Pandemic Preparedness by Vulture Conservation

Mains: *GS 3 – Bio-diversity and Disaster management*

Why in News?

Recent decline in vulture populations reminds us the connection between their conservation and pandemic preparedness, alarms need for natural conservation of vultures.

What are vultures?



- **Vultures** – These are large birds that feed mostly on animals found dead and that are related to the hawks and eagles but have weaker claws and the head usually naked.
- **Diet** – All vultures feed on carrion (animal carcasses), except for palm-nut vultures (Gyphohierax angolensis), which feed on the fruit of the oil palm.
- Some species *also hunt small prey, such as insects, lizards, smaller birds and rodents*.
- The pieces of decaying meat and skin are less apt to stick to bare heads than to a thick mat of feathers.
- **Incubation** – Vultures usually have one mate a year. Nests are constructed using sticks and leaves, and are built in trees and cliffs. The same nest may be used for several years.
- **Ecological importance** – Vultures are critical for maintaining ecosystem balance by removing carcasses, helps prevent the spread of pathogens like anthrax, Clostridium

botulinum, rabies.

- **Historical population decline** – Once numbering over 40 million in India, *vulture populations have plummeted by over 95% since the 1990s due to the use of diclofenac*.
- It is highlighting a significant public health issue linked to biodiversity loss.

What role do vultures play?

- **Safeguards ecosystems health** – As nature's clean-up crew, vultures play a crucial role in maintaining the health of our ecosystems by consuming dead animals.
- **Controlling spread of diseases** – Their scavenging activities likely control the spread of diseases, thus protecting both wildlife and human communities from potential outbreaks.
- **Recycling nutrients** – Vultures and their behavior of consuming carcasses helps recycle nutrients back into the soil.
- This potentially helps *promote vegetation growth and maintains sustainable and healthy ecosystems*.
- This natural waste management is both free and environmentally beneficial,
- **Providing advantages to livestock farmers** – Vultures reduces the need for artificial disposal methods such as transport to incineration plants.
- This minimizes related insurance pay-outs and greenhouse gas emissions.
- **Cultural and spiritual significance** – In many societies and regions vultures attract ecotourism, which generates substantial income for local communities.
- Their presence supports biodiversity and enhances ecosystem resilience.

How are vultures linked to pandemic preparedness?

- **Carcass management** – By being the first to encounter carcasses, vultures can help in surveillance and safe management of potential zoonotic spillover sources.

*A **Carcass** is the dead body of an animal, especially one that is to be cut up for meat or eaten by other animals. It can also refer to the frame or remains of an old, broken, or destroyed object, like a building or a vehicle.*

- **Reduction of zoonotic spillover –** The promptly disposing of carcasses by vultures reduce the risk of zoonotic spillover.
- This further, prevents transmission of pathogens from animals to humans, resists the emergence of pandemics.
- **Regional and global health linkages** – As part of the Central Asian Flyway (CAF), vultures connect ecosystems and disease risks across borders.

***Central Asian Flyway (CAF),** a migratory route connecting breeding grounds in Central Asia to wintering areas across South Asia. This corridor spans more than 30 countries and is traversed by millions of migratory birds each year.*

- **Ecosystem surveillance** – Vultures act as natural bio-monitors or first responders at

carcasses, helping in early detection of outbreaks and providing crucial data.
- **Conservation as preparedness** – Lower-cost vulture conservation efforts, such as banning harmful drugs, creating safe zones can build systemic resilience against pandemics.
- Vulture conservation essential for both biodiversity and public health.

What strategies can help protect vultures in India?

- **A post 2025 strategy with 5 pillars includes**
  - **Satellite telemetry** – Implement nationwide tracking to map habitats and spillover hotspots.
  - **Decision Support System (DSS)** – Integrate wildlife, livestock, and human health data for real-time risk analysis.
  - **Cross-sector coordination** – Strengthen links between environment, veterinary, and public health sectors within a One Health framework.
  - **Transboundary collaboration** – Work collaboratively through the Central Asian Flyway to enhance regional disease preparedness.
  - This collaboration to be aligned with commitments under the ***Convention on Migratory Species*** and stronger disease preparedness.
  - **Community stewardship** – Empower local communities, especially women and youth, to take active roles in surveillance and awareness.
- **Long-term goals** – Transitioning to a broader resilience framework by embedding health security dimensions into the existing Vulture Action Plan can conserve species and reduce pandemic risks.
- **Investing in vulture conservation** – Vulture conservation is modest compared to the potential costs of disease outbreaks, making it a vital area for intervention

What lies ahead?

- Protecting vultures is not only essential for conserving wildlife but also for maintaining the vital ecosystem services that all life depends on.
- The contribution of vultures may be formally recognized in pandemic preparedness strategies as holistic and sustainable measure.
- Local communities, who live alongside vultures, are critical partners in conservation efforts can be effectively utilized for better coordination and support.

References

1. The Hindu| Pandemic Preparedness by Vulture Conservation
2. Vulturesday.org

SHANKAR IAS PARLIAMENT
Information is Empowering