

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

POLICY ON CONSERVATION OF ENDANGERED SPECIES



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1. Background

The birds are the biological indicators in the aquatic environment. Birds have played a unique role in the growth, protection, and restoration of natural environment. Aquatic and semiaquatic birds are biological indicator in aquatic environment because the birds belong to the top level of food chain in aquatic ecosystem. Globally, many natural habitats are undergoing changes because of human activities that results in the declining of several species of birds locally and regionally.

2. Need for conservation

Birds perform various ecosystem services like controlling pests in agriculture and forestry, rodent control, pollination of plants, seed dispersal and forest regeneration, scavenging services, indicators of environmental health and have socio-cultural and religious values. There is total of 1,317 birds recorded from India so far and about more than 100 species are listed under the threatened category. Recently, the Indian government has come out with a 10-year plan to protect birds and conserve their habitats.

Besides these threatened species, there are several other species that are marked by sparse population size and restricted range and are generally considered rare by conservationists. The draft plan prepared by Government of India observes that it is documented that 270 species (21 percent) of Indian avifauna fall under the 'rare' category and these include the raptors, pheasants, bustards, hornbills, cranes, storks etc. which together are classified as Rare, Endangered and Threatened (RET) bird species.

The draft plan proposes steps to protect migratory birds conserve wetlands and focus on birds in urban areas. The draft plan, which has been put in the public domain, noted that anthropogenic activities leading to increased levels of greenhouse gas emissions are also impacting the environment on a global scale and urged interventions to minimize and mitigate such impacts on avifauna.

3. Conservation challenges for the Threatened birds of Sathyabama

The conservation of aquatic birds faces significant challenges at local level since most of the birds are colonial nesters, congregates at breeding sites in numbers ranging from few tens to hundreds. The present conservation policy framework for birds in Sathyabama finds out that

out of 47 species of recorded during the survey; only one species is considered under the Near Threatened (NT) category of IUCN Red list database.

3.1 Restoration of wetlands inside campus

Interestingly, in terms of aquatic birds, the ponds available inside the premises of Sathyabama have been refilled frequently with water by the management authorities of Sathyabama during drought conditions. The refilling of ponds would replenish the food availability for aquatic birds as well as increase the aquatic vegetation that enhances the settlement, breeding, and egg-laying behavior of birds. In addition, the scientists of the Centre for Climate Change Studies, Sathyabama also involved in the rescue and release of birds on the campus.

3.2 Continuous monitoring through bird surveys

There are two to three artificial ponds inside the Sathyabama campus where birds rest, feed and spend time for replenishment. Continuous bird surveys are much needed to assess the biodiversity, health status of the birds and ecosystem, newly recruited juveniles or young ones. These areas need to be prioritized as a major biogeographic zone for the birds to develop conservation strategies and management plans.

3.3 Conduct bird census

In order to avoid the dwindling population of birds inside the campus, bird census is encouraged to obtain baseline information and population status of birds, their behavior and habitats, monitor human-bird interface inside the campus as large crowd of students are moving in and out on daily basis.

3.4 Marking sites for migratory birds

The marked areas for bird surveys can also be treated as critical sites for observing the migratory birds especially during wintering months. It is recommended to draft species-specific action plans for conservation of selected migratory birds inside the campus to assess threats to migratory birds and their habitats and develop mitigation measures.