



## Effects on Faunal Community for Climate Change in Sunderbans

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Climate change in the Sunderbans poses both risks and opportunities to the vertebrates and invertebrate animals categorically under two distinct divisions, of which part of the faunal community would survive and the rest will be lost from their natural habitat due to rise of sea level. Most of the species of the animal kingdom will be threatened in the estuarine ecosystem of the Sunderbans. Inundated flood plains, point bars, mid channel bars will lose various types of fauna like sea pen, sea anemones, glass anemones, mud skippers, gastropods, bivalves, pea crabs, fiddler crabs, red crabs, copepods and other terrestrial insects which are generally available during ebb time. The worst sufferer would be the Royal Bengal tiger which could disappear by the end of this century due to habitat loss and lack of proper food. Herbivore animals like deer, porcupine, hare, rat, mice etc will be extinct due to lack of selective food items as these animals are purely herbivorous, seedivorous and frugivorous. Deer suffer the most in the inundated conditions of the forest areas as they have to remain standing or floating during entire flood tidal period. Monkey will meet their various fates for their semi-arboreal nature and might survive longer than deer of the same habitat. Wild boars having slight more tolerance power in the semi-aquatic situation have to face the same fate due to lack of food. On contrary, crocodiles will get more favourable situation for expansion

of their habitat and prey over fishes which will be abundantly occurred. Large sea turtles, come to lay eggs in the shallow waters of the coastal Sunderbans, lose their breeding grounds due to rise of sea level. Existence of birds of resident, migratory, aquatic or hole-nesting category, habituated to feed on the fish insects etc will be affected due to lack of feeding and loss of forest canopy in the Sunderbans. Among all these adverse situations for the faunal community due to climate change, some terrestrial fauna are seen occupying the forest canopy of the Sunderbans at present. Among them, *Doyel*, a bird of completely terrestrial habitat is a prominent one, might be considered as a bio-indicator, presumably for the climate change in the Sunderbans.

*Doyel* (*Copsychus saularis*) hidden from the sight in the Sunderbans are presently found in the human habitat areas surrounding the reserved forest. At least global warming and climatic change yield the least threats to this bird species of the Bengal basin. Most species of *Doyel* bird (magpie-robin) live in the tropical areas particularly in the Indian subcontinent. *Doyel*, the national bird of Bangladesh, fly usually a great distances, they are not found in the areas of the Sunderbans, the lower part of the Bengal delta even at 10 years back.

*Doyel* are garden and backyard favourites in India and Bangladesh. They are small and

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bi-coloured with black and white feathers. Most species measure about 15-20 cm and weight ca 100 grams. *Doyel* primarily eat food grains, insect etc. These birds require plenty of food and have to eat often for their breathing rate, heartbeat and body temperature. They digest food very fast too. These *Doyels* are not killed for any commercial purposes or captured for showcasing inside the cage like other colourful bird species as the house-hold pets in the domestic arena. They never flock together and are generally less in number in comparison to the other bird species. They are found of late at random inside the human habitated zone like Pakhirala, Gosaba, Basanti, Canning, Sonakhali, Namkhana, Patharpratima and Sagar Island of the Sunderbans. *Doyel* is now befitted for the areas of the Sunderbans

which is relatively declining and decreasing its salinity as a result of dilution of estuarine river waters for sea level rise due to climatic change. Further, increasingly agricultural practices lead to the presence of more scattered grains which the *Doyel* need to feed in the areas of the Sunderbans. *Doyel* found in the Sunderbans may be considered as the bio-indicator for the changing scenario of the estuarine environment due to sea level rise, climatic change and global warming. Huge agricultural practices and plantation of orchard in the Sunderbans may accentuate the occurrence of *Doyel* along with the changing climatic situation.

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