here.
- A public-private partnership framework led by qualified scientists is needed to conduct such independent monitoring.

Source: The Hindu

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