

THE INDIAN VULTURE SCENARIO



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Indian White-backed Vulture *Gyps bengalensis* is categorised as critically endangered by the IUCN

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VULTURE POPULATIONS, in the last decade, have declined by more than 95% in India, Nepal and Pakistan. The annual rates of decline continue to rise. Three species of vultures in South Asia – Indian White-backed *Gyps bengalensis*, Slender-billed *Gyps tenuirostris* and Long-billed *Gyps indicus* – are in grave danger of global extinction.

This catastrophic population crash led the World Conservation Union (IUCN), in the year 2000, to list the three vulture species, all from the *Gyps* genera, as critically endangered, which is the highest category of endangerment. All the three vulture species were categorised under Schedule I of the Indian Wildlife (Protection) Act in 2002.

Vultures play a subtle, but important ecological role in the environment, as primary carrion feeders (carcass disposers). They have been relied upon for millennia to scavenge, clean up and remove dead livestock, wild animal carcasses and even human corpses. The vultures' virtual absence on carrions has led to a growing population of minor scavengers, like feral dogs and crows, which are a potential threat for spreading diseases. This has necessitated use of expensive alternative methods of carcass disposal to reduce public health risks; has had an impact on a small scale on the economy of the hide and bone collectors, and culturally, it has affected the rituals for the dead of the Parsi community.

Research

Recent published findings of the Bombay Natural History Society (BNHS) and UK based organizations – Royal Society for Protection of Birds (RSPB) and the Zoological Society of London (ZSL) – which concurred with the Peregrine Funds’ (USA) findings in Pakistan in 2003, provided strong evidence, based on sound experimental design, supporting the theory that the non-steroidal anti-inflammatory veterinary drug (NSAID) – diclofenac is the prime cause for the crash in vulture populations in India, Nepal and Pakistan. Veterinary diclofenac occurred in the food chain (carcasses) of vultures, which was the cause of death due to visceral gout (deposition of uric acid crystals on organs) and kidney failure. The studies explicitly showed that even less than 1% of the total cattle carcasses containing diclofenac, if available to the vultures, would result in such a catastrophic rate of vulture decline. Analysis on 1,000 carcasses collected from various Indian states by the Wildlife Institute of India (Dehra Dun) indicated that 5 to 8 per cent of the livestock carcasses showed the prevalence of diclofenac (this is much higher than the simulation studies conducted), portraying a grim picture for the existing vulture populations.

Veterinary Diclofenac

Diclofenac was introduced into the Indian veterinary market as recently as over a decade ago. It appears to have become popular because of its therapeutic value for treating symptoms in a broad range of ailments and injuries. It causes immediate, but short-term relief for the animal. However, the drug has no specific curative value, has many potential substitutes, and is therefore non-essential. Asian vultures are likely to be exposed to diclofenac mainly from livestock, rather than human sources. Therefore, controlling diclofenac use in the veterinary market would alone be sufficient to remove diclofenac from the vultures’ food source. Simultaneously, there will have to be a policy regulation in the control of flow of diclofenac formulations from the human sector to the veterinary sector.

Conservation Breeding

The rate at which vulture decline has been occurring in India definitely called for scientific intervention. Thus, it has been imperative to undertake an immediate conservation action with a comprehensively designed species recovery plan. The only solution being, vulture conservation breeding in a diclofenac free environment. The



Gyps vulture populations have plummeted across the Indian subcontinent and immediate corrective measures are needed to conserve the species

population for future restocking could be built up over a period of time in the captive breeding centers in India, till the vulture distributional ranges are diclofenac free.

The Bombay Natural History Society (BNHS), with approval from the Haryana State Government and Forest Department with concurrence from the Indian Ministry of Environment and Forests (MoEF), has set up a conservation breeding center in Pinjore (Haryana State). This set up is in partnership with UK based organisations – RSPB, Darwin Initiatives for the survival of the species, ZSL and National Birds of Prey Trust and Poultry Diagnostic Research Centre (Pune). The upcoming second vulture-breeding centre is in Buxa (West Bengal). These breeding centres will be a prototype for the rest of the vulture range countries.

Dr. Vibhu Prakash, Principal Scientist from BNHS, along with a team of national and international experts, is overseeing the ongoing vulture conservation breeding programme in India, which is scientifically established, monitored and managed. Further, long term efforts for preservation of the *Gyps* breeding areas in the wild, supported by the conservation-breeding programme, will ensure the recovery of the vulture populations.

Alternative Drug

Research for the efficacy and safety of a promising alternative drug, Meloxicam, on the phylogenetically surrogate species *Gyps africanus*, in South Africa is ongoing. The test results are still awaited.

In India, the MoEF has given a green signal for an immediate alternative drug safety testing in India, conducted by the Indian Veterinary Research Institute in Bareilly (IVRI), BNHS and other Indian agencies.

Achievements

Countrywide awareness was generated amongst the State Government Veterinary Sectors, which led some States (Gujarat, Himachal Pradesh, Tamil Nadu, Uttaranchal and Punjab) to immediately respond to the

ban on diclofenac use. One of our major achievements in the BNHS Vulture Advocacy Programme, with MoEF support, was getting a ban on the veterinary use of diclofenac in India within six months, a decision taken at the recent (17th March, 2005) Indian National Board for Wildlife meeting chaired by the Prime Minister.

Meanwhile the MoEF has been convening meetings with the Agriculture Ministry, Health Ministry and drug manufacturers expediting necessary actions to be undertaken at the Centre on drug economics, policy and regulation levels. Simultaneously, in the rural sector (users' level),



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Vultures play a vital role in the ecosystem as scavengers

progress through awareness campaigns using radio as the medium have been implemented.

The directive to phase out the drug in a stipulated time-frame by the Indian Government and the ongoing actions by the MoEF has set precedence for the rest of the vulture range countries in South East Asia. This has enhanced the Indian conservation agencies' efforts to re-establish the vultures from the brink of extinction and thereby influence the rest of the vulture range countries.■