

## A Few Minutes Series

Subject - Environment

Date - 02<sup>nd</sup> March 2023

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### ALL ABOUT VULTURES



- The crash in their population from estimated 4 crores in the early 1980s to less than a lakh by 2007 in India is unprecedented in the animal world.
- Outside of the oceans, vultures are the only known obligate scavengers.
- The ecological, social and cultural significance of vultures in India may be summed up as: scavenging on animal carcasses and thereby helping keep the environment clean.
- There are nine species of vultures in India out of which three have been on critically endangered list of IUCN and also listed under Schedule I of the Wild Life (Protection) Act, 1972.
  - White-rumped Vulture (*Gyps bengalensis*)

- Slender billed Vulture (*Gyps tenuirostris*)
- Indian Vulture/long-billed vulture (*Gyps indicus*)
- Himalayan Griffon - closely related to Indian Gyps - Near Threatened
- Egyptian Vulture - Endangered
- Red-headed vulture is on the critically endangered list of IUCN but not listed under Schedule I of the Wild Life

Table 1. Status of Vultures in India

(Prakash et al 2017)

Species	Resident/ Migratory	Conservation (Global)	Status Conservation (Wildlife Protection Act 1972)	Estimated Population in India
Bearded (BV)	Resident	Near Threatened	Schedule-I	Not available
Cinereous (CV)	Winter visitor	Near Threatened	Schedule-IV	Not available
Egyptian (EV)	Resident	Endangered	Schedule-IV	Not available
Eurasian (EG)	Winter visitor	Least Concern	Schedule-IV	Not available
Himalayan (HV)	Winter/resident	Near Threatened	Schedule-IV	Not available
Long-billed (LBV)	Resident	Critically endangered	Schedule-I	26,500
Red-headed (RHV)	Resident	Critically endangered	Schedule-IV	Not available
Slender-billed (SBV)	Resident	Critically endangered	Schedule-I	1,000
Oriental White-backed (OWBV)	Resident	Critically endangered	Schedule-I	6,000

(Protection) Act, 1972. (Schedule IV)

### KNOW YOUR VULTURES: OLD & NEW

**NEW WORLD**  
Native to the Americas

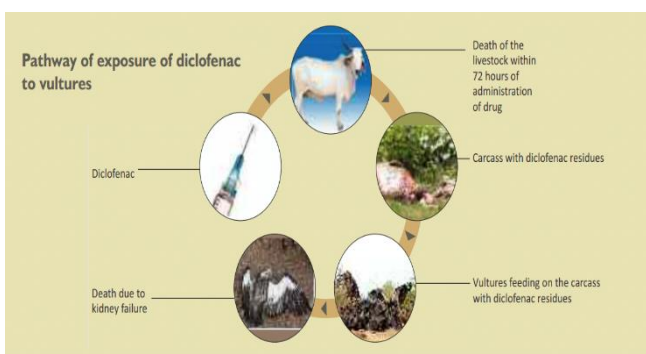
**OLD WORLD**  
Native to Europe, Asia and Africa

### ROLE OF VULTURES IN ECOSYSTEM

- Nature's most efficient scavengers.
- This prevented the outbreak of epidemics - bacteria and fungi can't grow on them.
- Cultural significance - Parsis
- Other scavengers such as rats and feral dogs moved in when their numbers declined but they lack the efficiency of vultures whose metabolism is a true 'dead-end' for pathogens. Dogs and rats, instead, become carriers of the pathogens spreading disease.

## Threats

- A major threat to vultures is the painkiller diclofenac used by veterinarians to treat cattle.



## Effects

- When vultures consume these carcasses, diclofenac enters their system, but they are unable to metabolize it.
- It results in uric acid accumulating in the birds' blood and crystallizing around their internal organs, a condition called visceral gout.
- Accumulation of diclofenac results in gout-like symptoms such as neck drooping (Thanatosis), kidney failure and ultimately leading to death.

## Aceclofenac

- Indian Veterinary Research Institute has demanded a ban on using aceclofenac in cattle.
- Aceclofenac is a veterinary painkiller.
- It metabolises into diclofenac in water buffaloes and cows which eventually

threatens vulture populations in the country.

## Drugs Toxic to Vulture

- Diclofenac has long been established as the prime reason for wiping out 99 percent of the vulture population in India in the 90s.
- Later two more veterinary drugs, aceclofenac and ketoprofen, were found to be toxic for vultures.
- As per the new study, nimesulide appears to act similar to diclofenac in exerting toxic effects on vultures.
- Flunixin
- Carprofen

## Safe Drugs for Vultures

- Meloxicam
- Tolfenamic acid

## Conservation Measures

- First Vulture Care Centre (VCC) was set up at Pinjore, Haryana in 2001. (to know the cause of decline)
- Later in 2004, the VCC was upgraded to being the first Vulture Conservation and Breeding Centres (VCBC) in India.
- At present there are nine Vulture Conservation and Breeding Centres (VCBC) in India, of which three are directly administered by Bombay Natural History Society (BNHS).
- The main objective of the VCBCs was to look after the vultures and breed them in captivity and also release them into the wild.
- The Bombay Natural History Society and the RSPB (UK) are working as part of Saving Asia's Vultures from Extinction (SAVE).

- Every four years, they set out on a survey of epic proportions, covering 15,500km of road in 13 states across India, counting individual vultures of each of the three species.

### Vulture census

- Vulture census was conducted in 2022.
- The last such census was carried out in 2015.
- The census would be conducted by scientists at the Bombay Natural History Society (a conservation NGO), along with teams from the 13 states and the MoEFCC.
- *Haryana, Punjab, Himachal Pradesh, Uttar Pradesh, Gujarat, Maharashtra, Madhya Pradesh, Odisha, Bihar, West Bengal, Assam, Arunachal Pradesh and Meghalaya.*

### Vulture Safe zone

- Establishment of at least one vulture-safe zone in each state for the conservation of the remnant populations in that state.
- Action Plan for Vulture Conservation 2020 - 2025
- The action plan was approved by the National Board for Wildlife (NBWL) in 2020.
- An earlier one was formulated in 2006 for three years.
- The new plan has laid out strategies and actions to stem the decline in vulture population, especially of the three Gyps species:
  - Oriental white-backed vulture (*Gyps bengalensis*)
  - Slender-billed vulture (*Gyps tenuirostris*)
- 3. Long-billed vulture (*Gyps indicus*)
- This would be done through both ex-situ and in-situ conservation.

- The plan has also suggested that new veterinary non-steroidal anti-inflammatory drugs (NSAIDs) be tested on vultures before their commercial release.

### International Efforts

- SAVE (Saving Asia's Vultures from Extinction) - It includes fourteen organisations involved and committed to helping the vultures to date, and this number is steadily growing.
- Bombay Natural History Society works with SAVE.

### International Vulture Conservation



### Awareness Day

- The initiative is run jointly by the
  - Birds of Prey Programme of the Endangered Wildlife Trust in South Africa and the
  - Hawk Conservancy Trust in England.
- Through IVAD, both the organisation try to raise awareness about the threats that vultures are facing today and promote a coordinated international effort to publicise the conservation of vultures to a wider audience.