

Big cat count reaches upper limit

Population At 100-120, But Forest May Not Support Tigers Beyond This

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Kolkata: The Sunderbans tiger population may have reached its carrying capacity. The scientists of the Wildlife Institute of India (WII), who are compiling data as part of the all-India tiger census, have revealed this.

The carrying capacity of a population is the maximum number of individuals that can live in a population stably. This, the scientists said, can be a cause of concern especially if movement corridors are disrupted, as this would lead to over-crowding of tigers who would be compelled to enter human habitation triggering conflict.

In the case of the Sunderbans, corridors can be disrupted by continuous movement of cargo vessels that would not permit animals to cross channels between islands. Movement of tigers across the Sunderbans of India and Bangladesh are very important to distribute tigers from high densities (sources) to low densities thereby minimizing their need to venture outside the mangrove forests into human habitation.

"Since 2010, when the population estimation of the swamp tigers was done for the first time using scientific methods, there is not much change in the big cats' density in the mangroves. In 2010, the Sunderbans Tiger Reserve (STR) threw up a density of 4.3 big cats per 100 square kilometres which meant there

NUMBER STABLE, BUT FOR HOW LONG?

Wildlife Institute of India estimation
100

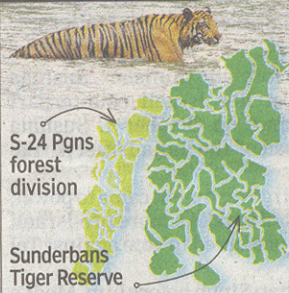
WWF-India estimation
120

Movement of tigers across the Sunderbans of India and Bangladesh is important to distribute tigers from high-density areas to low-density ones thereby minimizing their need to venture outside the forests

were 64 to 90 tigers in the mangroves. Based on data available so far, the density of tigers this year is so far hovering around 4 per 100 square kilometres. It points to the fact that the population is either very close to the carrying capacity of the forest or has already reached it," said Y V Jhala, senior scientist with WII.

According to sources, taking into account the number of tigers outside the reserve area, the tiger count in the entire mangroves may reach close to 100 which is the minimum number given by the state last year. A separate study by WWF-India may throw up an estimation of 120 tigers in the mangroves this year.

"The trend on prey population that we are getting from the tiger reserve area at the moment — 8-11 deer per square kilometre or around 25,000 across the reserve — can at the most sustain a healthy population of about a 100 tigers," said Jhala, adding that it's natural as every forest can



support ungulates up to a certain limit. "In Kanha, there are 50 deer per square kilometre. The nature of the mangroves forest is such that it is good for the marine system and not for the terrestrial one," he said.

According to another scientist of the institute, Qamar Qureshi, the forests outside the reserve area should be protected now. "Because, the young tigers will start moving out. There should also be a joint mechanism by India and Bangladesh to track the movement of tigers between the Sunderbans of both the countries," he added.

Wildlife biologist Vidya Athreya said this was an exciting finding. "Carrying capacity of tigers in a forest mainly depends on the prey population. Keeping aside factors like poaching and calamities, a certain number of prey species can only sustain a certain number of tigers. If the tiger number reaches that limit, one can say that the big cat

population has reached the forest's carrying capacity, which means the forest can't support tigers beyond this," said Athreya.

According to her, the population should be monitored properly in the days ahead to find out whether it's showing any decreasing trend or new tigers are coming in from other population.

But, WWF-India's Sunderbans chapter head Anurag Danda said since Sunderbans is a single block of mangroves spread over India and Bangladesh, it's not possible to create any physical corridor. "So, a time will come, may be 15-20 years down the line, when we will have to think of creating a genetic corridor for the tigers to keep the variation in gene pool alive," he said. However, the WII scientists feel the population is large, considering Indian and Bangladesh tigers as a single population. "So, they have sufficient genetic variability," said a WII scientist.

Chief wildlife warden Ujjwal Bhattacharya said that he can't offer any comment without going through the report. "We need to know the basis on which they have come to the conclusion," he added.

The tiger census in the mangroves has detected the presence of 5 big cats in the Ramganga range under South 24-Parganas forest division and 19 in the National Park East Range under tiger reserve area so far this year. Of this, eight tigers appeared before the cameras for the first time.

**STRIPED PRIDE,
SPOT OF BOTHER**