

Save Our Sea Turtles from Disappearing

Afifat Khanam Ritika



Sea turtles are keystone species that play pivotal roles in balancing oceanic ecosystems. These species have been navigating the oceans since the days of the dinosaurs. Presently, seven distinct sea turtles inhabit warm and temperate seas worldwide. Depending on the species, the International Union for the Conservation of Nature (IUCN) considers sea turtles vulnerable to critically endangered. Although accepted estimates of total sea turtle population figures are lacking, scientists concur that sea turtle nesting activity and

population size are declining globally.

The presence of sea turtles in the ocean is crucial for maintaining marine ecosystem dynamics, the food web, and fish production. As a keystone species, their extinction may have severe implications for the balance of ocean ecosystems. For instance, sea turtles, such as Jellyfish, help regulate their prey populations. A decrease in the sea turtle population could lead to Jellyfish blooms, which in turn can negatively impact fish production as Jellyfish feed on fish eggs and larvae.

We know that five out of the seven sea turtle species have been reported in the territorial waters of Bangladesh along the Bay of Bengal namely Olive Ridley (*Lepidochelys olivacea*), Green (*Chelonia mydas*), Hawksbill (*Eretmochelys imbricata*), Loggerhead (*Caretta caretta*), and Leatherback (*Dermochelys coriacea*). Among them, the Olive Ridley, Green, and Hawksbill turtles come ashore for nesting in St. Martins Island, various points in Coxs Bazar-Teknaf Beach, Shahporir Dwip, Sonadia Island, and Kutubdia Island.

However, like other regions in the world, sea turtles in Bangladesh's territorial waters face significant threats throughout their lifespans, contributing to the decline of populations, particularly the nesting populations, and posing a severe toll on remaining marine turtle populations. Scientists have reported an 80% decline in nesting over the last four decades in Coxs Bazar. Each year, hundreds of egg-carrying sea turtles perish and wash ashore during their breeding season from October/November to March/April. In the recent tragedy in February 2024, over 100 Olive Ridley turtles with eggs inside were found dead and washed ashore, possibly by entangling in fishing nets. Such types of incidents are alarming for marine biodiversity

While entangling, fishers often intentionally cut the turtle flippers or fishing lines to free turtles from the gear, which may include nets surrounding the flippers and neck or hook inside the mouth. Sometimes, the turtle struggles to breathe and free itself, tearing the net around

its flippers and neck or hook inside the mouth. In either scenario, the turtle eventually dies due to its injuries. In an exploratory study conducted in Cox's Bazar during the sea turtle mortality event in July 2020, over 70% of sea turtles were observed with either lost flippers or ulceration in the flipper joints, attributed to net entanglement. The turtles were physically too weak to move forward and died within the following days.

By the way, the Bangladesh government has made commendable efforts in sea turtle conservation by implementing effective initiatives and signing numerous international agreements, conventions, treaties, and protocols related to the marine environment and biological resources that affect marine turtles. The proposed revision of the Bangladesh Wildlife Preservation (Amendment) Act 1974 has also included marine turtles in the list of protected species. In Cox's Bazar, both Government Organizations (GOs) and Non-government Organizations (NGOs) also implement activities to protect sea turtles such as in-situ hatchery development, raising awareness, etc.

But, urgent development and implementation of strategic action plans are paramount to revamping and safeguarding the sea turtle populations in the Bay of Bengal. A series of crucial recommendations for ensuring the long-term survival of sea turtles include strengthening law enforcement against poaching and illegal trade, implementing fishing regulations, including the mandate of legal gear such as the Turtle Excluder Device (TED), which holds significant promise in mitigating the adverse impacts of fishing activities on sea turtle populations.

Furthermore, increasing research and conservation efforts to protect critical habitats and nesting areas are essential. Simultaneously, community engagement through extensive education and youth-led initiatives, incentivizing the release of entangled turtles from fishing nets without causing harm, and integrating sea turtle conservation into school curricula can foster widespread awareness and participation in conservation efforts.

Additionally, actions such as encouraging fishers to retrieve oceanic debris, identifying and cleaning up non-biodegradable litter and ghost gear accumulation zones (garbage patches), maintaining cleanliness on beaches during the sea turtle breeding season, and establishing a dedicated sea turtle research center and hatcheries in Cox's Bazar with the support of the Bangladesh Oceanographic Research Institute (BORI) are pivotal steps towards achieving sustainable sea turtle conservation goals.

Finally, implementing zoning regulations and halting afforestation in turtle breeding sites, collaborative partnerships among governmental bodies, non-governmental organizations, and local communities, and reducing marine pollution are integral components in safeguarding the future of sea turtles in the Bay of Bengal.

Author: Afifat Khanam Ritika, Research Officer, Bangladesh Institute of Maritime Research and Organization (BIMRAD).

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