

IDENTIFICATION OF ENVIRONMENTAL STRESSORS AND CLIMATE CHANGE IMPACTS ON AVIAN POPULATION ECOLOGY

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Climate change is one of the key area of the Paris Agreement 2030. It is now well acknowledged that climate change poses a fundamental threat to habitats, biodiversity and even livelihood of human beings. Hence, climate change is emerging as a major threat to natural communities in the coming decades with mid-range climate change scenarios expected to produce greater extinction rates than habitat loss and thus by compelling the hundreds of individual species to undergo extinction due to habitat change, change in distribution range, breeding habits and mismatch of breeding with the environmental cues. There is evidence that 0.8 °C rise in temperature has been recorded in the past century, this continues to extend 1.4 to 4.5 °C by 2100. Under the scenario of a doubling of CO₂, United Nations assessment report describes that birds will be seriously get affected in terms of shifts in distribution range and major population decline. Birds are first species to be affected by climate change and considered to be the indicators for climate change; as they depend upon various habitats and sites on daily basis for their feeding, nesting and roosting territories. Even a small or daily weather conditions affects avian species through changes in temperature and rainfall. This can ultimately leads to increase pressure from competitors, predators, parasites, diseases, nest/habitat loss, nest construction, nesting material and disturbances like storms and fires. The individual avian species are affected by earlier egg laying, shift in migration time, mismatch with the environment for breeding time and distribution pattern. The changes in ecological communities can result in restricted home range or territory, shortage of food and small populations in fragments can lead to extinction. This study focusses on the identification of various indicators of climate change affecting distribution of species, particularly endemic and threatened avian species of the area.

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