

# The clock ticks for the Sunderbans and the Royal Bengal tiger

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**S**underbans in West Bengal is the largest single block of tidal mangrove forest in the world and is a World Heritage Site. The mangrove forest is intersected by a complex network of tidal waterways, mud flats and small islands of salt-tolerant mangroves. The area is better known as the home of the Royal Bengal tiger.

But the mangrove is facing threat now due to neglect. "At least 15 per cent of the Sunderbans will be submerged by 2020 and neglecting the area further can have global implications as it is highly vulnerable to climate change," warns a UNDP (United Nation's Development Programme) report.

"The Sunderbans in South 24 Parganas district is highly vulnerable to climate change and it is estimated that 15 per cent of the region will be submerged by 2020. Neglecting the Sunderbans can have global implications," says a the report released recently.

Prepared by the District Human Development Report (DHDR) of North 24 Parganas and South 24 Parganas districts in partnership with the West Bengal government's development and planning department and the Planning Commission, the report says the Sunderbans region was the worst performing in terms of human development indicators among all the other regions of the district.

The island blocks of Basanti, Gosaba, Kultali, Patharpratima and Sagar need special attention as they are vulnerable to natural disaster. Livelihood opportunities are very less in most of the islands due to poor infrastructure. "Action at the local-level is critical if national development and the globally agreed millennium development goals are to be achieved," said Fadzai Gwaradzimba, chief, South and West Asia Division, Regional Bureau for Asia and the Pacific, UNDP.

The report says 54 of the 102 islands of the Sunderbans are inhabited and characterised by poor infrastructure and the local people have few alternative livelihood options other than depending on natural resources. As a part of the Man and Biosphere Programme (MABP), the Centre declared the entire 9,630 sq km of the Sunderbans forest as the Sunderban biosphere reserve in 1989.

"Over-reliance on natural resources by

the delta's inhabitants can harm an already fragile eco-system that is critical to maintaining the region's biological balance," Gwaradzimba said. The ravaging Bay of Bengal has already swallowed two islands, and is threatening five more. Worse, the tsunami of December 26, 2005 has permanently altered the Sunderbans coastline, triggering a rise in the sea water levels in this part of the globe.

This has been further confirmed by a study led by Weiqing Han, the associate professor in atmospheric and oceanic sciences at the University of Colorado, Boulder, United States. The study has cautioned that the rising levels in parts of the Indian Ocean and adjoining areas may worsen monsoon flooding in India and Bangladesh.

This is attributed to a warming due to increase in greenhouse gases caused by human activity. The parts affected by the rising sea levels are the Bay of Bengal, the Arabian Sea, Sri Lanka, reports Nature Geoscience. The key player in the process is the Indo-Pacific warm pool, an enormous, bathtub-shaped area of the tropical oceans stretching from the east coast of Africa to the International Date Line in the Pacific. The warm pool has heated by about one degree Fahrenheit, or 0.5 degrees Celsius, in the past 50 years, primarily caused by man-made increases of greenhouse gases, a Colorado University statement quoting Han stated.

Along the coasts of the northern Indian Ocean, seas have risen by an average of about 0.5 inches per decade, the study said. The Indian Ocean is the world's third largest ocean and makes up about 20 per cent of the water on earth's surface. Han admitted that availability of bio-fuel is quite easy in India and other Asian countries and unless the people in the Sunderbans shed their habit of over-reliance on natural resources, hunger of the tide (sea) will increase further.

In a much belated exercise to protect the Sunderbans from pollution and encroachment, the West Bengal Government has recent served notices for demolition of nine tourist lodges, built illegally inside the world heritage biosphere reserve area. An order was issued to pull down those tourist lodges, built in violation of building laws, within 15 days.

These lodges located at Pakhiralaya and Dayapur have been set up in and around the embankment which could lead to deluge if the construction work or lower level soil of the Sunderbans fails to hold up due to concrete construction. It is mandatory to obtain permission from the Coastal Regulatory Management Authority (CRMA) for any construction in the Sunderbans and the owners of the lodges failed to produce their permission papers.

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