
Ecology, physiology and behaviour

Effects of temperature and precipitation on nesting of olive ridley turtles in western Bay of BengalBanerjee, Kakoli^{1*}; Paul, Rakesh¹; Bindhani, Pramod Kumar¹; Kurhe, Anil²¹ Central University of Odisha, Department of Biodiversity and Conservation of Natural Resources, Sunabeda, NAD, Koraput, India² Padmashri Vikhe Patil College, Department of Zoology, Pravaranagar, Ahmednagar, Maharashtra, India

* banerjee.kakoli@yahoo.com

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Marine turtles inhabit tropical and temperate seas worldwide. Adult turtles of most species are commonly found in shallow coastal waters, bays, lagoons and estuaries, although some species also explore the open ocean. Rushikulya Beach and Gahirmatha Marine Sanctuary, known for their coastal environments, host the globally renowned olive ridley turtle nesting ground. Situated in the vicinity of Rushikulya River in Ganjam and Bhitarkanika Wildlife Sanctuary in Kendrapara, a protected zone, this area visualizes the maximum number of turtles nesting in the state and the country. The impact of climatic parameters was studied in this marine sanctuary in order to find out whether turtle nesting is dependent upon these two independent parameters. Similarly, the climatic data were procured from IMD, Bhubaneswar, and some online sources. The study showed that the trend of temperature over the years is decreasing, rainfall is more or less uniform with a rise in the recent decade, whereas the wind speed has a rising trend. Cyclonic data also shows that over the past two decades, there have been increased cyclones on the coast of Odisha. The study, however, shows that turtle nesting increased during 2016-2018 but again decreased during 2019-2020, which may be due to Cyclone Fani and also the erosion of the coastline. Considering future and ongoing natural phenomena, it is crucial to comprehensively understand, evaluate, and study shoreline changes and related processes to ensure the conservation of signature species and their habitats.