



## Bird Conservation

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### Opinion

A news in Hindustan times about a few months ago read that bird population across Europe have experienced sharp decline a staggering 421 million birds over the past 30 years with the majority of losses from the most common species. Birds worldwide face a threat and hence their number as well as variety is decreasing. We can hardly spot the common house sparrow which was so numerous about 15-20 yrs ago and almost extinct now. Bird conservation is the branch of science which is related to threatened birds. According to worldwide institute, many bird populations are currently declining worldwide with 1200 species facing extinction in the next century. The following are main reasons for it (Figure 1).



**Figure 1**

### Distribution and loss of habit

The loss and destruction of habitat is the most important reason for dwindling world population of birds. The loss of forest, plains and other natural systems into agriculture, mines and urban development's, draining of swamps and other wetland and logging reduce the habitat for any species. Further construction of roadways, railways leave lesser and fragmented pieces of lands due to which there is lesser scope for bird to make their nest and scope for birds to make their nest and flourish as they did decades ago.

### Poaching/hunting and exploitation

Birds have been hunted since time immemorial. They are poached and hunted for entertainment or for industrial uses like sports, feather or even from scientist collecting museum specimens.

### Need based breeding program's

Now a day's breeds/species are propagated according to need of the area such that gene frequency of many species decrease to an extent that they become extinct due to artificial selection.

### Introduction of new species

Natural and artificial selection, introduction of new characters and species by man or nature in the long run are also responsible for extinction of old population.

### Species hybridization

Crossbreeding between two species is called species hybridization. Hybridization may also endanger the birds, damaging the gene stock. For example, The American Black Duck has been often reported hybridizing with the Mallard, starting a slow decline. Game bird hybrids are also common.

### Pollution

High rise of pollution of air, water and soil are yet another reason for destroy poultry population. Chemicals like Pesticides and DDT was responsible for thinning of egg shell in nesting birds particularly seabirds and birds of prey that are high on food chain.

### Drugs/Medicine

Indiscriminate use of various medicines or drugs also introduce chemicals in the food chains in the food chain which are lethal to various species of birds, For example use of Diclofenic sodium was found to be responsible for the extinction of many species of birds like Vultures.

### Tower kill

Birds are killed in large numbers by flying into communication tower guidelines, usually after being attracted by tower lights. This phenomenon is called Tower kill and is responsible for 5-50 million deaths per year.

### Miscellaneous

High rise in numbers of buildings, communication towers, cars, buses and trucks are also few miscellaneous reasons for the death of birds in large numbers. The destruction of wetland bird areas, loss

of shrub vegetation coupled with reduction in potential breeding site has accelerated the rate of decline in the sparrow population in India. But the major reason for this decline in their population might be attributable to the loss of their freely available feeds like small insects, twigs etc.

### Steps of Conservation

Steps of conservation revolve around the measures to curb the reasons of extinction. Based on the reasons for the vulnerability of birds, the main steps by scientists to protect the birds' population are-

#### Protection and regeneration of habitats

Loss of habitat being the main reason for the extinction of birds, the most important step of conservation by the scientist all over the world is protection and regeneration of habitats. This can be achieved through purchasing the land by government specially for recreation of habitat e.g. setting aside land or gazetting it as a national park or other protected areas, and passing legislations preventing landowners from undertaking damaging land use practices or by paying them not to undertake these. Such protections meant at conserving the species at its place of origin is called in-situ conservation.

#### Ex-situ conservation

Captive breeding or ex-situ conservation has already been advocated and is used in a number of instances to save different species from going thinner in population. The principal is to create a variable population of species in either zoos or breeding facilities for later reintroduction back into wild.

#### Use of captive breeds to replenish wild population

The captive breeds can be reintroduced to wild populations to replenish it.

#### Translocation

Movement of endangered population from one habitat to another can sometimes be helpful because sometimes it does not work due to adaptability problem of the breed in the changed environment.

#### Miscellaneous

These miscellaneous steps include strict laws and individual morality to prevent poaching, indiscriminate use of drugs, medicines, pesticides etc. which is detrimental for the whole food chain in general and birds in particular and a check on the level of pollution etc.