



# VISION DOCUMENT FOR **VULTURE** **CONSERVATION** IN TAMIL NADU

2025-2030



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**Vision Document for Vulture  
Conservation in Tamil Nadu  
2025-30**



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## Vision Document for Vulture Conservation (VDVC)

### Mandate

The decision to develop a Vision Document for Vulture Conservation (VDVC) was taken during the meeting on the Constitution of a State Level Committee for vulture conservation held on October 19, 2024. This initiative underscores the urgent need to address the alarming decline in vulture populations, which play a crucial role in maintaining ecological balance and curbing the spread of diseases. Vultures, as obligate scavengers, efficiently remove carrion from the environment, thereby reducing the risk of disease outbreaks that can affect both wildlife and human populations. The VDVC serves as a comprehensive roadmap, outlining monitoring methods, strategic measures and targeted conservation actions to protect and revive these keystone species in Tamil Nadu.

## Chapter 1: Overview of Conservation Status in Tamil Nadu

### 1.1 Introduction

Among all the raptors, vultures are crucial avian scavengers that play a critical ecological role by consuming carcasses and preventing disease spread in the environment (Vicente & Vercauteren, 2019; Navarro & Castillo-Contreras, 2025) and are a worldwide threatened avian guild (Buechley & Şekercioğlu, 2016; McClure *et al.*, 2021). There are 23 vulture species distributed worldwide (Ogada *et al.*, 2012), and nine are found in India. Seven species of vultures are known to exist in the Nilgiri Biosphere Reserve (NBR) in southern India. Of these, the residents are the two critically endangered species: **White-rumped Vulture** (*Gyps bengalensis*) (Davidar & Davidar, 2002; Ramakrishnan *et al.*, 2014; Venkitachalam & Senthilnathan, 2015; Samson *et al.*, 2018) and **Long-billed Vulture** (*Gyps indicus*) (Venkitachalam & Senthilnathan, 2015). The prominent local migrants are the critically endangered **Red-headed Vulture** (*Sarcogyps calvus*) (Ramakrishnan *et al.*, 2012) and near-threatened **Egyptian Vulture** (*Neophron percnopterus*) (Subramanya & Naveen, 2006; Samson *et al.*, 2014).

Also, there has been a record of **Cinereous Vulture** (*Aegypius monachus*) (Samson *et al.*, 2019), **Himalayan Griffon** (*Gyps himalayensis*) (Praveen *et al.*, 2014), and **Eurasian Griffon** (*Gyps fulvus*) (Gajamohanraj, 2020) as vagrants in the Mudumalai Tiger Reserve.

Veterinary pharmaceuticals (Oaks *et al.*, 2004; Hernández & Margalida, 2008; Margalida *et al.*, 2014), intentional poisoning (Hernández & Margalida, 2008, 2009; Oro *et al.*, 2008), habitat destruction (Thiollay, 2006), low food availability (Thiollay, 2006; Margalida *et al.*, 2010; Margalida & Colomer, 2012), electrocution and collisions with power lines (Boshoff *et al.*, 2011), and anthropogenic disturbance (Morán-López *et al.*, 2006) have contributed to the decline of vultures worldwide.

## 1.2 Role of vultures

Vultures are essential components of many ecosystems, primarily due to their role as obligate scavengers. By rapidly consuming animal carcasses, they prevent the spread of harmful pathogens that proliferate in decomposing organic matter (Ogada *et al.*, 2012). Their unique physiological adaptations, including highly acidic stomachs, allow them to safely digest tissues infected with deadly pathogens such as anthrax, rabies, and botulism, thus acting as a natural barrier against disease transmission (Houston & Cooper, 1975). This ecological function significantly contributes to environmental sanitation and public health, particularly in rural and peri-urban landscapes.

In addition to disease control, vultures are also key contributors to nutrient cycling. Through the consumption and breakdown of carrion, they facilitate the rapid return of organic materials to the soil, promoting nutrient redistribution and enhancing soil fertility (DeVault *et al.*, 2003). By efficiently removing carcasses from the environment, vultures also limit the food available to feral scavengers such as stray dogs and rats—species often linked to human-wildlife conflict and the spread of zoonotic diseases (Markandya *et al.*, 2008).

The dramatic decline of vulture populations in South Asia—primarily due to the veterinary use of diclofenac—has underscored their irreplaceable ecological role. Regions that have experienced vulture loss have seen increases in carcass persistence and feral scavenger populations, resulting in higher incidences of diseases such as rabies (Pain *et al.*, 2003). The role of vultures is therefore not only crucial for biodiversity but also for sustaining vital ecosystem services and safeguarding public health.

### 1.3 Distribution Status of Vultures in Tamil Nadu

Distributional records of all four resident vultures were retrieved from published research, reports, and e-bird database and mapped for their probable distribution (Fig 1-4). Since there were only rare sighting of the vagrants, distributional maps of the vagrants were not included.

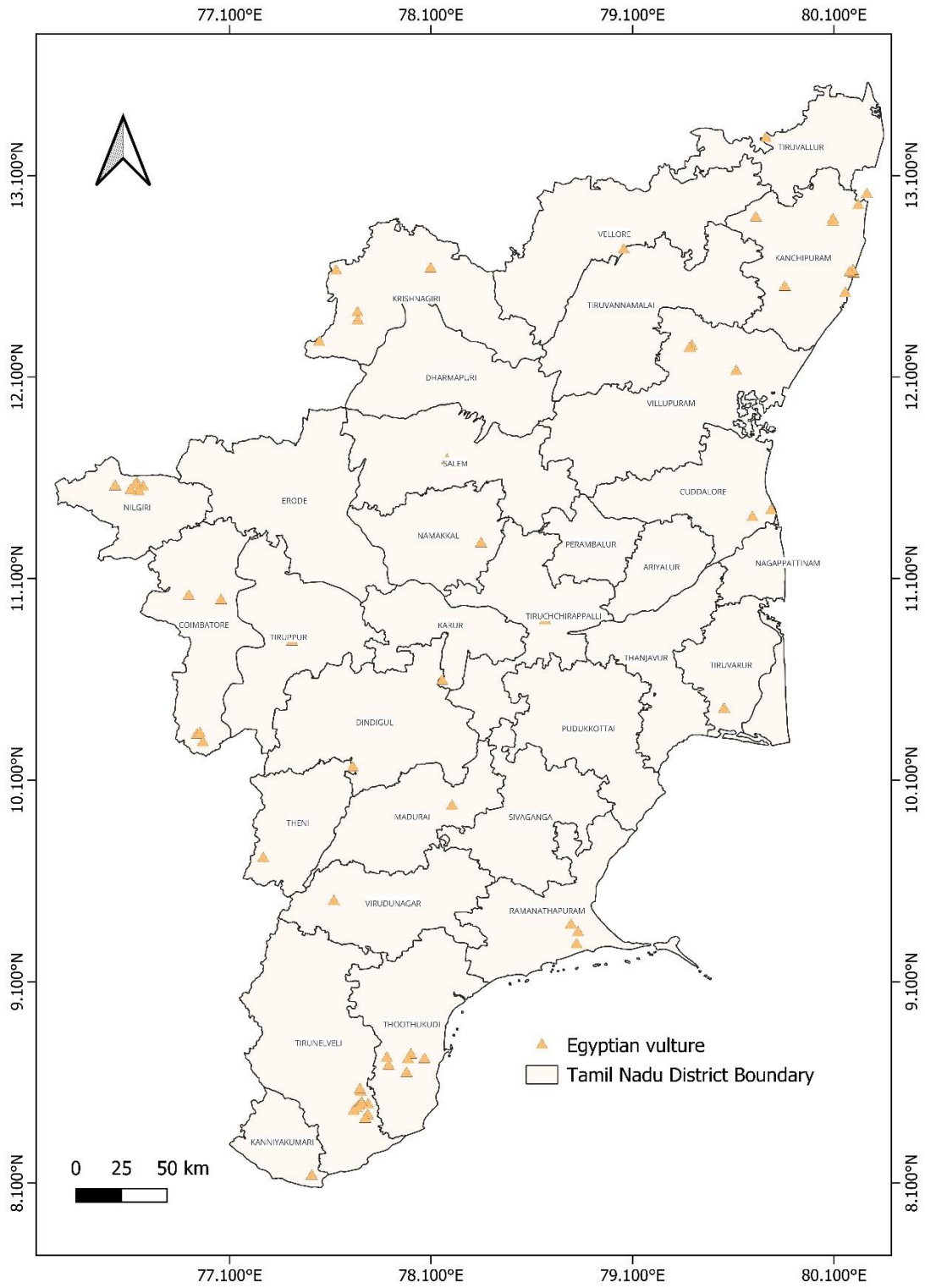


Figure 1: Distribution of Egyptian Vulture across Tamil Nadu

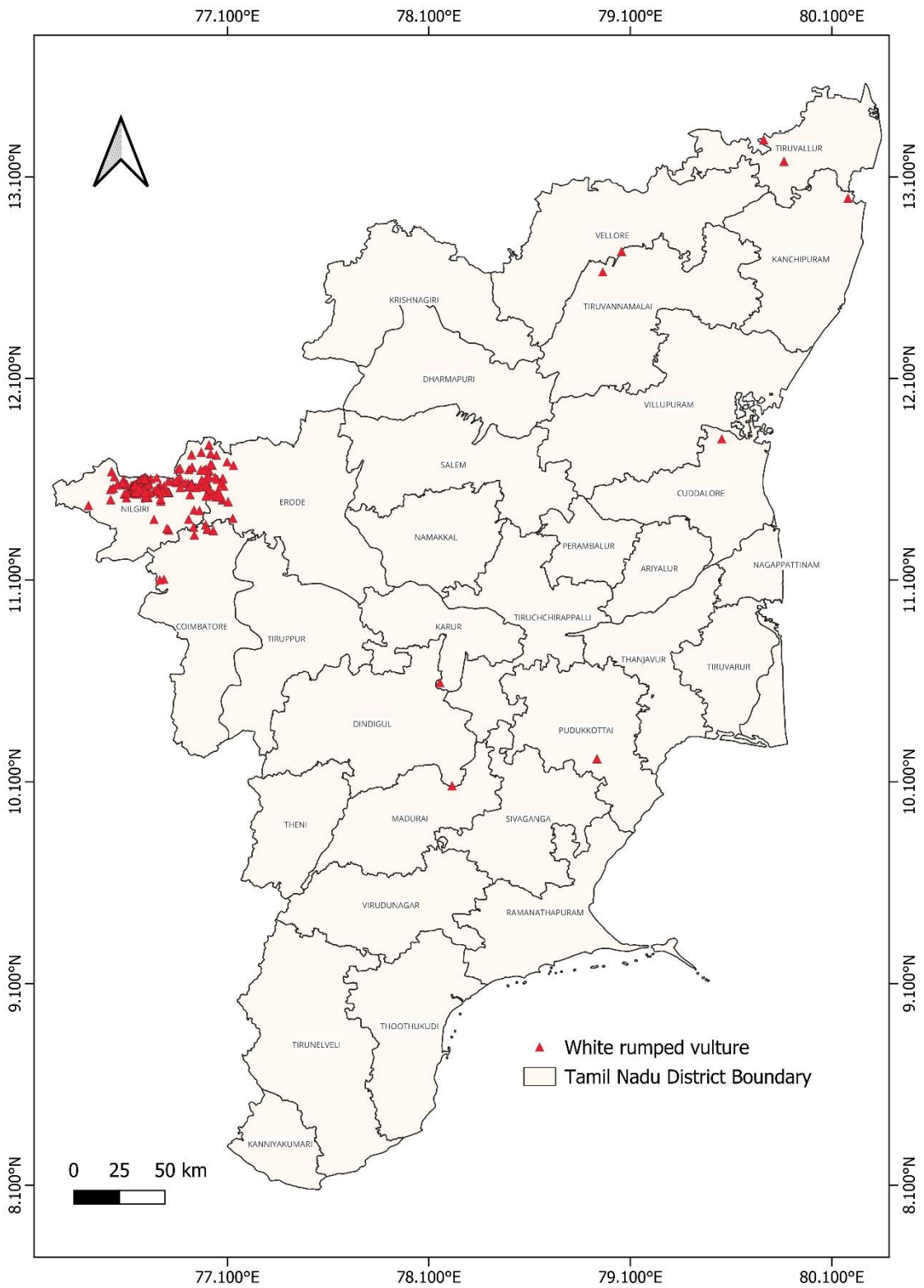


Figure 2: Distribution of White rumped Vulture across Tamil Nadu

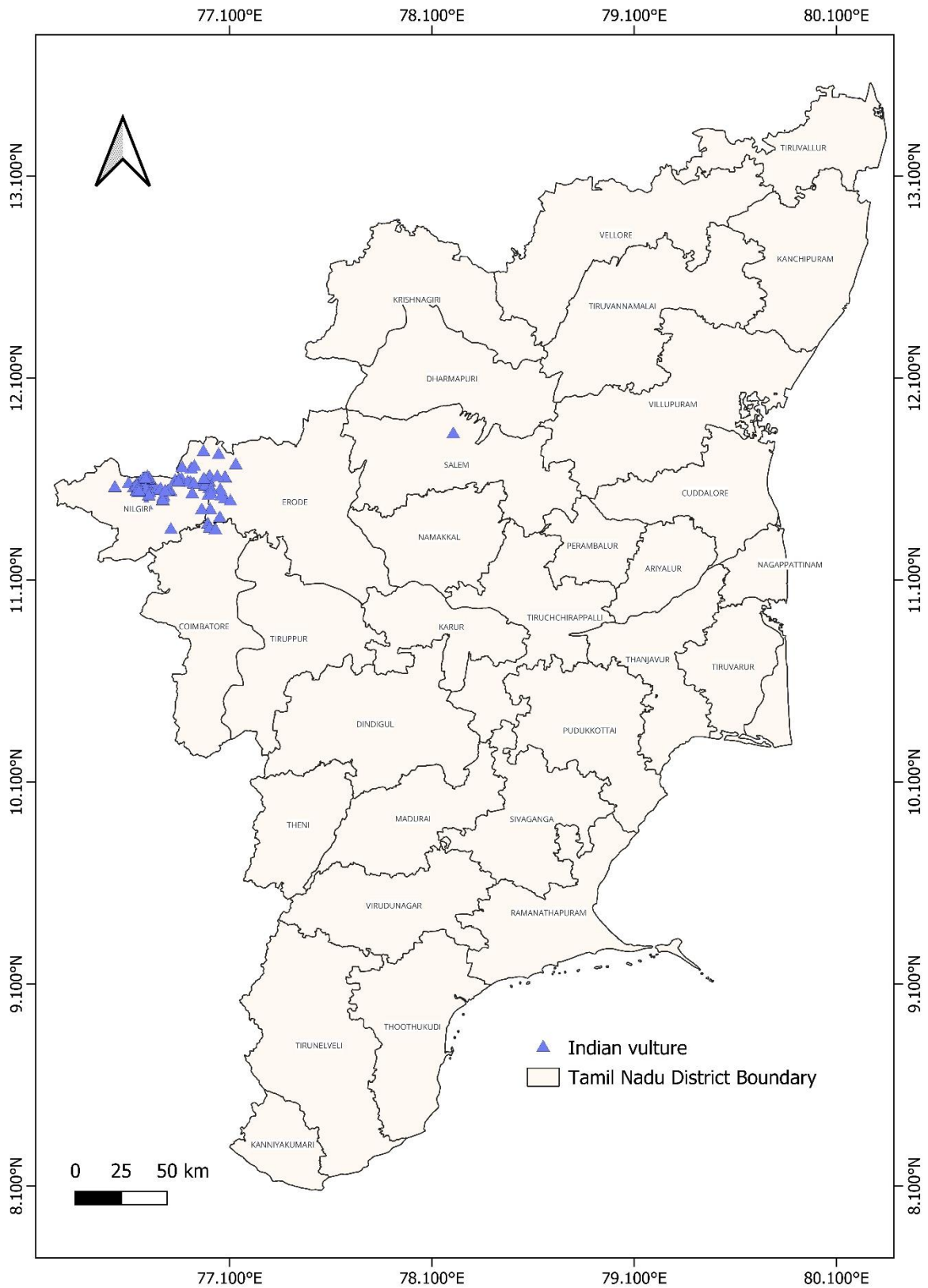
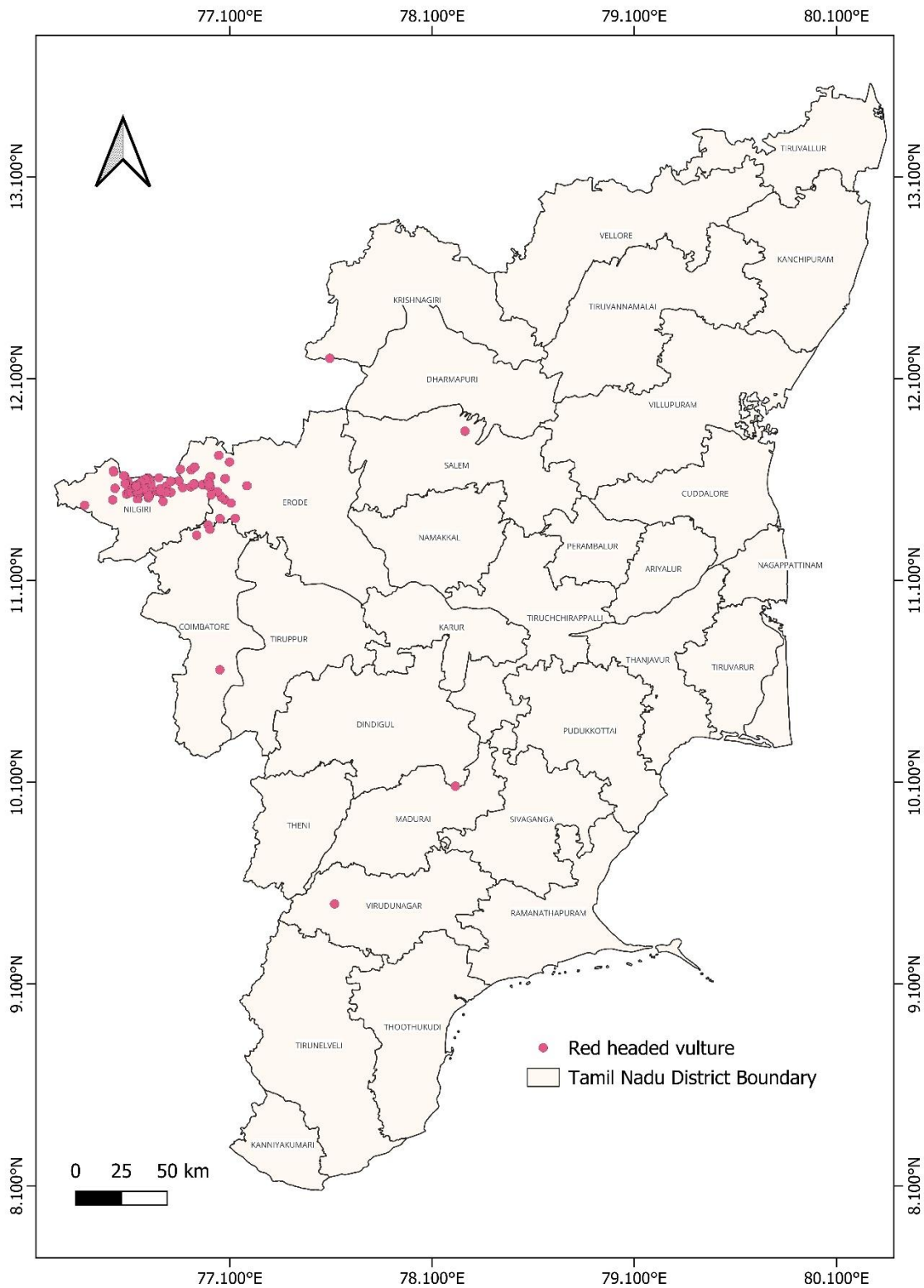


Figure 3: Distribution of Indian Vulture across Tamil Nadu



*Figure 4: Distribution of Red-headed Vulture across Tamil Nadu*

Among the four vultures, white-rumped vultures were the most frequently sighted. Based on available records, the Red-headed vulture, White-rumped vulture and Indian vulture

appear to be restricted to the Nilgiri Biosphere Reserve, especially the Moyar river valley. In contrast, the Egyptian vulture has been recorded more widely, with sightings reported across various parts of the State.

There is limited literature available on the systematic surveys conducted for vultures in Tamil Nadu. Currently, the State is involved in the Synchronized Vulture Survey, which is undertaken across seven Tiger reserves and three states – Tamil Nadu, Karnataka and Kerala, using the vantage point count method, conducted since December 2023. As per the latest survey conducted in February 2025, Tamil Nadu has recorded 110 individuals of the white-rumped vulture, followed by 31 individuals of long-billed vulture, 11 individuals of the red-headed vulture, and five individuals of Egyptian vulture.

Currently, there is occasional literature available on the distribution and historical sightings of vultures throughout the state. Among the few documented records, the earliest report by Badshah (1968) reported that the White-rumped Vultures were common in Tamil Nadu except near the seacoasts (BirdLife International, 2001). The White-rumped Vulture (*Gyps bengalensis*) and the Long-billed Vulture (*Gyps indicus*) have been reported as resident species in the Mudumalai Wildlife Sanctuary (Gokula *et al.*, 1996). Breeding pairs of Long-billed vulture have been recorded from the Nilgiris and Sathyamangalam Tiger Reserve division (Venkitachalam & Senthilnathan, 2015). Earlier accounts also noted breeding populations of Indian vultures on the cliffs of the Nilgiri and Palani Hills (Sathyamurthi, 1970).

Urban and semi-urban sightings were once widespread. Vultures were frequently seen around leather tanneries in areas such as Chrompet (Chennai), Vaniyambadi, and Dindigul, attracted by carcass disposal practices. In Dindigul, vultures were observed perching on pillars of leather tanneries (Bharathidasan S., personal observation, 1992). Chrompet witnessed large gatherings of vultures, with their numbers comparable to those of crows (Neelakantan, 1958). On the outskirts of Thanjavur, a wake of White-rumped Vultures regularly assembled in Vallam Village to feed on remains of cattle slaughtered for meat (Dr. K. Ratnam, personal communication). Nesting behavior was also noted in less conventional habitats; for instance, a vulture nest was recorded in a coconut tree in Tirunelveli. However, local farmers drove the bird away due to yield loss and inconvenience during harvesting (Raja, Nanguneri, personal interview).

Occasional sightings have also been recorded in Chinnar, Palakkad, and Thirukalukundram (C. Sasikumar and Sivaprasath, personal observation), suggesting that the species once had a more widespread and interconnected range across southern India.

## Chapter 2: Conservation Action Plan for Vulture in Tamil Nadu

### 2.1 Introduction

The conservation actions are based on the Action Plan for Vulture Conservation in India 2020 -2025 (APVC 2020-2025). While the national level plan outlines broad strategies applicable across the country, region specific actions tailored to Tamil Nadu are detailed in this Vision Document for Vulture Conservation in Tamil Nadu (VDVC) 2025.

### 2.2 Goal

To restore and maintain a viable wild population of vultures in Tamil Nadu.

### 2.3 Major objectives

The following are the major objectives of the VDVC 2025

1. Regular monitoring of the Vulture Population across the state
2. Establishment of Vulture Safe Zone (VSZ) network
3. Prevention of Non-Steroidal Anti-inflammatory Drugs (NSAIDs) Poisoning
4. Carcass availability for vultures
5. Management of wild animal carcasses in Protected and other areas
6. Habitat management
7. Establishment of Breeding and Rescue Centres
8. Research
9. Education and Awareness program

#### 2.3.1 Monitoring of vulture populations across the state

Regular and systematic monitoring of vulture populations is crucial for assessing long-term trends, understanding changes in species abundance and distribution, and evaluating the effectiveness of conservation interventions. Under stable ecological conditions, populations of large birds of prey such as vultures are expected to remain constant or exhibit a slight increase. Deviations from this pattern may indicate underlying ecological disturbances or conservation failures, necessitating targeted action.

### **Suggested action**

#### a. Population estimation

Vultures, regardless of size, have a large home range and they are known to generally move in and out of any area (Manigandan *et al.*, 2023). Each landscape requires different estimation methods, as vultures are tree nesters and rock cliff nesters. For estimating the population, designated fixed road transects (Pomeroy *et al.*, 2015; Subedi *et al.*, 2018; Prakash *et al.*, 2017), nest site count method (Ramakrishnan *et al.*, 2014, Venkidachalam & Senthilnathan, 2015; Bhusal *et al.*, 2019; Rana *et al.*, 2019), carcass count method (Fielding *et al.*, 2014; Manigandan *et al.*, 2021) need to be established across key habitats and monitored consistently at regular intervals. All the three methods will provide repeatable data sets to track relative abundance and distribution over time, ensuring methodological uniformity across the landscape.

#### b. Coordinated State-Wide Vulture Count:

Synchronized, state-wide total count of vultures should be conducted twice a year, ideally in February and September, as these months coincide with the presence of both resident and migratory vulture species. The exercise should involve forest department personnel, NGOs, citizen scientists, and other volunteers under the coordination of the Advanced Institute for Wildlife Conservation (AIWC). This collaborative approach will help generate reliable data and foster stakeholder participation in vulture conservation.

#### c. Nest Monitoring:

All known vulture nesting sites should be identified, geo-referenced, and monitored regularly. Key reproductive parameters—such as breeding success, hatching success, and fledging success—must be recorded systematically for each nest. This data will serve as indicators of habitat quality and threats, helping to evaluate conservation success and identify the causes of nest failure.

### **Expected Outcome:**

1. A systematic and scientifically robust documentation of long-term population trends of vulture species in the State.

2. Establish a centralized digital database to compile and maintain comprehensive data on vulture populations, nesting sites, and distribution patterns. This must be accessible to researchers, policymakers, and wildlife managers to facilitate informed decision making, coordinated conservation efforts and effective monitoring of vulture species across Tamil Nadu.

### 2.3.2 Establishment of Vulture Safe Zone (VSZ) network in Tamil Nadu

A **Vulture Safe Zone (VSZ)** is a geographic area, typically within a 100 km radius around a known vulture nesting or roosting site, where intensive management and conservation actions are undertaken to ensure the survival of wild vulture populations (IBCN, 2014; Venkitachalam & Senthilnathan, 2016). The primary goal of a VSZ is to create a safe environment free from threats, especially the use of toxic veterinary non-steroidal anti-inflammatory drugs (NSAIDs) like diclofenac, which have been a major cause of vulture mortality. Within a VSZ, targeted measures include strict regulation and promotion of vulture-safe alternatives (e.g., Meloxicam), safe carcass disposal practices, community awareness campaigns, and regular monitoring of vulture populations and drug prevalence. By focusing on localized yet ecologically significant zones, VSZs serve as core areas for species recovery and are a proven strategy in India's broader vulture conservation framework.

Based on the distribution of Vultures, the area for Vulture Safe Zones (VSZ) are to be designated. Locations which are having a Steady-State population of at least two species of vultures existing in the area can be designated as VSZ. Within this zone, measures will have to be taken to ensure low prevalence of toxic NSAIDs in an area of 100 km radius around the vulture colony through targeted advocacy and awareness programmes following the established protocol. This will help in the conservation of vultures across the state with participation of people and communities

#### **Suggested Action**

1. Identify and designate at least two Vulture Safe Zones (VSZs) in Tamil Nadu harbouring a steady-state population of  $\geq 2$  species presently or in the past.
2. Conduct mapping of pharmacies, veterinary practices, and carcass disposal points in the VSZ.
3. Implement awareness and advocacy campaigns on vulture-toxic NSAIDs to prevent poisoning of Vultures.

4. Engage local communities in monitoring and reporting vulture sightings and their threats within VSZ.

### **Expected Outcome**

1. Notification of priority VSZs covering a 100 km radius around identified vulture colonies.
2. Baseline map and data of carcass availability within each VSZ.
3. Enhancing community and local stewardship in vulture conservation.

### **2.3.3 Prevention of NSAIDs Poisoning**

All veterinary NSAIDs are in the Schedule H of the Drug and Cosmetics Act, 1940 and they can be obtained legally only upon the prescription of a medical or veterinary practitioner. However, in reality, the drug can generally be purchased across the counter anywhere in the country. Currently, the use of major NSAIDs such as Diclofenac, Ketoprofen, Aceclofenac is banned in India, while the use of Nimesulide is restricted. Despite the bans and restrictions, NSAID contamination of vulture food sources remains a pressing threat to vulture conservation in India. Meloxicam and Tolfenamic acid are the only known vulture-safe drugs while several other veterinary NSAIDs available are potentially toxic to vultures.

### **Suggested Action**

1. Regularly monitor the import, manufacture, and distribution of non-steroidal anti-inflammatory drugs (NSAIDs) known to be toxic to vultures
2. Form a dedicated expert committee to evaluate the safety of recently introduced and upcoming NSAIDs in connection with their impact on vulture species.
3. Ensure rigorous scientific safety testing of all veterinary drugs before they are approved for market release to prevent future vulture mortality incidents.
4. Promote the use of NSAIDs proven to be vulture-safe (e.g., meloxicam) and ensure their availability in good quality and adequate quantity.
5. Enforce regulations mandating the sale of veterinary NSAIDs only through valid prescriptions to avoid indiscriminate and unregulated usage.
6. Continue and expand awareness campaigns targeting veterinarians, para-veterinarians, livestock owners, and the general public regarding the risks of vulture-toxic NSAIDs and the importance of switching to safe alternatives.

7. Organize training programs for veterinarians and para veterinarians on best practices in animal restraining, first aid, sample collection, and proper dispatching biological samples for toxicological analysis.
8. Develop a systematic protocol for collection of dead vultures for necropsy to identify causes of mortality and establish a centralized database to record all incidents of vulture poisoning and other causes of death.
9. Upgrade and equip regional laboratories with infrastructure and expertise to conduct advanced toxicological and pathological investigations specific to vulture mortality.
10. Establish a dedicated vulture rescue and rehabilitation centres in districts hosting vulture populations to provide emergency veterinary care, rehabilitation and long-term conservation support.

### **Expected Output**

1. The enforcement, control, and monitoring of the ban on vulture toxic NSAIDs like Aceclofenac, Ketoprofen, Nimesulide, and other toxic compounds will be sufficiently strengthened.
2. The availability and accessibility of Vulture-safe NSAIDs like Meloxicam and Tolfenamic-acid in veterinary markets will be ensured.
3. The mortality of vultures due to consumption of NSAID contaminated carcasses will be reduced through effective regulation, awareness and safe drug practices.

#### **2.3.4 Carcass availability for vultures**

Carcass disposal is a critical issue with far-reaching environmental and ecological implications, particularly in the context of vulture conservation. Traditionally, in rural landscapes, animal carcasses were often left in the open, unintentionally supporting healthy populations of vultures and other scavengers (Bohra, 2023). However, contemporary carcass disposal practices have become more regulated. Under the Solid Waste Management Rules (2016) and Bio-medical Waste Management Rules (2016), the disposal of dead animals is now overseen by State governments. As per current guidelines, carcasses may be disposed of through incineration, rendering, burial in designated pits, or conversion into biogas, and thus decreasing the food availability for scavengers.

### **Suggested Action**

1. Establish a regulated carcass dump site in each district to ensure a reliable, NSAID drug-free food source for vultures and other scavengers.
2. Develop and enforce a revised carcass disposal policy that allows only carcasses from animals that have not been treated with veterinary drugs (such as animals dead from road accidents or natural causes) to be dumped in these open sites.
3. Ensure that carcasses from animals that have received any veterinary treatment, especially involving harmful NSAIDs, are strictly diverted for incineration or processed in biogas plants to prevent accidental poisoning of scavengers.
4. Implement this policy through formal directives from the Commissioner / Director of Animal Husbandry & Veterinary Services, under the Department of Animal Husbandry, Dairying and Fisheries, to integrate safe carcass disposal as an essential component of state-level vulture conservation action plans.

### **Expected Outcome**

1. Establishing regulated carcass dump sites in each district will ensure a reliable, drug-free food source for vultures and other scavengers, supporting the recovery and stability of their populations.
2. By diverting carcasses of treated animals to incineration units or biogas plants, the risk of NSAID poisoning and other contaminants reaching vultures will be significantly minimized.
3. Improved Compliance with Waste Management Rules: The revised policy will harmonize wildlife conservation goals with the existing Solid Waste Management Rules (2016) and Bio-medical Waste Management Rules (2016), promoting environmentally responsible and legally compliant and safe carcass disposal practices.

#### **2.3.5 Habitat management**

Among the seven vultures, the White-rumped Vulture, Indian Vulture and Red-headed Vulture are known to breed on cliffs and in trees . Road construction, mine excavation, tree felling, river exploitation, forest fires and other development activities near vulture colonies are the major threats to vultures, which have a direct impact on the long-term

survival of the species. Electrocutation and collision with power infrastructures have been one of the major threats globally to large birds of prey, including vultures. Since infrastructure growth in the power energy sector has been growing rapidly, the chance of electrocution has significantly increased due to contact with a live wire. Therefore, habitat management needs to be addressed with proper guidelines, effective planning, design, and mitigation measures.

### **Suggested Action**

1. Identify and legally protect critical nesting cliffs and trees.
2. Restrict tree felling and quarrying near active breeding sites.
3. Establish buffer zones around vulture colonies to limit disturbance from road construction, mining, and river exploitation.
4. Implement forest fire prevention strategies and establish rapid response measures in vulture habitats.
5. Conduct risk assessments of power lines and other infrastructures located near vulture habitats.
6. Install bird-safe designs (e.g., insulation of live wires, use of bird diverters, safe pole designs) in existing and new power lines.
7. Develop and enforce eco-friendly guidelines for road construction and mining operations near vulture colonies.
8. Track incidents of electrocution and collision to identify high-risk areas.
9. Conduct studies to inform better infrastructure placement and design.
10. Train local forest staff and power company technicians on vulture-friendly practices.
11. Engage local communities in habitat protection, fire control, and reporting of threats.
12. Integrate vulture conservation needs into local development planning and environmental clearance processes to ensure effective conservation.

### **Expected Outcome**

1. Improved Breeding Success through safer habitats.
2. Minimized disturbance around vulture nesting sites.
3. Lower mortality rates from reduced electrocution and collision incidents.

### 2.3.6 Management of animal carcasses in and around protected areas and Reserved Forests

Retaliatory poisoning by lacing poison on cattle carcasses or bait meat is often resorted to by cattle herders and farmers against carnivores such as tigers and leopards involved in cattle kills. However, these actions have cascading effects on non-target species such as vultures, striped hyaenas, jungle crows, and wild pigs. In many cases, such poisonings are deliberately concealed and misattributed to natural causes, reducing accountability and increasing conflict between local communities and forest departments (Davidar & Davidar, 2002). There is an urgent need for active and effective management of domestic carcasses near protected areas.

#### **Suggested Action**

1. Identify conflict-prone zones around Protected Areas where frequent incidents of livestock predation and carcass poisoning are reported.
2. Strengthen surveillance and enforcement to investigate suspected poisoning cases with the support of veterinary and forensic teams.
3. Conduct targeted awareness campaigns among livestock owners, local communities, and schools on the ecological role of vultures and legal penalties for poisoning.
4. Promote livestock insurance and compensation schemes to reduce the motivation for retaliatory actions by affected farmers and herders.
5. Train field staff and frontline personnel in detecting poisoning symptoms, collecting samples, and safely managing carcasses.

#### **Expected Outcome**

1. Decrease in retaliatory poisoning incidents around protected areas and Reserved Forests.
2. Establishment of regulated carcass management practices in buffer zones.
3. Increased survival and recovery of endangered vultures.
4. Strengthened ecosystem balance and scavenger-based services in and around protected area landscapes.

### 2.3.7 Establish rehabilitation centre and breeding programme for Vultures

Given the critically low vulture populations in Tamil Nadu, every individual bird is vital for the survival of the species. Though vultures are often injured by collisions with power lines or buildings, and suffer from deliberate or accidental poisoning, the State lacks a specialized vulture rescue centre. Although Zoos provide expert veterinary care, they have no facilities for long term rehabilitation or housing. Vultures with permanent injuries could still breed in captivity, adding valuable genetic diversity. Therefore, it is recommended to establish a dedicated Vulture Rescue, Rehabilitation and Breeding Centre approximately 5–6 km from an existing zoo or wildlife facility.

#### **Suggested Action**

1. Establish a Vulture Rescue, Rehabilitation and Conservation Breeding Centre near Moyar Valley, in proximity to known vulture habitats, under the stewardship of the Tamil Nadu Forest Department, with technical approval from the Central Zoo Authority (CZA).
2. Design the facility to include specialized enclosures for quarantine, rehabilitation, and captive breeding, in accordance with VCBC (Vulture Conservation Breeding Centre) protocols.
3. Operate the centre in collaboration with veterinary colleges, research institutions, and reputed national NGOs with expertise in raptor care and captive breeding.
4. Train frontline staff and veterinarians in species-specific rescue, rehabilitation, and post-injury management protocols to ensure high standards of recovery and welfare.

#### **Expected Outcome**

1. A fully functional, state-supported Rescue, Rehabilitation and Breeding Centre for vultures in Tamil Nadu, dedicated to species recovery
2. Timely veterinary intervention and long-term rehabilitation for injured or rescued vultures thereby improving survival rates.
3. Establishment of a captive breeding population to support future reintroduction and population recovery efforts in the wild.

### 2.3.8 Research

Conservation efforts must be grounded in robust scientific evidence and continuously refined through systematic monitoring to safeguard these vital scavengers. Although long-term monitoring of vulture populations provides valuable insights into their status, significant knowledge gaps remain in areas such as vulture biology, breeding ecology, movement patterns and habitat use. Therefore, there is an urgent need for research-driven conservation initiatives.

#### **Suggested Action**

1. Conduct targeted scientific research on the biology, ecology, genetics and behaviour of vultures specific to Tamil Nadu ecosystems.
2. Test livestock and vulture carcasses for NSAID residues to detect contamination levels in the food chain.
3. Capture and tag wild vultures to strengthen data on their movement ecology, including migration patterns, territory ranges and transboundary movements within and beyond Tamil Nadu.
4. Satellite tagging of captive-released vultures to monitor their survival, dispersal, and habitat use in post-release environments
5. Secure long-term funding and promote sustainable in-situ conservation practices through government support, institutional collaboration and private partnerships.

#### **Expected Outcome**

1. Science-based vulture conservation information system developed, documented and operational.
2. Centralized database available with up-to-date records for all vulture species in Tamil Nadu.

### 2.3.9. Education and Awareness programmes

Vultures provide vital ecosystem services by swiftly disposing animal carcasses, thereby limiting the spread of infectious diseases among livestock and human communities. Despite increased awareness efforts, negative perceptions and misconceptions about vultures persist in some regions of Tamil Nadu hindering conservation progress. Many veterinary practitioners and local communities remain unaware of the severe threat posed by non-steroidal anti-inflammatory drugs

(NSAIDs) such as diclofenac, aceclofenac, and nimesulide, which cause fatal poisoning in vultures that feed on medicated livestock carcasses (Prakash et al., 2012). Therefore Effective protection of these key scavengers requires widespread awareness, active community engagement, and the mainstreaming of vulture conservation into everyday management practices and policy frameworks.

### **Suggested Action**

1. Continue awareness campaigns on the harmful effects of diclofenac and other banned NSAIDs, targeting veterinary professionals, livestock owners, and pharmacy operators.
2. Encourage citizen participation in vulture monitoring and reporting through citizen science initiatives.
3. Establish a local Vulture Stewardship Groups at key nesting and roosting sites across Tamil Nadu's hill ranges and forested lowlands to involve communities directly in protection efforts.
4. Organise awareness programmes for the youth and other citizens in an around the vulture supporting areas.

### **Expected Outcome**

1. All key conservation stakeholders, including local communities, veterinary professionals, and Government officials, are fully sensitized to the importance of vulture conservation.
2. The children and youth of the State will be sensitized to the need, value and strategies for vulture conservation, thereby increasing the chances for its long-term conservation.

### Chapter 3: Stakeholder Roles and Responsibilities

Under the leadership of the State Forest Department, the existing State Vulture Conservation Committee needs to ensure the effective implementation of the Vision Document for Vulture Conservation (VDVC) 2025. Each Vulture Safe Zones shall have a Committee which will take critical decisions and implement the field-level actions regarding conservation and awareness generation on Vultures. The suggested Committee members include:

1. The concerned Chief Conservator of Forests (CCF) as Chairperson
2. District Forest Officers/Wildlife Wardens/Deputy Directors of the jurisdiction as members
3. Regional Joint Director, Department of Animal Husbandry of the particular zone as member/s
4. Assistant Director of Drugs Control of the particular Zone as member/s
5. Two experts for Scientific input as members

### Chapter 4: Budget and Resource Allocation

A ballpark budget table for the various conservation measures listed above and to be undertaken in the next 5 years is provided below. The exact budget however would need to be worked out when the annual action plans for vulture conservation is worked out for the 5 year period.

S.No.	Conservation Measures	Budget (Rs in lakhs) for 5 years
1	Scientific management of carcass dumps and carrying out sample analysis of cattle carcasses and Management of wild animal carcasses in protected and other areas	20
2	Establishment of a coordinated, well-established and effective regulatory mechanism for ban on drugs found toxic to vultures	10
3	Setting up of vulture conservation breeding centre	100
4	Setting up Vulture Rescue Centres to cater to sick and injured vulture	50
5	Participating in nation wide vulture census. Identifying locations of vultures, developing teams for carrying out census and developing capacity to work on vulture census periodically	25
6	Regular monitoring of vulture population across the state of TamilNadu	50
7	Enhancing vulture safe zone network by creating vulture safe zones in Tamil Nadu	20
8	Enhance public awareness about the need to conserve vulture species through educational initiatives in schools & colleges, field visits, workshops, seminars and media icludind social media etc.	50
9	Preparation of Annual Report of Action Plan for Vulture Conservation in Tamil Nadu	5
	<b>Total</b>	<b>330</b>

### Chapter 5: Timeline

	<b>Objective</b>	<b>2025–2026</b>	<b>2026–2027</b>	<b>2027–2028</b>	<b>2028–2029</b>	<b>2029–2030</b>
1	Monitoring of Vulture Population	Baseline survey, protocol development	Annual survey	Annual survey	Annual survey & Mid-term review	Annual survey & Final evaluation
2	Establishment of VSZ Network	Site Identification, protocol adaptation	Declare VSZs	Implement	Strengthen	Review & expand
3	Prevention of NSAIDs Poisoning	Sensitization, policy draft	Enforcement begins	Monitor drug use	Continued enforcement	Impact evaluation
4	Carcass Availability	Site selection, policy draft	Establish safe carcass sites	Regulate supply	Expand to all districts	Monitor & revise
5	Management of Wild Animal Carcasses	Conflict mapping, SOP drafting	Pilot implementation	Scale up to all PAs & non-PAs	Staff training	Periodic audit
6	Habitat Management	Identify key habitats	Implement restoration measures	Monitor habitat condition	Adaptive management	Review & maintenance
7	Breeding & Rescue Centres	Land allocation, approvals	Centre construction	Staffing & operations	Breeding program starts	Monitor breeding success
8	Research	Identifying gaps, plan studies	Conduct priority research	Continue research	Continue research & Disseminate findings	Integrate into policy
9	Education & Awareness	Develop education and awareness material	Community outreach	School & college engagement	Stakeholder workshops	Impact assessment, continuity

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