

# Climate cloud over swamp tigers

*In Next Three Decades, Sunderbans May Lose 600 Sq Km, Including Prime Tiger Habitat: Study*

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**Kolkata:** Sunderbans' tigers that lord over the archipelago and are counted among the most ferocious predators on the planet could end up with a rather sad refugee tag. Climate change scientists believe these big cats will become the foremost animals on earth to become climate refugees as they are forced out of their habitat by rapidly rising sea water and steady subsidence of the islands.

Scientists researching on sea level rise and its impact in the Indian Sunderbans have identified 11 islands that will disappear in the next three decades.

## SUNDERBANS ALERT

Of these, three islands — Bulhani, Bhangaduan and Dalhousie — are tiger habitats. Around 27 tigers inhabit the three islands.

Bulhani falls under Chulkathi in the Ramganga range that has been recently included in the West Sunderbans Wildlife Sanctuary spanning 462 sq km in South 24-Parganas forest division. A camera trap exercise has found five tigers in the range so far this year. Bhangaduan and Dalhousie are in Mayadwip under National Park West Range of Sunderbans Tiger Reserve (STR) area. A key tiger habitat in the mangroves, the range had around 22 big cats in 2012.

Sugata Hazra from the School of Oceanographic Studies at Jadavpur University said Sunderbans tigers

## Bid to protect corridors

Officials of India and Bangladesh have proposed to regulate movement of vessels in the river channels between the Sunderbans of both the countries to facilitate easy movement of animals, mainly tigers, from one side to another. The proposal was discussed at the recently-concluded 2nd Global Tiger Stocktaking Conference in Dhaka. "We will identify areas where river width is less and islands' presence is more and jointly monitor those potential corridors," said Bangladesh chief conservator of forests Yunus Ali. TNN

becoming climate refugees was inevitable as the islands sink. The problem is two-pronged: the sea level is rising at 8 mm per annum and the islands are subsiding by 4 mm a year. The cumulative effect has led to the difference between land and sea being narrowed by 10-12 mm in some years.

"A comparison of satellite images taken during high tide in 1986 and in 2014 shows that 210 sq km has disappeared in the Sunderbans. In the last decade, the rate of sea level rise was 3.14 mm per annum. But in recent years, the average annual rise in sea level compared to the land is around 7.5 mm, the highest in the world. Hence, in the next three decades, the Indian Sunderbans is likely to lose at least 600 sq km to the sea. That will force migration of both men and tiger," said Hazra, who has been studying sea level rise in the Sunderbans for years.

In the past, Lohachara, Suparibhanga and Purbasha East Islands have disappeared.

As the water level rises, tigers will seek refuge in higher ground. While there is no option of migrating either north or south, moving west to islands that are inhabited by humans will trigger man-tiger conflict. But with these islands also under threat of erosion, tigers could look east towards Bangladesh. This part of the Sunderbans receives a high sediment load from the Brahmaputra-Padma system, the rate of deposit outstripping the sea level rise, making it less vulnerable to inundation.

Sunderbans veteran Tushar Kanjilal said of the 102 islands in the mangroves two have already disappeared. Of the rest of the 100 islands, 54 were de-forested to make room for human habitation. Only 46 are now left with wildlife habitat. "One has to pay for this ecological imbalance. In the days ahead, either tigers will stray into human habitat more frequently or cross over to the Bangladesh side," Kanjilal said.

Foresters are unwilling to press the alarm bell yet. "In the past two years, there have been only two incidents of tiger straying. So why panic? These are scientific studies and have no relevance in today's forest management," said STR field director Soumitra Dasgupta.

WWF-India Sunderbans chapter head Anurag Danda, too, argued that tigers would not stray too far, even when forced by the rising water. "During the tiger census exercise, we haven't noticed any tiger covering a vast distance. Only a male was found to have covered a distance of 174 sq km, but that too only within the National Park East range," said Danda.

But, Hazra believes wildlife protection perspective must change. Some tigers will perish in extreme events like cyclonic storms but the rest are unlikely to simply wait to get drowned. "Till now all climate change related studies and mitigation/adaptation strategies have focused on the human population. It is time that some attention was devoted to Sunderbans' tigers. It may be difficult to create migration corridors for big cats like elephants but a strategy has to be in place," he felt.

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