



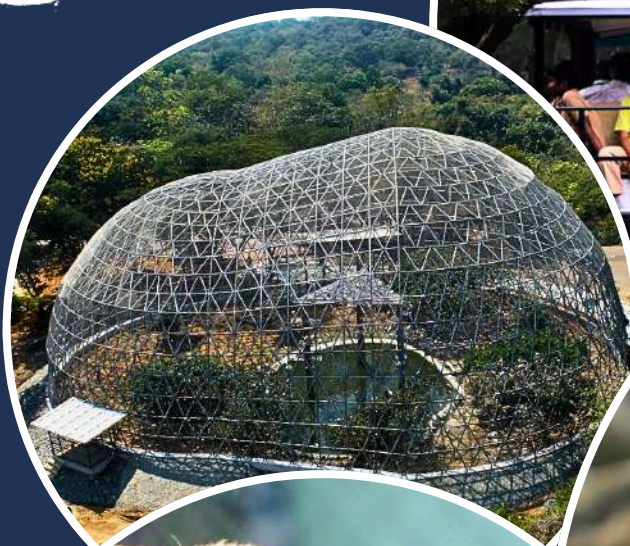
ARIGNAR ANNA ZOOLOGICAL PARK

OPERATOR OF THE ZOO
ADDITIONAL CHIEF SECRETARY,
TO THE GOVERNMENT FOR THE ENVIRONMENT, CLIMATE
CHANGE AND FORESTS DEPARTMENT IN TAMIL NADU

MASTER PLAN

2026-2027 TO 2046-2047

YEAR OF SUBMISSION 2026



CERTIFICATE

This is to certify that the Master Plan of Arignar Anna Zoological Park, Vandalur, has been prepared and the final version has been submitted in the financial year 2026-2027 to the Central Zoo Authority for approval. Ref. No. F.No.19-79/92-CZA (238) (Vol.VII)(M)/3109 dated 27.06.2013, subject to condition that the responsibility of mobilizing financial resources for implementation of the Master Plan will be sole responsibility of the Forest Department.


Mr. T. RITTO CYRIAC I.F.S.,
Chief Conservator of Forests
& Director,
Arignar Anna Zoological Park


Mr. RAKESH KUMAR DOGRA I.F.S.,
Principal Chief Conservator of Forests
& Chief Wildlife Warden,
Tamil Nadu

The revised Master Plan (2026-27 to 2046-47) of the Zoo was placed in the 120th Meeting of the Expert Group on Zoo Designing (EGZD) held on 13.01.2026 and recommended the proposal to the Technical Committee of the Central Zoo Authority subject to certain observations. The proposal was placed before the 117th Meeting of the Technical Committee held on 16.01.2026 vide agenda 5A(a) and recommended the revised Master Plan for consideration of the Central Zoo Authority. Subsequently, the Central Zoo Authority, in its 43rd Meeting held on 02.02.2026, approved the recommendation of the 117th Technical Committee.

Dr. V. CLEMENT BEN I.F.S.,
Member Secretary, Central Zoo Authority

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Chief Conservator of Forests & Director
Arignar Anna Zoological Park

PREFACE

Arignar Anna Zoological Park, the Chennai zoo is popularly known as Vandalur zoo. It was established in the year 1855 by Edward Barflour later shifted to the present location in Vandalur in the year 1985. AAZP the oldest and one of the largest zoos in the country which is dedicated to the conservation of wild animals, notably rare and threatened species of the Western and Eastern Ghats. It is one of the nation's most innovative and scientifically managed zoos in the country. On an average, annually the park attracts over 20 lakh visitors. Arignar Anna Zoological Park is home to the rescued and abandoned wild animals. Many endangered wild animals have been successfully bred in captivity at the zoo. The park has secured the highest score of 82 % in the first Management Effectiveness Evaluation conducted by Central Zoo Authority in 2022 in large zoo category.

Many have contributed for its growth and development. I wish to congratulate all my predecessors for their innovative practices. The zoo had achieved great strides and developments owing to its extensive animal collection and successful captive breeding. With the great strength and the experience gained from the past. The zoo is preparing itself with the futuristic approach for strengthening the modern and scientific management of the zoo. The zoo in the coming years will focus on increasing the display collection of animals, more successive breeding of native species, enhancing the visitor's amenities, improving the scientific management practices, conservation breeding programme, veterinary care, education of visitors.

The foundation for developing a future action plan is an appraisal of the current infrastructure, animal collection, visitor facilities, financial situation, and institutional culture. Critical determinants of the master plan's contour include empowering existing animal collections, breeding records, and human resource rationalization.

The master plan is the culmination of the efforts of the entire zoo staff. I owe this plan to my entire zoo staff, who contributed directly or indirectly to accomplishing the task.


Chief Conservator of Forests & Director
Arignar Anna Zoological Park

FOREWORD

Arignar Anna Zoological Park is one of the largest and oldest zoo of the country. The park has secured the first position in the first Management Effectiveness Evaluation (MEE-2022) report conducted by the Central Zoo Authority, MOEF&CC. This shows the resilience and potential upkeep of the park. AAZP is a pioneer in its unique efforts, which are well regarded on a global scale.

The zoo is renowned for its animal housing by exhibiting the animals in open naturalistic enclosures provides near nature habitat to the in-house species. Periodical animal enrichment, sustainable practices, timely veterinary care upscales the zoo standard of care and animal welfare.

I appreciate the Director, Deputy Director and the entire team of Arignar Anna Zoological Park for writing this practical and implementable plan.

Wishing Arignar Anna Zoological Park keeps its reputation as the best Ex-situ conservation facility in the nation and raises its standards and worth globally.



Principal Chief Conservator of
Forests & Chief Wildlife Warden

List of abbreviations used

AAZP - Arignar Anna Zoological Park
CZA - Central Zoo Authority of India
GST - Road Grand Southern Trunk Road
ZAT - Zoo Authority of Tamil Nadu
MAMSL - Meters above mean sea level
ZVH - Zoo Veterinary Hospital
NSAIDS - Non-steroidal anti-inflammatory drugs
NS - Normal saline
DNS - Dextrose and normal saline
RL - Ringers Lactate
ELISA - Enzyme Linked Immunosorbent Assay
AIWC - Advanced Institute for Wildlife Conservation
ND - New Castle's disease
FRT - Feline Rhinotracheitis
FPV - Feline Panleukopenia Virus
FCV - Feline Calici Virus
DHPPi - Canine Distemper, Adenovirus, Parvovirus, Parainfluenza Virus.
LEPTO - Leptospirosis
HS - Haemorrhagic Septiemia
FMD - Foot & Mouth Diseases
BQ - Black Quarter
CCTV - Closed Circuit Television
RO - Reverse-Osmosis
QR code - Quick Response code
UPI - Unified Payments Interface
CMRL - Chennai Metro Rail Limited
BOV - Battery Operated Vehicles
SFRI - State Forest Research Institute
GSDP - Green Skill Development Programme
IZEA - International Zoo Educator Association
UN - United Nations
P3 - Pro-Planet People
AAO - Assistant Agricultural Officer
TANUVAS - Tamil Nadu Veterinary and Animal Sciences University
CSIR - Council for Scientific and Industrial Research

CCMB - Centre for Cellular and Molecular Biology

LTM - Lion-tailed Macaque

IUCN - International Union for Conservation of Nature

CEO - Chief Executive Officer

DL - Driver's Licence

PRO - Public Relations Officer

APCCF - Additional Principal Chief Conservator of Forests

COVID - 19 Coronavirus Disease 2019

LAN - Local Area Network

CSR - Corporate Social Responsibility

Part I

CHAPTER I – INTRODUCTION

1. Overview

Arignar Anna Zoological Park (AAZP) is one of the oldest zoos in India, originally established in Chennai in 1855 and later shifted to the Vandalur Reserve Forest in 1985. Spanning 602 hectares, it is one of the largest zoos in Southeast Asia. Recognized as a modern and scientifically managed zoo, AAZP is acknowledged as a Centre for Excellence by the Central Zoo Authority of India (CZA).

In the first Management Effectiveness Evaluation conducted by the CZA in 2022, AAZP ranked first among large zoos with a score of 82%.

Key Statistics and Features

- Annual Visitors: Over 2 million
- Total Animals: 1711 wild animals
- Total Species: 139 species
- Special Attractions: Lion & Deer Safari, Otteri Lake, Butterfly Park, Serpenterium, Aviaries, Aquarium, Nocturnal animal house, 7D/ 9D theatre, Elephant feed & shower, Brindavan garden.
- Conservation Breeding: Lion-Tailed Macaque, Nilgiri Langur
- Livestreaming: 15 enclosures 24x7 via website and mobile app; 8 crore+ views
- Surveillance: 300 cameras under Zoo E-Eye system
- Veterinary Care: Dedicated veterinary centre with state-of-art-Veterinary facility
- Rescue & Rehabilitation: Separate centre for abandoned/rescued wild animals which span across 92 acres
- Education: Dedicated Zoo School providing premier conservation education programme

2. History of the Zoo

2.1 Establishment

- Date: 23rd November 1855
- Founder: Dr. Edward Green Balfour, Surgeon, East India Company
- Original Location: Near Madras Central Railway Station, covering 4.9 hectares
- Reason for Relocation: Pollution from the railway station affected animal health

2.2 Centenary Redesign (1955)

- Redesigned by Architect G. Venkataramana Reddy
- Director: Shri. B. V. Ramanujulu
- Formation of a committee to identify a new site for the zoo
- Consultation with wildlife expert Mr. Ruben David (Ruben Committee)

2.3 Site Selection

- Potential Sites: Guindy, Pallikaranai, Nanmangalam, Vandalur
- 1974: First master plan by K. Viswanathan I.F.S. for Vandalur
- Site Area Identified: 283 hectares (Vandalur Reserve Forest)
- Layout plan consultation: Mr. Pushpakumar I.F.S., Founder of Hyderabad Zoo
- Alternate Proposal: Mr. Subburayulu Naidu I.F.S., 510 hectares near GST Road (NH45)

2.4 Construction and Inauguration

- Current Site: Adjacent to GST Road (west) and Kelambakkam Road (south)
- Plan Charted: 1976
- Construction Started: 1979 with initial budget of 7.5 crores
- Inauguration: 24th July 1985 by Chief Minister Dr. M.G. Ramachandran
- Initial Animal Count: 1,841 animals, 160 species
- Expansion: 602 hectares in 1998–1999 to include
- Rescue & Rehabilitation Centre

2.5 Animal Safaris

- Introduced: 1990
- Concept: Individuals of a species housed over large areas in near-natural conditions, viewed via safari vehicles
- Lion Safari Area: 30 hectares; Deer Safari: 38 Ha

2.6 Governance and Recognition

Central Zoo Authority (CZA)

- Constitution: 1992 under Ministry of Environment and Forests (Chapter IV A, Sections 38 A–J of Wildlife Protection Act, 1973)
- Role: Governance, management norms, housing standards, healthcare, diet regulations
- Amendments: 2009 and 2013
- AAZP Recognition: First recognized in 2003, continued with periodic assessments

Zoo Authority of Tamil Nadu (ZAT)

- Constitution: 3rd December 2004
- Chairperson: Chief Minister of Tamil Nadu
- Member Secretary: Director of AAZP
- Board Members: 11 members in total, overseeing zoo governance and management



Table 1: Members of the Zoo Authority of Tamil Nadu

Chief Minister of Tamil Nadu	Chairperson
Minister of Forests	Vice-chairperson
The Secretary to the Govt. Env't. And Forest Dept.	Member
The Secretary to the Govt. Finance Dept.	Member
The Secretary to the Govt. Animal Husbandry Dept	Member
The Principal Chief Conservator of Forests, TN	Member
The Chief Wildlife Warden, TN	Member
The Vice Chancellor, Tamil Nadu Veterinary and Animals Science University	Member
The Director, Dept. Of Environment	Member
The Commissioner, Tourism Department	Member
The Director, Arignar Anna Zoological Park	Member Secretary

3. Vision of the Zoo

To develop environmentally sensitive people who care for wild flora and fauna and conserve it for the long-term welfare of mankind.

4. Mission of the Zoo

1. Conservation of fauna of the Eastern and Western Ghats, with focus on Lion-Tailed Macaque, Nilgiri Langur, Gaur, and small mammals.
2. Provide highest standards of housing, upkeep, and healthcare for all animals.
3. Offer visitors uninterrupted viewing of animals to foster empathy.
4. Conduct research on biology, behavior, and genetics of endangered species and facilitate breeding.
5. Provide care, housing, and healthcare for rescued/distressed animals.

5. Strategy for Achieving the Mission

1. Maintain viable populations through nutrition, housing, healthcare, and behavioral management.
2. Display animals in naturalistic enclosures; educate visitors with signage and interpretation.
3. Ensure secure, hassle-free visitor experience.
4. Upgrade technical knowledge and efficiency of zoo personnel.

6. Objectives

1. Ex-situ conservation and propagation of Eastern and Western Ghats fauna.
2. Initiate captive breeding programmes for endangered species; enable rehabilitation if required.
3. Promote the zoo as a centre for conservation awareness via education programs.
4. Enable scientific studies on fauna to improve zoo management and conservation.
5. Provide healthcare and rehabilitation for rescued animals.

7. Physical Features

- Location: Vandalur (12.879490° N, 80.082509° E)
- Distance from Chennai: 32 km
- Area: 602 hectares
- Terrain: Mildly undulating, elevation 31–147 m asl
- Water Body: Otteri Lake (7 Ha, non-perennial, north-west corner)
- Rescue & Rehabilitation Centre: 92 Ha, south across Kelambakkam Road
- Entire zoo enclosed by strong compound walls

8. Geology

- Fertile alluvial plains with rocky hillocks
- Rocks mostly igneous

9. Rock and Soil

- Suitable for fodder cultivation (grasses, fruits, vegetables)
- Supports near-natural replication of forest types (evergreen, deciduous, scrub forests, grasslands) for enclosures

10. Flora and Fauna

- Vegetation: Tropical dry evergreen and dry scrub forests; rocky outcrops
- Plants: ~140 native species; notable: Neem, Bamboo, Pongamia; artificial: Eucalyptus
- Mammals: Mongoose, Jackal, Palm Civet, Small Indian Civet, Porcupine, Bonnet Macaque
- Birds: Egrets, Storks, Spoonbill, Grey Pelican, Forest Owlet, Barn Owl, Black Kite, Shikra
- Reptiles: Lizards (*Hemidactylus*, *Calotes*, *Sitana*), Snakes (Keelback water snakes, Rat Snake, Indian Cobra)

11. Climate

- Type: Tropical, hot and humid
- Mean Annual Temperature: 29–37°C
- Diurnal Range: 23.58–33.41°C
- Summer: Up to $36.10 \pm 3.37^\circ\text{C}$
- Post-Monsoon: $\sim 23.68 \pm 0.78^\circ\text{C}$

12. Rainfall and Humidity

- Monsoons: Southwest (May–Sept), Northeast (Oct–Dec)
- Cyclonic Rainfall: From Bay of Bengal depressions
- Average Annual Rainfall: ~ 50 cm
- Average Humidity: $80.07 \pm 4.88\%$

13. Seasons

- Summer: March–May
- Pre-Monsoon: June–Sept
- Monsoon: Oct–Dec
- Post-Monsoon: Dec–early March

14. Approach

- By Road: Vandalur (0 km) Bus stop : Vandalur zoo; Nearest terminus: Kilambakkam (0.6km)
- By Train: Vandalur (Tambaram–Chengalpattu line), Airport Metro
- By Air: Chennai Airport (15 km)

15. Demography of Surrounding Area

- Population (2012): 16,852 (8,410 males, 8,442 females)
- Children (0–6 years): 1,838 (10.91%)
- Female population: 1,004 vs state avg 996
- Children female: 972 vs Tamil Nadu avg 943
- Literacy Rate: 90.71% (Male: 95.16%, Female: 86.29%)

16. Legal Status of Land

- Initially 510 Ha from Revenue Dept Patta lands and Vandalur Reserve Forest
- Off-campus expansion: 92 Ha across Kelambakkam Road for Rescue & Rehabilitation Centre

17. Sources of Pollution

- Noise: Minimal in core zoo area
- Plastic: Managed at entry, recycled periodically
- Air : Exhaust from road traffic

CHAPTER II – APPRAISAL OF PRESENT ARRANGEMENTS AND CONSTRAINTS

a.1. Animal Section

The animals in the zoo are classified into groups based on their type, as follows:

Primates

- Lion-tailed macaque, Nilgiri langur, Savannah baboon, Chimpanzee and Squirrel monkey



LION-TAILED MACAQUE
Macaca silenus



CHIMPANZEE
Pan troglodytes



SQUIRREL MONKEY
Saimiri sciureus

Fig. 1. Some animals housed at Arignar Anna Zoological Park

Aquarium

- 34 glass-covered tanks house freshwater and marine fishes, including ornamental species.

Forest Birds

- Includes both native and exotic species such as Parakeets, Macaws, Conures, Pheasants, Peafowl, Cranes, and Flightless birds like Ostrich, Rhea, Emu, and Cassowary.



RENOVATED VEDANTHANGAL BIRDS AVIARY

Herbivores

- Spotted Deer (Chital), Sambar Deer, Swamp Deer (Barasingha), Hog Deer, Barking Deer (Muntjac), Indian Chevrotain (Mouse Deer), Blackbuck, Nilgai (Blue Bull) and Gaur (Indian Bison).

Megaherbivores

- Asian Elephant, Greater One-horned Rhinoceros (Indian Rhinoceros) Hippopotamus and Giraffe.
- The Elephant enclosure, one of the largest, facilitates free movement.
- The Hippopotamus enclosure consists of a six-chambered water moat.
- Rhinos are exhibited in two sections of a large enclosure.



INDIAN GAUR HERD WITH CALVES



SWAMP DEER WITH FAWN

Carnivores

- Lions, Bengal Tigers, White Tigers and Leopards are housed in the zoo's large carnivore enclosures. The lion enclosure and one of the tiger enclosures are designed with elevated moats, while the remaining enclosures are ground-level moat exhibits.

Small Mammals and Canids

- Malabar Giant Squirrel, Giant Flying Squirrel, Jackal, Bengal Fox, Dhole (Asiatic Wild Dog), Striped Hyena, and Indian Grey Wolf.



BENGAL TIGER

Panthera tigris tigris



WHITE TIGER

Panthera tigris tigris



MALABAR GIANT SQUIRREL

Ratufa indica

Omnivores

- Asiatic black bear and Sloth bear.

Animal Safaris

- The northeastern corner of the zoo accommodates the Lion Safari and Deer Safari complexes. Dedicated safari vehicles available.

Walk-through Aviary

- The Bio-Centre Aviary, located opposite the tiger enclosure, houses native free-ranging terrestrial bird species.

Wetland Birds

- Vedanthangal and Point Calimere-themed aviaries house storks, pelicans, herons, and flamingos. The Vedanthangal Aviary has been renovated, while renovation of the Point Calimere Aviary is proposed.

Birds of Prey

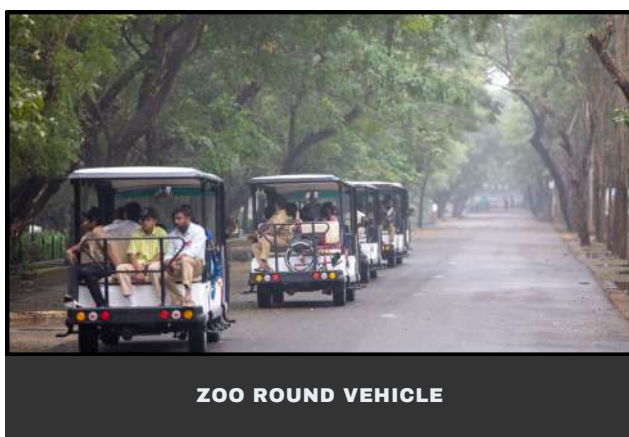
- Kites and vultures.

Reptiles

- Turtles and tortoises (native and exotic).
- Around 10 crocodilian species, including Saltwater crocodile, Mugger, Gharial, Spectacled caiman, and Nile crocodile.
- A unique underwater Gharial exhibit.
- Lizards: Iguanas, Monitor lizards.
- Full-fledged serpentarium housing more than 10 species of venomous and non-venomous snakes

Nocturnal Animal House

Nocturnal House – Situated opposite the giraffe enclosure, it houses Lorises, Civets, Porcupines, Jungle Cats, and Owls.



ZOO ROUND VEHICLE



JUNGLE CAT AT NOCTURNAL ANIMAL HOUSE

Eco-Trail

3-hectare thematic eco-trail behind the aquarium, exhibiting grassland, terrestrial, desert, and pond ecosystems. (Yet to be opened for visitors.)

a.2. Veterinary Section

Zoo Veterinary Hospital:

The Zoo Veterinary Hospital (ZVH) of AAZP is the most vital section of the zoo and is directly involved in the healthcare management and well-being of the animals housed in the zoo. This hospital is suitably located in the south-western corner of the zoo and is strategically placed to facilitate the doctors in moving easily to all parts of the zoo quickly.

Zoo Veterinarians:

The Veterinary Hospital has three veterinarians, one in the Veterinary Officer cadre and two in the Veterinary Assistant Surgeon cadre, when it was established in 1985. This same number of veterinarian posts is still maintained, even though around 1977 animals are presently housed, with increasing challenges of disease emergence and modern health management activities, which demand more technical and scientific approaches. Measures are being taken to increase the number of Veterinary Assistant Surgeon posts from two to three. Steps are also being taken to retain them through suitable provisions in the existing rules with appropriate emoluments and career progression, considering their vast experience and knowledge. Meanwhile, one contract veterinarian has been engaged every year to assist the present veterinary team, along with the lab technicians and assistants.

Infrastructure:

The present infrastructure includes a two-floor veterinary hospital with an X-ray unit, a small animal operation theatre, an in-patient ward, a quarantine facility, a pharmacy, a sterilization room, a neonatal clinic, a veterinary laboratory, a veterinary kitchen, a post-mortem room, a zoo post-operative care unit, an incinerator, and both large and small animal ambulances. Additionally, a dedicated classroom for intern vets, with a screen and projector, is also available in the veterinary hospital to conduct various education/training programmes for veterinary students and scholars.



FIG. 2: OPERATION THEATRE AT THE VETERINARY HOSPITAL



FIG. 3: BENGAL TIGER BEING OPERATED UNDER GAS ANAESTHESIA



FIG. 4: ASIAN ELEPHANT BEING TREATED



FIG. 5: RESCUED TIGER BEING TREATED

List of Equipment at the Veterinary Hospital:**X-ray unit:**

The Zoo Veterinary Hospital (ZVH, hereafter) has an exclusive X-ray unit which can diagnose injured or fractured animals. Since the unit also has a mobile X-ray machine, it can be taken to the animal enclosure itself, and radiographic images are taken to ensure correct diagnosis and subsequent treatment.

Small animal operation theatre:

The small animal operation theatre is equipped with full-fledged surgical equipment such as an anaesthetic unit, oxygen unit, vital signs monitor, foldable surgical table with thermoregulation, and a halogen focus lamp above the surgical table. Zoo animals of small to moderate body size (e.g., Tiger, Sambar deer) that suffer serious injuries can be treated surgically in this in-house facility.

In-patient unit:

The Zoo Veterinary Hospital has in-patient wards with squeeze-cage facilities and currently has provisions for carnivores, herbivores, and birds up to medium size (e.g., Tiger or Sambar deer). The facility will be expanded further to accommodate larger animals in the future. Animals are given post-surgical care in the in-patient wards for the required period.

Quarantine facility:

The zoo has a quarantine facility where animals brought from other places through the animal exchange programme are maintained for a short duration under constant and critical observation before being certified disease-free and fit for maintenance in the zoo. This ensures that no diseases are spread from animals brought into the zoo from other zoos.

Pharmacy:

The zoo has a pharmacy where vital medications are stored, such as antiseptic solutions, antibiotics, painkillers (non-steroidal anti-inflammatory drugs, NSAIDs), steroids, anthelmintics (for deworming), vitamin and amino acid supplements (both oral and IV), and IV fluids such as normal saline (NS), dextrose normal saline (DNS), and Ringer's lactate (RL). Styptics (clotting aids) such as Stopchrome, Menadione, Styplone (Ayurvedic), diuretics such as frusemide, and immuno-modulators are also maintained for different classes of animals ranging from birds and reptiles to mammals. In addition, syringes of varying volumes, needles of different sizes, intravenous catheters, central venous catheters, butterfly needles, infant-feeding tubes of various sizes, anaesthetics, and reversal drugs are stored in the pharmacy.

Sterilization room:

A separate facility for sterilization of surgical and other medical equipment is available in the zoo to keep them free from germs and pathogens. A sterilization room of 15 x 20 ft dimension with a horizontal autoclave facility is available for sterilization of surgical equipment.

Neonatal clinic:

The Zoo Veterinary Hospital currently has a neonatal care unit measuring 14 x 20 ft (with an attached kitchen and washroom facility for the attendant) that can accommodate young ones of small animals and has provisions to hand-rear young ones of larger herbivores. Additionally, an incubator is available for neonates of small mammals. A similar facility for accommodating larger animals will be developed in the near future. Further, infrastructure for the maintenance and physical activities of neonates is being developed. So far, many young ones such as tiger cubs, hyenas, Asian elephants, lions, and birds such as parakeets and macaws have been hand-reared by our zoo vets, and they are performing well at present.

Veterinary laboratory:

The zoo has a fully furnished veterinary lab with vital equipment such as a compound microscope, IDEX hematology analyzer, ELISA reader, and incubator. For more advanced facilities, a full-fledged laboratory is available nearby in the Advanced Institute for Wildlife Conservation (AIWC), an autonomous institution established by the Tamil Nadu Forest Department, which caters for testing of blood samples, histopathological analysis, etc.

Veterinary kitchen:

The Zoo Hospital Kitchen is a specialized facility dedicated to the preparation of therapeutic diets and nutritional supplements for animals requiring special care. It plays a critical role in supporting the treatment and recovery of sick, injured, geriatric, and orphaned animals by providing species-specific diets formulated according to veterinary prescriptions. Animals undergoing medical treatment receive easily digestible, nutrient-rich feeds tailored to their physiological condition, while neonates and hand-reared young are provided with specially prepared milk replacers, soft diets, and balanced nutritional supplements to ensure healthy growth and development. The kitchen also prepares modified feeds for animals recovering from surgery or illness, helping to restore their health and improve survival. In addition to therapeutic feeding, the facility contributes significantly to behavioural and environmental enrichment by preparing innovative feed enrichment items. During the hot summer months, frozen enrichment feeds such as ice blocks containing fruits, vegetables, meat, fish, or blood are prepared for carnivores, herbivores, and omnivores according to their dietary requirements of various kinds of animals including mammals, reptiles and birds. These frozen treats encourage natural foraging and feeding behaviours, reduce heat stress, promote physical activity, and enhance the psychological well-being of captive animals. The kitchen also develops seasonal diets, vitamin and mineral supplementation programmes, and customized feeds for breeding animals to meet changing nutritional demands and plays an indispensable component of the zoo's animal healthcare system, ensuring optimal welfare, faster recovery of patients, successful hand-rearing of neonates, and improved quality of life for the diverse animal collection.

Post-mortem room:

The zoo currently has separate post-mortem rooms for both large and small animals, of appropriate size and with the required infrastructure.

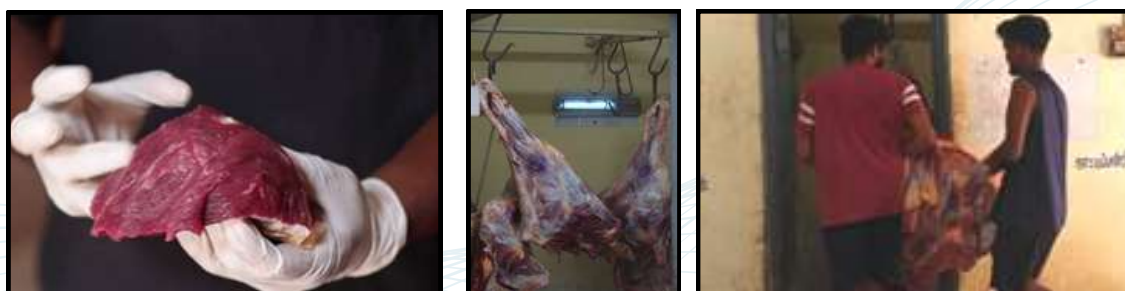


FIG. 6: MEAT BEING INSPECTED AT THE FEED STORE



FIG. 7: FROZEN FRUITS BEING PREPARED FOR ANIMALS DURING SUMMER

Incinerator:

A gas-cremation furnace, capable of reaching about 1000–1300 °C, that can burn carcasses weighing up to 300 kg is available at the zoo.

Constraints:

The present mobile digital radiographic equipment will be upgraded with the latest version. Also, a single convex probe is not adequate for the wide range of applications required in various species. Hence, a portable ultrasound machine with multiple probes is planned to be procured. The present compound microscope also needs to be updated with the latest advanced version. Further, video endoscopy, a thermal imaging camera, and hematology analyzers for birds and reptiles are required for a scientific and prompt treatment approach. Steps are being taken to improve all of these items.

Transit enclosures:

A separate set of enclosures is available where animals under treatment are housed short-term to be kept under clinical observation. This is currently available for various groups of animals such as mammals, birds, and reptiles.

Disease prophylaxis measures:

Animals are being vaccinated for most of the common diseases as per the schedule provided below. Vaccination for birds is not being carried out, as the common vaccine used is against Newcastle's Disease (ND), which is a live vaccine. Health advisory has instructed the zoo not to vaccinate for ND, since the vaccine itself could introduce the disease.

Table 2: Vaccination schedule- AAZP

ANIMALS		VACCINES	BOOSTERS
FELIDS	Royal Bengal Tiger (including White Tigers)	FRT,FPV, FCV, RABIES	Annual
	Lion	FRT,FPV, FCV, RABIES, CDV	Annual
	Leopard	FRT,FPV, FCV, RABIES	Annual
	Jaguar	FRT,FPV, FCV, RABIES	Annual
CANIDS	Striped hyena	DHPPi, RABIES, LEPTO	Annual
	Wild dog	DHPPi, RABIES, LEPTO	Annual
	Jackal	DHPPi, RABIES, LEPTO	Annual
	Wolf	DHPPi, RABIES, LEPTO	Annual
HERBIVORES	Elephants	HS, TETANUS, FMD	Annual
	Indian Gaur	FMD,BQ,HS	Annual
	Zebra	TETANUS	Annual
	Giraffe	TETANUS	Annual
	Wild ass	TETANUS	Annual
	Nilgai	FMD,BQ,HS	Annual, Pre Monsoon

Note:-**FRT – Feline Rhinotracheitis****FPV – Feline Panleukopenia Virus****FCV – Feline Calici Virus****DHPPi – Canine Distemper, Adenovirus, Parvovirus, Parainfluenza Virus.****LEPTO - Leptospirosis****HS – Haemorrhagic Septiemia****FMD – Foot & Mouth Diseases****BQ – Black Quarter**

Annual de-worming is done with rotation of drugs to avoid drug resistance. Periodical faecal screening for ova of parasites is carried out, and whenever necessary, additional de-worming is done apart from the annual cycle. Animals are continuously monitored for ecto-parasites, and whenever spotted, an empirical anti-tick therapy with acaricide spraying in the enclosures is carried out within 2–3 days.

As in most advanced zoological parks abroad, a master check-up protocol is maintained where all the carnivores and bears are subjected to general screening of diseases with blood sample collection and diagnostic imaging under general anaesthesia. This aids in diagnosing disease conditions at an earlier stage, so that further control measures or treatment protocols can be initiated appropriately. This also provides information about each particular animal—such as how they respond to drugs and their normal parameters—which would help veterinarians in assessing the animal in case of emergencies or critical illness. For this, a well-equipped hospital with a well-trained team of veterinarians is mandatory.

The veterinarians are encouraged to upgrade their clinical skills through participation in various trainings and workshops, and steps are taken to ensure the proper availability of relevant journals and reference books. Collaborative arrangements are also made with eminent institutions and zoos in India and abroad to infuse advanced scientific skills amongst the veterinarians at the zoo.

a.3. Store and Feed supply

An extensive facility is available for procurement and storage of animal feed of various kinds, including live, perishable, and non-perishable items for the animals housed in the zoo. Most mammals and birds are fed on a daily basis. Reptiles are fed at lower frequencies, depending on their nutritional requirements. Meat, vegetables, and fruits are obtained from suppliers on a contractual basis daily.

On average, the following are procured every day:

- About 430–500 kg of meat
- 790 kg of fruits and vegetables
- 283 kg of grains, including cereals and pulses
- 390 kg of wheat bran and layer feed
- About 130–175 kg of fish
- In addition, about 1250 kg of fodder (CO4, Para, Super Napier & China grass) is cultivated in the zoo.



FIG. 8: FODDER PLANTING AND HARVEST AT THE FODDER PLOT

a.4. Sanitation Section

Manpower is engaged in maintaining the sanitation of the zoo. Various sanitary activities such as sweeping and cage/enclosure maintenance are carried out by them. Screening for plastic materials is undertaken meticulously at the entrance to prevent the entry of plastic bags and other substances that could pollute the zoo environment or prove fatal to animals if consumed. Animal excreta and leaf litter are collected from the zoo premises and respective enclosures for composting and manure production, which in turn is used for the fodder plots. However, the number of personnel involved may need to be increased in the near future.



FIG. 9: COMPOSTING UNIT AND PLASTIC SCREENING AT THE ZOO ENTRANCE



FIG. 10: PROCUREMENT AND MAINTENANCE OF VARIOUS ANIMAL FEED AT THE ZOO FEED STORE

FIG. 11: FEED BEING DISTRIBUTED TO THE ANIMALS

a.5. Maintenance Section

The animal keepers regularly monitor and maintain the respective animal enclosures. A clean and congenial environment is maintained throughout the zoo premises for both visitors and the animals housed. Dustbins are placed at strategic points to ensure that garbage is disposed of properly on a regular basis after being classified into biodegradable and non-biodegradable waste. Cleaning drives are organized every month by the zoo staff to keep the zoo environment clean.

a.6. Security Section

A constant vigil is maintained in the zoo at various levels for the security of the animals and visitors by officers of various grades, ranging from Forest Range Officers, Foresters, Forest Guards, and Forest Watchers. A special dedicated team (on a rotation basis) patrols the zoo premises thoroughly during the night on all days to ensure orderliness in the zoo. A strong compound wall encloses the zoo. The zoo is equipped with a total of 300 CCTV cameras that provide constant surveillance in and around the zoo. A dedicated staff member is appointed for monitoring the CCTV cameras, some of which can also be observed remotely, even when away from the zoo campus. Details of entrants to the zoo, other than visitors, are logged periodically to maintain records.

a.7. Water Supply

The daily water requirement for the zoo is about 600,000 liters. This is used for cleaning animal enclosures, drinking, filling wet-moat enclosures, watering plants, and fodder plots. Additionally, about 100,000 liters per day for zoo use is procured from the Tamil Nadu Drinking Water Supply Board and distributed at various points around the zoo. Reverse-Osmosis (RO) facilities for drinking water are available for visitors at various points. The zoo also has eight bore wells and 14 wells that support its daily water requirement. However, during peak summers, water management requires prior planning.

a.8. Disposal of Solid Waste and Liquid Sewerage

Solid wastes such as leftover fodder and feed are collected and dumped in a pit. Leftover bones from meat procured for carnivores are sold. Other degradable solid waste is collected for composting. A separate unit for solid waste recycling and management is established in the zoo. Water from the liquid waste generated in the zoo is recycled for watering gardens, hedge plants, and fodder plots.

a.9. Visitors' Amenities

Visitors' Amenities at Present

Twenty ticket counters and parking facilities with laid platforms are available at two locations inside the zoo, with additional parking along Kelambakkam Road. Other facilities include cloakrooms, food outlets, 29 nos of RO drinking water points, 14 toilets includes renovated and new toilet complex, 15 rest sheds, dining areas, baby care rooms, bicycles, e-cycles, battery-operated vehicles for zoo rounds, photo points, a children's play area, and the Vandalur Zoo mobile application (for navigation, maps, animal information, live streaming of zoo animals, and other features).

Ticketing System

Arignar Anna Zoological Park, Vandalur, the oldest and one of the largest zoos in South Asia, attracts over 17 lakh visitors annually. To ensure hassle-free movement and better visitor experience, the park has introduced multiple ticketing options that make entry simple, quick, and efficient. Tickets are generated with QR code and it get validated at the entrance.

Kiosk : Visitors can use the self-service kiosks - 6 nos at the zoo entrance for on-the-spot ticket purchases, making the process quick and convenient.

WhatsApp Booking : By scanning the QR code displayed at the zoo, visitors are directly book the tickets by using whatsapp chat.

Website Booking : Tickets can be booked in advance through the official zoo website, where visitors can select the date, number of visitors, and complete payment online.

Vandalur Zoo Mobile App : The Vandalur zoo mobile app, available on Google Play Store and App Store, allows visitors to book tickets anytime, anywhere, along with access to additional zoo information.

Cash Counter : Cash Counter is also available at the entrance for visitors who prefer cash payments. The zoo management is preferring cashless transactions, the zoo reception is able to achieve 100% in cashless transaction. 5-10% of cash transaction also be considered.

Phase 2:

- Paper tickets are usually discarded after the visit. The zoo may introduce souvenir tickets with attractive designs and conservation messages, allowing visitors to keep them as a memorable keepsake of their visit.
- Further development will be based on visitor feedback during the 10-year master plan review.

Visitor Management

- A free shuttle service transfers visitors from additional parking to the zoo gate. With CMRL taking over parts of the current parking area, a fully functional new ticket counter is planned for the additional car parking area.
- Entry and exit will be validated by an automated ticket system.
- Plastic entry (snack covers, bottles, aluminum-coated tins) will be phased out.
- Sensor-based technology will reduce the need for manual plastic screening.
- A digital board at the ticket counter displays visitor counts, BO vehicle availability, safari tickets, bicycles, wheelchairs, and ticket rates. Additional displays with maps, amenities, and events will be set up at key locations inside the zoo.

Zoo Parking

- Current parking spans one hectare but may be reduced by CMRL construction. Expansion of additional car parking and construction of multi-level facilities for cars and bikes are planned.
- The parking ticket system will be upgraded with advanced technology for smooth check-in/out.
- Both digital and cash payments will be accepted with preference to cashless transactions.
- Online booking will allow slot selection.
- A backend dashboard for vehicle tracking, space allocation, and monitoring will aid crowd management.

Strengthening the Visitor Experience

- Eight new toilets, including two accessible toilets for differently abled visitors, have been constructed during 2026–2027, and the existing toilets have been renovated, bringing the total number of toilet facilities in the zoo to 14. Toilet cleaning services have been outsourced to ensure regular cleaning and proper hygiene. Toilet facilities are available at approximately every 200 metres throughout the zoo.
- Pathways, ramps, benches, toilets, water points, and photo points are being redesigned in consultation with associations for differently-abled persons.
- Signage/ informational boards will include braille.
- Audio guides will be available in BO vehicles and through the mobile app for walkers and cyclists.
- Animal and tree information will be accessible through QR codes.
- Mothers' rooms will be enhanced with privacy curtains, diaper stations, and hot water facilities.
- An in-house first aid hospital will include a resting hall for senior citizens.
- Adequate RO water points and labeled waste bins will be ensured.
- Directional signage will be regularly reviewed.
- Visitor feedback will be reviewed monthly/quarterly by administrators and weekly by zoo educators.
- BO vehicles will include hop-on/hop-off stops at key points with advanced validation and visitor location tracking.
- Visitor feedback desks will be set up at entrances and accessible via chat and Email,
- Zoo-themed photo points will be planned near entrances.
- First-aid boxes and emergency numbers will be displayed at key points; anti-snake venom will be stocked in the hospital.
- Advanced cameras with thermal and night vision will monitor visitor areas.



FIG. 12: CHILDREN'S PARK



FIG. 13: VISITORS' REST SHED AND TICKETING KIOSK

Education and Awareness

The zoo serves as a one-stop destination for learning about wildlife. The Conservation Education Wing has been active since the zoo's establishment at Vandalur. In 1998, the "Zoo School" was launched to deliver education and awareness.

Zoo Education Programmes at AAZP include:

- Zoo Outreach Programme (2000): Focuses on schools and colleges from remote areas. Over 1,000 schools reached so far. Targets 20–30 schools annually through offline and online.
- Zoo Ambassador Programme (2018): 45 batches completed; 4,200 students trained as “Zoo Ambassadors.” Open to Class 5+ students and above. Flagship programme of the zoo..
- Species Ambassador Programme (2021): Focuses on endangered and conflict species. Participants conduct awareness in their communities, earning grade titles based on outreach.
- Zoo Venture (2025): Conservation awareness for government schools (Mondays). Zoo Explorer for private schools (Thursdays).
- Special Themed Workshops (since 2019): On wildlife photography, bird identification/painting, wildlife forensics. Over 500 participants.
- Green Skill Development Programme (2019): Certificate course offered by MOEF&CC.
- Zoo Club for Volunteering: Expanding through partnerships with colleges and universities.
- Trainer Training Programmes: For teachers, eco-clubs, and professionals.
- Zoo In-House Training: For government officers, new recruits, and zoo staff.
- Celebration of Environmental Days: With events, expert talks, and contests.
- Signage: Directional, identification, interactive, and interpretive boards placed throughout.

Strengthening Zoo Education

- Conservation Education Committee to be formed as per CZA, including zoo leadership, educators, conservationists, and IZEA members.
- Permanent Zoo Education Officer post to be established, supported by Assistant Educators.
- Zoo Education Officer to join IZEA for curriculum enrichment.
- Education programmes to be age-specific, dynamic, and planned in advance.
- Awareness campaigns and sustainability messages to align with UN, UNESCO, and CBD goals.

Prime Focus:

- Unique learning experiences (signage, interactive models).
- Enhancing community participation.
- Training zoo personnel.
- Citizen science initiatives.
- Outcome-based programming
- Collaborative initiatives

Expansion of Zoo Education:

- Early Learning Programme (ages 3–6): In partnership with Anganwadi, parent–child joint sessions.
- Zoo Interpretation Centre & Forest Museum: To be upgraded.
- Zoo Library : To be established.
- Collaborations: With Indian and international zoos, universities.
- Outreach Expansion: Including the “Zoo on Wheels” project.

- Academic Courses: Certificate, diploma, and PG diplomas in animal care and education.
- Citizen Science Projects: To foster curiosity and public contribution.
- Species Ambassador Programme: To expand to more species.
- Workshops & Drives: Including sustainable lifestyle activities.
- Digital Signage: Weather-proof, regularly reviewed.
- Interpretive Models: Developed with field staff.
- Periodic Review: Conservation education plan revised every 10 years.

a.10. Landscaping:

A separate Assistant Agricultural Officer (AAO) used to look after the lawns and gardens of the zoo, which needs to be restored for hassle-free functioning. Separate nurseries are maintained for hedge plants, which are dispatched to the required sites/animal enclosures around the zoo. A fodder bank with several fodder species such as CO4, CO3, and para grass, along with the required greens, is cultivated and maintained within the zoo premises.

a.11. Zoo specific features:

- Arignar Anna Zoological Park was inaugurated by the then Hon'ble Chief Minister, M. G. Ramachandran.
- Arignar Anna Zoological Park is among the oldest zoological institutions in the country, with origins dating back to 1855.
- It is recognized as one of the largest zoological parks in India.
- Arignar Anna Zoological Park ranked in the top position under the Large Zoo category with a score of 82% in India's first Management Effectiveness Evaluation for Zoos, conducted by the Central Zoo Authority, MoEF&CC, announced during the National Zoo Directors' Conference held on 9th September 2022 at Bhubaneswar.
- The majority of the carnivore enclosures are equipped with high-quality (302) stainless steel cages to ensure safety and durability.
- Arignar Anna Zoological Park was inaugurated by the then Hon'ble Chief Minister, M. G. Ramachandran.
- 10% incentive scheme has been introduced for the first time for all zoo personnel, extending from the Director to the supporting staff.
- A well-designed butterfly park has been established near the water bodies. While Tamil Nadu is home to approximately 326 species of butterflies, the park currently hosts over 70 species within the zoo.
- An extensive rainwater harvesting system has been developed to promote sustainable water management practices.
- A structured and efficient solid waste management system has been implemented within the premises.

- Under the Conservation Breeding Programme, it is a coordinating zoo for the Lion-Tailed Macaque and Nilgiri Langur, and a participating zoo for the Royal Bengal Tiger, Indian Gaur, Malabar Giant Squirrel, and Wild Dog.
- Ensuring successful breeding of captive animals, including both native and exotic species.
- Equipped with a full-fledged veterinary hospital with advanced equipment and facilities.
- Undertaking the best zoo education programmes for students of various age groups.
- The zoo currently houses the highest number of Indian Gaurs, Yellow Anacondas, and Ostriches in captivity in the whole of India.
- Successfully bred chimpanzees in captivity.
- It has an animal rescue centre, where animals involved in conflict with humans, confiscated from circuses, and senile animals unfit for display are housed and taken care of.
- The park preserves elements of its heritage through replicas and installations, including a gorilla statue and a newly developed library complex.
- The zoo features naturalistic enclosures designed to closely replicate wild habitats, ensuring animal welfare and ecological authenticity.
- Microclimatic zones have been developed to maintain the park's evergreen environment throughout the year.
- A sustainable in-house management system is in place, including fodder plots producing over 1,800 kg of fodder daily, along with tree fodder resources, fruit orchards, and cultivation of greens and legumes.
- Dedicated live-rearing units have been established for feed production, including rat breeding, roaches, super worms, and mealworms.
- Native plant saplings and organic manure are made available for sale to visitors, promoting environmental awareness.
- The zoo has adopted 100% digital transactions for ticketing and office administration.
- Administrative processes are streamlined through an e-office system.
- Stakeholder engagement has been strengthened through volunteer participation and Corporate Social Responsibility (CSR/CER) initiatives.
- The zoo is progressing towards becoming the first to operate under a corporate governance model.
- State-of-the-art veterinary facilities, supported by experienced veterinarians, ensure high standards of animal healthcare.
- The zoo houses significant collections of species such as Indian gaur, ostrich, anaconda, hippopotamus, and blackbuck.
- Conservation breeding programmes are actively undertaken for species such as the lion-tailed macaque and the Nilgiri langur.
- The institution is a pioneer in zoo education and public awareness initiatives.
- Approximately 85% of the zoo's energy requirements are met through solar power.
- The park maintains nearly 80% green cover, contributing to ecological sustainability.
- Eco-friendly transport options, including battery-operated vehicles, bicycles, and e-cycles, are provided for visitor mobility.
- The zoo is dedicated to animal rescue, rehabilitation, and conservation breeding programmes.

(b) Existing Animal Collection Plan of Arignar Anna Zoological Park, Vandalur

The Madras Zoo is one of the oldest zoos in the country and has long been renowned for its rich and diverse animal collection, both in terms of species diversity and the number of animals. Over the years, the zoo has played a significant role in wildlife conservation, education, and recreation, offering visitors an opportunity to learn about a wide variety of native and exotic fauna.

At present, Arignar Anna Zoological Park houses a well-planned collection of indigenous and exotic animal species representing a wide range of mammals, birds, reptiles, amphibians, and fishes. The existing collection has been developed in accordance with the approved animal collection plan, with emphasis on conservation-priority species, endemic fauna, threatened wildlife, and species of educational significance. The zoo continues to actively participate in conservation breeding programmes, animal exchange initiatives, rescue and rehabilitation of wild animals, and public awareness activities.

While the present collection effectively fulfills the objectives of conservation and education, there remains considerable scope to further enrich the diversity of species by reintroducing animals that were once exhibited at the zoo and by incorporating additional species of high conservation and educational value. Such an enhancement will strengthen the zoo's role as a premier ex-situ conservation centre and provide visitors with a more comprehensive understanding of global biodiversity.

The Inventory Register maintained by Arignar Anna Zoological Park reveals that the zoo has previously exhibited several indigenous and exotic mammalian species over different periods. The indigenous species included the Himalayan Goral (1986–87), Crab-eating Macaque (1985–1991), Capped Langur (1985–2000), Nilgiri Tahr (1987–1990), and Fishing Cat (1994–1995). The exotic mammal collection comprised Mangabey (1987–2008), Gibbon (1986–1988), Grey Kangaroo (1996–2008), Black-and-White Ruffed Lemur (1993–1997), African Lion (1983–1986), Llama (1987–1997), Common Marmoset (2014–2015), and Mouflon (1987–2009).

As these species were successfully housed in the past, the zoo continues to possess the requisite enclosures and supporting infrastructure, either in functional condition or requiring only minor refurbishment.

Table 3: EXISTING ANIMAL COLLECTION PLAN FOR THE ZOO

S.No	Name of the species	Existing Number				Minimum No. of animals to be maintained			Optimum number of animals			Animal to be disposed or acquired			Probable source of exchange	Enclosure no.in the layout plan
	Schedule I	M	F	U	T	M	F	T	M	F	T	M	F	T		
BIRDS																
1	PEAFOWL (<i>Pavo cristatus</i>)	2	5	9	16	2	5	7	6	14	20	1	7	8	Indian zoos	15a
2	WHITE SPOON BILL (<i>Platalea leucorodia</i>)	0	0	0	0	5	5	10	6	14	20	5	5	10	Indian zoos	69a
3	EASTERN WHITE STORK (<i>Ciconia ciconia</i>)	0	0	1	1	2	3	5	3	5	8	2	4	6	Indian zoos	24
4	DEMOISELLE CRANE (<i>Anthropoides virgo</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	24
5	SARUS CRANE (<i>Grus antigone</i>)	2	1	0	3	2	5	7	6	14	20	1	4	5	Indian zoos	25b
6	BRAHMINY KITE (<i>Haliastur indus</i>)	0	0	2	2	2	5	7	6	14	20	2	4	6	Indian zoos	67a
7	INDIAN COMMON KITE (<i>Milvus migrans</i>)	0	0	1	1	2	5	7	6	14	20	0	0	0	Indian zoos	67a
8	BARN OWL (<i>Tyto alba</i>)	0	0	2	2	2	5	7	6	5	11	0	0	0	Indian zoos	98
9	INDIAN EAGLE OWL(<i>Bubo bengalensis</i>)	0	0	2	2	2	2	4	4	6	10	0	0	0	Indian zoos	98
10	WHITE PEA FOWL (<i>Pavo cristatus</i>)	5	7	11	23	2	5	7	6	14	20	0	0	0	Indian zoos	14
11	SHIKRA (<i>Accipiter badius</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	67
12	ADJUTANT LESSER STORK (<i>Leptoptilos javanicus</i>)	1	0	0	1	2	5	7	6	14	20	0	2	2	Indian zoos	26

13	WHITE BACKED BENGAL VULTURE (<i>Gyps bengalensis</i>)	0	1	0	1	2	3	5	3	6	9	2	3	5	Indian zoos	67b
14	CRESTED SERPENT EAGLE (<i>Spilornis cheela</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0	Indian zoos	67b
15	INDIAN VULTURE (<i>Gyps indicus</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	67d
16	FOREST OWLET (<i>Athene blewitti</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	98
17	WHITE-BELLIED SEA EAGLE (<i>Haliaeetus leucogaster</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	67
18	GREY JUNGLEFOWL (<i>Gallus sonneratii</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	19
S.No	Schedule II	M	F	U	T	M	F	T	M	F	T	M	F	T		
19	RED VENTED BULBUL (<i>Pycnonotus cafer</i>)	0	0	0	0	5	5	10	8	8	16	0	0	0	Indian zoos	68
20	RED WHISKERED BULBUL (<i>Pycnonotus jocosus</i>)	0	0	0	0	5	5	10	8	8	16	0	0	0	Indian zoos	68
21	WHITE BROWED BULBUL (<i>Pycnonotus luteolus</i>)	0	0	0	0	5	5	10	8	8	16	0	0	0	Indian zoos	68
22	RED COLLARED DOVE (<i>Streptopelia tranquebarica</i>)	0	0	0	0	2	3	5	5	8	13	0	0	0	Indian zoos	68
23	SPOTTED DOVE (<i>Streptopelia chinensis</i>)	0	0	0	0	2	3	5	5	8	13	0	0	0	Indian zoos	68
24	SPOT-BILLED DUCK (<i>Anas poecilorhyncha</i>)	0	0	0	0	2	3	5	2	3	5	2	2	4	Indian zoos	69B

25	CATTLE EGRET (<i>Bubulcus ibis</i>)	0	0	2	2	10	10	20	10	10	20	8	8	16	Indian zoos	69A
26	LITTLE EGRET (<i>Egretta garretta</i>)	0	0	6	6	2	5	7	6	14	20	0	0	0	Indian zoos	69A
27	LESSER FLAMINGO (<i>Phoeniconaias minor</i>)	0	0	2	2	4	4	8	4	5	9	5	2	7	Indian zoos	69B
28	EASTERN GREY HERON (<i>Ardea cinerea</i>)	0	0	16	16	2	5	7	6	14	20	0	0	0	Indian zoos	69A
29	BARHEADED GOOSE (<i>Anser indicus</i>)	0	0	0	0	2	3	5	2	3	5	2	2	4	Indian zoos	69B
30	BLACK CROWNED NIGHT HERON (<i>Nycticorax nycticorax</i>)	0	0	173	173	2	5	7	6	14	20	20	20	40	Indian zoos	69A
31	POND HERON (<i>Ardeola grayii</i>)	0	0	0	0	2	5	7	6	14	20	1	3	4	Indian zoos	69A
32	BLACK- HEADED IBIS (<i>Threskiornis melanocephalus</i>)	0	0	1	1	2	5	7	6	14	20	0	0	0	Indian zoos	69A
33	CHESTNUT MUNIA (<i>Lonchura articapilla</i>)	0	0	9	9	2	5	7	6	14	20	2	4	6	Indian zoos	18H
34	COMMON MYNA (<i>Acridotheres tristis</i>)	0	0	0	0	2	5	7	6	14	20	10	10	20	Indian zoos	68
35	ALEXANDRINE PARAKEET (<i>Psittacula eupatria</i>)	22	22	0	44	2	5	7	6	14	20	0	0	0	Indian zoos	18B
36	ROSE RINGED PARAKEET (<i>Psittacula krameri</i>)	33	48	6	87	2	5	7	6	14	20	25	25	50	Indian zoos	18A
37	ROSE RINGED PARAKEET (MUTANT) (<i>Psittacula krameri</i>)	7	7	3	11	2	5	7	6	14	20	1	4	5	Indian zoos	22

38	BLOSSOM HEADED PARAKEET (<i>Psittacula cyanocephala</i>)	1	0	2	3	2	5	7	6	14	20	2	4	6	Indian zoos	18C
39	CHEST NUT BELLID SAND GROUSE (<i>Pterocles exustus</i>)	0	0	0	0	2	5	7	6	14	20	0	0	0	Indian zoos	16
40	GREY PELICAN (<i>Pelecanus philippenensis</i>)	0	0	27	27	2	5	7	6	14	20	1	4	3	Indian zoos	69A
41	ROSY / WHITE PELICAN (<i>Pelecanus onocrotalus</i>)	6	4	8	18	2	5	7	6	14	20	0	0	0	Indian zoos	69C
42	RED JUNGLE FOWL (<i>Gallus gallus murghi</i>)	1	0	0	1	2	5	7	6	14	20	1	4	5	Indian zoos	19
43	PAINTED STORK (<i>Mycteria leucocephala</i>)	5	5	52	62	5	10	7	6	14	20	15	15	30	Indian zoos	69A
44	KOEL (<i>Eudynamys scolopacea</i>)	0	0	0	0	3	5	8	3	5	8	2	4	6	Indian zoos	68
45	GREATER COUCAL (<i>Centropus sinensis</i>)	0	0	0	0	2	4	6	2	4	6	2	4	6	Indian zoos	68
46	PADDYFIELD PIPIT (<i>Anthus rufulus</i>)	0	0	0	0	5	5	10	5	5	10	0	0	0	Indian zoos	68
47	OPENBILL STORK (<i>Anastomus oscitans</i>)	0	0	1	1	2	2	4	2	2	4	2	0	2	Indian zoos	69B
48	WHITE BROWED WAGTAIL (<i>Motacilla maderaspatensis</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	68
49	GLOSSY IBIS (<i>Plegadis falcinellus</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	69A
50	DARTER (<i>Anhinga melanogaster</i>)	0	0	1	1	2	2	4	2	2	4	1	1	2	Indian zoos	69A
51	LITTLE CORMORANT (<i>Phalacrocorax niger</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	69A

51	LITTLE CORMORANT (<i>Phalacrocorax niger</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	69A
52	LESSER WHISTLING DUCK (<i>Dendrocygna bicolor</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	69B
53	GREY FRANCOLIN (<i>Ortygornis pondicerianus</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	16
54	PAINTED SPURFOWL (<i>Galloperdix lunulata</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	16
MAMMALS																
S.No	Schedule I	M	F	U	T	M	F	T	M	F	T	M	F	T		
55	YELLOW BILLED BABBLER (<i>Turdodies caudatus</i>)	0	0	0	0	2	5	7	14	20	34	10	10	20	Indian zoos	68
56	SOUTHERN CASSOWARY (<i>Casuarius unappendiculatus</i>)	1	1	0	2	2	5	7	6	14	20	1	5	6	Indian zoos	27
57	GREY COCKATIEL (<i>Nymphicus hollandicus</i>)	4	0	20	24	5	5	10	8	8	16	0	0	0	Indian zoos	20
58	WHITE COCKATIEL (<i>Nymphicus hollandicus</i>)	0	0	8	8	5	5	10	8	8	16	0	0	0	Indian zoos	20
59	MOLUCCAN COCKATOO (<i>Cacatua alba</i>)	1	1	0	2	2	5	7	6	14	20	2	4	6	Indian zoos	20
60	SULPHUR-CRESTED COCKATOO (<i>Cacatua gaterita</i>)	0	1	0	1	2	5	7	6	14	20	1	4	5	Indian zoos	20
61	OSTRICH (<i>Strutheo camelus</i>)	4	9	11	24	3	4	7	6	14	20	0	0	0	Indian zoos	95

62	RHEA (<i>Rhea americana</i>)	1	2	0	3	2	2	4	2	3	5	0	1	0	Indian zoos	23
63	EMU (<i>Dromaius novaehollandiae</i>)	2	4	0	6	2	5	7	6	14	20	1	4	5	Indian zoos	28
64	AFRICAN GREY PARROT (<i>Psitacus erithacus</i>)	1	1	2	4	2	5	7	6	14	20	1	4	5	Indian zoos	20
65	ECLECTUS PARROT (<i>Electus roratus</i>)	2	2	0	4	2	5	7	4	5	9	1	4	5	Indian zoos	20
66	LADY AMHERST PHEASANT(<i>Chrysolophus amherstiae</i>)	2	1	0	3	2	5	7	6	8	14	2	5	7	Indian zoos	17b
67	GOLDEN PHEASANT (<i>Chrysololophus pictus</i>)	1	1	0	2	2	5	7	6	8	14	2	5	7	Indian zoos	17c
68	SILVER PHEASANT (<i>Lophura nycthemera</i>)	2	2	0	4	2	5	7	6	8	14	2	5	7	Indian zoos	17a
69	BLUE ROCK PIGEON (<i>Columba livia</i>)	0	0	0	0	10	20	30	10	20	30	0	0	0	Indian zoos	68
70	PEACH FACED LOVE BIRD (<i>Agapornis roseicollis</i>)	0	0	0	0	2	4	6	2	4	6	2	4	6	Indian zoos	20
71	FISCHERS LOVE BIRD (<i>Agapornis fischeri</i>)	0	0	0	0	2	4	6	2	4	6	2	4	6	Indian zoos	20
72	ZEBRA FINCH (<i>Teniopygia guttata</i>)	1	1	4	6	10	20	30	10	20	30	5	16	21	Indian zoos	18e
73	BLUE AND YELLOW MACAW (<i>Ara ararauna</i>)	1	1	9	11	2	2	4	2	2	4	0	0	0	Indian zoos	20
74	BLACK SWAN (<i>Cygnus atratus</i>)	1	0	0	1	2	3	5	2	3	5	1	2	3	Indian zoos	25a

75	WHITE PIGEON (<i>Columba livia</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	68
76	MAROON-BELLIED CONURE (<i>Pyrrhura frontalis</i>)	1	1	8	10	2	2	4	2	2	4	1	1	2	Indian zoos	21a
77	GREEN CHEEK CINNOMON CONURE (<i>Pyrrhur amolinae</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	21b
78	DIAMOND DOVE (<i>Geopelia cuneata</i>)	2	0	0	2	5	5	10	5	5	10	0	0	0	Indian zoos	18j
79	BUDGERIGARS (<i>Melopsittacus undulatus</i>)	0	16	33	49	20	20	40	20	20	40	20	26	46	Indian zoos	20
80	RAINBOW LORIKEET (<i>Trichoglossus haematodus</i>)	1	0	0	1	2	2	4	2	2	4	2	2	4	Indian zoos	20
81	JAVA SPARROW (<i>Lonchura oryzivora</i>)	4	5	9	18	10	20	30	10	20	30	13	20	33	Indian zoos	18I
82	DUSKY PIONUS (<i>Pionus fuscus</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	20
83	RED BELLIED MACAW (<i>Orthopsittaca manilatus</i>)	0	0	9	9	5	5	10	5	5	10	0	0	0	Indian zoos	20
84	SCARLET MACAW (<i>Ara macao</i>)	0	0	4	4	2	2	4	2	2	4	0	0	0	Indian zoos	20
85	HARLEQUIN MACAW(Hybrid) Blue and Gold & Green winged	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	20
86	SEVERE MACAW (<i>Ara severus</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	20

87	WHITE EYE CONURE (<i>Psittacara leucophthalmus</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	21a
88	ORANGE WING AMAZON (<i>Amazona amazonica</i>)	0	0	1	1	2	2	4	2	2	4	1	1	2	Indian zoos	20
89	RUPELL'S PARROT (<i>Poicephalus rueppellii</i>)	0	0	1	1	2	2	4	2	2	4	1	1	2	Indian zoos	18g
90	PALM COCKATOO (<i>Proboscigera terrimus</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	20
91	RING-NECKED PHEASANT (<i>Phasianus colchicus</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	17a
92	RED SPURFOWL (<i>Galloperdix spadicea</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	16a
MAMMALS																
S.No	Schedule I	M	F	U	T	M	F	T	M	F	T	M	F	T		
93	INDIAN WILD ASS (<i>Equus hemionus</i>)	1	0	0	1	2	3	5	4	6	10	1	2	3	Indian zoos	46
94	SLOTH BEAR (<i>Melursus ursinus</i>)	1	1	0	2	2	3	5	4	6	10	1	2	3	Indian zoos	49
95	ASIATIC BLACK BEAR (<i>Ursus thibetanus</i>)	2	3	0	5	2	3	5	4	6	10	1	2	3	Indian zoos	51
96	BLACK BUCK (<i>Antelope cervicapra</i>)	11	16	2	29	2	3	5	4	6	10	0	0	0	Indian zoos	31
97	JUNGLE CAT (<i>Felis chaus</i>)	4	3	0	7	2	5	7	6	14	20	2	4	6	Indian zoos	98

98	SWAMP DEER / BARASINGHA (<i>Rucervus duvauceli</i>)	6	17	3	26	2	3	5	4	6	10	1	1	2	Indian zoos	41
99	INDIAN CHEVROTAIN / MOUSE DEER (<i>Moschiola indica</i>)	6	8	6	20	6	6	12	6	6	12	0	0	0	Indian zoos	8
100	GRAY SLENDER LORIS (<i>Loris lydekkerianus</i>)	1	2	0	3	2	5	7	6	14	20	1	4	5	Indian zoos	98
101	SMALL INDIAN CIVET CAT (<i>Viverricula indica</i>)	1	0	0	1	2	5	7	6	14	20	2	4	6	Indian zoos	98
102	ASIAN PALM CIVET CAT (<i>Paradoxurus hemaphroditus</i>)	1	2	3	6	2	5	7	6	14	20	0	0	0	Indian zoos	98
103	ASIATIC WILD DOG/(DHOLE (<i>Cuon alpinus</i>)	4	3	0	7	2	5	7	6	14	20	2	3	5	Indian zoos	48
104	INDIAN GREATER ONE HORNED RHINOCEROS (<i>Rhinoceros unicornis</i>)	1	1	0	2	3	5	8	3	7	10	1	1	2	Indian zoos	93
105	ASIATIC ELEPHANT (<i>Elephas maximus</i>)	0	2	0	2	2	3	5	4	6	10	0	3	3	Indian zoos	90
106	GAUR / INDIAN BISON (<i>Bos gaurus</i>)	10	13	19	42	2	3	5	4	6	10	0	0	0	Indian zoos	42
107	BENGAL FOX (<i>Vulpes bengalensis</i>)	0	1	0	1	2	5	7	6	14	20	2	4	6	Indian zoos	50
108	JACKAL (<i>Canis aureus</i>)	8	1	0	9	2	5	7	6	14	20	0	2	2	Indian zoos	57

109	NILGIRI LANGUR (<i>Semnopithecus johni</i>)	8	10	3	21	2	5	7	6	14	20	0	0	0	Indian zoos	4
110	LEOPARD / PANTHER (<i>Panthera pardus</i>)	2	1	0	3	2	3	5	4	6	10	0	0	0	Indian zoos	66
111	BONNET MACAQUE (<i>Macaca radiata</i>)	16	2	0	18	2	5	7	6	14	20	0	4	4	Indian zoos	7
112	LION TAILED MACAQUE (<i>Macaca silenus</i>)	5	10	6	21	2	5	7	6	14	20	2	0	2	Indian zoos	5
113	SMOOTH COATED OTTER (<i>Lutrogale perspicillata</i>)	1	1	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	36
114	INDIAN PORCUPINE (<i>Hystrix indica</i>)	1	2	6	9	2	5	7	6	14	20	3	3	6	Indian zoos	98
115	GRIZZLED GIANT SQUIRREL (<i>Ratufa macroura</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	45b
116	GIANT FLYING SQUIRREL (<i>Petauristha philippinensis</i>)	1	0	0	1	2	5	7	6	14	20	1	4	5	Indian zoos	45a
117	MALABAR / INDIAN GIANT SQUIRREL (<i>Ratufa indica</i>)	1	1	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	45a
118	GRAY WOLF (<i>Canis lupus</i>)	8	4	0	12	2	5	7	6	14	20	0	7	7	Indian zoos	58
119	BENGAL WHITE TIGER (<i>Panthera tigris tigris</i>)	3	6	0	9	2	3	5	4	6	10	1	2	3	Indian zoos	47
120	BENGAL TIGER (<i>Panthera tigris tigris</i>)	8	10	0	18	2	3	5	4	6	10	1	1	2	Indian zoos	65

121	HOG DEER (<i>Axis porcinus</i>)	3	3	2	8	2	5	7	6	14	20	0	0	0	Indian zoos	34
122	SAMBAR DEER (<i>Rusa unicolor</i>)	13	41	26	80	2	3	5	4	6	10	20	20	40	Indian zoos	41
123	STRIPPED HYAENA (<i>Hyaena hyaena</i>)	1	3	0	4	2	5	7	6	14	20	1	3	3	Indian zoos	59
124	HYBRID LION (<i>Panthera leo</i>)	4	5	0	9	2	3	5	4	6	10	0	0	0	Indian zoos	39
125	LEOPARD CAT (<i>Prionailurus bengalensis</i>)	1	1	0	2	2	3	5	2	3	5	1	1	2	Indian zoos	61c
126	MALAYAN GIANT SQUIRREL (<i>Ratufa bicolor</i>)	1	1	0	2	1	1	2	1	1	2	1	1	2	Indian zoos	45a
S.No	Schedule II	M	F	U	T	M	F	T	M	F	T	M	F	T		
127	GREY LANGUR (<i>Semnopithecus thersites</i>)	0	1	1	2	2	5	7	6	14	20	2	2	4	Indian zoos	12
128	SPOTTED DEER (<i>CHITAL</i>) (<i>Axis axis</i>)	4	21	14	39	2	3	5	4	6	10	3	13	16	Indian zoos	30
129	NILGAI / BLUE BULL (<i>Boselaphus ttragocamelus</i>)	2	7	7	16	2	3	5	4	6	10	1	0	0	Indian zoos	38
130	WILD PIG (<i>Sus scrofa</i>)	3	1	10	14	2	3	5	4	6	10	1	0	0	Indian zoos	91
131	INDIAN HARE (<i>Lepus nigricollis</i>)	0	0	1	1	2	2	4	2	2	4	1	3	4	Indian zoos	98

S.No	Schedule III, IV & Exotics	M	F	U	T	M	F	T	M	F	T	M	F	T		
132	RHESUS MACAQUE (<i>Macaca mulatta</i>)	19	15	46	80	2	5	7	6	14	20	29	27	56	Indian zoos	13
133	BARKING DEER MUNTJAC (<i>Muntiacus muntjak</i>)	3	6	5	14	2	5	7	6	14	20	0	0	0	Indian zoos	29
134	SAVANA BABOON (<i>Papio cynocephalus</i>)	1	0	0	1	2	3	5	2	3	5	1	2	3	Indian zoos	100
135	RED HANDED TAMARIN (<i>Saguinus midas</i>)	1	1	1	3	2	3	5	4	6	10	0	2	2	Indian zoos	102b
136	CHIMPANZEE (<i>Pan troglodytes</i>)	2	1	0	3	2	3	5	2	3	5	1	0	1	Indian zoos	101
137	GIRAFFE (<i>Giraffa camelopardalis</i>)	0	1	0	1	2	3	5	4	6	10	1	2	3	Indian zoos	96
138	HIPPOPOTAMUS (<i>Hippopotamus amphibius</i>)	3	4	0	7	2	3	5	4	6	10	0	1	1	Indian zoos	92
139	BROWN CAPUCHIN (<i>Sapajus apella</i>)	0	0	0	0	2	5	7	6	14	20	0	5	5	Indian zoos	102a
140	SQUIRREL MONKEY (<i>Saimeri sciureus</i>)	1	2	0	3	2	2	4	2	2	4	1	1	2	Indian zoos	102c
141	PYGMY HIPPOPOTAMUS (<i>Choeropsis liberiensis</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian/ Intl zoos	92
142	WHITAKER'S BOA (<i>Eryx whitakeri</i>)	2	2	0	4	2	5	7	3	6	9	2	2	4	Indian zoos	77
143	RED SAND BOA (<i>Eryx johnii</i>)	0	0	6	6	2	5	7	2	5	7	2	2	4	Indian zoos	77
144	CROCODILE - GHARIAL (<i>Gavialis gangeticus</i>)	2	4	2	8	2	5	7	6	14	20	0	3	3	Indian zoos	85

145	MARSH CROCODILE (<i>MUGGER</i>) (<i>Crocodylus palustris</i>)	20	52	15	87	2	5	7	6	14	20	20	20	40	Indian zoos	86A
146	SALT WATER CROCODILE (<i>Crocodylus porosus</i>)	2	0	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	79
147	KING COBRA (<i>Ophiophagus hannah</i>)	4	0	0	4	2	5	7	6	14	20	1	5	6	Indian zoos	78
148	INDIAN COBRA (<i>Naja naja</i>)	0	0	14	14	2	5	7	6	14	20	1	3	4	Indian zoos	77
149	WATER MONITOR (<i>Varanus salvator</i>)	1	1	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	72
150	BENGAL MONITOR (<i>Varanus bengalensis</i>)	0	6	0	6	2	5	7	6	14	20	1	4	5	Indian zoos	74
151	CHECKERED KEELBACK SNAKE (<i>Fowlea piscator</i>)	0	2	8	10	2	5	7	6	14	20	1	1	2	Indian zoos	77
152	RUSSEL'S VIPER (<i>Daboia russelli</i>)	0	0	3	3	2	5	7	6	14	20	2	2	4	Indian zoos	77
153	PYTHON (<i>Python molurus</i>)	0	0	8	8	2	5	7	6	14	20	0	0	0	Indian zoos	77
154	RETICULATED PYTHON (<i>Malayopython reticulatus</i>)	0	1	14	15	2	5	7	6	14	20	0	0	0	Indian zoos	77
155	ASSAM ROOF TURTLE (<i>Pangshura sylhetensis</i>)	0	0	4	4	2	5	7	4	6	10	2	2	4	Indian zoos	70
156	INDIAN FLAP SHELL TURTLE (<i>Lissemys punctata</i>)	0	0	4	4	3	3	6	3	3	6	1	1	2	Indian zoos	70

157	INDIAN STAR TORTOISE (<i>Geochelone elegans</i>)	0	0	18	18	2	5	7	6	14	20	0	0	0	Indian zoos	70
158	SPOTTED POND TURTLE (<i>Geoclemys hamiltoni</i>)	0	0	45	45	2	5	7	6	14	20	0	0	0	Indian zoos	70
159	TRICARINATE HILL TURTLE (<i>Melanochelys tricarinata</i>)	0	0	2	2	2	5	7	3	6	9	0	0	0	Indian zoos	70
160	DHAMAN or INDIAN RAT SNAKE (<i>Ptyas mucosa</i>)	0	0	6	6	2	2	4	4	4	8	0	0	0	Indian zoos	77
161	SAW SCALED VIPER (<i>Echis carinatus</i>)	0	0	1	1	2	5	7	6	14	20	2	2	4	Indian zoos	77
162	COMMON SAND BOA (<i>Eryx conicus</i>)	0	0	5	5	2	5	7	2	5	7	2	2	4	Indian zoos	77
S.No	Schedule II	M	F	U	T	M	F	T	M	F	T	M	F	T		
163	INDIAN BLACK TURTLE (<i>Melanochelys trijuga</i>)	0	0	6	6	4	4	8	6	6	12	0	0	0	Indian zoos	70
164	STRIPPED KEELBACK SNAKE (<i>Amphiesma stolatum</i>)	0	0	4	4	2	5	7	2	5	7	1	2	3	Indian zoos	77
S.No	Schedule III, IV & Exotics	M	F	U	T	M	F	T	M	F	T	M	F	T		
165	SPECTACLED CAIMAN (<i>Caiman caiman</i>)	0	2	0	2	2	2	4	2	2	4	2	1	3	Indian zoos	75
166	MORLETT'S CROCODILE (<i>Crocodilus morletti</i>)	0	1	0	1	2	2	4	2	2	4	1	2	3	Indian zoos	88

167	SIAMESE CROCODILE (<i>Crocodylus siamensis</i>)	2	1	0	3	2	5	7	6	8	14	4	7	11	Indian zoos	76
168	NILE CROCODILE (<i>Crocodilus niloticus</i>)	1	2	0	3	2	2	4	2	2	4	1	1	2	Indian zoos	84
169	COMMON INDIAN KRAIT (<i>Bungarus caeruleus</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	77
170	GREEN VINE SNAKE (<i>Ahaeutulla oxyryncha</i>)	0	0	4	4	2	5	7	2	5	7	1	2	3	Indian zoos	77
171	COMMON INDIAN TREE SNAKE (<i>Dendrelaphais tristis</i>)	0	0	2	2	2	5	7	2	5	7	2	2	4	Indian zoos	77
172	INDIAN TRINKET SNAKE (<i>Elaphe helena</i>)	0	0	2	2	2	5	7	2	5	7	2	2	4	Indian zoos	77
173	BALL PYTHON (<i>Python regius</i>)	1	1	0	2	1	1	2	1	1	2	0	0	0	Indian zoos	77
174	DWARF CAIMAN (<i>Paleosuchus palpebrosus</i>)	0	0	1	1	1	1	2	1	1	2	1	1	2	Indian zoos	82
175	WEST-AFRICAN DWARF CROCODILE (<i>Osteodamus</i>)	0	0	1	1	1	2	3	1	2	3	1	2	3	Indian zoos	83
176	GREEN IGUANA (<i>Iguana iguana</i>)	0	1	2	3	2	2	4	3	3	6	2	2	4	Indian zoos	77
177	RED IGUANA (<i>Iguana iguana</i>)	0	0	2	2	2	2	4	3	3	6	2	2	4	Indian zoos	77
178	YELLOW ANACONDA (<i>Eunectes notaeus</i>)	2	4	7	13	2	4	6	2	4	6	2	2	4	Indian zoos	71a
179	RED EARED TURTLE (<i>Chrysemys scripta elegans</i>)	0	0	22	22	2	5	7	6	10	16	5	5	10	Indian zoos	70
180	AMERICAN ALLIGATOR (<i>Alligator mississippiensis</i>)	0	0	0	0	2	5	7	6	14	20	0	5	5	Indian zoos	88b

MAKING THE ZOO POPULATION SELF-SUSTAINING

The zoo will optimize the population growth of all species through scientific husbandry and effective population management. Priority will be given to sexing all unsexed animals and acquiring suitable mates for single animals through coordinated exchanges with other zoos. Regular assessments of age structure, sex ratio, reproductive status, and population demographics will be undertaken to maintain healthy, genetically viable, and self-sustaining captive populations.

Animal behaviour and breeding compatibility will be monitored regularly by the zoo's biologists and veterinarians. Where incompatible pairs are identified, suitable replacements will be made wherever feasible, while assisted reproductive techniques may be considered for priority species when required, following approved Standard Operating Procedures (SOPs) and scientific protocols where presently the study is underprogress.

The zoo shall implement a scientific population management programme based on studbooks, Species Management Plans, and the guidelines of the Central Zoo Authority. Breeding and animal transfers will be coordinated to maintain genetic diversity, avoid inbreeding, and optimize enclosure carrying capacity. Regular population assessments will guide management decisions to ensure healthy, sustainable captive populations that contribute to long-term conservation breeding programmes.



FIG. 14: FROM TOP LEFT: LIONS, OSTRICH CHICKS, SLOTH BEARS, WHITE PEAFOWLS, MALABAR GIANT SQUIRREL, OTTER, GOLDEN PHEASANT AND INDIAN ONE-HORNED RHINOCEROS



FIG. 15: THE HYPER-MELANISTIC HETEROZYGOUS TIGER



FIG. 16: HIPPOPOTAMUS WITH CALF

GENETIC MANAGEMENT

The zoo manages the genetic health of captive populations through scientific population management practices aimed at maintaining genetic diversity and reducing inbreeding. Genetic management is achieved through pedigree analysis, studbook maintenance, individual animal identification, and coordinated breeding programmes. The zoo regularly monitors the lineage, parentage, age structure, and reproductive performance of animals to support informed breeding decisions.

MAINTAINING THE BEHAVIOURAL VIABILITY

All efforts would be made by the zoo to minimize human impact on animals. The feeding kraals/feeding cells would be designed in such a way that there is no physical or visual contact between the animals and the keepers at the time of feeding. The kraals should be screened by green cover so that the visitors and the animals cannot see each other. Behavioral observation of the animals in conservation breeding enclosures should be carried out through CCTV, causing minimal imprinting on the animals.

MINIMISING MORTALITIES

The zoo veterinarians shall keep a close watch on newly born young ones and ensure whether the mother is taking due care of them, resorting to hand-rearing only once they are certain that the mother is not attending to the young properly. This task should be done without disturbing the mother, and where necessary, the help of CCTV should be utilised. Veterinarians should continuously update their skills in neo-natal health care, ensure the availability of suitable baby feeds, and maintain a requisite stock of the same.

(c) General Zoo Administration

Tamil Nadu Forest Department: The zoo was under the Department of Environment and Forests, Government of Tamil Nadu since its inception, and later, until the CZA was constituted by the Government of India. Central Zoo Authority (CZA): The CZA conferred recognition to the AAZP initially in 2003. Since then, it has been renewed periodically from time to time every three years.

Zoo Authority of Tamil Nadu (ZAT): The Zoo Authority of Tamil Nadu was constituted in the year 2004 and currently acts as the administrative body of the zoo at the State level. The following officials are managing the zoo.

Table 4: Administrative setup of the Zoo

Management Section	Administration / Office section	Technical Section	Veterinary care section	Animal Care section	Maintenace section
Director	Personal Assistant	Assistant Executive Engineer	Veterinary Officer	Biologists	Sweeper cum scavenger
Deputy Director	Superintendents	Jr. Engineer	Veterinary Assistant Surgeon	Animal Keepers	Electrician
Assistant Director	Steno Typist	Sr. Draughting Officer	Livestock inspector	Feed distribution helper	Plumber
Range Officers	Assistants	Draughting Officer		Mali	Pump operator
Foresters	Junior Assistants	Asst. Draughtsman		Night watchmen	Drivers
Forest Guards	Typist				
Forest Watchers	Driver				
	Office Assistants				

(d) Research

The Arignar Anna Zoological Park has been conducting research on wildlife in collaboration with the Advanced Institute for Wildlife Conservation (AIWC), an institution of the Tamil Nadu Forest Department, on various aspects such as the collection and analysis of animal scat samples, bones, tissues, blood, hair, feathers, etc. Collaborative research programmes based on Memoranda of Understanding are also undertaken in collaboration with the Tamil Nadu Veterinary and Animal Sciences University (TANUVAS). A 21-day internship programme for Life Science graduates shall be conducted at all zoological parks under the control of the Tamil Nadu Forest Department, namely Arignar Anna Zoological Park (Vandalur), Guindy Children's Park (Chennai), Kurumbapatti Zoological Park (Salem), and Amirthi Zoological Park (Vellore). Admission to the internship programme shall be subject to the prior approval of the Director, Arignar Anna Zoological Park, and the interns shall be permitted to undergo training at the respective zoo as approved. Zoo Educator, Biologist, Forest Range Officer to monitor and regulate the internship activities.

Scope of Research Areas

The zoo shall promote multidisciplinary research to strengthen scientific management, wildlife conservation, animal welfare, and environmental sustainability. Research shall be encouraged in diverse fields including animal welfare and behaviour, conservation breeding and reproductive biology, veterinary health and One Health, wildlife nutrition, population genetics and conservation genomics, ex situ conservation, species recovery, enclosure design and habitat management, biodiversity monitoring, urban ecology, ecosystem restoration, environmental sustainability, climate change adaptation, wildlife disease ecology, animal physiology, conservation education, visitor studies, animal population management, wildlife rescue and rehabilitation, and technology-driven zoo management.

The zoo shall also encourage research in emerging areas such as assisted reproductive technologies, cryopreservation, environmental DNA (eDNA), microbiome studies, ecological modelling, GIS and remote sensing, artificial intelligence, wildlife forensics, invasive species management, human–wildlife conflict mitigation, biosecurity, disaster preparedness, carbon footprint assessment, renewable energy, circular resource management, citizen science, and conservation policy.

Collaborative research with universities, research institutions, government agencies, and conservation organizations shall be promoted to generate scientific knowledge that supports evidence-based decision-making, enhances conservation outcomes, and contributes to national and global biodiversity conservation goals.

Table 5: Details of Recent research projects conducted at AAZP

S.No	Name of the Researcher	Permission Given Date / Duration	Research topic
1	Dr.D.Sankar Ganesh, Vellore Institute of Technology	(Nov 2024 to Nov 2026)	Kairomone identification form captive felids to develop formulations for rodent pest management
2	AIWC (R,T&E) MoFF Scheme 2024-25	One year January 2025 to January 2026	Evaluation of stress hormone in selected captive wild animals faecal samples at regular intervals from different captive carnivores & herbivores at AAZP
3	Ms.Aparna, Research Scholar & Dr.M.Nagarajan, Associate Professor, Department of Genomic Science, Central University of Kerala	March 2025 to February 2026	To carry out study on “Molecular Characterization of Indian Wild and Domestic Dog with the collection of fecal sample from Indian Wild dog Dhole, Indian Wolf, Indian Jackal in Arignar Anna Zoological Park, Vandalur”.
4	Dr. S. Abinaya M.Sc student, Department of Veterinary Anatomy, Orathanadu. Thanjavur.	August 2025 to February 2026	Forensic Anatomy of hair in domestic and wild mammals such as Indian Gaur, Asiatic Elephant, Spotted deer, Wild dog and wild cat
5	Mr. P. Masswin Joal, Ph.D., Scholar, Dr. Ambedkar Govt., Arts College, Vyasarpadi	One year September 2025 to September 2026	A comparison of wild & captive: A non-invasive genome iodation & dynamics, parasitology study in Royal Bengal Tiger (<i>Panthera Tigris</i>)

6	Dr. Mohanned Rameez K, PG Diploma, Scholar, Department of WLS, MVS, Chennai	6 months April 2025 to October 2025	“Evaluation of anthelmintic efficacy of fenbendazole in captive Indian Rock Python with collection of fecal from captive Indian Rock Python.
7	Dr. S. Parthiban, Professor & Head, Department of Animal Biotechnology, Madras Veterinary	Sep 2025 to Aug 2026	Swap monitoring if antimicrobial resistance chreats (SMART) in Animal Human interface areas : one health approach
8	Ms. Prerna Sharma, Ph.D., Scholar (Wildlife Science)	Dec 2025 to May 2026	An Assessment of Welfare measures for Elephants in Indian Zoo.

(e) Conservation Breeding

A dedicated breeding center has been established for the captive breeding of endangered and endemic species such as the Lion-tailed macaque. AAZP is designated as the coordinating zoo by the Central Zoo Authority of India for the conservation breeding of the Lion-tailed Macaque (LTM), Nilgiri langur, and Nilgiri Tahr. At present, we have a population of Lion-tailed Macaque and Nilgiri langur for conservation breeding, out of which the Lion-tailed Macaque comes under the endangered species category as per IUCN status.

From the inception of the program, Lion-tailed Macaques were bred conventionally, but so far, a sustained population for release as a troop in the wild could not be achieved. Their breeding strategies, longer gestation periods, and longer inter-parturition intervals are assessed to be factors affecting the achievement of a sustained population. In order to overcome these limitations and achieve a successful increase in the number of animals, assisted breeding techniques such as artificial insemination, in-vitro fertilization, embryo collection, and embryo transfer play a pivotal role. To pursue the above-mentioned techniques, semen collection, assessment, and preservation become a primary task to be accomplished. Electro-ejaculatory methods of semen collection are documented in Bonnet macaques and Rhesus macaques. A procedure for semen collection by electro-ejaculation technique can be standardized from the in-house captive Bonnet macaque population of Arignar Anna Zoological Park, and the technique can be applied for Lion-tailed Macaques.

Semen collection plays an imperative role in any assisted breeding technique, and the collected semen can be used for preservation, artificial insemination, and in-vitro fertilization. In the case of captive breeding of wild animals, it is essential to reduce the effect of inbreeding. This can be achieved by the introduction of new genes, either from different animals in captivity or from the wild, by means of collected semen and artificial breeding techniques, when the introduction of an animal with different genetic makeup is not possible.

The Lion-tailed Macaques seen in many captive facilities across India and other countries were from the initial parent stock of Arignar Anna Zoological Park, Chennai, which limits the possibilities of reducing the inbreeding coefficient through animal exchange programs. This could impose serious inbreeding effects in future breeding if new genes are not introduced. It also seems that there is little to no scope to avoid inbreeding without introducing new genes from the wild. Once the semen collection method is standardized for Bonnet macaque, the same can be implemented in endangered species like the Lion-tailed Macaque, where bringing an animal from the wild to captivity extensively for breeding purposes is not possible. At present, the Veterinary Hospital is provisioned with an electro-ejaculator, emergency and critical care facility, and also with an experienced veterinary team to anesthetize, monitor, and follow up on the patient.

In the first five years, semen collection and preservation methods will be standardized for the Lion-tailed Macaque. In the next five years, assisted breeding methodologies such as estrus cycle tracking, artificial insemination, embryo collection, embryo preservation, and embryo transfer techniques will be standardized. In the third five years, population enhancement through viable techniques mentioned above and exploring and designing the means of soft release will be done. In the last five years, the soft release of a viable troop of Lion-tailed Macaques into a suitable habitat will be targeted.

As a participating zoo, two pairs of wild dogs have been acquired from Pilikula Zoo, Mangalore. Sufficient numbers of the Malabar giant squirrel are currently not available at our zoo. Hence, more individuals need to be acquired. Indian gaurs have been bred successfully, and we currently house the highest number (41) of individuals in captivity in the country. Two of our captive-bred Bengal tigers have recently been exchanged with Jambu Zoo, Jammu, and plans are being made to breed selected individuals from the available stock.

However, apart from the above two focal species for the captive breeding programme, the park has successfully bred the following species of animals, in addition to some more common birds and other mammals:

Table 6: List of animals bred successfully in captivity at AAZP

1	Lion (<i>Panthera leo</i>)	20	Wild ass (<i>Equus hemionus khur</i>)
2	White tiger (<i>Panthera tigris</i>)	21	Mouse deer (<i>Moschiola indica</i>)
3	Bengal Tiger (<i>Panthera tigris</i>)	22	Spotted deer (<i>Axis axis</i>)
4	Chimpanzee (<i>Pan troglodytes</i>)	23	Black buck (<i>Antelope cervicapra</i>)
5	Hanuman langur (<i>Semnopithecus entellus</i>)	24	Wild boar (<i>Sus scrofa</i>)
6	Indian Wolf (<i>Canis lupus</i>)	25	Peafowl (<i>Pavo cristatus</i>)
7	Squirrel monkey (<i>Saimeri scuireus</i>)	26	Red Jungle fowl (<i>Gallus gallus</i>)
8	Rhesus macaque (<i>Macaca mulatta</i>)	27	Ostrich (<i>Strutheo camelus</i>)
9	Bonnet macaque (<i>Macaca radiata</i>)	28	Painted Stork (<i>Mycteria leucocephala</i>)
10	Red handed Tamarin (<i>Saguinus midas</i>)	29	Green cheeked conure (<i>Pyrrhura molinae</i>)
11	Slender loris (<i>Loris lydekkerianus</i>)	30	Night Heron (<i>Nycticorax nycticorax</i>)
12	Hog Deer (<i>Axis porcinus</i>)	31	Peach faced lovebirds (<i>Agapornis roseicollis</i>)
13	Nilgai (<i>Boselaphus tragocamelus</i>)	32	Blue and gold macaw (<i>Ara aranura</i>)
14	Barking deer (<i>Muntiacus muntjac</i>)	33	Rose-ringed parakeet (<i>Psittacula krameri</i>)
15	Golden jackal (<i>Canis aureus</i>)	34	Indian Rock Python (<i>Python molurus</i>)
16	Striped Hyena (<i>Hyena hyena</i>)	35	Marsh crocodile (<i>Crocodilus palustris</i>)
17	Sambar deer (<i>Rusa unicolor</i>)	36	Gharial (<i>Gavialis gangeticus</i>)
18	Hippopotamus (<i>Hippopotamus amphibious</i>)	37	Reticulated python (<i>Malayopython reticulatus</i>)
19	Yellow Anaconda (<i>Eunectes neonatus</i>)	38	Pond turtle (<i>Melanochelys trijuga</i>)

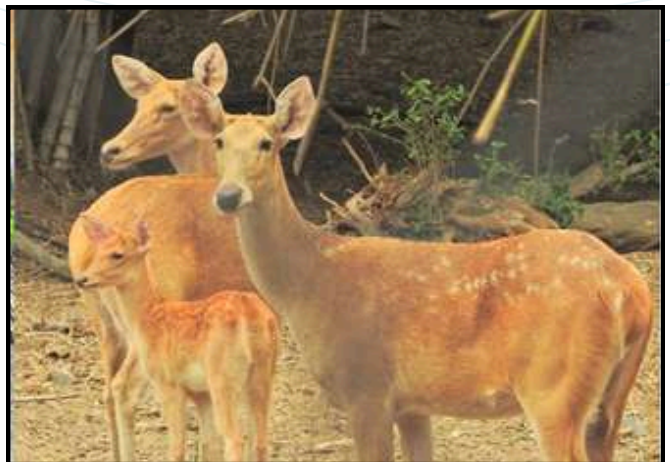


FIG. 17: ANIMALS WITH THEIR CAPTIVE-BORN YOUNG ONES: JACKAL PUPS, YELLOW ANACONDA JUVENILES, CHIMPANZEE, SWAMP DEER, INDIAN GAUR AND LION-TAILED MACAQUE

f) Education and Awareness

The AAZP established a dedicated zoo school in the year 1998 with the mission to educate the public about the importance of wildlife and its conservation. It aims to promote wildlife conservation by the public for sustainable development in the future. The zoo school organizes various lecture series, field-based educational sessions, online sessions, awareness programmes, and educational events throughout the year. The zoo has a comprehensive zoo education plan. The unique zoo education programmes include:

1. Zoo Venture for Government school & Govt home school students
2. Zoo orientation for visiting schools
3. Zoo outreach programme for distant schools & colleges
4. Zoo ambassador programme - Summer & winter camp
5. Species ambassador programme -
6. In-house training
7. Special thematic workshops
8. Green-skill development programme
9. Zoo Club
10. Webinars/Seminars/Symposia
11. Environment and conservation related online courses
12. Awareness sessions, contests and events on important environment and wildlife days

FIG. 18: EDUCATION PROGRAMMES BEING CONDUCTED FOR SCHOOL STUDENTS



(g) Any other peculiarities unique to the Zoo

- Established in 1855, Arignar Anna Zoological Park is one of India's oldest and largest zoological institutions and was inaugurated by the then Hon'ble Chief Minister Thiru. M.G. Ramachandran after its relocation to Vandalur.
- The zoo maintains naturalistic enclosures, modern veterinary facilities, and scientific animal management practices to ensure high standards of animal welfare.
- The park undertakes conservation breeding programmes for threatened species such as Lion-tailed Macaque and Nilgiri Langur.
- Only zoo in the country that is chaired by
- Innovative facilities include a butterfly park, microclimatic zones, heritage installations, library complex, and biodiversity conservation initiatives.
- Sustainable practices include rainwater harvesting, solid waste management, solar energy utilization, extensive green cover, fodder production, orchards, and in-house live feed rearing units.
- Digital transformation has been adopted through cashless ticketing, e-office systems, and streamlined administrative processes.
- The zoo promotes conservation education, research, volunteer participation, and CSR/CER partnerships.
- Eco-friendly visitor facilities include battery-operated vehicles, bicycles, and e-cycles.
- The zoo supports wildlife rescue, rehabilitation, and species conservation initiatives while maintaining important species collections including Indian Gaur, Ostrich, Hippopotamus, Blackbuck, and Anaconda.
- In order to prevent plastic waste accumulation within the zoo premises, a token system is followed for visitors buying water bottles, wherein an advance amount is obtained from the visitors and the balance amount is refunded upon returning the empty bottles that bear a unique sticker. Thus, littering of plastic within the zoo premises is controlled and regulated.
- AAZP was also the top-scoring zoo for the year 2022 under the large zoos category with a score of 82.5 under five categories of Management Effectiveness Evaluation (MEE), conducted for the first time by the CZA.
- As part of sustainable practice, the zoo has also initiated several in-house cultivation of feed/fodder, including species such as CO 4, CO 5, para grass, and azolla. In addition, fishes are cultured in the wet moated enclosures for the animals housed within, which serves as a substantial supplement.
- The park preserves elements of its heritage through replicas and installations, including a gorilla statue and a newly developed library complex.
- The majority of the carnivore enclosures are equipped with high-quality spoon-grade (302) stainless steel cages to ensure safety and durability.
- A 10% incentive scheme has been introduced for the first time for all zoo personnel, extending from the Director to the supporting staff.

FIG. 20: SLOTH BEARS BROUGHT FROM MYSORE ZOO

Animal exchanges with other Indian zoos:

Arignar Anna Zoological Park (AAZP) implements a well-planned animal exchange programme as an important component of scientific population management and collection planning. The programme facilitates the exchange of surplus captive-bred animals with recognized zoological institutions in accordance with the guidelines of the Central Zoo Authority (CZA). Such exchanges help maintain genetically diverse and demographically stable populations while preventing overcrowding and ensuring optimum utilization of available enclosure space.

The exchange programme is carried out based on the zoo's long-term collection plan, conservation priorities, enclosure carrying capacity, and population management requirements. Surplus animals produced through successful breeding programmes are exchanged for species required to improve the zoo's collection, strengthen conservation breeding initiatives, or introduce new genetic lineages into existing populations. All exchanges are undertaken through proper documentation, health screening, quarantine procedures, and approvals from competent authorities.

AAZP has established collaborations with several recognized zoos across India for animal exchanges, contributing to coordinated captive breeding and conservation efforts. The programme supports genetic management by facilitating the transfer of unrelated individuals, improving breeding potential, and reducing the risk of inbreeding. Through systematic planning and inter-zoo cooperation, the animal exchange programme plays a vital role in maintaining sustainable, healthy, and genetically viable zoo populations.



FIG. 19: OSTRICH SENT TO MYSORE ZOO



FIG. 20: SLOTH BEARS BROUGHT FROM MYSORE ZOO

Table 7: Recent Animal exchanges with AAZP and other zoos

S. No.	Species sent	Numbers	Species received	Numbers	Recipient/ Source Zoo	Date
1	White tiger (<i>Panthera tigris</i>)	0:1:0:1	Hybrid lion (<i>Panthera leo</i>)	0:1:0:1	Nawab Wajid Ali Shah Zoological Garden, Lucknow	04-10-2022
2			Sarus crane (<i>Grus antigone</i>)	1:1:0:2		
3			Red Jungle fowl (<i>Gallus gallus</i>)	1:1:0:2		
4			Golden pheasant (<i>Chrysolopus pictus</i>)	1:1:0:2		
5			Rosy Pelican (<i>Pelecanus onocrotalus</i>)	2:2:0:4		
6	Royal Bengal Tiger (<i>Panthera tigris</i>)	1:1:0:2	Himalayan Black bear (<i>Selenarctos thibetanus</i>)	1:1:0:2	Jambu Zoo, Jammu & Kashmir	18-01-2023
7	Ostrich (<i>Struthio camelus</i>)	2:3:0:5	Sloth bear (<i>Melursus ursinus</i>)	1:1:0:2	Sri Chamarajendra Zoological Gardens, Mysore	01-02-2023
8	White tiger (<i>Panthera tigris</i>)	1:0:0:1	Hybrid lion (<i>Panthera leo</i>)	1:0:0:1	Bannergatta Biological Park, Bengaluru	20-04-2023
9	Bonnet macaque (<i>Macaca radiata</i>)	1:1:0:2	Nil (Donated)	-	Shaheed Ashfaq Ullah Khan Prani Udayan, Gorakhpur	31-03-2023
10	Reticulated python (<i>Malayopython reticulatus</i>)	1:1:0:2	Nil (Donated)	-		
11	Reticulated python (<i>Malayopython reticulatus</i>)	1:1:0:2	Hanuman langur (<i>Semnopithecus entellus</i>)	4:6:0:10	Kanpur Zoo	30-01-2024
12	Mouse deer (<i>Moschiola indica</i>)	2:2:0:4	Mottled Wood Owl (<i>Strix ocellata</i>)	0:0:5:5		
13	Ostrich (<i>Struthio camelus</i>)	1:2:0:3	Himalayan vulture (<i>Gyps himalayensis</i>)	1:1:0:2		
14	Green Iguana (<i>Iguana iguana</i>)	0:0:2:2	Egyptian vulture (<i>Neophron percnopterus</i>)	1:1:0:2		
15	Wolf (<i>Canis lupus</i>)	1:0:0:1	-	-	Thiruvananthapuram Zoological Park	
16	Yellow anaconda (<i>Eunectes notaeus</i>)	0:0:5:5	Rhea (<i>Rhea americana</i>)	2:2:0:4		
17	Lion (<i>Panthera leo</i>)	0:1:0:1	Lion (<i>Panthera leo</i>)	0:1:0:1		
18	Lion tailed macaque (<i>Macaca silenus</i>)	1:0:0:1	Wolf (<i>Canis lupus</i>)	1:0:0:1		
19	Black buck (<i>Antelope cervicapra</i>)	2:2:0:4	Black buck (<i>Antelope cervicapra</i>)	2:2:0:4	Pinjore Vulture conservation breeding centre	
20	Brown fish owl (<i>Ketupa zeylonensis</i>)	1:1:0:2	White peafowl (<i>Pavo cristatus</i>)	2:2:0:4		
21	-	-	Long billed vulture (<i>Gyps indicus</i>)	2:2:0:4		
22	Hippopotamus (<i>Hippopotamus amphibius</i>)	1:1:0:2	Himalayan Black bear (<i>Selenarctos thibetanus</i>)	1:1:0:2	Jambu Zoo, Jammu & Kashmir	
23	-	-	Leopard cat (<i>Panailurus bengalensis</i>)	1:1:0:2		
24	White tiger (<i>Panthera tigris</i>)	1:1:0:2	Lion (<i>Panthera leo</i>)	1:2:0:3	Sakkarbaug Zoo	
25	Indian gaur (<i>Bos gaurus</i>)	1:0:0:1	Asiatic Wild ass (<i>Equus hemionus kuhz</i>)	0:1:0:1		
26	Mouse deer (<i>Moschiola indica</i>)	2:2:0:4	-	-		
27	Yellow anaconda (<i>Eunectes notaeus</i>)	0:0:2:2	-	-		

CHAPTER III

1. Future Vision of the Zoo:

Strengthening the ex-situ conservation of endangered native species, imparting conservation education among the public, and optimizing animal welfare and healthcare.

2. Future Mission of the Zoo:

- To promote care and concern among the public towards wildlife conservation.
- To conserve the fauna of the Eastern and Western Ghats with special reference to LTM, Nilgiri Langur, Nilgiri Tahr, Gaur, and small mammals.
- To provide the animals housed in the zoo with the highest standards of housing, upkeep, and healthcare.
- To provide zoo visitors opportunities for gaining first-hand experience of wild animals.
- To carry out research on different aspects of biology, behaviour, and genetic makeup of select endangered species of wild animals and facilitate their captive breeding.
- To provide requisite housing, upkeep, and healthcare to distressed animals rescued from various illegal sources.
- To facilitate captive breeding of select species for reintroduction into their respective native habitats.

3. Future Objectives:

- Ex-situ conservation and propagation of the fauna of peninsular India.
- Initiate captive breeding programmes for select endangered species in accordance with protocols for rehabilitation in the wild, if necessary.
- Promote the zoo as a Centre for conservation awareness by organizing wildlife education and interpretation programmes to elicit public awareness for wildlife.
- Broaden opportunities to conduct scientific studies on fauna to enhance knowledge on animal behaviour, biology, and ecology, so as to aid in scientific management of the zoo and conservation of wildlife.
- Provide the best possible facilities for healthcare and rehabilitation of rescued animals.
- Reintroduction and restocking of select species bred in captivity in the zoo.

Strategy for achieving the mission of the Zoo:

- Sensitization of visitors about the ecological significance of wildlife in maintaining the balance of ecosystems.
- Conservation breeding of select fauna of the Eastern and Western Ghats, namely LTM, Nilgiri Langur, Gaur, and small mammals.

CHAPTER IV: FUTURE ACTION PLAN

- Modernization of animal housing, upkeep, and healthcare to international standards.
- Thematic display of healthy and active animals in naturalistic enclosures and enabling visitors to appreciate and understand the ecological linkages of nature through appropriate signage and interpretation facilities.
- Formulation of collaborative research projects in association with various educational and research institutions.
- Maintenance and upgradation of the rescue Centre and transit enclosure facility to house various kinds of animals.
- Captive breeding and rewilding of locally occurring threatened species and restocking of their populations.

Future Action Plan

(i) Proposed Animal Collection Plan

The future animal collection plan of Arignar Anna Zoological Park (AAZP) shall be developed in accordance with the Central Zoo Authority (CZA) guidelines for scientific management of zoo populations and the objectives of conservation, education, research, and public awareness. The collection plan will focus on maintaining a balanced, genetically viable, and self-sustaining animal population by considering species conservation status, enclosure carrying capacity, available resources, and long-term management feasibility.

The zoo will prioritize the conservation of threatened and endangered Indian species. Efforts will be made to strengthen existing populations through acquisition of suitable mates, exchange of animals with recognized zoos, and introduction of genetically valuable individuals to maintain genetic diversity and prevent inbreeding.

Arignar Anna Zoological Park will expand the animal collection by adding suitable species based on the geographical location, considering other parameters, and will submit the plan to the Central Zoo Authority for approval.

Some of the exotic species available in Arignar Anna Zoological Park, Vandalur, have either reached senility (very old) or their numbers are very low. Some of the species are single-sexed and represented by very few individuals (one or two) in the collection. .

Considering the exotic birds, most of them are common species and are available with local breeders. Out of 40 species of exotic birds, Macaw and Ostrich are viable in numbers and are breeding well at the zoo. With respect to exotic reptiles, the Yellow Anaconda is viable and breeding, while the rest are not breeding. In exotic mammals, except for Hippopotamus and Chimpanzee, none are viable, and their numbers are very low. These populations are planned to be supplemented by acquiring additional individuals through animal exchanges between zoos.

Table 9 : Proposed Animal Collection Plan for the Arignar Anna Zoological Park

UPCOMING ANIMAL COLLECTION PLAN																		
S.No	Sche dule	Name of the Species	Existing				Capacity			Source			Proposed			Proposed Source Zoo	Enclosur e	Justification
			M	F	U	T	M	F	T	M	F	T	M	F	T			
Indigenous species (Indian)																		
1	I	Bengal fox (<i>Vulpes bengalensis</i>)	0	1	0	1	2	3	5				2	2	4	Indian Zoos	50a	Single
2	I	Pygmy hog (<i>Porcula salvania</i>)	0	0	0	0	2	3	5				2	2	4	Indian Zoos	9	Education/ Conservation
3	I	Four horned antelope (<i>Tetracerus</i>	0	0	0	0	2	3	5				1	2	3	Indian Zoos	33	Education/ Conservation
4	I	Chinkara (<i>Gazella bennettii</i>)	0	0	0	0	2	3	5				1	2	3	Indian Zoos	32	Education/ Conservation
5	I	Hoolock Gibbon (<i>Hoolock hylobates</i>)	0	0	0	0	2	2	4				2	2	4	Guwahati Zoo/Indian Zoos	6	Education/ Conservation
6	I	Brow-antlered deer (<i>Rucervus eldii</i>)	0	0	0	0	2	3	5				2	3	5	Indian Zoos	35b	Education/ Conservation
7	I	Fishing cat (<i>Prionailurus viverrinus</i>)	0	0	0	0	2	3	5				2	3	5	Indian Zoos	61b	Education/ Conservation
8	I	Leopard Cat (<i>Prionailurus</i>	0	0	0	0	1	2	3				1	2	3	Indian Zoos	61c	Education/ Conservation

9	I	Honey Badger (<i>Mellivora capensis</i>)	0	0	0	0	2	3	5				2	3	5	Indian Zoos	61d	Education/ Conservation
10	I	Slow loris (<i>Nycticebus bengalensis</i>)	0	0	0	0	1	1	2				1	1	2	Indian Zoos	98	Education/ Conservation
11	I	East Indian Leopard Gecko (<i>Eublepharis hardwickii</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	77	Education/ Conservation
12	I	Egyptian Vulture (<i>Neophron</i>)	1	1	0	2	2	3	5				2	2	4	Indian Zoos	67e	Education/ Conservation
13	I	Long-billed Vulture (<i>Gyps indicus</i>)	0	0	0	0	1	1	2				1	1	2	Indian Zoos	67d	Education/ Conservation
15	I	Brown fish owl (<i>Ketupa zeylonensis</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	67g	Education/ Conservation
16	I	Cheer pheasant (<i>Catreus wallichii</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	17	Education/ Conservation
17	I	Northern river terrapin (<i>Batagur baska</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	70	Education/ Conservation
18	I	Red crowned roof turtle (<i>Batagur kachuga</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	70	Education/ Conservation
19	I	Three-striped roofed turtle (<i>Batagur</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	70	Education/ Conservation

9	I	Honey Badger (<i>Mellivora capensis</i>)	0	0	0	0	2	3	5				2	3	5	Indian Zoos	61d	Education/ Conservation
10	I	Slow loris (<i>Nycticebus bengalensis</i>)	0	0	0	0	1	1	2				1	1	2	Indian Zoos	98	Education/ Conservation
11	I	East Indian Leopard Gecko (<i>Eublepharis hardwickii</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	77	Education/ Conservation
12	I	Egyptian Vulture (<i>Neophron</i>)	1	1	0	2	2	3	5				2	2	4	Indian Zoos	67e	Education/ Conservation
13	I	Long-billed Vulture (<i>Gyps indicus</i>)	0	0	0	0	1	1	2				1	1	2	Indian Zoos	67d	Education/ Conservation
15	I	Brown fish owl (<i>Ketupa zeylonensis</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	98	Education/ Conservation
16	I	Cheer pheasant (<i>Catreus wallichii</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	17	Education/ Conservation
17	I	Northern river terrapin (<i>Batagur baska</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	70	Education/ Conservation
18	I	Red crowned roof turtle (<i>Batagur kachuga</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	70	Education/ Conservation
19	I	Three-striped roofed turtle (<i>Batagur</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	70	Education/ Conservation

20	I	Monocled Cobra (<i>Naja kaouthia</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	77	Education/ Conservation
21	II	Bare-bellied Hedgehog (<i>Paraechinus nudiventris</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	98f	Education/ Conservation
22	II	Garganey (<i>Spatula querquedula</i>)	0	0	0	0	2	3	5				3	5	8	Indian Zoos	69b	Education/ Conservation
23	II	Lesser Whistling teal (<i>Dendrocygna javanica</i>)	0	0	1	1	2	2	4				2	2	4	Indian Zoos	69b	Education/ Conservation
24	II	Red-naped Ibis (<i>Pseudibis papillosa</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	69a	Education/ Conservation
25	II	White breasted water hen (<i>Amaurornis</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	69a	Education/ Conservation
26	II	Eurasian coot (<i>Fulica atra</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	69b	Education/ Conservation
27	II	Purple moorhen (<i>Porphyrio porphyrio</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	69b	Education/ Conservation
28	II	Bronze winged jacana (<i>Metopidius indicus</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	69b	Education/ Conservation
29	II	Asian Paradise Flycatcher (<i>Terpsiphone</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation

30	II	Common Hoopoe (<i>Upupa epops</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
31	II	Black Drongo (<i>Dicrurus macrocerus</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
32	II	Forest wagtail (<i>Dendronanthus indicus</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
33	II	Indian robin (<i>Copsychus fulicatus</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
34	II	Coppersmith Barbet (<i>Psilopogon haemacephalus</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
35	II	Blyth's Reed Warbler (<i>Acrocephalus dumetorum</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
36	II	Red wattled Lapwing (<i>Vanellus indicus</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
37	II	White browed wagtail (<i>Motacilla maderaspatensis</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
38	II	Indian roller (<i>Coracias bengalensis</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation

39	II	Sun bird (<i>Leptocoma zeylonica</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
40	II	Oriental Magpie Robin (<i>Copsychus saularis</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
41	II	Ashy Prinia (<i>Prinia socialis</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
42	II	Tailor bird (<i>Orthotomus sutorius</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
43	II	Rufous Treepie (<i>Dendrocitta vagabunda</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
44	II	Orange-headed Thrush (<i>Geokichla citrina</i>)	0	0	0	0	2	2	4				2	2	4	Indian Zoos	68	Education/ Conservation
Exotic species																		
1	Appendix II	Black tufted marmoset (<i>Callithrix penicillata</i>)	0	0	0	0	2	2	4				1	1	2	Indian Zoos	102a	Education/ Conservation
2	Appendix IV	Meerkat (<i>Suricata suricatta</i>)	0	0	0	0	2	3	5				2	3	5	Indian Zoos	37	Education/ Conservation

3	Appendix I	Jaguar (<i>Panthera onca</i>)	0	0	0	0	1	1	2				1	1	2	Indian/ International zoos	62	Education/ Conservation
4	Appendix I	African cheetah (<i>Acinonyx jubatus</i>)	0	0	0	0	2	2	4				1	2	3	Indian/ International zoos	63	Education/ Conservation
5	Appendix II	Zebra sps (<i>Equus quagga</i>)	0	0	0	0	2	3	5				2	3	5	Indian/ International zoos	97	Education/ Conservation
6	Appendix II	Blue Wilebeest (<i>Connochaetes taurinus</i>)	0	0	0	0	2	3	5				1	2	3	Indian/ International zoos	43	Education/ Conservation
7	Not Listed	Red-necked Wallaby (<i>Notamacropus rufogriseus</i>)	0	0	0	0	2	2	4				2	2	4	Indian/ International zoos	94	Education/ Conservation
8	Appendix II	Hamadryas baboon (<i>Papio hamadryas</i>)	0	0	0	0	2	3	5				1	2	3	Mysuru / Bannerghatta Zoo	100	Education/ Conservation
9	Appendix II	Green Anaconda (<i>Eunectes murinus</i>)	0	0	0	0	3	4	7				3	4	7	Madras Crocodile Bank / Mysuru Zoo	71b	Education/ Conservation

10	Appendix I	Ring-tailed Lemur (<i>Lemur catta</i>)	0	0	0	0	2	3	5				1	2	3	Vizag zoo/ Indian Zoos	102d	Education/ Conservation
11	Not Listed	Blue - tongue d skink (<i>Tiliqua scincoides</i>)	0	0	0	0	2	3	5				2	3	5	Indian Zoos	77	Education/ Conservation
12	Appendix I	Siamang gibbon (<i>Symphalangus syndactylus</i>)	0	0	0	0	1	1	2				1	1	2	Indian/ International zoos	6	Education/ Conservation

AAZP Unpaired Animals List & Action Plan

There are certain unpaired animals at the Arignar Anna Zoological Park housed currently. For such animals, companions are sought through animal exchange with other zoos on priority basis. Some of this has already been accomplished, while others have been proposed and are underway. Potential sources for companions of such animals have been identified and are being approached for exchange of animals in order to acquire suitable companions for the unpaired animals at our zoo. As a part of this exercise, animal exchange proposed with Sakkarbaug Zoo has partly been completed, and a female Asiatic Wild Ass has been brought from the zoo. Likewise, an exchange has been proposed with Pilikula Biological Park, Mangaluru for getting companions for Whitaker's boa and the King cobra. For the red junglefowl, a female is being acquired through exchange from Kamala Nehru Zoo, Indore. Black kites are planned to be acquired from Childrens' Park, Guindy, Chennai. For the red sand boa, either the Chennai Snake Park or the Childrens' Park, Guindy, Chennai will be approached for acquisition of companions.

With regard to the proposed acquisition of Dwarf Caiman (*Paleosuchus palpebrosus*), Morelet's Crocodile (*Crocodylus moreletii*), Siamese Crocodile (*Crocodylus siamensis*), Saltwater Crocodile (*Crocodylus porosus*), and Red Sand Boa (*Eryx johnii*), discussions have been initiated with the Madras Crocodile Bank Trust for obtaining these species through animal exchange. The proposal of exchange has been approved by both the zoos and awaiting for the approval from Central Zoo Authority.

In respect of the Giraffe continuous efforts have been made to procure a suitable breeding pair. However, zoos possessing surplus giraffes have not come forward to provide animals for exchange or transfer. Despite these constraints, the zoo has been actively pursuing various initiatives and coordinating with other zoological institutions to identify suitable animals, with the objective of establishing a genetically viable breeding population and ensuring the long-term sustainability of the species under zoo care.

Procurement of White Stork (*Ciconia ciconia*) has been initiated with Thissur Zoo and also, opportunities are being explored for the acquisition of select exotic mammals such as the Savannah Baboon, along with certain bird species that are presently not available within Indian zoological parks. Since these species are not commonly held in Indian zoos, efforts are being made to identify suitable pairs through inter-zoo coordination and international or institutional collaborations, wherever feasible, to strengthen the diversity of the collection plan.

AAZP Single Sex Animal List

S. No	Species	Proposed Plan	No and Sex
Birds			
1	Asian openbill (<i>Anastomus oscitans</i>)	Nandankanan Zoological Park	1 U
2	Cassowary (<i>Casuarius casuarius</i>)	Children's Park, Guindy	2 U
3	Black swan (<i>Cygnus atratus</i>)	Indira Gandhi Zoological Park	2 U
4	Barn owl (<i>Tyto alba</i>)	Children's Park, Guindy	1 U
5	Greater sulphur crested cockatoo (<i>Cacatua galerita</i>)	Alipore Zoological Garden	1 U
6	Lesser Adjutant stork (<i>Leptoptilos javanicus</i>)	Assam State Zoo cum Botanical Garden	1 M
7	Orange winged Amazon parrot (<i>Amazona amazonica</i>)	Sayaji Baug Zoo, Vadadora	1 U
8	Rainbow lorikeet (<i>Trichoglossus moluccanus</i>)	Sayaji Baug Zoo, Vadadora	1 U
9	Ruppell's parrot (<i>Poicephalus rueppellii</i>)	Indian Zoos	1 U
10	White rumped vulture (<i>Gyps bengalensis</i>)	Kamla Nehru Zoological Garden	1 U
11	White stork (<i>Ciconia ciconia</i>)	Thrissur Zoo and State Museum	1 U
12	Himalayan griffon vulture (<i>Gyps himalayensis</i>)	North Bengal Wild Animals Park	1 U
13	Green winged macaw (<i>Ara chloropterus</i>)	Indian Zoos	1 U
14	Darter (<i>Anhinga melanogaster</i>)	Indian Zoos	1 U
15	Red Junglefowl (<i>Gallus gallus</i>)	Kamla Nehru Prani Sangrahalaya	1M
16	Black headed ibis (<i>Threskiornis melanocephalus</i>)	Children's Park, Guindy	1U
17	Lesser flamingo (<i>Phoeniconaias minor</i>)	Indian Zoos	2U
18	Cattle egret (<i>Bubulcus ibis</i>)	Children's Park, Guindy	2U
19	Black kite (<i>Milvus migrans</i>)	Children's Park, Guindy	1 U
Mammals			
17	Indian Fox (<i>Vulpes bengalensis</i>)	Kurumbapatti Zoological Park	1 F
18	Grey langur (<i>Semnopithecus thersitis</i>)	Indian Zoos	1 F
19	Massai Giraffe (<i>Giraffa tippelskirchi</i>)	Sanjay Gandhi Biological Park / Mysore Zoo	1 F
20	Indian wild Ass (<i>Equus hemionus khur</i>)	Sakkarbaug Zoological Garden	1 M
21	Small Indian civet (<i>Viverricula indica</i>)	Assam State Zoo cum Botanical Garden	1 M
22	Savannah Baboon (<i>Papio cynocephalus</i>)	International Zoo	1 M
23	Malabar giant squirrel (<i>Ratufa indica</i>)	Rajiv Gandhi Zoological Park / Pilikula Biological Park	2 F
Reptiles			
24	Dwarf caiman (<i>Paleosuchus palpebrosus</i>)	Madras Crocodile Bank	1 U
25	Morlets crocodile (<i>Crocodylus moreletii</i>)	Madras Crocodile Bank	1 F
26	Siamese crocodile (<i>Crocodylus siamensis</i>)	Madras Crocodile Bank	1 M
27	Spectacled caiman (<i>Caiman crocodilus</i>)	Madras Crocodile Bank	2 F
28	Whitaker's boa (<i>Eryx whitakeri</i>)	Pilikula Biological Park	1 U
29	Salt water crocodile (<i>Crocodylus porosus</i>)	Madras Crocodile Bank	2 M
30	Red sand boa (<i>Eryx johnii</i>)	Chennai Snake Park Trust	1 U

The existing theme will be maintained for displaying animals in the following manner.

Zone I: Primates

The following species of primates will be maintained in this section. Proposed acquisitions are presented at the end of each section.

SI. No.	Species
1	Nilgiri Langur (<i>Semnopithecus johni</i>)
2	Lion-tailed macaque (<i>Macaca silenus</i>)
3	Savannah Baboon (<i>Papio cynocephalus</i>)
4	Rhesus macaque (<i>Macaca mulatta</i>)
5	Bonnet Macaque (<i>Macaca radiata</i>)
6	Hanuman Langur (<i>Semnopithecus entellus</i>)
7	Red-handed tamarin (<i>Saguinus midas</i>)
8	Squirrel monkey (<i>Saimeri sciureus</i>)
9	Chimpanzee (<i>Pan troglodytes</i>)
Proposed list	
11	Black tufted marmoset (<i>Callithrix penicillata</i>)
12	Hoolock Gibbon (<i>Hoolock hylobates</i>)
13	Hamadryas baboon (<i>Papio hamadryas</i>)
14	Ring-tailed lemur (<i>Lemur catta</i>)
15	Siamang Gibbon (<i>Symphalangus syndactylus</i>)

Zone II: Aquarium

A shark-shaped aquarium will house the following species of native, exotic and ornamental fishes.

SI. No.	Species	SI. No.	Species
1	Flowerhorn Cichlid (<i>Amphilophus hybrid</i>)	12	Neon Tetra (<i>Paracheirodon innesi</i>)
2	Zebra Danio (<i>Danio rerio</i>)	13	Longnose Gar (<i>Lepisosteus osseus</i>)
3	Texas Cichlid (<i>Herichthys cyanoguttatus</i>)	14	Japanese Koi (<i>Cyprinus rubrofuscus</i>)
4	Giant Gourami (<i>Osphronemus goramy</i>)	15	Guppy Fish (<i>Poecilia reticulata</i>)
5	Leopard Cory Catfish (<i>Corydoras trilineatus</i>)	16	Glass Fish (<i>Parambassis ranga</i>)
6	Silver Arowana (<i>Osteoglossum bicirrhosum</i>)	17	Snakehead Fish (<i>Channa striata</i>)
7	Oscar Fish (<i>Astronotus ocellatus</i>)	18	Kissing Gourami (<i>Helostoma temminckii</i>)
8	Rainbow Shark (<i>Epalzeorhynchus frenatum</i>)	19	Red-bellied Piranha (<i>Pygocentrus nattereri</i>)
9	Electric Yellow Lab (<i>Labidochromis caeruleus</i>)	20	Discus Fish (<i>Symphysodon aequifasciatus</i>)
10	Black Ghost Knifefish (<i>Apteronotus albifrons</i>)	21	Angelfish (<i>Pterophyllum scalare</i>)
11	African Cichlid (<i>Cichlidae</i>)		

Zone III: Forest Birds The following species of birds, both native and exotic, will be housed in this section.

Sl. No.	Species	Sl. No.	Species
1	Common Peafowl (<i>Pavo cristatus</i>)	30	Rainbow lorikeet (<i>Trichoglossus moluccanus</i>)
2	White Peafowl (<i>Pavo cristatus</i>)	31	Blossom-headed parakeet (<i>Psittacula roseate</i>)
3	Maroon bellied conure (<i>Pyrrhura frontalis</i>)	32	Buggerigars (<i>Melopsittacus undulatus</i>)
4	Grey cockatiel (<i>Nymphicus hollandicus</i>)	33	Java sparrow (<i>Lonchura oryzivora</i>)
5	White cockatiel (<i>Nymphicus hollandicus</i>)	34	Red-bellied macaw (<i>Orthopsittaca manilatus</i>)
6	Moluccan cockatoo (<i>Cacatua moluccensis</i>)	35	Scalet macaw (<i>Ara macao</i>)
7	White-crested cockatoo (<i>Cacatua alba</i>)	36	Harlequin Macaw (<i>Ara chloroptera</i>)
8	Sulphur-crested cockatoo (<i>Cacatua galerita</i>)	37	Severe Macaw (<i>Ara severus</i>)
9	Sand grouse (<i>Pterocles exustus</i>)	38	Palm Cockatoo (<i>Probosciger aterrimus</i>)
10	Red jungle fowl (<i>Gallus gallus</i>)	39	African grey parrot (<i>Psittacus erithacus</i>)
11	Lady Amherst Pheasant (<i>Chrysolophus amherstiae</i>)	40	Eclectus Parrot (<i>Eclectus roratus</i>)
12	Golden pheasant (<i>Chrysolophus pictus</i>)	41	Orange-winged Amazon (<i>Amazona amazonica</i>)
13	Silver Pheasant (<i>Lophura nycthemera</i>)	42	Rupel's parrot (<i>Poicephalus rueppellii</i>)
14	Shikra (<i>Accipiter badius</i>)	43	Red Munia (<i>Lonchura atricapilla</i>)
15	Peach faced lovebird (<i>Agapornis roseicollis</i>)	44	Dusky Pionus (<i>Pionus fuscus</i>)
16	Fischer's lovebird (<i>Agapornis fischeri</i>)	45	Yellow-billed babbler (Bio-center) (<i>Turdoides affinis</i>)
17	Zebra Finch (<i>Taeniopygia guttata</i>)	46	Red-vented bulbul (Bio-center) (<i>Pyconotus cafer</i>)
18	Blue and gold Macaw (<i>Ara ararauna</i>)	47	Red-whiskered bulbul (Bio-center) (<i>Pycnonotus jocosus</i>)
19	White eyed conure (<i>Aratinga leucophthalma</i>)	48	Koel (Bio-center) (<i>Eudynamis scolopaceus</i>)
20	Green-cheeked conure (<i>Pyrrhura molinae</i>)	49	Blue rock pigeon (Bio-center) (<i>Columba livia</i>)
21	Lesser Adjutant Stork (<i>Leptoptilos javanicus</i>)	50	Greater coucal (Bio-center) (<i>Centropus sinensis</i>)
22	Demoiselle crane (<i>Grus virgo</i>)	51	Paddy-field pipit (Bio-center) (<i>Anthus rufulus</i>)
23	Silver-diamond dove (<i>Geopelia cuneata</i>)	52	White-browed wagtail (Bio-center) (<i>Motacilla maderaspatensis</i>)
24	Sarus Crane (<i>Antigone antigone</i>)	53	Common Myna (Bio-center) (<i>Acridotheres tristis</i>)
25	Black Swan (<i>Cygnus atratus</i>)	54	White browed bulbul (Bio-center) (<i>Pycnonotus luteolus</i>)
26	Alexandrian parakeet (<i>Psittacula eupatria</i>)	55	Red-collared dove (Bio-center) (<i>Streptopelia tranquebarica</i>)
27	Rose-ringed parakeet (<i>Psittacula krameri</i>)	56	Spotted dove (Bio-center) (<i>Spilopelia chinensis</i>)
28	Mutant Rose-ringed parakeet (<i>Psittacula krameri</i>)	57	Eastern White stork (<i>Ciconia Ciconia</i>)
29	Sun Conure (<i>Aratinga solstitialis</i>)	58	other bird sps
Proposed List (Bio-center)			
1	Asian Paradise Flycatcher (<i>Terpsiphone paradisi</i>)	10	White browed wagtail (<i>Motacilla maderaspatensis</i>)
2	Hoopoe (<i>Upupa epops</i>)	11	Indian roller (<i>Coracias bengalensis</i>)
3	Black Drongo (<i>Dicrurus macrocercus</i>)	12	Sun bird (<i>Leptocoma zeylonica</i>)
4	Forest wagtail (<i>Dendronanthus indicus</i>)	13	Oriental Magpie Robin (<i>Copsychus saularis</i>)
5	Indian robin (<i>Copsychus fulicatus</i>)	14	Ashy Prinia (<i>Prinia socialis</i>)
6	Coppersmith Barbet (<i>Psilopogon haemacephalus</i>)	15	Tailor bird (<i>Orthotomus sutorius</i>)
7	Blyth's Reed Warbler (<i>Acrocephalus dumetorum</i>)	16	Rufous Treepie (<i>Dendrocitta vagabunda</i>)
8	Red wattled Lapwing (<i>Vanellus indicus</i>)	17	Orange-headed Thrush (<i>Geokichla citrina</i>)
9	Cheer pheasant (<i>Catreus wallichii</i>)		

Zone IV: Herbivores

The following nine species of native herbivores currently exhibited will be supplemented with four additional species and displayed in this section, which will primarily feature Indian ungulates.

Sl. No.	Species
1	Spotted Deer (<i>Axis axis</i>)
2	Hog deer (<i>Axis porcinus</i>)
3	Barking deer (<i>Muntiacus muntjak</i>)
4	Sambar Deer (<i>Rusa unicolor</i>)
5	Swamp deer (<i>Rucervus duvauceli</i>)
6	Black buck (<i>Antilope cervicapra</i>)
7	Nilgai (<i>Boselaphus tragocamelus</i>)
8	Mouse Deer (<i>Moschiola indica</i>)
9	Brow-antlered deer (<i>Rucervus eldi</i>)
10	Indian Gaur (<i>Bos gaurus</i>)
Proposed list	
1	Four-horned antelope (<i>Tetracerus quadricornis</i>)
2	Chinkara (<i>Gazella bennettii</i>)
3	Blue Wildebeest (<i>Connochaetes taurinus</i>)
4	Brow-antlered deer (<i>Rucervus eldi</i>)

Zone V: Large Herbivores

This section will contain large herbivore enclosures, primarily housing exotic species, with the exception of three native species—Indian One-horned Rhinoceros, Wild Boar, and Asian Elephant. For the Asian Elephant, the recommended guidelines outlined during stakeholder meetings on “Elephants Upkeep in Zoos” will be strictly followed.

Sl. No.	Species
1	Giraffee (<i>Giraffa camelopardalis</i>)
2	Hippopotamus (<i>Hippopotamus amphibius</i>)
3	Indian Greater one-horned Rhinoceros (<i>Rhinoceros unicornis</i>)
4	Asian Elephant (<i>Elephas maximus</i>)
5	Wild Ass (<i>Equus hemionus khur</i>)
6	Wild Pig (<i>Sus scrofa</i>)
7	Zebra sps
Proposed list	
1	Pygmy hog (<i>Porcula salvania</i>)

Zone VI: Large Carnivores

This section will house the following species of large carnivores, consisting primarily of big cats.

SI. No.	Species
1	Bengal Tiger (<i>Panthera tigris</i>)
2	Lion (Hybrid) (<i>Panthera leo</i>)
3	White Tiger (<i>Panthera tigris</i>)
4	Leopard (<i>Panthera pardus</i>)
Proposed list	
1	Jaguar (<i>Panthera onca</i>)
2	African Cheetah (<i>Acinonyx jubatus</i>)

Zone VII: Animal Safaris

Currently, the Lion Safari and Deer Safari are functional. In addition, designated space has been earmarked in the northern part of the zoo for the newly proposed Gaur Safari and Tiger Safari.

SI. No.	Species
1	Lion Safari (<i>Panthera leo</i>)
2	Herbivore Safari
Proposed list	
1	Tiger Safari (<i>Panthera tigris</i>)

Zone VIII: Small Mammals

This section currently houses four species, and two additional species have been proposed to be added.

SI. No.	Species
1	Malabar giant Squirrel (<i>Ratufa indica</i>)
2	Flying Squirrel (<i>Petauristha philippinensis</i>)
3	Smooth-coated otter (<i>Lutrogale perspicillata</i>)
4	Grizzled Giant Squirrel (<i>Ratufa macroura</i>)
5	Malayan /Black giant squirrel (<i>Ratufa bicolor</i>)
Proposed list	
1	Meerkat (<i>Suricata suricatta</i>)

Zone IX: Wetland Birds

This zone features aviaries designed to represent the Vedanthangal Bird Sanctuary and the Point Calimere Bird Sanctuary. It will house a variety of wetland bird species, showcasing the diversity and ecological importance of these habitats.

Sl. No.	Species
1	Cattle Egret (<i>Bubulcus ibis</i>)
2	Little Egret (<i>Egretta garzetta</i>)
3	Lesser Flamingo (<i>Phoeniconaias minor</i>)
4	Grey Heron (<i>Ardea cinerea</i>)
5	Black-crowned Night Heron (<i>Nycticorax nycticorax</i>)
6	Indian Pond Heron (<i>Ardeola grayii</i>)
7	Glossy Ibis (<i>Plegadis falcinellus</i>)
8	Little Cormorant (<i>Microcarbo niger</i>)
9	Oriental Darter (<i>Anhinga melanogaster</i>)
10	Eurasian Spoonbill (<i>Platalea leucorodia</i>)
11	White Ibis (<i>Threskiornis aethiopia</i>)
12	Spot-billed Pelican (<i>Pelecanus philippensis</i>)
13	Great White Pelican (<i>Pelecanus onocrotalus</i>)
14	Painted Stork (<i>Mycteria leucocephala</i>)
15	Asian Openbill (<i>Anastomus oscitans</i>)
16	Indian Spot-billed Duck (<i>Anas poecilorhyncha</i>)
17	Bar-headed Goose (<i>Anser indicus</i>)
Proposed list	
1	Garganey (<i>Spatula querquedula</i>)
2	Red-naped Ibis (<i>Pseudibis papillosa</i>)
3	Lesser Whistling Teal (<i>Dendrocygna javanica</i>)
4	White-breasted water hen (<i>Amaurornis phoenicurus</i>)
5	Eurasian Coot (<i>Fulica atra</i>)
6	Purple moorhen (<i>Porphyrio porphyrio</i>)
7	Bronze-winged Jacana (<i>Metopidius indicus</i>)

Zone X: Birds of Prey

The following species of carnivorous birds, commonly known as ‘birds of prey’, are displayed in this section which includes Vultures, Kites and Eagles.

Sl. No.	Species
1	Black Kite (<i>Milvus migrans</i>)
2	Brahminy Kite (<i>Haliaster indus</i>)
3	White backed vulture (<i>Gyps bengalensis</i>)
4	Serpent Eagle (<i>Spilornis cheela</i>)
Proposed list	
5	Egyptian vulture (<i>Neophron percnopterus</i>)
6	Griffon Vulture (<i>Gyps himalayensis</i>)

Zone XI: Nocturnal Animal House

The dedicated nocturnal animals’ enclosure currently houses the following species, and one additional species is proposed.

Sl. No.	Species
1	Palm civet (<i>Paradoxurus hermaphroditus</i>)
2	Small Indian Civet (<i>Viverricula indica</i>)
3	Porcupine (<i>Hystrix indica</i>)
4	Slender Loris (<i>Loris lydekkerianus</i>)
5	Black-naped Hare (<i>Lepus nigricollis</i>)
Proposed list	
1	Bere-bellied Hedgehog (<i>Paraechinus nudiventris</i>)
2	Slow loris (<i>Nycticebus bengalensis</i>)

Zone XII: Small Carnivores Section

This section will house the following Indian native species, primarily nocturnal species of lesser cats, and the Honey Badger.

Sl. No.	Species
1	Jungle Cat (<i>Felis chaus</i>)
Proposed list	
1	Fishing Cat (<i>Prionailurus viverrinus</i>)
2	Leopard Cat (<i>Prionailurus bengalensis</i>)
3	Honey Badger (<i>Mellivora capensis</i>)

Zone XIII: Reptiles Section

The reptile section will contain the following species of lizards, snakes, turtles, tortoises, and crocodiles.

Sl. No.	Species	Sl. No.	Species
1	Indian Gharial (<i>Gavialis gangeticus</i>)	20	Ball Python (<i>Python regius</i>)
2	Morelet's Crocodile (<i>Crocodylus moreletii</i>)	21	Red Sand Boa (<i>Eryx johnii</i>)
3	Nile Crocodile (<i>Crocodylus niloticus</i>)	22	Whitaker's Boa (<i>Eryx whitakeri</i>)
4	Dwarf Caiman (<i>Paleosuchus palpebrosus</i>)	23	Green Vine Snake (<i>Ahaetulla nasuta</i>)
5	West African Dwarf Crocodile (<i>Osteolaemus tetraspis</i>)	24	Trinket snake (<i>Coelognathus helena</i>)
6	Saltwater Crocodile (<i>Crocodylus porosus</i>)	25	Checkered Keelback Water Snake (<i>Fowlea piscator</i>)
7	Mugger / Marsh Crocodile (<i>Crocodylus palustris</i>)	26	Common Sand Boa (<i>Eryx conicus</i>)
8	Siamese crocodile (<i>Crocodylus siamensis</i>)	27	Yellow Anaconda (<i>Eunectes notaeus</i>)
9	Spectacled Caiman (<i>Caiman crocodilus</i>)	28	Water Monitor Lizard (<i>Varanus salvator</i>)
10	Indian Rat Snake (<i>Ptyas mucosa</i>)	29	Common Monitor Lizard (<i>Varanus bengalensis</i>)
11	Common Krait (<i>Bungarus caeruleus</i>)	30	Indian Chameleon (<i>Chameleo zeylanicus</i>)
12	Indian Cobra (<i>Naja naja</i>)	31	Assam Roof Turtle (<i>Pangshura tecta</i>)
13	King Cobra (<i>Ophiophagus hannah</i>)	32	Tricarinate Hill Turtle (<i>Melanochelys tricarinata</i>)
14	Russell's Viper (<i>Daboia russelii</i>)	33	Spotted Pond Turtle (<i>Geoclemys hamiltonii</i>)
15	Saw-scaled Viper (<i>Echis carinatus</i>)	34	Indian Black Turtle (<i>Melanochelys trijuga</i>)
16	Green Iguana (<i>Iguana iguana</i>)	35	Indian Flapshell Turtle (<i>Lissemys punctata</i>)
17	Red Iguana (<i>Iguana iguana</i>)	36	Red-eared Slider Turtle (<i>Trachemys scripta elegans</i>)
18	Indian Rock Python (<i>Python molurus</i>)	37	Star Tortoise (<i>Geochelone elegans</i>)
19	Reticulated Python (<i>Malayopython reticulatus</i>)	38	Buff striped keelback (<i>Amphiesma stolatum</i>)
Proposed List			
1	Green Anaconda (<i>Eunectes murinus</i>)	5	Monocled Cobra (<i>Naja kaouthia</i>)
2	Northern River Terrapin (<i>Batagur baska</i>)	6	Blue-tongued Skink (<i>Tiliqua scincoides</i>)
3	Red-crowned Roofed Turtle (<i>Batagur kachuga</i>)	7	East Indian Leopard Gecko (<i>Eublepharis hardwickii</i>)
4	Three-striped Roofed Turtle (<i>Batagur dhongoka</i>)		

Zone XIV: Bears Section

There are two species of bears housed in this section. More individuals will be added to the existing Himalayan Black Bear enclosure

Sl. No.	Species
1	Sloth Bear (<i>Melursus ursinus</i>)
2	Himalayan Black Bear (<i>Ursus thibetanus</i>)

Zone XV: Canids and Hyena Section

There are three species of canids and one species of hyena in this section.

Sl. No.	Species
1	Indian Wild Dog (Dhole) (<i>Cuon alpinus</i>)
2	Indian Wolf (<i>Canis lupus</i>)
3	Golden Jackal (<i>Canis aureus</i>)
4	Striped Hyena (<i>Hyaena hyaena</i>)
Proposed list	
1	Bengal Fox (<i>Vulpes bengalensis</i>)

Zone XVI: Flightless Birds

There are four species of flightless birds in the zoo, of which three are housed together opposite the herbivore area. As ostriches are high in number compared to the above three species, they are housed in a separate, large enclosure adjacent to the giraffe in the large herbivores area. AAZP holds a good track record of breeding ostriches and is one of the primary candidates for animal exchange programmes with other zoos.

Sl. No.	Species
1	Greater Rhea (<i>Rhea americana</i>)
2	Southern Cassowary (<i>Casuarus casuarus</i>)
3	Emu (<i>Dromaius novaehollandiae</i>)
4	Ostrich (<i>Struthio camelus</i>)

Zone XVII: Owlry

A set of five enclosures dedicated to owls will be constructed between the raptors' enclosure and the turtle house. This will house five species of owls mentioned below.

Sl. No.	Species
1	Great Horned Owl (<i>Bubo bubo bengalensis</i>)
2	Barn Owl (<i>Tyto alba</i>)
3	Forest Owlet (<i>Athene blewitti</i>)
Proposed list	
1	Mottled Wood Owl (<i>Strix ocellata</i>)
2	Brown Fish Owl (<i>Ketupa zeylonensis</i>)

Description of the layout plan

Thus, the total species of animals being displayed will follow the following scheme.

Table: 10: Summary of thematic animal enclosures

Section	Details	Present	Additions	Deletion	Total
1	Primates	9	5	0	14
2	Aquarium	1	0	0	1
3	Forest Birds	63	17	0	79
4	Herbivores	10	4	0	14
5	Large herbivores	8	1	0	9
6	Large carnivores	4	2	0	6
7	Animal Safaris	2	1	0	3
8	Small mammals	5	1	0	7
9	Wetland birds	17	7	0	24
10	Birds of prey & Hornbill	4	3	0	7
11	Nocturnal animals	5	2	0	7
12	Small Carnivores Section	1	3	0	4
13	Reptiles	38	7	0	46
14	Bears	2	0	0	2
15	Canids and Hyena	4	1	0	5
16	Flightless Birds	4	0	0	4
17	Owls	3	2	0	5
	Total	180	56	0	236

The existing collection plan comprises 180 species, of which 127 are endemic (native) species and 53 are exotic species, representing 70% endemic species and 30% exotic species of the total collection.

Under the Collection Plan for the period 2026–2045, it is proposed to include an additional 52 endemic species and 12 exotic species. With these additions, the zoo's collection will increase to 243 species, comprising 178 endemic species and 65 exotic species. Consequently, the proportion of endemic species will increase to 73.14%, while the proportion of exotic species will decrease to 26.86%, reflecting the zoo's enhanced focus on the conservation and display of India's native wildlife while maintaining a representative collection of selected exotic species.

(ii) Proposal to Address Inadequacies and Constraints:

Enrichment of Infrastructure and Habitat in Select Enclosures:

a. 1. ANIMAL SECTION:

Animal Housing Enclosures in the Display Area

Most of the animal enclosures have adequate space provision as per CZA recommendations. However, measures to restrict the visibility of exhibits to 33%, as per CZA recommendations,

As a general measure, steps need to be taken to move the feeder and water troughs away from the visitor side. Bamboo or other vegetation cover should be provided between enclosures. The use of chain-link fencing in moated exhibits should be discontinued, develop immersive naturalistic enclosures by gradually replacing iron bars and chain-link fencing, enhance species specific simulated natural habitat. Attention should also be concentrated on treatment kraals, animal restraint devices, enclosure enrichment strategies, and predator and rodent control

Enclosure No. 2: Fish-Breeding Tank

Both enclosures are located quite close to the entrance near the main road. At present, the pond is utilized for freshwater fish rearing for in-house supply. The black swan has now been moved to a new, interior area near the Sarus Crane enclosure.

Enclosures No. 4–7, 12–13, and No. 100–102: Primate Section

(4–7 and 12–13) The Nilgiri Langur enclosure will be enriched with native tree species from the Western Ghats. Likewise, the Lion-Tailed Macaque enclosure will be enriched with native species from the Western Ghats to provide a near-natural environment, which is currently filled with local tree species of the park. Species such as *Ficus microcarpa*, *Artocarpus heterophyllus*, and *Madhuca indica* will be planted to enhance the complexion of the moats.

The Nilgiri Langur and Lion-Tailed Macaque enclosures have sufficient area in the exhibit but require regular and innovative enrichment activities, which may need to be replaced or repaired promptly. The night shelters for both species need to be reconstructed, as they are dingy and poorly ventilated. In particular, the night shelter of the Nilgiri Langur is located below ground level, making it dangerous for the animals during the rainy season.

An extension from the Red-Handed Tamarin enclosure will be built to house marmosets (102a).

(101) The moat of the Chimpanzee enclosure is of appropriate size and dimension. Habitat enrichment will be provided to the animals through the planting of suitable tree species. To supplement the perches, dry tree stumps and wooden swings, wheels of appropriate dimensions have been fixed.

Efforts will be made to improve visitor viewing points through the plantation of appropriate species. The hard exteriors of the feeding cells and moat walls will be camouflaged with suitable plantations. A green buffer comprising bamboo, shrubs, and trees of suitable species and optimum size will also be created.

The Savannah Baboon will be maintained in the fairly large Enclosure No. 100.

No. 10: Butterfly Park

The 2.7 ha Butterfly Park supports over 75 butterfly species and includes host plants, a breeding centre, and a pupa-rearing unit. To improve the facility, mesh nets should be upgraded, and water sprinklers and exhaust fans installed to regulate temperature. A dedicated breeding centre with an entomology laboratory is proposed for future development



FIG. 21: BUTTERFLY PARK AT ARIGNAR ANNA ZOOLOGICAL PARK

Enclosure No. 15–28: Bird Enclosures

The existing bird enclosures were constructed when the zoo was initially started, and they need substantial renovation or even reconstruction in some cases. The bird section will further be divided into the following subdivisions:

1. **Galliformes** – Common, white, black-shouldered, and pied peafowls, red junglefowl, and sand grouse are presently housed in this section. Among them, the peafowl enclosure is currently crowded; some individuals have been released to match the carrying capacity of the enclosure.
2. **Psittaciformes** – Alexandrine parakeet, rose-ringed parakeet, and blossom-headed parakeet are displayed now. Rose-ringed parakeets, which often tend to get crowded, will be released when the enclosure becomes crowded. Therefore, the number of individuals will be regulated by releasing surplus individuals periodically.

The Exotic Subdivision will have two or three exhibits, namely:

1. **Pheasants** – The pheasant enclosures will be improved by adding some vegetative cover (undergrowth) inside.
2. **Cockatoos, Macaws, Parrots, and Conures** – These will be exhibited in this section.
3. **Flightless Birds: Emu, Rhea, Cassowary, and Ostrich.** Among these, all species other than ostrich are housed in a single section. Because of the greater number of ostriches and their requirement for a spacious enclosure, they are kept separately near the exotic mammals area.

All the bird enclosures, except the aquatic bird enclosures and the flightless bird enclosure, will be built on a rodent-proof foundation and have RCC flooring with about 1 m of soil deposited over the floor to facilitate planting of dwarf trees and tree branches to serve as perches. The birds will be provided adequate withdrawal areas with appropriate nesting boxes. Green buffers will also be provided between various exhibits. The feeding cells will be made rodent-proof.

Enclosures No. 29–35: Ungulates

The paddocks of all the enclosures are adequate in size and have requisite vegetation for behavioural enrichment. Feeding kraals need renovation. New kraals will be constructed at a location far away from the visitor viewing point but close to the wall of the paddock so that animals can get direct access to the paddock through an appropriately designed gate. The moat on the road side is slightly realigned to create an immersion effect for visitors. Bamboo and suitable tree species will be planted in the paddocks to soften the visual impact of moats and kraals. Green buffer plantations will also be established between all enclosures

No. 36–37: Common Otter and Meerkat Enclosures

The toughened glass of adequate strength has been replaced so that it can withstand the pressure of a high-water column and enable effective viewing. The second section will be modified appropriately and used for housing meerkats.

No. 38: Nilgai Enclosure

The Nilgai enclosure could get crowded soon, and some individuals may be sent out in an animal exchange programme. Habitat enrichment to be developed in Nilgai enclosure.

No. 39: Lion Enclosure

The lion moat is appropriate for displaying lions, and the boundary wall between the Nilgai and lion enclosures to be strengthened. Habitat enrichment to be developed.

No. 40: Tiger Enclosure

The tiger moat enclosure is appropriate for housing tigers. Tigers are displayed in subsections for effective viewing. Habitat enrichment to be developed.

No. 41: Sambar Enclosure

The number of individuals within the enclosure will be regulated by shifting additional individuals to the deer safari area. Planting of suitable shrub species will be done to camouflage the hard exteriors of the enclosure.

No. 42: Indian Gaur Enclosure

The enclosure is of adequate size for housing and displaying only a few animals. Currently, the enclosure is crowded with 42 individuals, and some need to be shifted to the newly proposed Gaur Safari in the near future.

No. 43: Blue Wildebeest

One of the two sections of the earlier Gaur enclosure will be used to house African Wildebeest. The gaurs in this section will be shifted to the newly proposed Gaur Safari.

No. 44: New Mouse Deer Enclosure

A recently constructed enclosure houses mouse deer, and this will be maintained as is.

No. 45: Squirrel House

The enclosure size is sufficient. The two enclosures should be adequately enriched based on the physical and biological requirements of the animals.

No. 46: Wild Ass Enclosure

The wild ass enclosure is of appropriate dimension and is sufficient to house the pair. It will be sufficient even if the number increases due to breeding. The animal shelter needs periodic enrichment.

No. 47: White Tiger Enclosure

This is a good wet-moat enclosure and is currently used for white tigers. The animal house needs some renovation.

No. 48: Wild Dog Enclosure

The enclosure is large enough to house the existing number of individuals. The size of the animal house, with an open yard of 800 sq. m, is sufficient. However, the shelter needs renovation with double-layer protection for the safety of animals as well as keepers.

No. 49 and 51: Sloth Bear and Himalayan Black Bear

Enclosures are appropriately designed and have paddocks and feeding cells of adequate size. Modifications of the moat to give an immersion effect at the viewing point and planting of tree trunks to meet the behavioural requirements of the bears have been done.

No. 50: Indian Fox Enclosure

The enclosure is good and of sufficient size. It does not need any substantial modification. It is currently used for housing Indian fox.

No. 52: New Tiger Enclosure

This enclosure was recently constructed for housing excess tigers and is of sufficient size. The animal shelter will require some basic renovation in the future.

No. 53: Carnivore Temporary Care Area

This is a good enclosure. The size of the animal house is sufficient. An open yard of 600 sq. m will be sufficient. At present, no animals are housed here. This will be used as an off-site temporary enclosure for carnivores. Only the animal housing is available at present, and a yard needs to be developed.

No. 54: Tiger Safari

A tiger safari is proposed to be developed in this area. When the zoo has a sufficient number of tigers to enable their maintenance in the safari area, it will be made operational and opened to visitors. Animal shelters, kraals, sheds, and feeding cubicles need to be constructed. A limited number of animals will be maintained in the safari as per its carrying capacity.

No. 55: Lion Safari

The Lion Safari is of appropriate size, spread across an area of 30 ha, and has adequate vegetation. However, the chain-link fence needs to be replaced. Compound wall inspection should be regularly conducted to ensure the strengthened boundaries. 2 m high fence should be provided around the existing fence as a second line of defense to prevent lions from escaping due to breaches. Provision of an emergency exit gate should also be made. The road should be realigned so that the paddock area is not visible to visitors.

No. 56: Herbivore Safari

The safari is located at a very suitable site, spanning an area of 86 ha, and has adequate vegetation. It gives visitors a real wilderness feeling. The Deer Safari has recently been renovated by providing improved shelters, designated feeding points, enhanced natural vegetation, and desilting the water bodies within the safari area to ensure a perennial water supply for the deer. Proper rainwater channeling has been done.

Some spotted deer could also be released in the safari. No hog deer should be released due to the possibility of hybridization between spotted deer and hog deer. Because of the dense vegetation, blackbucks should not be released in the area. Gaur, being an endangered species, is in high demand for display in various zoos. There is currently no Gaur Safari in the zoo, but considering the fairly large population of Gaur available, it is feasible to send Gaurs into the herbivore safari in the near future. Night shelters, sheds, kraals, feeding cubicles, and a water pool are required.

No. 57: Golden Jackal Enclosure

This is a good, spacious enclosure for jackals and does not need any modification. Regular maintenance will be sufficient.

No. 58: Wolf Enclosure and No. 59: Hyena Enclosure

Both enclosures are appropriately designed and need no major modification. However, routine maintenance will have to be done. The squeeze cages of these enclosures need to be replaced.

No. 60: Exotic Birds Aviary

A dedicated exotic forest birds' aviary will be built opposite the present Himalayan Black Bear enclosure. Visitors can walk through an enclosed chamber within which a variety of exotic forest birds, such as Macaws, Cockatoos, etc., will be housed.



FIG. 22: ENCLOSURE ENRICHMENTS AT PRIMATE (RHESUS MACAQUE & SQUIRREL MONKEY) AND CARNIVORE (WHITE TIGER & LEOPARD) ENCLOSURES

FIG. 23: SOME ANIMALS ON DISPLAY AT ARIGNAR ANNA ZOOLOGICAL PARK**Bengal Tiger****White Tiger****Painted stork****Eurasian white stork****Lesser Flamingo****Marsh Crocodile****King Cobra**



Chimpanzee



Hanuman Langur



Squirrel monkey



Nilgiri Langur



Mottled Wood owls in the nocturnal animal house

No. 61. Small Cat House

A dedicated series of enclosures will be built for housing small cat species such as Jungle Cat, Leopard Cat, and Fishing Cat.

No. 62. Jaguar Enclosure

A new enclosure needs to be constructed opposite the Leopard enclosure to house Jaguars.

No. 63. Cheetah Enclosure

A new, flat, and sufficiently large enclosure needs to be constructed for housing Cheetahs, opposite the Leopard and adjacent to the newly proposed Jaguar enclosure.

No. 64. Heterozygous Tiger Enclosure

A good enclosure that is being used for housing heterozygous, melanistic Tigers. The animal shelter and grills, however, would need renovation in the future.

No. 65. Tiger Enclosure

A separate breeding cell for Tigers is maintained in this isolated enclosure. A good enclosure used for housing Tigers and cubs. The animal house needs some basic renovation of flooring.

No. 66. Leopard

An enclosure consisting of two subsections with a grilled dome is maintained for displaying Leopards. Sufficient enrichments for climbing, such as tree stumps with slabs, have been provided.

No. 67. Raptor House: (a–b) Kites, (c) Hornbill, (d–f) Vultures, (g) Owlry

These enclosures are of adequate width and height with sufficient natural enrichment. The Hornbill section behind the Vulture enclosure will be used to house Hornbills. A new similar pair of enclosures will be built adjacent to the Kites to house the proposed Griffon and Egyptian Vultures. The area of each of these enclosures will be slightly expanded to 300 sq. m to provide enough flying space for the birds. A set of four enclosures exhibiting four species of Owls, of appropriate dimensions, will be built between the Raptors and Turtle exhibit.

No. 68. Terrestrial Walk-through Aviary (Bio-centre)

This aviary is one of the largest and highest in the country. There are frequent breaches in the chain-link roof and upper portions of the side chain-link fences. As a remedy to the situation, the upper portion of the aviary needs to be re-knit. These breaches in the roof, which occurred during Cyclone Vardha (2016), have enabled the escape of some bird species housed within and hence need replacement in the near future. The artificial stream sides in the aviary would have barriers of appropriate size on both sides. A lot of trees and shrubs would be planted in the aviary to serve as perches and nesting substrata for the birds. Appropriate feed species will also be planted within the aviary.

No. 69 a–c. Point Calimere Bird Sanctuary and Vedanthangal Bird Sanctuary Aviaries

Structural renovation has been proposed for all the water-bird aviaries. All three enclosures are of appropriate size and height. The top cover needs to be changed to a dome-shaped structure.

No. 70. Tortoises & Turtles Enclosure

Turtle and Tortoise enclosures are of sufficient size but need to be repartitioned to house the existing five species of chelonians. Currently, there are only four partitions, and the boundary walls and chain-link roof are quite old, which would need renovation.

No. 71 a & b. Anacondas

This newly constructed enclosure is currently being used for Yellow Anacondas and their juveniles. The second part would be used for Green Anacondas upon their acquisition.

No. 72. Water Monitor Lizard Enclosure

It has recently been renovated with see-through glass on all the walls to enable effective viewing around the enclosure.

No. 73. Komodo Dragon

A new enclosure will be built for housing the proposed Komodo Dragons to be acquired from the Madras Crocodile Bank.

No. 74. Common Monitor

Common Monitors are currently kept in this enclosure after sufficient modification, such as smoothening of the inner walls and tree trunks within. One tree stump in the middle of the enclosure has been provided for the Monitors to climb if needed, in such a way that it is isolated from the boundaries.

No. 75 & 76. Spectacled Caiman and Siamese Crocodile

Sufficiently large enclosures are provided for housing these crocodilian species. The boundary walls of these enclosures will be further strengthened in the future to ensure safety and durability.

No. 77. Serpentarium

The serpentarium is an old structure that requires substantial renovation to meet current standards of animal housing, maintenance, and visitor experience. It consists of 17 sections that currently house snakes and iguanas.

No. 78. King Cobra

A newly constructed enclosure has been developed for housing King Cobras. One pair is maintained in the public display section, while another pair is kept in an off-site enclosure located behind it.

No. 79–84, 86, 89. Crocodiles

Most of the crocodile and gharial enclosures are of adequate dimensions, with water pools allowing the reptiles to remain fully immersed. The boundary walls of these enclosures will be gradually extended, strengthened, and renovated as necessary in a phased manner.

No. 85 & 86. Gharial Off-Exhibit Enclosure and Underwater Exhibit

An off-site enclosure is maintained behind the underwater exhibit for breeding gharials. The underwater gharial exhibit is a major visitor attraction, featuring toughened glass windows that allow clear viewing of gharials submerged in water. However, a UV water treatment system is required to reduce turbidity and improve visibility.

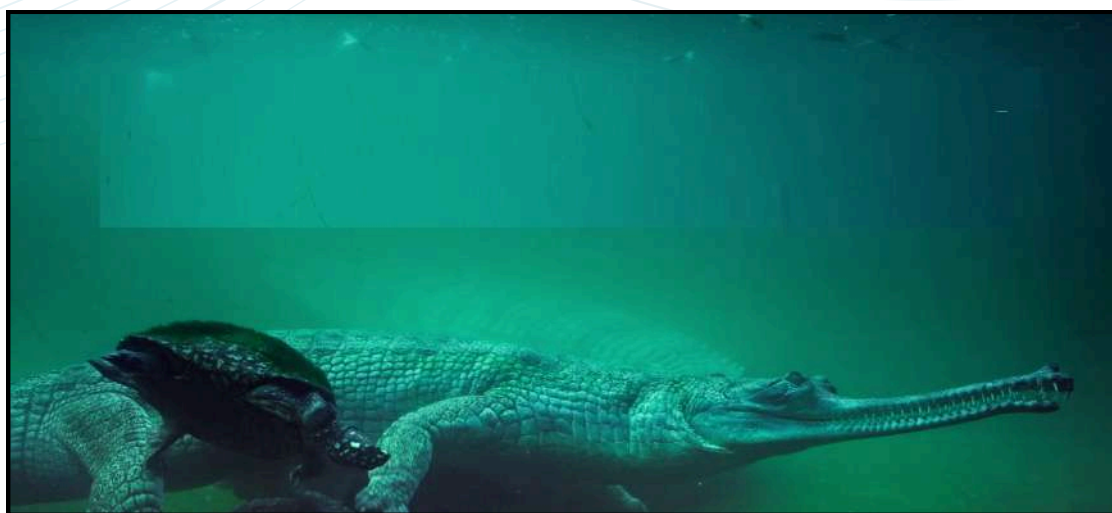


FIG. 25: UNDERWATER GHARIAL ENCLOSURE

No. 90. Elephant Enclosure

The elephant enclosure extends over an area of 8.7 hectares, providing sufficient space for the two individuals currently housed in the zoo. A specialized elephant restraining device has been installed at the rear of the enclosure to facilitate safe immobilization and treatment when required. A dedicated kitchen within the enclosure complex is used for cooking rice and other food items for the elephants. Elephant keepers are provided with a keeper house to enable round-the-clock monitoring and care.

The enclosure also includes a large water pool for wallowing and cooling, along with a series of showers at the front section. These showers allow the elephants to drench themselves during hot summers and serve as a popular attraction for visitors.



FIG. 26: ELEPHANT-KRAAL CONSTRUCTED AT THE ENCLOSURE



FIG. 27: WALLOWING POND AND SHOWER AT ELEPHANT ENCLOSURE

No. 91. Wild Boar

The enclosure is sufficient for the current population and has capacity to accommodate additional individuals upon breeding. It is an oval-shaped terrestrial enclosure with adequate wallowing marshes for the wild boars.

No. 5a,b; 4b. LTM and Nilgiri Langur Off-Exhibit Breeding Enclosures

Located behind the reptile exhibits (ex-prehistoric animal park), two spacious wet-moated enclosures have been constructed under the coordinated conservation breeding programme for Lion-tailed Macaques (LTM). These are enriched with planted seedlings, including fruiting species such as guava, mango, and tamarind.

A new wet-moated enclosure of nearly the same area as the LTM facility, with an animal house, will be constructed adjacent to the existing center for Nilgiri Langur conservation breeding. This enclosure will also be enriched with food plants to replicate a near-natural environment.

No. 92. Hippopotamus Enclosure

The water is changed frequently. For better visitor viewing, new water pools are proposed at the center of the paddock. An appropriately designed water recycling plant will be installed to maintain water quality and prevent fecal contamination.

No. 93. Rhinoceros Enclosure

Previously used for Pygmy Hippopotamus, this enclosure is now repurposed for Rhinoceros. It includes a pool and a water shower for cooling during summers. However, the animal house requires renovation.

No. 94. Wallaby Enclosure

This enclosure requires renovation and modifications before housing wallabies.

No. 95. Ostrich Enclosure

A good enclosure with a regularly breeding population. The size is sufficient and no major modifications are needed.

No. 96. Giraffe Enclosure

A well-designed enclosure replicating dry grassland habitat, with appropriate shelter.

No. 97. Zebra Enclosure

Spread over 0.657 hectares, this enclosure includes a good animal house and yard, and is adequate for the proposed zebra collection. An additional animal house of suitable dimensions will be constructed for the incoming population.

No. 98. Nocturnal Animal House

Visitors' eyesight is conditioned in a dim-light chamber with interpretation signage before entering. The main gallery has no external light, while animal enclosures provide sufficient internal lighting for viewing. Mud floors and adequate perches are maintained for the animals. Deployment of dim blue lights, which do not disturb the natural behaviour of light-sensitive nocturnal animals, has been done to enhance visibility. Each enclosure also has an outdoor section attached at the rear, allowing exposure to sunlight as required. Cross-ventilation is provided with sufficient exhaust fans.

No. 99. Aquarium

The aquarium has 21 exhibits showcasing both native and exotic fish species, which are well maintained.

No. 103. Veterinary Hospital Complex

This complex includes the veterinary hospital, old and new operation theatres, and a classroom facility for veterinary interns.

No. 104. Transit Enclosures

Located near the veterinary hospital, these enclosures house recovering animals and those under medical observation. Basic renovation of flooring and concrete structures is required.

Otter Lake – Bird Sanctuary within Arignar Anna Zoological Park

Otter Lake covers 7 hectares within the zoo and attracts around 70 species of migratory birds between October and December. Both terrestrial and aquatic birds congregate here seasonally.

The lake can be developed into a water bird sanctuary through desilting and deepening, afforestation for roosts and perches, and creation of islands or mounds by dredging. Planting *Barringtonia sp.* and *Acacia nilotica*, along with releasing fingerlings, will enhance habitat and food availability.

Currently surrounded by trees, the lake requires trimming of bushes for better visitor visibility. Proposed facilities include walk-in platforms, observation towers with binoculars, and an Interpretation Centre at the entrance, providing details about migratory birds and their seasonal patterns. Desilting will also significantly improve groundwater recharge in the area.



FIG. 28: OTTERI LAKE SITUATED WITHIN THE ZOOLOGICAL PARK

Animal Rescue Centre

The Animal Rescue Centre was established to accommodate up to 60 rescued lions and tigers. It is designed with the flexibility to house animals of various types and body sizes, including mammals, birds, and reptiles.

At present, the centre shelters a lioness, three tigers, three leopards rescued from conflict situations, and one crocodile. Facilities include 50 spacious holding cells and 21 paddocks equipped with water troughs to ensure adequate care and management of rescued animals



FIG. 29: AERIAL VIEW OF THE ANIMAL RESCUE CENTRE

Proposed New Enclosures

Mammals Section

No. 32 & 33. Four-horned Antelope and Chinkara Enclosures

- Two medium-sized enclosures will be developed in the herbivore section by dividing the current Spotted Deer enclosure. The proposed Chinkara and Four-horned Antelopes will be housed here, while the Spotted Deer will be shifted to the vacant portion of the Swamp Deer enclosure.

No. 9. Pygmy Hog Enclosure

- One of the older Mouse Deer enclosures located near the birds' section will be suitably modified for housing Pygmy Hogs.

Birds Section

- The proposed Black Ibis, Glossy Ibis, Bar-headed Goose, Garganey, and Whistling Teals can be accommodated within the existing two water-bird aviaries (Vedanthangal and Point Calimere, No. 69).
- A new aviary with two divisions will be constructed for Griffon and Egyptian Vultures (No. 67 e–f).
- A new Owlry (No. 67 g) has also been proposed to house four species of owls.

Exotic Animal Section

- Black Tufted Marmoset will be housed in a new enclosure proposed near the Red-handed Tamarin and Squirrel Monkey enclosures (No. 102a).
- No. 61. Jaguar – New enclosures will be constructed near the Leopard enclosure for the proposed collection of Jaguars.
- No. 62. African Cheetah – A new enclosure will be built adjacent to the Leopard enclosure to accommodate African Cheetahs.
- No. 94. Wallaby – The existing Kangaroo enclosure will be renovated and retained for Wallabies.

Reptiles Section

- No. 70b. Green Anaconda – Green Anacondas will be housed in the enclosure next to the Yellow Anaconda, where juveniles are currently maintained.
- No. 76. Common Wolf Snake – Specimens can be sourced from Chennai Snake Park for display in the serpentarium.

Veterinary Section

- **In-Patient Wards** – All squeeze cages in the IP and transit areas will be replaced with stainless steel to prevent rusting and injury. Additionally, a day kraal will be constructed at the rear of every cell in the In-Patient ward section.



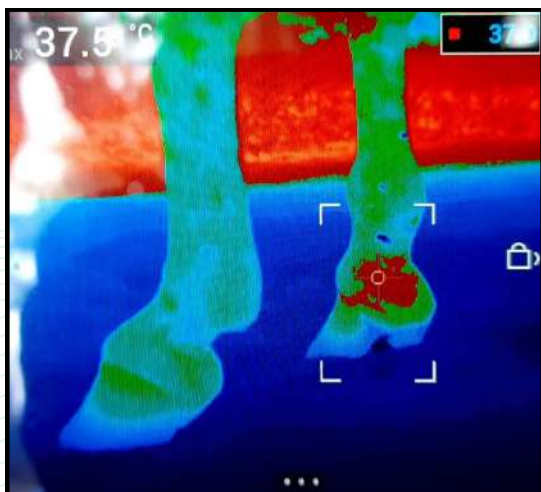
FIG. 30: ELISA UNIT AT THE VETERINARY HOSPITAL



FIG. 31: INJURED BIRD BEING TREATED



FIG. 32: TIGER, JACKAL AND ELEPHANT BEING TREATED AT THE ZOO

FIG. 33: CLINICAL INFRASTRUCTURE AT THE ZOO**Thermal imaging camera****Ultrasound imaging****Emergency and critical care of rescued, orphaned tiger cubs****Lioness being treated in a squeeze cage**

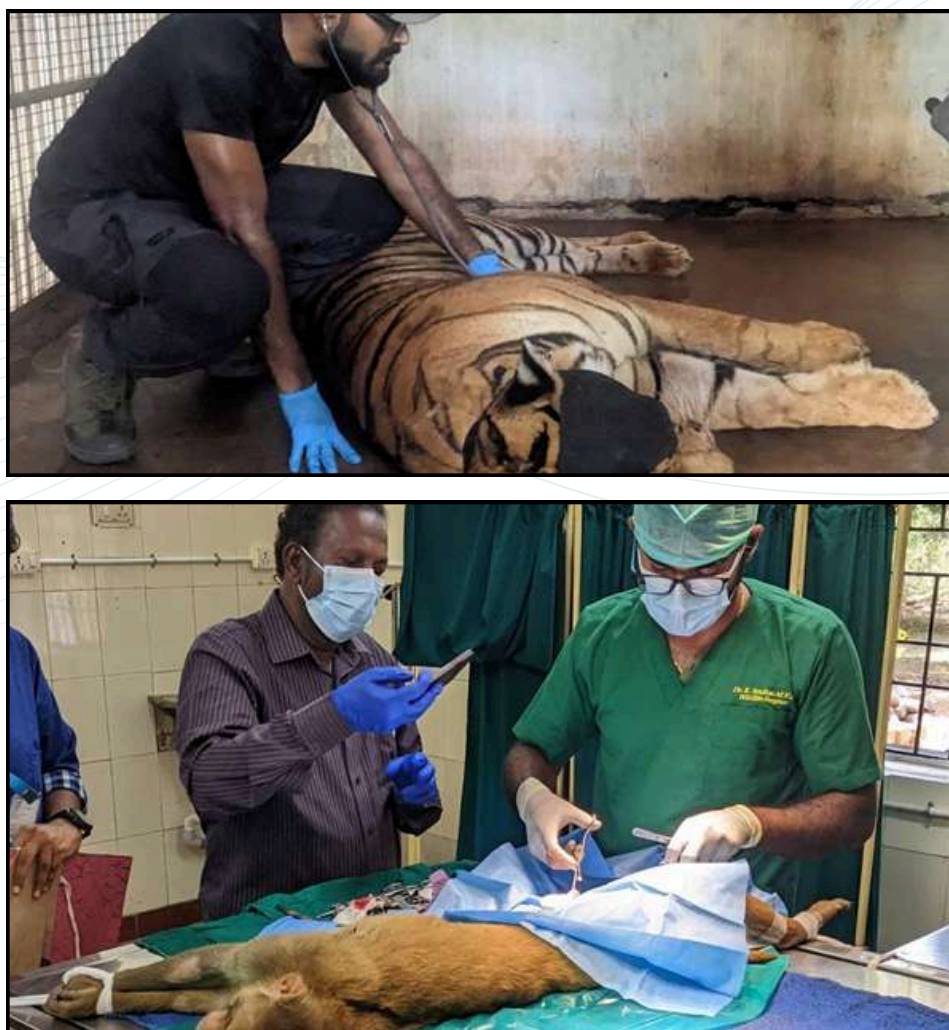


FIG. 34: TIGER AND RHESUS MACAQUE BEING TREATED AT THE VETERINARY HOSPITAL

Infrastructure

- Acquisition of a portable ultrasound machine with multiple probes is essential to cater to the diagnostic needs of a wide range of species.
- A fluorescent microscope is highly required for prompt diagnosis of blood protozoan diseases.
- Additional equipment such as video endoscopy, thermal imaging camera, hematology analyzer for birds and reptiles, and frequent upgradation of surgical instruments is also necessary.
- A two-floor large animal operation theatre will be constructed, equipped with induction and recovery rooms for equines, a hoisting facility to lift and position animals on the table, and a dedicated large animal anesthesia workstation.
- A neonatal care unit will be developed to accommodate young small animals and to hand-rear young herbivores.
- A forklifter will be acquired for safe and less stressful animal loading and unloading during transport.

By upgrading to these state-of-the-art facilities, the AAZP Veterinary Hospital can function as a referral hospital for South India, capable of handling emergency procedures for diverse wild animal species.

Zoo Stores

1. A cold-storage facility is available for effective short-term storage of animal feed.
2. Separate racks will be maintained for different types of feed.
3. A white rat-breeding centre will be established to meet reptile house requirements.
4. Mealworm and superworm rearing facilities will be developed for feeding birds and reptiles.

Disease Prophylaxis and Management

- A master check-up protocol will be implemented, subjecting carnivores and bears to general disease screening under anesthesia, including blood sample collection and diagnostic imaging.
- This protocol will allow early disease detection, better control measures, and provide baseline health parameters useful during emergencies.
- A well-equipped hospital with a trained veterinary team is mandatory; dependence on external teaching institutes will be discouraged.
- Veterinarians will be encouraged to enhance skills through training programmes, workshops, journals, and collaborations with leading institutions and zoos in India and abroad.

Engineering Section

- Responsible for the development, modification, and maintenance of electrical and civil structures within the zoo.
- The section currently has four staff members handling these responsibilities.

Security Section

- The number of surveillance cameras will be increased by installing additional cameras at strategic locations for effective monitoring and management.

Garden Section

- Extensive lawns and gardens are maintained near the zoo entrance and around enclosures.
- A large, dedicated butterfly garden is maintained and will be further enriched with nectar-rich flowering plants.

Research and Study

- Postgraduate dissertations in wildlife biology are regularly carried out at the zoo, based on ex-situ observations of captive animals.
- Veterinary students from TANUVAS also conduct dissertation projects under the guidance of zoo veterinary doctors.

Zoo Education

- A Conservation Education Plan will be revised every 5 years and reviewed by a committee comprising the Zoo Director, Deputy Director, Zoo Education Officer, District Chief Education Officers, District Education Officers, teachers, and a representative from the International Zoo Educators Association.
- The plan will integrate advanced technology, audience interest, and community knowledge requirements.
- A permanent Zoo Education Officer will be deployed as per CZA guidelines, supported by 2–3 Assistant Educators on a contractual basis.
- The Zoo Education Officer should be a member of the International Zoo Educators Association for exchange of ideas and curriculum improvement.
- The Zoo School will design conservation education programmes for all age groups, with schedules prepared three months in advance and reports submitted to the Zoo Director.
- The education programme will focus on:
 - Wildlife and habitat conservation.
 - Adoption of sustainable lifestyles.
 - Responsible use of natural resources through reuse, recycling, and refusal.
- Awareness sessions will be conducted regularly to inspire visitors to adopt sustainable practices for the betterment of the planet.



Fig. 35: Education programme being organized for school students



Fig. 36: Education programme for school children at the Zoo School

Focus Areas for AAZP Zoo Education & Community Engagement

1. Unique Learning Experiences

- Signage, interpretation boards, and interactive interpretation models to enhance visitor learning.
- Upgrading the Zoo Interpretation Centre and Forest Museum with modern, innovative concepts and themes.
- Development of a museum for preserved faunal specimens.
- Establishment of a zoo theatre in the old cloakroom area for films and audio-visual shows on wildlife.
- Establishment of a zoo library accessible to visitors.

2. Community Participation & Public Engagement

- Programmes to induce public participation in conservation ideas.
- Continuous training for zoo personnel.
- Outcome-based programmes to track learning and engagement impact.
- Special themed workshops, cleanliness drives, and celebration of important forest days.

3. Early Learning Programmes (3–6 years)

- Focus on critical early development years with hands-on learning, language development, environmental awareness, self-awareness, and outdoor activities.
- Designed as joint programmes for both child and parent to enhance conducive learning.

4. School & College Outreach Programmes

- Expansion of outreach to reach more schools and colleges.
- Portable technical support arranged for outreach: laptops, tablets, microphones, speakers, projectors, and other essentials.
- **Exclusive programmes:**
 - Government/Home Schools: “Zoo Venture” – free of cost, Mondays 10:00 am – 3:30 pm, includes educational materials and refreshments.
 - Private Schools: “Zoo Explorer” – paid programme (Rs 500), Thursdays 10:00 am – 3:30 pm, includes entry, vehicle, programme fee, and materials.
- Both programmes include classroom sessions, field-based learning, visual learning systems, expert guidance, and engaging activities.

5. Collaboration & Advanced Learning

- Identify areas for collaboration with other Indian and international zoos for education programmes.
- Collaborate with universities for certificate, diploma, and PG diploma courses in captive management.
- Encourage M.Sc. Zoology, Wildlife Biology, BVSc, and MVSc students to enroll in programmes.
- Revise Zoo Ambassador Programme curriculum in collaboration with nearby zoological parks, botanical gardens, and sanctuaries.
- Improve the “Band of Species Ambassador Programme” to include more endangered species.

6. Transport & Communication

- One dedicated vehicle shall be allocated for the Zoo School to conduct regular outreach activities.
- One e-vehicle shall be provided for the Zoo Educator to move across the zoo premises and conduct educational programmes.
- Community groups through phone and email shall be created and maintained for effective communication.



Fig. 37: Painting competition held for students during Wildlife Week



FIG. 38: ZOO AMBASSADORS RECEIVING THEIR CERTIFICATE



FIG. 39: OUTREACH PROGRAMME CONDUCTED AT GOVERNMENT SENIOR SECONDARY SCHOOL

CHAPTER V: PERSONNEL PLANNING

Arignar Anna Zoological Park recruits employees primarily through the Tamil Nadu Public Service Commission via direct recruitment, and through the Zoo Subordinates Service by employment exchange. A few positions are filled through recruitment transfers or compassionate appointments.

- The zoo currently has 250 sanctioned posts, of which 129 are permanent personnel.
- Over the next five years, 47 staff members are expected to retire.
- Consequently, approximately 67% of the permanent staff will superannuate within this period.

Long-term Planning Considerations:

- To ensure better animal care and encourage public participation in wildlife conservation, the zoo needs to revise its personnel planning.
- Based on the requirements for technical personnel, the park can consider:
 - Creating new posts where necessary.
 - Surrendering least required sanctioned posts.
 - Filling all vacant sanctioned positions to maintain optimal staffing levels.

Contractual Labour

The zoo management employs contractual labour through third-party manpower contracts to manage various operational aspects of the park.

- Currently, approximately 250 contractual workers are engaged for tasks including:
 - Animal maintenance
 - Clearing works and garbage collection/disposal
 - Battery-operated vehicle (BOV) operation
 - Night security
 - Fodder bank maintenance
 - Washroom maintenance
 - Feed distribution and cleaning
 - Veterinary hospital maintenance
 - Ticket counter operation
 - Screening and checking at the entrance gate
 - Cloakroom maintenance
 - Butterfly park maintenance
 - Plumbing assistance
 - Parking area maintenance
 - Vets, Biologist, Zoo Educator, Technical Assistant, Research Assistant
- This workforce is essential for the smooth day-to-day operations of the Zoological Park.

Table 11: Personnel at the Arignar Anna Zoological Park

	S. No.	Designation	Sanctioned	Filled	Vacant
	1	Director	1	1	-
	2	Deputy Director	1	1	-
	3	Asst. Conserv. Forests	1	1	-
	4	Personal Assistant	1	1	-
	5	Superintendent	2	2	-
	6	Assistant	6	5	1
	7	Junior Accountant	1	1	-
	8	Junior Assistant	3	3	-
	9	Steno typist Gr. II	1	1	-
	10	Typists	2	2	-
	12	Asst. executive engineer	1	-	1
	13	Junior Engineer	1	-	1
	14	Senior Draughting Officer	1	1	-
	15	Draughting Officer	1	1	-
	16	Assistant Draughtsman	2	-	-
	17	Veterinary Officer	1	1	0
	18	Veterinary Asst. Surgeon	2	2	0
	19	Biologist	3	1	2
	20	Livestock inspector	1	-	1
	21	Lab Technician	1	-	1
	22	Office Assistant	7	3	4
	23	Office Watchman	1	1	-
	24	Sweeper	1	1	-
	25	Electrician	1	-	1
	26	Plumbers	1	-	1
	27	Forest Range Officer	5	5	-
	28	Forester	6	6	-
	29	Forest Guard	9	9	-
	30	Forest Guard with DL	5	5	-
	31	Forest Watcher	2	2	-
	32	Driver	14	5	9
	33	Night watchman (FSS)	3	-	3
	34	Mahout	1	-	1
	35	Bungalow Watcher	1	-	1

36	Animal keepers	45	5	40
37	Sweeper cum scavenger	32	10	22
38	Mali	30	17	23
39	Night Watchman	11	2	9
40	Gate watchman	13	2	11
41	Food distribution helper	6	-	6
42	Plumber	3	-	3
43	Pump operator	10	1	9
44	Assistant Agricultural Officer	1	-	1
45	Gardener	4	1	3
46	Asst. Electrician	1	1	-
47	Driving – garbage collection worker	2	-	2
TOTAL		248	100	148

CHAPTER VI: DISASTER MANAGEMENT PLAN

6.1 Introduction

Disaster management involves a continuous and integrated process of planning, organizing, coordinating, and implementing measures which are necessary to overcome challenges faced during untoward events.

- Prevention of danger or threat of any disaster.
- Mitigation or reduction of risk of any disaster or its severity or consequences.
- Capacity-building.
- Preparedness to deal with any disaster.
- Prompt response to any threatening disastrous situation.
- Assessing the severity or magnitude of effects of any disaster.
- Rehabilitation and reconstruction.

Disaster Management

The following steps are crucial for disaster management:

- Preparedness: Being ready to handle disasters and emergencies. Risk assessment, disaster planning, adequate supplies, trained staff, and community partnerships all contribute to disaster preparedness.
- Mitigation: The process of preventing or minimizing the losses and damages that emergencies can cause.
- Recovery: Involves restoring services, facilities, programs, collections, and infrastructure.

Likely Disasters in Zoo:

1. Occurrence of Floods/Cyclonic Rainfall
2. Thunder and lightning threat
3. Man-Made / Natural / Electrical Fire Outbreaks
4. Bomb Blast
5. Law and Order Problem
6. Disruption in Feed Supply
7. Air-force base-related threats
8. Earthquakes

6.1.1 Occurrence of Floods/Cyclonic Rainfall

In general, the park faces more rainfall due to cyclonic effect, especially during the northeast monsoon time and at times whenever cyclonic effect is noticed in the Bay of Bengal. Occasionally, also during the southwest monsoon season, the park is likely to get some rainfall resulting in water-logging inside the moated enclosures. Heavy rainfall could cause uprooting/falling of trees at various points inside the zoo.

Preparedness: The park has sufficient rainwater drainage channels and 26 percolation ponds to collect the excess rainwater. All these rainwater channels are interlinked to Otteri Lake (natural lake), which is spread over an area of 16 acres. Large trees within proximity of animal enclosures that could potentially cause a breach in the structures, leading to the escape of animals, will be identified and removed.

Enclosure-specific preparedness: In the zoological park, there are four wet moats available, especially for species such as primates and carnivores. During excess rainfall, there are likely chances of accumulation of rainwater in those moats that could facilitate the animals' escape from the enclosures. Therefore, arrangements are being made to ensure proper drainage of excess rainwater either through natural means or motorized pumping.

Potential enclosures that could be affected:

- Crocodiles – Mugger, Dwarf Crocodile, Dwarf Caiman, Morlett's Crocodile, Siamese Crocodile
- Primates – Lion-tailed Macaque, Nilgiri Langur, Chimpanzee, and Lion-tailed Macaque Conservation Breeding Centre
- Carnivores – White and Bengal Tiger moats

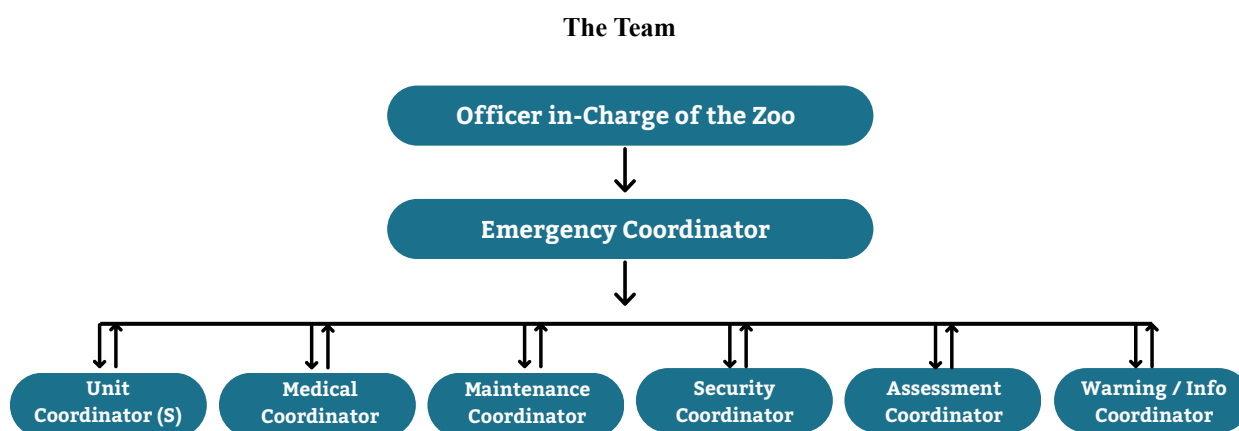
Mitigation:

There are chances of creating additional rainwater drainage channels and de-silting of existing 26 percolation ponds and check dams.

Perspective Plan

- There has to be an overall in-charge in the zoo for providing direction and ensuring the plan is prepared and implemented.
- The members of the team are to be identified meticulously.
- Control room and media centers will help in a coordinated approach to the disaster and in the dissemination of information.
- Establish adequate communication and warning capabilities.
- Establish adequate evacuation procedures.
- Establish damage assessment capabilities.

Disaster Management wing:



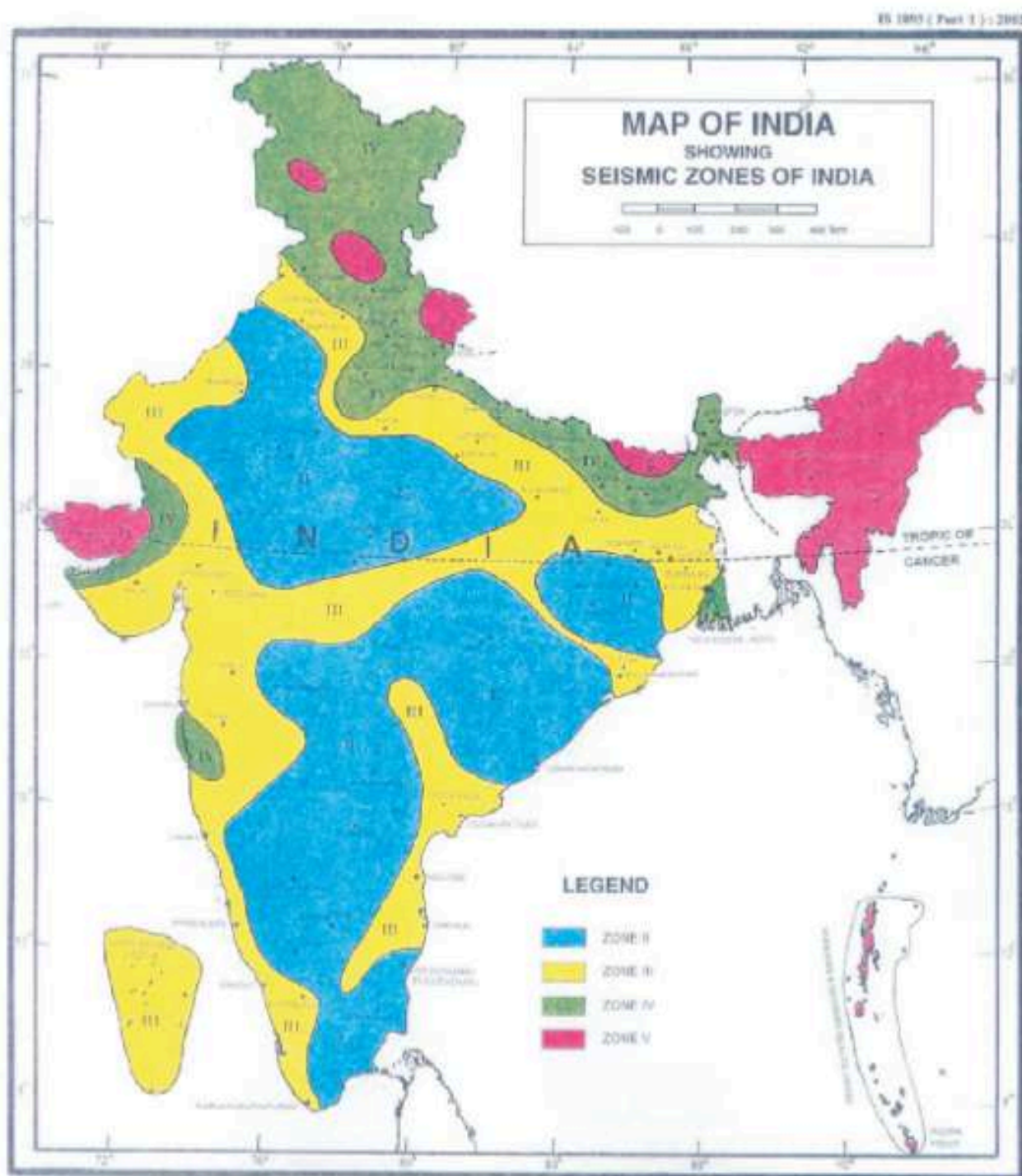


Fig. 40: Seismic zones of India: the country is divided into four seismic zones – II, III, IV and V (source: IS1893 (part I): 2002).

Teamwork

The officers and staff of the zoo will be organized into the following teams to mitigate and effectively overcome possible disaster scenarios. This structure will:

- Ensure all necessary issues are addressed.
- Reinforce staff acceptance of the plan.
- Decrease the workload for team participants.
- Increase staff awareness of the plan.

1. Monitoring Wing

- Constituted by administrative officers such as the Director, Deputy Director, and Assistant Director.

2. Implementation Wing

- Primarily comprises officers responsible for execution, including forest range officers.
- The zoo has five ranges, each with specific responsibilities:
 - Animal Management Range I & II – Responsible for all animal enclosures in the zoo.
 - Feed Store Range – Responsible for ensuring proper and adequate supply of quality feed for zoo animals.
 - Reception Range – Located near the main entrance, responsible for visitor screening, ticketing, vehicle management (including feed delivery vehicles and BOVs), crowd control, and parking.
 - Infrastructure Range – Located behind the aquarium, responsible for electricity, surveillance cameras, and water supply.

3. Actionable Wing: Veterinary Wing

- A team of three veterinarians managing emergencies such as disease outbreaks, injuries, and other unexpected circumstances.
- The zoo veterinary hospital is stocked with veterinary medicines, anaesthetics, injectable dart guns, blowpipes, and other essential equipment.
- The veterinary team undergoes continuous capacity-building and training programmes both within AAZP and across India to stay updated with advances in veterinary care.

4. Advisory Wing: Biologists

- Includes one full-time biologist who inspects the zoo and provides scientific advice and recommendations to the Monitoring and Implementation Wings, in consultation with the Veterinary Wing.

Pattern of Execution of Disaster-Management Activities

1. In-Charge / Director of the Zoo

- Prepare and approve the disaster management plan.
- Identify responsible personnel and assign tasks.
- Decide and implement protective actions to minimize disaster impact.

2. Deputy Director

- Maintain and regularly test the disaster management plan.
- Ensure all teams are trained in emergency response.
- Coordinate the functioning of different teams involved in crisis management.
- Organize and maintain a control room with adequate communication facilities.
- Implement directives from the Director.

3. Assistant Director cum PRO

- Participate in plan review meetings and provide inputs.
- Train staff working under them.
- Conduct mock drills.
- Prepare press notes (after consulting the assessment coordinator) for Director's approval.
- Take protective actions within their jurisdiction before an emergency.
- Safeguard vital resources under their jurisdiction.
- Mobilize resources and personnel.
- Ensure safe evacuation of stranded zoo visitors.
- Ensure electricity points are shut down during emergencies.
- Manage public relations and press releases.
- Establish a media centre for logging messages and conducting media tours.
- Receive and disseminate disaster-related information.

4. Forest Range Officers

- Maintain mitigation equipment in readiness.
- Publicize protective actions among employees.
- Participate in emergency plan review meetings.
- Train personnel working under them.
- Notify local authorities of any emergency.
- Ensure vital records are identified and protected.
- Arrange logistics, housing, and food for emergency staff.
- Ensure food and water requirements for zoo animals.
- Maintain communication equipment (wireless sets, fax machines, telephones, etc.).
- Assist in movement of people and vehicles.
- Coordinate with police and fire departments.
- Request support from district administration for vehicles and personnel.

5. Zoo Veterinarians

- Monitor disease prognosis and prevent epidemic outbreaks among zoo animals.
- Maintain veterinary equipment (dart guns, animal ambulances, immobilizing drugs, squeeze cages, transport vehicles).
- Ensure round-the-clock preparedness of veterinary assistants and staff for animal emergencies.

6. Biologists

- Maintain animal history and records.
- Provide consultancy and advice to Veterinary and Implementation Wings.
- Update the Monitoring Wing on current situations.
- Offer species-specific recommendations during emergencies.
- Ensure proper upkeep and maintenance of animal enclosure entry/exit structures (doors, gates, cells, etc.)

Table 12: List of equipment required for dealing with disaster

Items	What at AA ZD	Essentially needed	Quantity existing	Proposed
Rubber boots	✓	✓	35.00	60.00
Alarm systems	✓	✓	-	6.00
Public address system	✓	✓	15.00	25.00
Radio communications (walkie talkie)	✓	✓	35.00	Nil
Protective gloves	✓	✓	Adequate	On demand
Helmet	✓	✓	Adequate	On demand
Measuring tape	✓	✓	Adequate	On demand
Shovels	✓	✓	Adequate	On demand
Pick axe	✓	✓	Adequate	On demand
Tranquilizing gun with drugs	✓	✓	3.00	On demand
Welding machine with sufficient welding rods	✓	✓	Adequate	On demand
Ropes and nets	✓	✓	Adequate	On demand
Transportation/rescue cages	✓	✓	Adequate	On demand
Construction and repair materials like Cement, iron rods, sand etc.	✓	✓	Adequate	On demand
Gas cutters	Nil	✓	✓	On demand
Earth moving equipment	Nil	✓	✓	On demand
Fire proof dress	Nil	Nil	✓	On demand
Goggles	✓	✓	Adequate	On demand

CHAPTER VII: CONTINGENCY PLAN

It is very much needed by the zoos that they should have a well-documented technical contingency plan for specific and high-priority animal diseases.

1. Animals Rescued from the Wild

Animals rescued will be accommodated and maintained in the animal rescue center available at the zoo. Currently, it is capable of accommodating animals in 60 cells of varying dimensions, with measurements ranging from 5.6 m x 3.45 m to 8.5 m x 3.45 m. Gradually, upon acclimatization of the rescued individuals, they may be released back into the wild.

2. Escape of Animals from Enclosures

Arignar Anna Zoological Park houses 1,977 animals of 173 species, mostly in enclosures and in the safari (lion and deer). Since the enclosures and the entire zoo are protected by a compound wall about 8–10 feet high, there is little chance of animals escaping. However, past incidences of escapes provide strategies for dealing with future situations.

AAZP conducts detailed inspections of the zoo's parapet walls and all enclosures to avoid such mishaps. The keepers of each enclosure thoroughly check public exhibit areas, fences, night shelter rooms, and service areas both before releasing animals into day exhibits and after bringing them back into night shelters.

Public safety is the top priority. Otherwise, damage caused by escaped animals could be immense—both in terms of injuries or fatalities among zoo visitors/staff and in terms of the possible loss of the wild animals themselves.

All animal keepers are sensitized about the issue of animal escapes during animal keeper training programmes and frequent interactions with the zoo's technical staff.

- Trees around the enclosures are trimmed regularly to maintain shape and prevent branches from falling into exhibits, which could serve as escape routes for primates, carnivores, and reptiles.
- Water in wet-moated enclosures is maintained at levels that prevent animals from crossing the barrier.
- Gates and windows are painted annually to prevent rusting.
- Barriers are designed, constructed, and maintained to effectively contain animals within enclosures.
- Gates and doors to enclosures are as strong and effective as the enclosure barriers themselves.

For enclosures where the public is admitted (e.g., Nocturnal Houses) and for any enclosures with stand-off barriers, a three-tier system—comprising moat, solar fence, and chain-link fence—has been designed, constructed, and maintained so as not to trap or injure visitors, especially children or persons with disabilities.

Table 13: Equipment required to deal with escape of different captive animals

Captive animals	Minimal requirement	What AAZP has
Large carnivores	Nets, pole syringes, snare, Projectile guns and darts, blow dart equipment, crates, squeeze cages etc.,	Nets, snare, Projectile guns and darts, blow dart equipment, crates, squeeze cages etc.,
Small carnivores	Nets, gloves, pole syringes, snare, crates, blow dart equipment, crates, squeeze cage etc.,	Nets, gloves, snare, crates, blow dart equipment, crates, squeeze cage etc.,
Hoofed stock	Projectile guns and darts, blow dart equipment, crates etc.,	Projectile guns and darts, blow dart equipment, crates etc.,
Elephants	Elephant hook, projectile guns and darts, chains	Elephant hook, projectile guns and darts, chains
Small mammals (e.g., primates).	Nets, gloves, pole syringe, snares, plastic tubes, blow dart equipment, crates, squeeze cage	Nets, gloves, snares, plastic tubes, blow dart equipment, squeeze cage
Large primates like chimpanzee	Nets, gloves, pole syringe, projectile guns and darts, blow dart equipment	Nets, gloves, projectile guns and darts, blow dart equipment
Birds	Nets, gloves, towels, pole syringe	Nets, gloves, towels
Reptiles	Nets, gloves, snares, plastic shield, bags, plastic tubes, snake tong, snake hook	Nets, gloves, snares, plastic shield, bags, plastic tubes, snake tong, snake hook

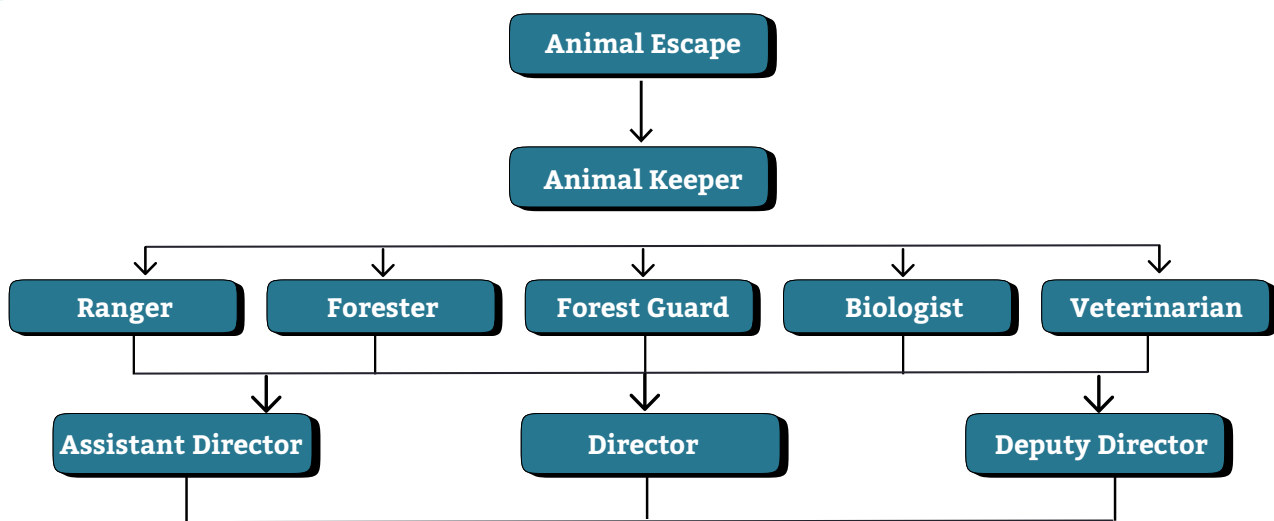
Storage of Equipment

The Zoo maintains an adequate inventory of animal restraint, capture, and handling equipment to ensure the safe and effective management of captive wildlife during routine husbandry, veterinary interventions, emergencies, animal escapes, and rescue operations.

Range III (Store) is responsible for the procurement, maintenance, and storage of all animal restraint and capture equipment. The range ensures that essential equipment is procured well in advance and that adequate stocks of consumables and critical accessories are maintained in the central store to meet emergency requirements without interruption.

Regular inspections are carried out to assess the condition and functionality of the equipment, and defective or obsolete items are promptly repaired or replaced. This proactive inventory management system ensures operational preparedness and enables rapid response during veterinary emergencies, animal escapes, disaster situations, and wildlife rescue operations.

Flow of information



Chain of command

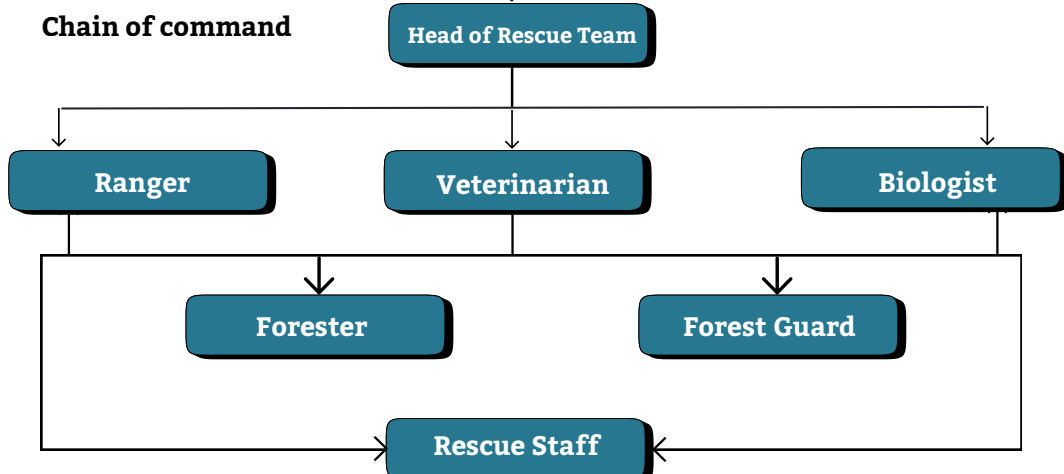


Table 14: Telephone numbers of the officers

S. No	DESIGNATION	PHONE NO
1	Director	044-29542300
2	Deputy Director	044-29542302
3	Assistant Director	044-29542303
4	Forest Range Officer - I	044-29542301
5	Forest Range Officer - II	044-29542301
6	Forest Range Officer - III	044-29542301
7	Forest Range Officer - IV	044-29542301
8	Forest Range Officer - V	044-29542301
9	Forester, Range I	044-29542301
10	Forester, Range I	044-29542301
11	Forester, Range II	044-29542301
12	Forester, Range III	044-29542301
13	Forester, Range IV	044-29542301
14	Forest Guard, Range I	044-29542301
15	Forest Guard, RangeII	044-29542301
16	Forest Guard,Range III	044-29542301
17	Forest Guard, Range IV	044-29542301
18	Forest Guard, Range V	044-29542301
19	Forest Guard Range IV	044-29542301
20	Biologist	044-29542301
21	Vet. Officer	044-29542301
22	Vet. Asst. Surgeon	044-29542301

3. MONKEY MENACE, RODENT MENACE AND STRAY DOGS

Ungulates and birds are provided concentrates in open kraals and feed cells. Both monkeys and rodent populations frequently enter the zoo in search of food. Even the half-eaten food left by visitors near cafeterias and restaurants lures monkeys to the zoo. The zoo has been making active efforts to capture stray monkeys and eliminate rodents. However, the rodent population keeps increasing and poses a serious threat to zoo animals, as they act as carriers of tuberculosis and leptospirosis.

Rodents also cause significant damage to the eggs of endangered bird species, particularly vultures and pheasants. Stray monkeys will be captured and released in the forest area through periodic monitoring. Stray dogs and cats are captured with traps and relocated outside the zoo premises when detected. Rodent-proofing will be ensured by preventing rodent entry into enclosures through the construction of concrete floor walls with iron mesh.

4. ARRANGEMENT OF FOOD IN CASE OF STRIKE (NON-SUPPLY OF CONTRACTOR)

The supply of food and feed for the animals may be affected by public strikes, vehicle breakdowns, non-supply by contractors, natural calamities, etc. In these circumstances, it is essential to secure the required feed items.

- At present, non-perishable feed items are supplied once a week. The AAZP store has the capacity to stock non-perishable feed for a period of three months.
- For perishable feed items, AAZP has a cold storage unit with a capacity of two tonnes, sufficient for one week's requirement.
- Workers'/labourers' strikes will be managed amicably through discussions and negotiations at the earliest possible time.

5. SNAKE BITE

- Sufficient anti-snake venom is stocked in the zoo veterinary hospital and will be used in case of any eventuality.
- Vehicles are readily available to transport the victim to the nearest hospital for proper treatment and care.

6. VISITOR GETTING INJURED / VISITOR FALLING INSIDE THE ENCLOSURE

Visitors getting injured:

- First aid boxes are kept ready at important points of the zoo, such as the entrance complex, Battery-Operated Vehicle counter, zoo round vehicle, Zoo Veterinary Hospital, and the Forest Range Offices.
- Zoo frontline staff and zoo round drivers are trained to provide basic first aid. Annual training for first aid will be conducted in collaboration with hospitals.
- Vehicles are readily available to transport the victim to the nearest hospital for treatment and care.
- In case of insect bites or wasp stings, a basic first aid kit is available.
- Signage boards and digital maps are marked with the locations of first aid stations.

Visitor falling inside the enclosure:

- All major carnivore enclosures are provided with double-layer protection for visitors and animals.
- Zoo animal keepers are trained to address such scenarios. All enclosures are equipped with ropes, ladders, long sticks, and nets.
- The veterinary hospital maintains a well-equipped ambulance with a chemical immobilization kit to avoid injury to either the fallen visitor or the animal.
- Communication equipment such as cell phones, smartphones, walkie-talkies, and 24x7 CCTV cameras are available for efficient monitoring and coordination.

7. FIGHTING AMONG ANIMALS

Every effort will be made to separate fighting animals without causing serious injuries. Fighting animals will be driven back to the night shelters (for primates and carnivores) or kraals (for herbivores) to avoid further conflict.

Fights often occur during breeding/rutting seasons, and animals are closely monitored during these times to prevent aggression. Only compatible felids will be released in the public exhibit area. If needed, animals will be chemically immobilized and returned to their night shelters.

8. EPIDEMICS

Ring vaccination will be carried out for cattle in contact with zoo staff to prevent the transmission of diseases.

During the recent COVID-19 pandemic, the zoo was shut down to visitors for 22 months, which impacted revenue generation. However, animal keepers stayed inside the zoo to prevent external contact and to continue animal care. Animals were regularly checked for symptoms of COVID-19 by veterinary doctors and respective animal keepers. Their health was continuously monitored.

Feed and fodder were disinfected with potassium permanganate solution, and meat was treated with ultraviolet light before being fed. Perishable feed was procured in advance due to transportation constraints. Keepers were provided with PPE kits and regularly screened by doctors. Positive cases were quarantined immediately to prevent disease spread. Swab samples were periodically collected from zoo animals and tested for COVID-19.

Zoo staff entry was restricted through a single gate near the guest house. Vehicles were thoroughly sanitized before entry. Sanitizer and potassium permanganate solution were placed at the entrances of all animal enclosures.

The zoo had 13 lions on display. In the last week of May 2021, two lions at the Lion Safari developed respiratory signs. Symptomatic treatment was initiated immediately. By afternoon, three more lions housed nearby were affected. Based on morbidity patterns and the ongoing pandemic, COVID-19 was tentatively diagnosed, and samples from all lions were sent to CZA-recommended laboratories.

A treatment protocol was developed in collaboration with TANUVAS experts. Over the next week, three more lions developed respiratory illness, and one lioness succumbed within 24 hours of showing symptoms.

Patient management and evaluation were challenging due to limitations in thoracic imaging, SpO₂ monitoring, and physical examinations. Lions required regular injections, but many refused to enter the squeeze cage (a device used for physical restraint). Injections were therefore administered using dart syringes. Severely ill lions received nebulization and oxygen therapy as part of treatment.



FIG. 41: COVID 19 MANAGEMENT AT ARIGNAR ANNA ZOOLOGICAL PARK

The temperatures of the lions were monitored using an advanced thermal imaging camera from a distance without causing disturbance and stress. In spite of the intensive treatment protocol and monitoring, two lions succumbed out of the ten lions affected. In the remaining eight lions, two lions housed at the lion exhibit were asymptomatic. On genome sequencing of the virus, it was found to be the Delta variant, which is highly transmissible and a major cause for the second wave of COVID-19. Six lions had moderate to severe respiratory illness, and four had renal impacts also. The four severely sick lions were not feeding continuously for more than five days. They were managed with regular fluid therapy and a platter trial diet with meat and a variety of soups (chicken, mutton, rabbit, and beef) to encourage them to feed. By regular intensive treatment and round-the-clock monitoring with the innovative approach of the zoo veterinary team, the animals recovered. They were sampled again after 45 days for COVID-19; all the lions tested negative for COVID-19 and had recuperated and were carrying out their normal activity.

On June 6th, 2021, the Hon'ble Chief Minister of Tamil Nadu paid a visit to Arignar Anna Zoological Park to assess the action taken regarding COVID-19 outbreaks among Asiatic lions. The Hon'ble Chief Minister of Tamil Nadu, who is the Chairman of Zoo Authority of Tamil Nadu, urged the zoo officials to give the best treatment for the affected lions and reviewed the health status of other lions housed in the zoo. As a precaution following this episode, all big cats housed at the zoo, including lions, tigers, and leopards, were tested for COVID-19 and were found to be negative. This information had to be published through the press and other media, which was quite challenging.

Once the zoo activities were restored after a period of 22 months, the visitors were also subjected to sanitization with hand-wash solutions and potassium permanganate solution as foot-dip. Proximity between the visitors and the zoo animals was constantly maintained at maximum in such a manner that there was minimal contact. Entry of visitors to the zoo was restricted to seven thousand persons at a given time. Social distancing norms were enforced and announced frequently so that the contact could be kept minimal. Additionally, spots were marked throughout the zoo premises for the visitors to stand/sit so that they were in minimal contact with each other. Hence, as a consequence of the above episode, a constant vigil is maintained post COVID-19 against the spread of epidemic diseases among the visitors that could affect the animals housed in the zoo, or zoonotic diseases and vice versa.

Lion safari for the visitors had been suspended since 2020, and preparations are being made to resume its functionality for the visitors. Specifically for this purpose, a pair of lions (a male and a female) has been procured through an animal exchange programme for restocking the lion safari, which is being prepared for opening soon.

9. BREAKDOWN OF POWER SUPPLY

AAZP has two 100 kV power generators and fuel for the same to run a minimum of 24 hours in stock. The generator will be used to supply power for the entrance complex, feed store, hospital, office, and exhibits that require continuous power supply like the aquarium, nocturnal animal house, and king cobra exhibit.

10. FREE-RANGING ANIMALS/FERAL ANIMAL MENACE

Some of the native, free-ranging animals that exist in abundance inside the park premises, causing menace, are the common mongoose, porcupine, bonnet macaque, spotted deer, crows, and waterbirds such as storks and egrets, that are often seen feeding on the food meant for animals in enclosures.

Table 15: Equipment for warning people about the emergencies

Equipment required		
Alarm systems	Megaphones	CCTV Surveillance System with AI Detection
Public address system	Fire Alarm & Detection Systems	Emergency Lighting and Exit Signage
Radio communications (walkie talkie)	LED Display Boards	Handheld Emergency Sirens

CHAPTER VIII: CAPACITY BUILDING

Arignar Anna Zoological Park has over 151 permanent staff and 217 temporary workers. Capacity-building trainings are crucial for the staff to develop their skills and knowledge. As time progresses, new challenges will emerge, and the staff is required to upgrade their skills and potential to handle any situation. Building the capacity of various categories of frontline and office staff is critical for better animal care, nature education, and the smooth operation of the zoo.

On-Job training for animal keepers:

Periodical training programmes at regular intervals will be scheduled for animal keepers in their dedicated animal enclosure. The Forest Range Officer of the Zoo has to ensure that the trained personnel remain in that particular enclosure for a period of one year. Zoo biologists and veterinarians will provide training on animal enclosure enrichment, behaviour monitoring, feeding, pairing, grouping, etc. The zoo educator should provide instruction on how to interact with visitors, the press, media, and the general public. Training records will be maintained by the keepers in their diary and in the Forest Range office training records.

Rewards to staff members

Motivation is important to sustain the interest of staff members. Therefore, the zoo has recently introduced giving rewards to staff members to recognize their service.

- Best animal-keeper of the month/year are presented with the Subburayulu Rolling Trophy for encouragement.
- "Arignar Anna Memorial Award" for outstanding contribution during disaster times. Cash prize of Rs. 5,000 to 10,000.
- The best animal keeper of the month is rewarded with the title "Standout Performer".
- Appreciation awards and certificates for zoo volunteers.
- Annual Star Performer Awards for the Best Initiatives in the zoo – for Forest Range Officers, Veterinarians, Biologists & Zoo Educators.

The Zoo management will approach retired zoo officers, personnel, and organizations for the inclusion of more awards in various categories. After four years of service in the Zoo, all awards are available to both permanent and contractual employees.

Training collaboration with other zoos

Arignar Anna Zoological Park is rated as the best zoo in the large category in the country, with top scores in the management effectiveness evaluation conducted by the Central Zoo Authority. Still, there are various areas where Arignar Anna Zoological Park needs upgrades. For the purpose of knowledge and resource sharing, Arignar Anna Zoological Park will collaborate with other Indian and international zoos. Vets, biologists, and zoo educators will collaborate to train and educate lower-level staff.

In-house training

In-house training is conducted regularly for the state forest department, government officials, professionals, zoo staff, and animal keepers at various levels. The park will continue to execute the in-house training programme.

Visit to other zoos

Zoo employees of all categories, such as biologists, veterinarians, zoo educators, and animal keepers, should interact regularly and be provided an opportunity to visit other zoos. To acquire knowledge on suitable animals, enrichment of enclosures, veterinary care, and other aspects of zoo management such as crowd management, initiation of better visitor facilities, enclosure designs, etc., it also provides an opportunity to interact with many experts in the field, who shall participate as faculty in the training programme. The zoo should take advantage of the training to have trained officers in management for better results. Recently, our zoo staff (animal keepers, Forest Guards, Foresters, veterinary doctors, biologists, and Range Officers) made a two-day-long exposure visit to Mysore Zoo.

Formation of training advisory committee

A training advisory committee will be formed for reviewing, upgrading, pooling of experts, findings, and outcomes of the training, and so on. The Deputy Director, AAZP will be chairperson of the committee. Zoo scientific experts—vets, biologists, and zoo educators—will be the members of the committee. In addition, external advisory members can be retired forest personnel and experts from other Indian or international zoos. The annual training body meeting will be held every three years. The zoo management may allocate funds for capacity-building training for zoo staff, including permanent and casual workers, under the ZAT account.





FIG. 43A: INTERACTION WITH FOREST TRAINEES



FIG. 43B: ANIMAL KEEPERS' EXPOSURE VISIT TO MYSORE ZOO

CHAPTER IX: E-GOVERNANCE

As instructed by the Government of Tamil Nadu, AAZP oversees and implements the E-governance activities. The AAZP has already developed and is presently using a number of E-governance initiatives, including a dedicated Zoo website, a vast network of CCTV cameras, a specialised mobile application, E-ticketing, and more.

E-governance in staff management

At present, AAZP employs 130 permanent and 217 contractual and casual workers. To improve the effectiveness and efficiency of functioning and monitoring the staff, the following are the areas where E-governance for personnel management will be concentrated:

- Bio-metric attendance for staff has recently been established, which ensures punctuality among the zoo workers.
- Smart ID cards with photographs, barcodes/QR codes might be provided to all zoo staff except uniformed forest personnel so that they could easily be recognized and distinguished from the visitors. This would enhance protection and prevent unauthorized trespassers.
- Walkie-talkies are used by the staff for communication across long distances within the zoo premises for better communication and crowd management.

E-governance in Visitor and Zoo management

• **Ticketing:** The zoo presently has online ticket booking through its website and mobile application. The current ticketing system will be improved with validated entry and exit data of the visitors in zoo ticketing for entry, BOV booking, and parking. QR code, barcode, or any new recent digital technology will be used for the upgraded version, providing hassle-free entry and exit of visitors. From November 2025, the park is able to achieve 100% cashless transactions in ticketing. However, for the convenience of visitors who prefer to pay in cash, 5–10% cash transactions may be permitted.

• **Website:** The present website www.aazp.in provides all sorts of information about the zoo to the visitors, ranging from the animals on display at the zoo, zoo working hours and holidays, tariff, visitor amenities, zoo map, visitor statistics, animal rescue and rehabilitation, and the Zoo School, which conducts educational awareness programmes especially for school students visiting the zoo as a part of their extra-/co-curricular activities. In addition, an option for the visitors to adopt an animal of their choice and sponsor its expenses for a fixed period of time is available, which facilitates creating a bond between animals and visitors, thereby inculcating empathy and care for wildlife and its environment among the public. Gaja, a chatbot with 99% accurate knowledge, offers support, 24x7 live streaming of zoo animals, tender information, current job openings, and many more. The content of the website needs to be verified and changed periodically. Based on the current trend and information, the model of display could be changed on the website. The zoo currently maintains the website through a third-party agency. The feasibility of integrating the zoo website handling with the Tamil Nadu Forest Department is to be analyzed, and a smooth transformation strategy might be devised.

- **Zoo E-eye surveillance:** The zoo is equipped with a vast network of more than 180 Closed-Circuit Television (CCTV) cameras (the Zoo E-eye) to monitor the day-to-day activities of the zoo across a dedicated staff monitor and maintain the CCTV camera network so that a constant vigil is kept in the zoo environment. Some of these cameras, situated at certain vital locations, are capable of covering a 360° view. Recently in 2023, an additional number of 100 cameras were planned to be installed at various points. Parking cameras are implanted with advanced technologies, which help track vehicle details. Additional car parking and upcoming projects in parking will also include vehicle number reading cameras.



FIG. 44: CCTV CAMERAS MONITORING ANIMAL ENCLOSURES



FIG. 45: CCTV CAMERA CONTROL ROOM

A mobile phone application, 'VANDALUR ZOO', is currently available on the Google Play Store and can be freely downloaded on Android mobile phones by the beneficiaries. Various options are available in the application, such as e-ticket booking, animal adoption, queries, a real-time zoo map showing the current location of the visitor within the zoo premises, and a live stream of selected animal enclosures. Currently, the following charismatic animals can be viewed remotely through the application. Some of the major animal enclosures that can be remotely viewed by the users include:

Lion	Hippopotamus
Bengal tiger	Lion-tailed macaque
White tiger	Chimpanzee
Elephant	Nilgiri langur
Marsh crocodile	Leopard
King cobra	Indian gaur
Sloth bear	One-horned rhinoceros

This will be expanded further to include more animal enclosures / species in future.

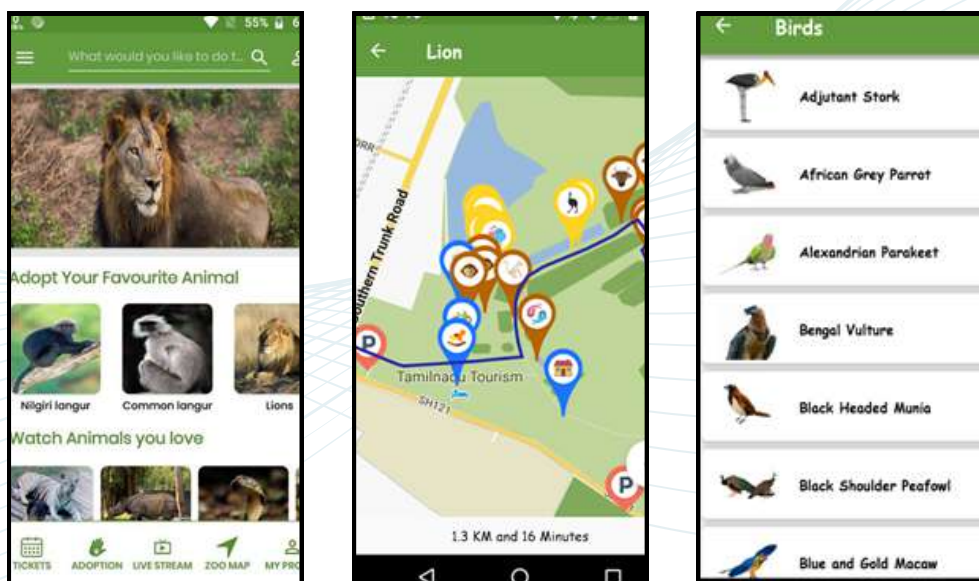


FIG. 46: VANDALUR ZOO – MOBILE APPLICATION ON GOOGLE PLAY STORE

E-governance in Administration:

- The zoo has currently enrolled to change the office administration through e-governance. The zoo office management will spontaneously change to E-governance mode as directed by the Tamil Nadu Forest Department.
- The zoo may work to incorporate an E-governance system into all fund transactions.
- The zoo feed store shall be equipped with a digital system to monitor stock details, stock delivered, quantity, and quality monitoring of the feed, etc.
- A Local Area Network (LAN) could be established between the computers within the zoo offices so that the data can be accessed, stored, backed up, and maintained by the officers concerned in a hassle-free manner.
- The E-office portal is used for submission of files and documents by the office staff.
- An inverter for uninterrupted power supply to the office premises is being planned to be implemented in the near future.



FIG. 47: BATTERY-OPERATED VEHICLES FOR ZOO VISITORS



FIG. 48: CLOAK ROOM FACILITY



FIG. 49: CAR PARKING FACILITY

CHAPTER X

(a) Budget Analysis

This master plan has been prepared for a period of twenty years from 2023-24 to 2043-44. Being situated in the metropolitan city of Chennai, the Arignar Anna Zoological Park attracts several tourists at various levels, namely locals, national (tourists from other states), and internationally (tourists from other countries). This constitutes the major part of the revenue generated by the park. The animal species housed in the zoo has been proposed to be boosted in this upcoming master plan from 145 to 172 by adding 27 species to the existing list, for which construction of new enclosures has been planned. The major source of revenue for the zoo is through the entry tickets purchased by the visitors annually, which ranged from Rs. 34,061,150 – 201,488,303 in the last ten years. A sharp dip in the income was observed in the year 2020-21 due to the adverse impact of the COVID-19 pandemic, which has been recuperated gradually, and the revenue generated has attained the highest this year during this decade.

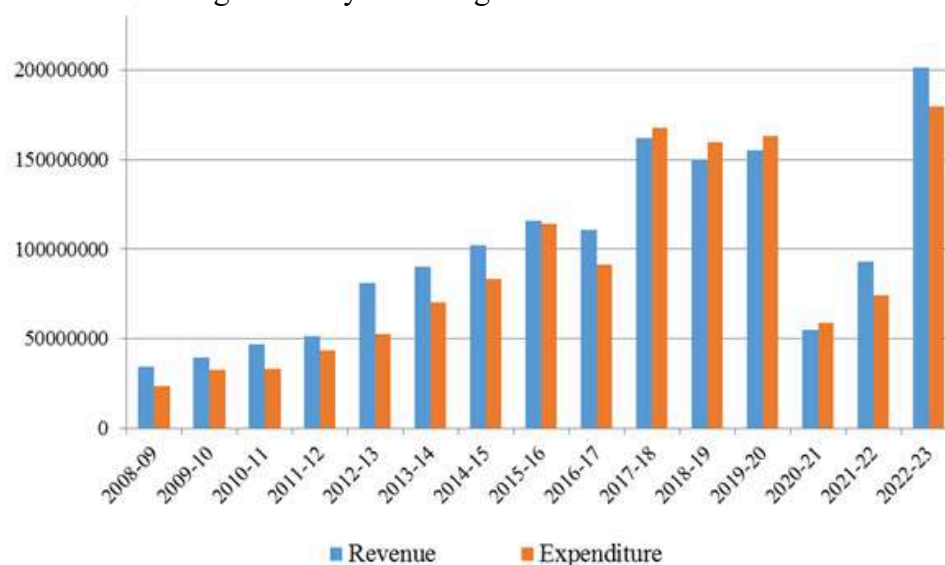


FIG. 50: ZOO'S INCOME-EXPENDITURE TREND OVER THE PAST 15 YEARS

Revenue and Expenditure Details from 2009 – 2023

The major proportion of revenue generated by the zoo was from the visitors' entry tickets, which was supplemented to some extent by other sources of income such as through animal adoptions, CSR grants, revenue generated through sales of bones, rent from facilities such as restaurants, bicycle hire, rest house, research fees, etc.

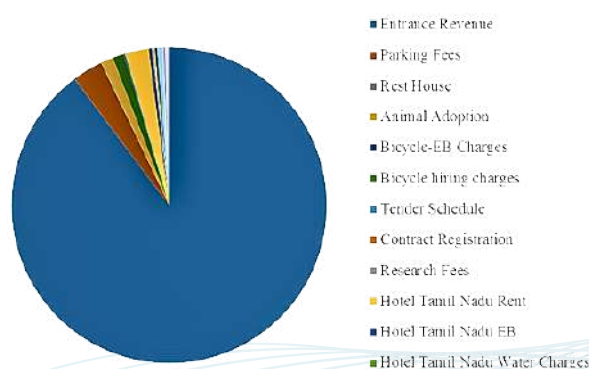


FIG. 51: REVENUE AND EXPENDITURE DETAILS FROM 2009 – 2023

From the year 2023, the Arignar Anna Zoological Park is coming under the Companies Act (2013). This would result in a self-sustaining system for meeting the zoo's expenses, including the major heads such as salaries of the zoo staff, animal feed, medical expenses, etc. Migration of the zoo to the Companies Act (2013) and the proposed hike in the visitors' entry fee would boost the revenue generated by the zoo further, and the additional revenue generated could be used for a variety of developmental activities within the zoo.

(b) Construction and Development

During the current masterplan duration, a total of seventeen animal enclosures that include reptiles, mammals, and birds have been proposed to be renovated. Twelve forest bird enclosures that are quite old have been proposed to be demolished and reconstructed anew. These enclosures proposed will be designed as per the currently accepted standards and appropriate dimensions to house the forest birds. Apart from these, construction of eight new animal enclosures has been proposed, which will include black-tufted marmoset, grizzled giant squirrel, owlry, a small cat-house, an exotic birds aviary, African cheetah, jaguar, Komodo dragon, and an off-display conservation breeding enclosure for Nilgiri Langurs. Apart from the animal enclosures, fruit orchards have been proposed to be developed within the zoo premises to cultivate a part of the animal feed in a partly self-sustaining manner. Also, the development of a 7D theatre has been proposed in this masterplan. In addition to the above, a dormitory with three floors has been proposed to be constructed near the guest house for accommodating visiting researchers and people from other zoos. The animal rescue centre of the zoo has been planned to be upgraded with the construction of new dedicated enclosures for birds and reptiles. Also, new toilets for the visitors, an additional solid waste management unit, and a rainwater harvesting unit in the additional car parking area and the rescue centre have been proposed.

(c) Day-to-day Maintenance

On a daily basis, the animal keepers mark their attendance in the morning in the biometric system and visit the respective animal enclosures and the animal night shelter for watching and monitoring the animals. The water troughs are filled in the yard, and the animals are released back into the yard. The night shelter space is cleaned, and the food debris left over by the animals are weighed. Once the feed for the day arrives, it is divided among the individuals housed in the enclosure based on their requirements. By the end of the day, they fill up their daily activity sheets and maintain the record for submission to the authorities.

Table16:

**PROJECTION OF THE REVENUE AS PER THE PROPOSED ENTRY FEE ENHANCEMENT IN
ARIGNAR ANNA ZOOLOGICAL PARK, VANDALUR, CHENNAI - 48,**

Sl. No.	Visitor details	Total visitors (Nos)	Proposed Fee placed in ZAT GB meeting Agenda (Rs.)	Projected revenue based on the proposed entry fee enhancement (Rs.)
I	Entry Ticket			
1	Indian Adults	128540	200.00	25708000.00
2	Indian Children	30580	50.00	1529000.00
3	Foreigner - Adults	130	200.00	26000.00
4	Foreigner - Children	12	50.00	600.00
5	School Children	1562	30.00	46860.00
II	Hand camera / SLR / DSLR / High end camera for photography			
	Indians	300	350.00	105000.00
	Foreigners	2	350.00	700.00
III	Video camera / High end camera for videography (doesn't include any videography for commercial programs / short movies, etc.,)			
	Indians	5	750.00	3750.00
	Foreigners	2	750.00	1500.00
IV	Battery operated vehicles for zoo round			
	Adult	12700	150.00	1905000.00
	Children	3241	50.00	162050.00
V	Lion Safari			
a	A/C Safari Vehicle			
	Adult	7000	200.00	1400000.00
	Children	2000	50.00	100000.00
b	Non A/C Safari Vehicle			
	Adult	9000	150.00	1350000.00
	Children	3500	30.00	105000.00
VI	Wheel Chair	25	25.00	625.00
Total		198599		32444085.00
		Per Month		Rs. 3.24 crore
		Per Year		Rs. 38.88 crore

CHAPTER XI

Management Plan:

Activities to be taken up for the development and effective management of the Arignar Anna Zoological Park, Vandalur, are outlined below in a periodical manner. Essential works to be carried out in the first few years have been prioritized for immediate implementation, followed by other works of secondary and tertiary importance. Primarily, the works pertain to development, construction, strengthening, and maintenance of infrastructure within the zoo. The estimated amount allotted for each of the identified works has also been presented beside each of the identified tasks. The table below summarizes the proposed activities and the estimated expenses.

Table 17:

S.No	Budget	Rs in lakhs
1	Desilting and deepening the Otteri Lake	150
2	Creation of meal worm / super-worm rearing centre	10
3	Renovating the infrastructure of rat/mice breeding centre	5
4	Publicity materials, brochures, pamphlets, stickers	5
5	Procurement of zoo outreach equipment laptop, projector, public speaker system	3
6	Construction of rainwater channel in additional car parking area and rescue centre	130
7	Strengthening the walls of all crocodile enclosures and other renovation works	125
8	Construction of marmoset enclosure next to red handed tamarin	80
9	UPS upgradation of CCTV control room & Director office	25
10	Veterinary care equipment procurement of thermal imaging scanner	40
11	Lightening arrestor at five points	40
12	Introducing QR Code ticketing system	10
13	Remodeling the night animal house of Rhinoceros	60
14	Rain-gun in primate enclosures	5
15	Renovation / installation of signage boards	30
16	Providing enrichment facilities to selected needy enclosures	15

17	Installation of additional RO water facility for the visitors at various points	40
18	Renovation of Water-bird aviaries	200
19	Renovation and reconstruction of terrestrial bird enclosures 4 nos.in first	180
20	Renovation of turtle house	25
21	Renovation of Carnivore breeding cell (yard & moat)	150
22	Renovation of Wild dog night shelter	40
23	Painting of enclosure grills and walls for primates	20
24	Peafowl roof replacement	10
25	Extension of exotic birds area at the back for breeding activity	20
26	Extension of wild dog shelter	30
27	Purchase of Battery operated Vehicles 10 nos.	120
28	Purchase of Safari vehicles 2 nos.	80
29	Modification and renovation of nocturnal animal house	140
30	Construction of a 3D/7D zootorium theatre & interpretation centre	120
31	Creation of additional generator facility for the zoo	100
32	Development of a new Indian gaur safari area including fence and feeding	200
33	Development of a Tiger Safari including night shelter and fence	300
34	Establishment of exotic bird aviary	500
35	Stainless steel grill and squeeze cage for sloth bear, Himalayan black bear	70
36	Remodeling of visitors' dining area at entrance	20
37	Provision of LED display for zoo education	10
38	Procurement of advanced equipment for offline ticketing system- manual	10
39	Providing tensile sheds for making shade to visitors at ticket counter and entrance walk path	90

40	Expansion and creation of shelter for the new mouse deer enclosure	25
41	Modernization of zoo kitchen	15
42	Renovation of Serpentarium	100
43	Rain-gun for herbivore enclosures	20
44	Construction of a new enclosure for pygmy hog and renovation of mouse deer	60
45	Renovation of Gaur enclosure, shelter and strengthening of compound walls	100
46	SS squeeze cage and night shelter reconstruction - lion moat & lion safari	100
47	SS squeeze cage and flooring - White tiger	7
48	SS squeeze cage and night shelter reconstruction - Lion	20
49	SS squeeze cage and night shelter renovation heterozygous tiger	80
50	Rosy pelican enclosure floor repair and mesh modification	70
51	Heronery renovation in Point Calimere aviary	100
52	Gobar gas plant for store kitchen	20
53	Improvement of 3D/7D zootorium theatre & interpretation centre	120
54	Strengthening the wall of Tiger moat enclosure	50
55	Animal keepers cabins for dressing changing with locker provision	25
56	Establishment of audio guide integration for Battery operated Vehicles	35
57	Creation of fruit orchard	50
58	Construction of wash room facility - 2 nos	40
59	Remodeling the ramp for differently abled persons	10
60	Providing boom barrier facilities at the parking area	45
61	Renovation of zoo interpretation centre	200
62	Construction of new night shelter with SS squeeze cages - Nilgiri langur, LTM	100

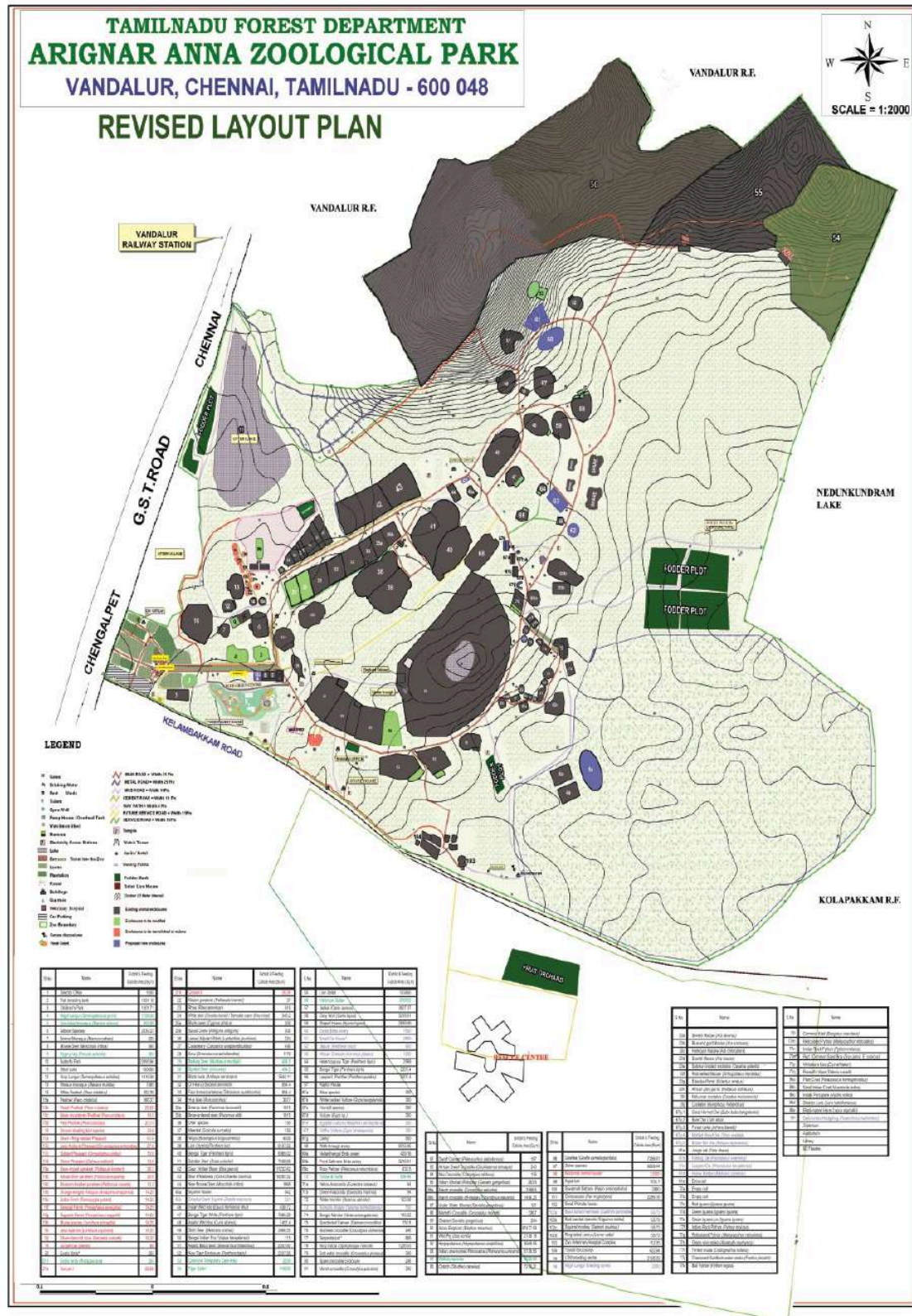
63	Rain-gun for carnivore enclosures	20
64	Renovation of Wallaby enclosure	10
65	Enrichment for primate enclosures	6
66	Renovation and additional construction, SS conversion of new tiger enclosure	50
67	Improvement of 3D/7D zootorium theatre & interpretation centre	120
68	Remodeling the benches facilities for differently abled persons	20
69	Remodeling the visitors benches	15
70	Lawn development and landscaping within zoo campus	5
71	Landscaping and horticulture- All preliminary work	15
72	Construction of additional water tanks and new lines	95
73	Creation of library for zoo visitors	20
74	Creation of a new partition for four-horned antelope in the deer area	5
75	Creation of a new partition for Chinkara in the deer area	5
76	Predator proofing of exotic bird cages	25
77	Purchase of new cameras and lenses	5
78	Reconstruction of Hyena night shelter	60
79	Establishing new enclosure for small mammals (fishing cat, leopard cat etc.)	200
80	Purchase of a new wild animals ambulance	35
81	improvement of Director's office	35
82	Improvement and renovation by replacing the damaged chain links	45
83	Shifting of Gaurs from the second partition to create the gaur safari	12
84	Reconstruction of day kraal and feeding platform for Gaur	20
85	Renovation of existing staff quarters	10

86	Renovating the toilets for differently abled person	15
87	Creation of play area in quarters	3
88	Rain-gun for bird enclosures	20
89	Renovation of Wolf shelter	100
90	Remodeling the zoo entrance	30
91	Rain-gun for Canid and Hyena enclosures	20
92	Dormitory near guest house with three floors	500
93	Reconstruction of forest bird enclosures	100
94	Additional animal shelter for white tiger	60
95	Renovation guest house annexure building	20
96	Purchase of walkie-talkie & other accessories	10
97	Additional parking - RO drinking facility	10
98	Renovation of transit enclosures	20
99	Setting up of Solar panel for Director office, veterinary hospital, Reception range	30
100	Construction of bird enclosure in rescue centre	50
101	Providing sewage / sludge motors for pumping waste water with accessories	15
102	Renovation, additional night shelter, cushioned induction and recovery room-wild ass	25
103	Multi-level two wheeler parking facility	100
104	Creation of photo points near the entrance	5
105	Renovation of toilets	75
106	Printing of books, pamphlets, brochure etc.,	5
107	Purchase of Battery operated vehicle 10 nos	150
108	Purchase of safari vehicle, A/C 2 nos	60

109	Renovation of rescue centre	75
110	Construction of reptile house in rescue centre	35
111	Repair drainage	120
112	Renovation of fodder bank	50
113	Renovation of mothers feeding room	20
114	Renovation of leopard enclosure	40
115	Desilting the percolation ponds	30
116	Renovation of walk-through aviary	200
117	Construction of multi-level parking area	200
118	Construction of a new owlry	45
119	Infrastructure development of Director's office, FRO office	25
120	Landscaping and gardening in zoo premises	10
121	Renovation of eco trail	30
122	Construction of new toilets	100
123	Strengthening the moat wall of lion & tiger	50
124	Replacement of chainlink fences	500
125	Renovation of king cobra enclosure	15
126	Replacing the night animal house in phase 2	500
127	Repair maintenance of zoo premises & safari roads	400
128	Renovation of quarantine facility in zoo	50
129	Renovation of veterinary lab	150
130	Renovation of ticket counter	300
131	Construction of additional solid waste management unit	90

132	Construction of a new enclosure for Jaguar	100
133	Renovation of signage boards	100
134	Renovation of cloak room	50
135	Renovation of range offices	100
136	Renovation of tiger breeding enclosure	110
137	Construction of a new enclosure for cheetah	100
138	Renovation of children's play area	50
139	Construction of a new enclosure for Meerkats	70
140	Renovating the rest sheds for visitors	50
141	Renovation of parking area	20
142	Renovation of guest house	50
143	Enrichment for Birds	30
144	Renovation of Indian fox enclosure	15
145	Renovation of jackal enclosure	20
146	Renovation of Walk through aviary	100
147	Increasing the number of CCTV camera	100
148	Construction of double floor annexure in rest house	70
149	Renovation of hyena enclosure	10
150	Renovation of aquarium	30
151	Construction of water tank above the enclosure - wild ass, tiger, leopard	20
152	Purchase of motors and other equipment for disaster management	20
153	Renewal of centralized alarm system and replacement of fire extinguishers	40
154	Remodeling feed store	15

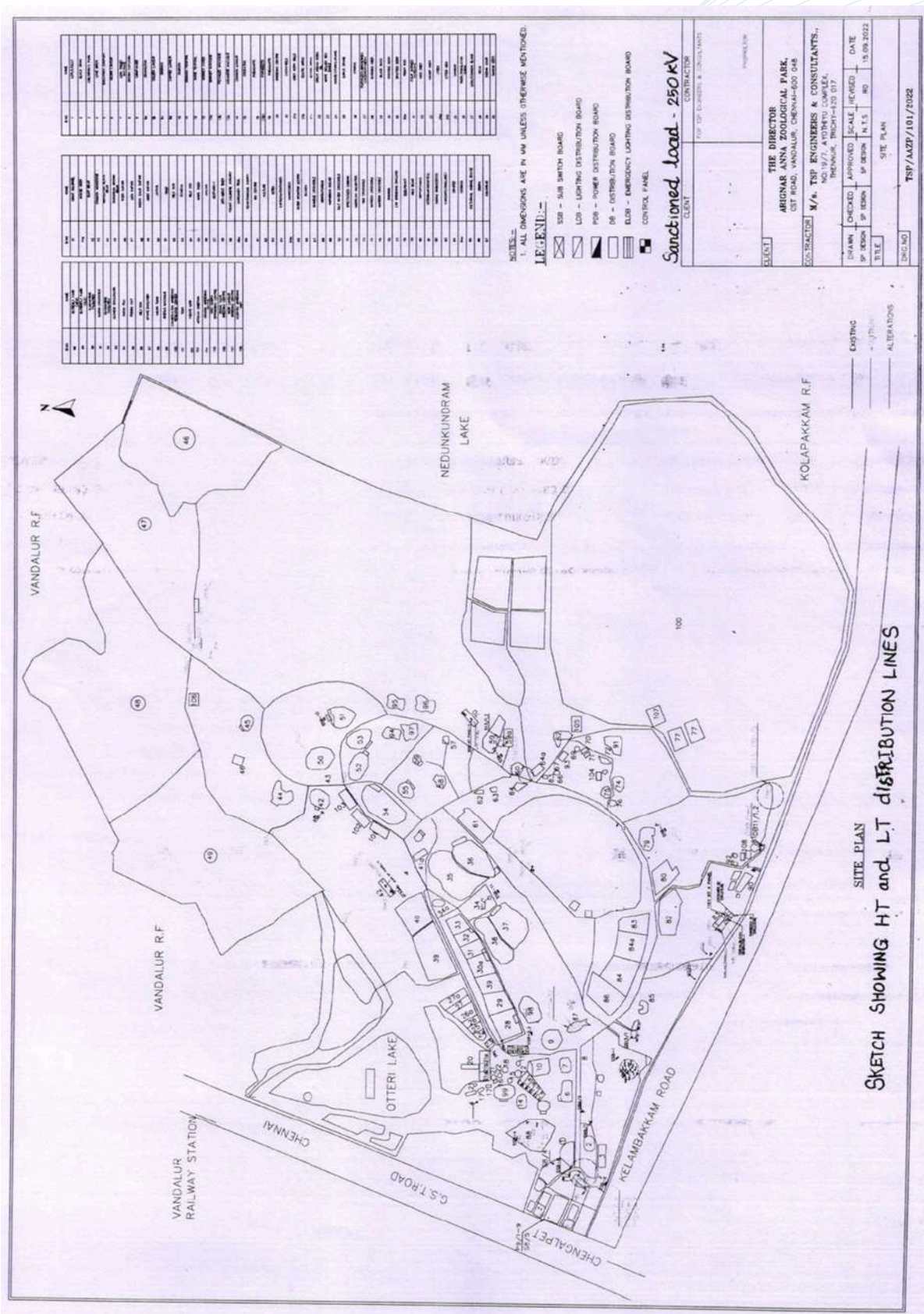
155	Improving sanitization facility	10
156	Desilting of percolation ponds	30
157	Replacement of electrical wiring network	200
158	Maintenance of animal enclosures	200
153	Strengthening the electrical installation	150
154	Improving the digital displaying	100
155	Purchase of a new lawn mover	40
Subtotal		Rs. 11,891 lakhs
Recurring expenses (animal feed, supplies, medicines etc.)		2000
Total		13,891



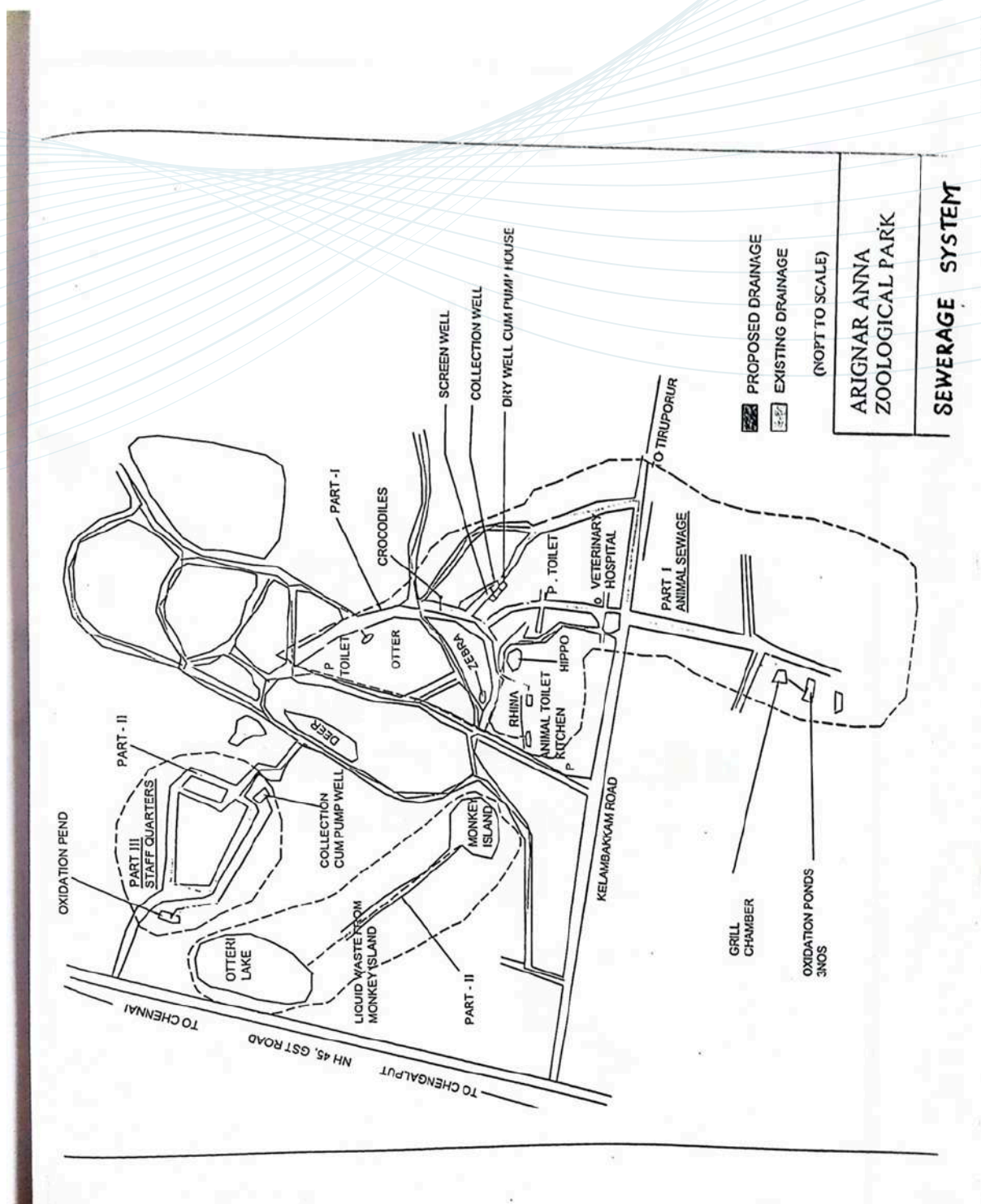
TAMILNADU FOREST DEPARTMENT
ARIGNAR ANNA ZOOLOGICAL PARK
VANDALUR, CHENNAI, TAMILNADU - 600 048
REVISED LAYOUT PLAN



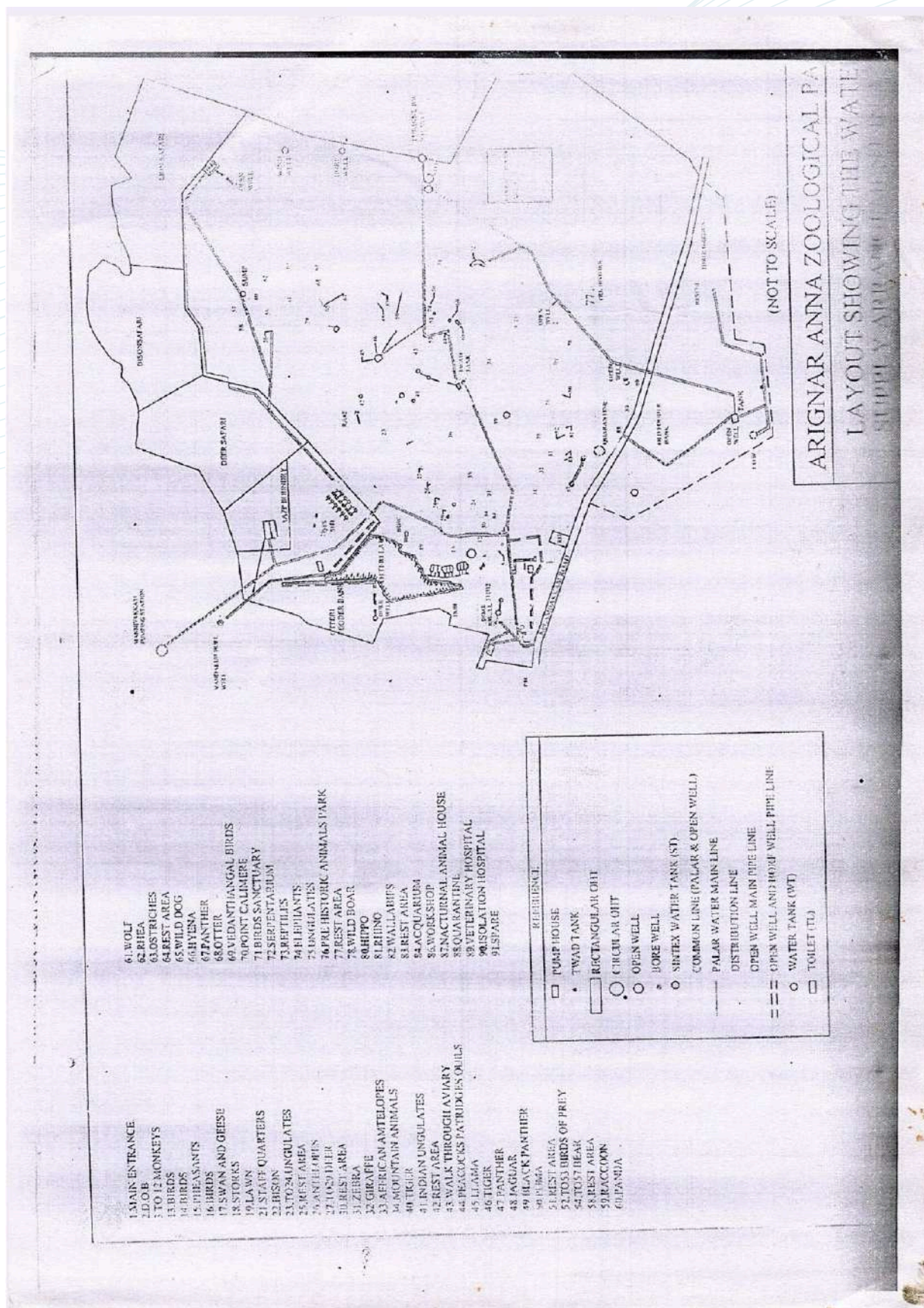
ANNEXURE B - DISTRIBUTION OF ELECTRICITY LINE



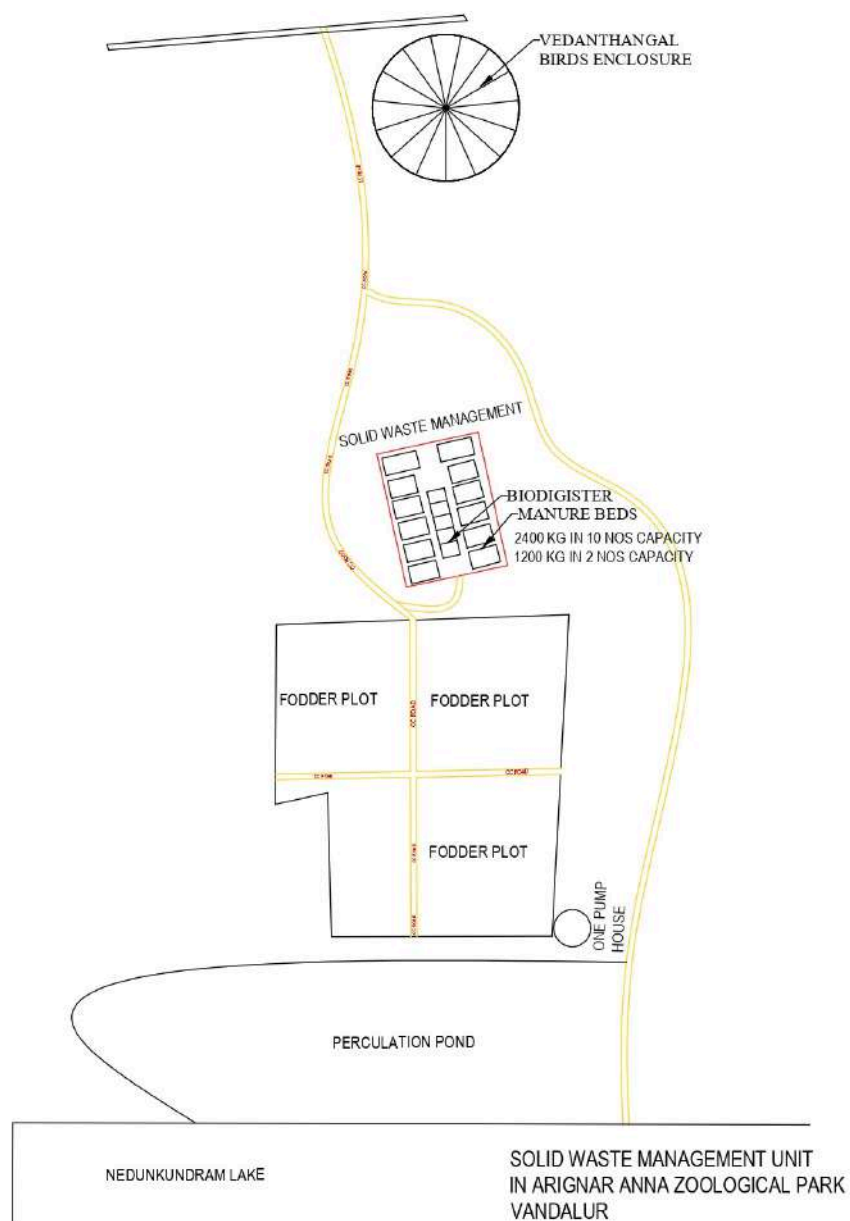
ANNEXURE C1 - MAP INDICATING THE STORM WATER CHANNELS



ANNEXURE C2 - MAP INDICATING WATER DISTRIBUTION



ANNEXURE C3 - MAP INDICATING SOLID WASTE MANAGEMENT UNIT



**DETAILED PLAN OF ZOO
IN PEOPLE'S PARK, MADRAS.**

SCALE: 50 FEET TO AN INCH

The plan shows a large zoo area with a central 'LAKE'. To the left is a road labeled 'MADRAS ROAD'. To the right is a road labeled 'MADRAS ROAD'. The zoo is divided into several sections by paths and fences. Key features include:

- ENCLOSURES:** Various animal enclosures, some labeled with numbers like '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100'.
- LAKE:** A large central body of water.
- ROADS:** 'MADRAS ROAD' on the left and right sides.
- ENCLOSURES:** Various animal enclosures, some labeled with numbers like '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100'.
- ENCLOSURES:** Various animal enclosures, some labeled with numbers like '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100'.



ANNEXURE E : EXISTING ANIMAL COLLECTION PLAN FOR THE ZOO

S.No	Name of the species	Existing Number				Minimum No. of animals to be maintained			Optimum number of animals			Animal to be disposed or acquired			Probable source of exchange	Enclosure no.in the layout plan
	Schedule I	M	F	U	T	M	F	T	M	F	T	M	F	T		
BIRDS																
1	PEAFOWL (<i>Pavo cristatus</i>)	2	5	9	16	2	5	7	6	14	20	1	7	8	Indian zoos	15a
2	WHITE SPOON BILL (<i>Platalea leucorodia</i>)	0	0	0	0	5	5	10	6	14	20	5	5	10	Indian zoos	69a
3	EASTERN WHITE STORK (<i>Ciconia ciconia</i>)	0	0	1	1	2	3	5	3	5	8	2	4	6	Indian zoos	24
4	DEMOISELLE CRANE (<i>Anthropoides virgo</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	24
5	SARUS CRANE (<i>Grus antigone</i>)	2	1	0	3	2	5	7	6	14	20	1	4	5	Indian zoos	25b
6	BRAHMINY KITE (<i>Haliastur indus</i>)	0	0	2	2	2	5	7	6	14	20	2	4	6	Indian zoos	67
7	INDIAN COMMON KITE (<i>Milvus migrans</i>)	0	0	1	1	2	5	7	6	14	20	0	0	0	Indian zoos	67
8	BARN OWL (<i>Tyto alba</i>)	0	0	2	2	2	5	7	6	5	11	0	0	0	Indian zoos	98
9	INDIAN EAGLE OWL(<i>Bubo bengalensis</i>)	0	0	2	2	2	2	4	4	6	10	0	0	0	Indian zoos	98
10	WHITE PEA FOWL (<i>Pavo cristatus</i>)	5	7	11	23	2	5	7	6	14	20	0	0	0	Indian zoos	14
11	SHIKRA (<i>Accipiter badius badius</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	67
12	ADJUTANT LESSER STORK (<i>Leptoptilos javanicus</i>)	1	0	0	1	2	5	7	6	14	20	0	2	2	Indian zoos	26

13	WHITE BACKED BENGAL VULTURE (<i>Gyps bengalensis</i>)	0	1	0	1	2	3	5	3	6	9	2	3	5	Indian zoos	67b
14	CRESTED SERPENT EAGLE (<i>Spilornis cheela</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0	Indian zoos	67
15	INDIAN VULTURE (<i>Gyps indicus</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	67d
16	FOREST OWLET (<i>Athene blewitti</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	98
17	WHITE-BELLIED SEA EAGLE (<i>Haliaeetus leucogaster</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	67
18	GREY JUNGLEFOWL (<i>Gallus sonneratii</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	19
S.No	Schedule II	M	F	U	T	M	F	T	M	F	T	M	F	T		
19	RED VENTED BULBUL (<i>Pycnonotus cafer</i>)	0	0	0	0	5	5	10	8	8	16	0	0	0	Indian zoos	68
20	RED WHISKERED BULBUL (<i>Pycnonotus jocosus</i>)	0	0	0	0	5	5	10	8	8	16	0	0	0	Indian zoos	68
21	WHITE BROWED BULBUL (<i>Pycnonotus luteolus</i>)	0	0	0	0	5	5	10	8	8	16	0	0	0	Indian zoos	68
22	RED COLLARED DOVE (<i>Streptopelia tranquebarica</i>)	0	0	0	0	2	3	5	5	8	13	0	0	0	Indian zoos	68
23	SPOTTED DOVE (<i>Streptopelia chinensis</i>)	0	0	0	0	2	3	5	5	8	13	0	0	0	Indian zoos	68
24	SPOT-BILLED DUCK (<i>Anas poecilorhyncha</i>)	0	0	0	0	2	3	5	2	3	5	2	2	4	Indian zoos	69B

25	CATTLE EGRET (<i>Bubulcus ibis</i>)	0	0	2	2	10	10	20	10	10	20	8	8	16	Indian zoos	69A
26	LITTLE EGRET (<i>Egretta garretta</i>)	0	0	6	6	2	5	7	6	14	20	0	0	0	Indian zoos	69A
27	LESSER FLAMINGO (<i>Phoeniconaias minor</i>)	0	0	2	2	4	4	8	4	5	9	5	2	7	Indian zoos	69B
28	EASTERN GREY HERON (<i>Ardea cinerea</i>)	0	0	16	16	2	5	7	6	14	20	0	0	0	Indian zoos	69A
29	BARHEADED GOOSE (<i>Anser indicus</i>)	0	0	0	0	2	3	5	2	3	5	2	2	4	Indian zoos	69B
30	BLACK CROWNED NIGHT HERON (<i>Nycticorax nycticorax</i>)	0	0	173	173	2	5	7	6	14	20	20	20	40	Indian zoos	69A
31	POND HERON (<i>Ardeola grayii</i>)	0	0	0	0	2	5	7	6	14	20	1	3	4	Indian zoos	69A
32	BLACK- HEADED IBIS (<i>Threskiornis melanocephalus</i>)	0	0	1	1	2	5	7	6	14	20	0	0	0	Indian zoos	69A
33	CHESTNUT MUNIA (<i>Lonchura articapilla</i>)	0	0	9	9	2	5	7	6	14	20	2	4	6	Indian zoos	18H
34	COMMON MYNA (<i>Acridotheres tristis</i>)	0	0	0	0	2	5	7	6	14	20	10	10	20	Indian zoos	68
35	ALEXANDRINE PARAKEET (<i>Psittacula eupatria</i>)	22	22	0	44	2	5	7	6	14	20	0	0	0	Indian zoos	18B
36	ROSE RINGED PARAKEET (<i>Psittacula krameri</i>)	33	48	6	87	2	5	7	6	14	20	25	25	50	Indian zoos	18A
37	ROSE RINGED PARAKEET (MUTANT) (<i>Psittacula krameri</i>)	7	7	3	11	2	5	7	6	14	20	1	4	5	Indian zoos	22

38	BLOSSOM HEADED PARAKEET (<i>Psittacula cyanocephala</i>)	1	0	2	3	2	5	7	6	14	20	2	4	6	Indian zoos	18C
39	CHEST NUT BELLID SAND GROUSE (<i>Pterocles exustus</i>)	0	0	0	0	2	5	7	6	14	20	0	0	0	Indian zoos	16
40	GREY PELICAN (<i>Pelecanus philippenensis</i>)	0	0	27	27	2	5	7	6	14	20	1	4	3	Indian zoos	69A
41	ROSY / WHITE PELICAN (<i>Pelecanus onocrotalus</i>)	6	4	8	18	2	5	7	6	14	20	0	0	0	Indian zoos	69C
42	RED JUNGLE FOWL (<i>Gallus gallus murghi</i>)	1	0	0	1	2	5	7	6	14	20	1	4	5	Indian zoos	19
43	PAINTED STORK (<i>Mycteria leucocephala</i>)	5	5	52	62	5	10	7	6	14	20	15	15	30	Indian zoos	69A
44	KOEL (<i>Eudynamys scolopacea</i>)	0	0	0	0	3	5	8	3	5	8	2	4	6	Indian zoos	68
45	GREATER COUCAL (<i>Centropus sinensis</i>)	0	0	0	0	2	4	6	2	4	6	2	4	6	Indian zoos	68
46	PADDYFIELD PIPIT (<i>Anthus rufulus</i>)	0	0	0	0	5	5	10	5	5	10	0	0	0	Indian zoos	68
47	OPENBILL STORK (<i>Anastomus oscitans</i>)	0	0	1	1	2	2	4	2	2	4	2	0	2	Indian zoos	69B
48	WHITE BROWED WAGTAIL (<i>Motacilla maderaspatensis</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	68
49	GLOSSY IBIS (<i>Plegadis falcinellus</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	69A
50	DARTER (<i>Anhinga melanogaster</i>)	0	0	1	1	2	2	4	2	2	4	1	1	2	Indian zoos	69A
51	LITTLE CORMORANT (<i>Phalacrocorax niger</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	69A

51	LITTLE CORMORANT (<i>Phalacrocorax niger</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	69A
52	LESSER WHISTLING DUCK (<i>Dendrocygna bicolor</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	69B
53	GREY FRANCOLIN (<i>Ortygornis pondicerianus</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	37
54	PAINTED SPURFOWL (<i>Galloperdix lunulata</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	16
MAMMALS																
S.No	Schedule I	M	F	U	T	M	F	T	M	F	T	M	F	T		
55	YELLOW BILLED BABBLER (<i>Turdodius caudatus</i>)	0	0	0	0	2	5	7	14	20	34	10	10	20	Indian zoos	68
56	SOUTHERN CASSOWARY (<i>Casuarius unappendiculatus</i>)	1	1	0	2	2	5	7	6	14	20	1	5	6	Indian zoos	27
57	GREY COCKATIEL (<i>Nymphicus hollandicus</i>)	4	0	20	24	5	5	10	8	8	16	0	0	0	Indian zoos	20
58	WHITE COCKATIEL (<i>Nymphicus hollandicus</i>)	0	0	8	8	5	5	10	8	8	16	0	0	0	Indian zoos	20
59	MOLUCCAN COCKATOO (<i>Cacatua alba</i>)	1	1	0	2	2	5	7	6	14	20	2	4	6	Indian zoos	20
60	SULPHUR-CRESTED COCKATOO (<i>Cacatua gaterita</i>)	0	1	0	1	2	5	7	6	14	20	1	4	5	Indian zoos	20
61	OSTRICH (<i>Struthio camelus</i>)	4	9	11	24	3	4	7	6	14	20	0	0	0	Indian zoos	95

62	RHEA (<i>Rhea americana</i>)	1	2	0	3	2	2	4	2	3	5	0	1	0	Indian zoos	23
63	EMU (<i>Dromaius novaehollandiae</i>)	2	4	0	6	2	5	7	6	14	20	1	4	5	Indian zoos	28
64	AFRICAN GREY PARROT (<i>Psitacus erithacus</i>)	1	1	2	4	2	5	7	6	14	20	1	4	5	Indian zoos	20
65	ECLECTUS PARROT (<i>Electus roratus</i>)	2	2	0	4	2	5	7	4	5	9	1	4	5	Indian zoos	20
66	LADY AMHERST PHEASANT(<i>Chrysolophus amherstiae</i>)	2	1	0	3	2	5	7	6	8	14	2	5	7	Indian zoos	17b
67	GOLDEN PHEASANT (<i>Chrysololphus pictus</i>)	1	1	0	2	2	5	7	6	8	14	2	5	7	Indian zoos	17c
68	SILVER PHEASANT (<i>Lophura nychthemera</i>)	2	2	0	4	2	5	7	6	8	14	2	5	7	Indian zoos	17a
69	BLUE ROCK PIGEON (<i>Columba livia</i>)	0	0	0	0	10	20	30	10	20	30	0	0	0	Indian zoos	68
70	PEACH FACED LOVE BIRD (<i>Agapornis roseicollis</i>)	0	0	0	0	2	4	6	2	4	6	2	4	6	Indian zoos	20
71	FISCHERS LOVE BIRD (<i>Agapornis fischeri</i>)	0	0	0	0	2	4	6	2	4	6	2	4	6	Indian zoos	20
72	ZEBRA FINCH (<i>Teniopygia guttata</i>)	1	1	4	6	10	20	30	10	20	30	5	16	21	Indian zoos	18e
73	BLUE AND YELLOW MACAW (<i>Ara ararauna</i>)	1	1	9	11	2	2	4	2	2	4	0	0	0	Indian zoos	20
74	BLACK SWAN (<i>Cygnus atratus</i>)	1	0	0	1	2	3	5	2	3	5	1	2	3	Indian zoos	25a

75	WHITE PIGEON (<i>Columba livia</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	68
76	MAROON-BELLIED CONURE (<i>Pyrrhura frontalis</i>)	1	1	8	10	2	2	4	2	2	4	1	1	2	Indian zoos	21a
77	GREEN CHEEK CINNOMON CONURE (<i>Pyrrhur amolinae</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	21b
78	DIAMOND DOVE (<i>Geopelia cuneata</i>)	2	0	0	2	5	5	10	5	5	10	0	0	0	Indian zoos	18j
79	BUDGERIGARS (<i>Melopsittacus undulatus</i>)	0	16	33	49	20	20	40	20	20	40	20	26	46	Indian zoos	20
80	RAINBOW LORIKEET (<i>Trichoglossus haematodus</i>)	1	0	0	1	2	2	4	2	2	4	2	2	4	Indian zoos	20
81	JAVA SPARROW (<i>Lonchura oryzivora</i>)	4	5	9	18	10	20	30	10	20	30	13	20	33	Indian zoos	18I
82	DUSKY PIONUS (<i>Pionus fuscus</i>)	0	0	0	0	2	2	4	2	2	4	2	2	4	Indian zoos	20
83	RED BELLIED MACAW (<i>Orthopsittacamanilata</i>)	0	0	9	9	5	5	10	5	5	10	0	0	0	Indian zoos	20
84	SCARLET MACAW (<i>Ara macao</i>)	0	0	4	4	2	2	4	2	2	4	0	0	0	Indian zoos	20
85	HARLEQUIN MACAW(Hybrid) Blue and Gold & Green winged	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	20
86	SEVERE MACAW (<i>Ara severus</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	20

87	WHITE EYE CONURE (<i>Psittacara leucophthalmus</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	21a
88	ORANGE WING AMAZON (<i>Amazona amazonica</i>)	0	0	1	1	2	2	4	2	2	4	1	1	2	Indian zoos	20
89	RUPELL'S PARROT (<i>Poicephalus rueppellii</i>)	0	0	1	1	2	2	4	2	2	4	1	1	2	Indian zoos	18g
90	PALM COCKATOO (<i>Proboscigera terrimus</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	20
91	RING-NECKED PHEASANT (<i>Phasianus colchicus</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	17a
92	RED SPURFOWL (<i>Galloperdix spadicea</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian zoos	16a
MAMMALS																
S.No	Schedule I	M	F	U	T	M	F	T	M	F	T	M	F	T		
93	INDIAN WILD ASS (<i>Equus hemionus</i>)	1	0	0	1	2	3	5	4	6	10	1	2	3	Indian zoos	46
94	SLOTH BEAR (<i>Melursus ursinus</i>)	1	1	0	2	2	3	5	4	6	10	1	2	3	Indian zoos	49
95	ASIATIC BLACK BEAR (<i>Ursus thibetanus</i>)	2	3	0	5	2	3	5	4	6	10	1	2	3	Indian zoos	51
96	BLACK BUCK (<i>Antilope cervicapra</i>)	11	16	2	29	2	3	5	4	6	10	0	0	0	Indian zoos	31
97	JUNGLE CAT (<i>Felis chaus</i>)	4	3	0	7	2	5	7	6	14	20	2	4	6	Indian zoos	98

98	SWAMP DEER / BARASINGHA (<i>Rucervus duvauceli</i>)	6	17	3	26	2	3	5	4	6	10	1	1	2	Indian zoos	41
99	INDIAN CHEVROTAIN / MOUSE DEER (<i>Moschiola indica</i>)	6	8	6	20	6	6	12	6	6	12	0	0	0	Indian zoos	8
100	GRAY SLENDER LORIS (<i>Loris lydekkerianus</i>)	1	2	0	3	2	5	7	6	14	20	1	4	5	Indian zoos	98
101	SMALL INDIAN CIVET CAT (<i>Viverricula indica</i>)	1	0	0	1	2	5	7	6	14	20	2	4	6	Indian zoos	98
102	ASIAN PALM CIVET CAT (<i>Paradoxurus hemaphroditus</i>)	1	2	3	6	2	5	7	6	14	20	0	0	0	Indian zoos	98
103	ASIATIC WILD DOG/(DHOLE (<i>Cuon alpinus</i>)	4	3	0	7	2	5	7	6	14	20	2	3	5	Indian zoos	48
104	INDIAN GREATER ONE HORNED RHINOCEROS (<i>Rhinoceros unicornis</i>)	1	1	0	2	3	5	8	3	7	10	1	1	2	Indian zoos	93
105	ASIATIC ELEPHANT (<i>Elephas maximus</i>)	0	2	0	2	2	3	5	4	6	10	0	3	3	Indian zoos	90
106	GAUR / INDIAN BISON (<i>Bos gaurus</i>)	10	13	19	42	2	3	5	4	6	10	0	0	0	Indian zoos	42
107	BENGAL FOX (<i>Vulpes bengalensis</i>)	0	1	0	1	2	5	7	6	14	20	2	4	6	Indian zoos	50
108	JACKAL (<i>Canis aureus</i>)	8	1	0	9	2	5	7	6	14	20	0	2	2	Indian zoos	57

109	NILGIRI LANGUR (<i>Semnopithecus johni</i>)	8	10	3	21	2	5	7	6	14	20	0	0	0	Indian zoos	4
110	LEOPARD / PANTHER (<i>Panthera pardus</i>)	2	1	0	3	2	3	5	4	6	10	0	0	0	Indian zoos	66
111	BONNET MACAQUE (<i>Macaca radiata</i>)	16	2	0	18	2	5	7	6	14	20	0	4	4	Indian zoos	7
112	LION TAILED MACAQUE (<i>Macaca silenus</i>)	5	10	6	21	2	5	7	6	14	20	2	0	2	Indian zoos	5
113	SMOOTH COATED OTTER (<i>Lutrogale perspicillata</i>)	1	1	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	36
114	INDIAN PORCUPINE (<i>Hystrix indica</i>)	1	2	6	9	2	5	7	6	14	20	3	3	6	Indian zoos	98
115	GRIZZLED GIANT SQUIRREL (<i>Ratufa macroura</i>)	0	0	0	0	2	5	7	6	14	20	1	4	5	Indian zoos	45a
116	GIANT FLYING SQUIRREL (<i>Petauristha philippinensis</i>)	1	0	0	1	2	5	7	6	14	20	1	4	5	Indian zoos	45a
117	MALABAR / INDIAN GIANT SQUIRREL (<i>Ratufa indica</i>)	1	1	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	45a
118	GRAY WOLF (<i>Canis lupus</i>)	8	4	0	12	2	5	7	6	14	20	0	7	7	Indian zoos	58
119	BENGAL WHITE TIGER (<i>Panthera tigris tigris</i>)	3	6	0	9	2	3	5	4	6	10	1	2	3	Indian zoos	64
120	BENGAL TIGER (<i>Panthera tigris tigris</i>)	8	10	0	18	2	3	5	4	6	10	1	1	2	Indian zoos	65

121	HOG DEER (<i>Axis porcinus</i>)	3	3	2	8	2	5	7	6	14	20	0	0	0	Indian zoos	34
122	SAMBAR DEER (<i>Rusa unicolor</i>)	13	41	26	80	2	3	5	4	6	10	20	20	40	Indian zoos	41
123	STRIPPED HYAENA (<i>Hyaena hyaena</i>)	1	3	0	4	2	5	7	6	14	20	1	3	3	Indian zoos	59
124	HYBRID LION (<i>Panthera leo</i>)	4	5	0	9	2	3	5	4	6	10	0	0	0	Indian zoos	39
125	LEOPARD CAT (<i>Prionailurus bengalensis</i>)	1	1	0	2	2	3	5	2	3	5	1	1	2	Indian zoos	50
126	MALAYAN GIANT SQUIRREL (<i>Ratufa bicolor</i>)	1	1	0	2	1	1	2	1	1	2	1	1	2	Indian zoos	45a
S.No	Schedule II	M	F	U	T	M	F	T	M	F	T	M	F	T		
127	GREY LANGUR (<i>Semnopithecus thersites</i>)	0	1	1	2	2	5	7	6	14	20	2	2	4	Indian zoos	12
128	SPOTTED DEER (<i>CHITAL</i>) (<i>Axis axis</i>)	4	21	14	39	2	3	5	4	6	10	3	13	16	Indian zoos	30
129	NILGAI / BLUE BULL (<i>Boselaphus ttragocamelus</i>)	2	7	7	16	2	3	5	4	6	10	1	0	0	Indian zoos	38
130	WILD PIG (<i>Sus scrofa</i>)	3	1	10	14	2	3	5	4	6	10	1	0	0	Indian zoos	91
131	INDIAN HARE (<i>Lepus nigricollis</i>)	0	0	1	1	2	2	4	2	2	4	1	3	4	Indian zoos	98

S.No	Schedule III, IV & Exotics	M	F	U	T	M	F	T	M	F	T	M	F	T		
132	RHESUS MACAQUE (<i>Macaca mulatta</i>)	19	15	46	80	2	5	7	6	14	20	29	27	56	Indian zoos	13
133	BARKING DEER MUNTJAC (<i>Muntiacus muntjak</i>)	3	6	5	14	2	5	7	6	14	20	0	0	0	Indian zoos	29
134	SAVANA BABOON (<i>Papio cynocephalus</i>)	1	0	0	1	2	3	5	2	3	5	1	2	3	Indian zoos	100
135	RED HANDED TAMARIN (<i>Saguinus midas</i>)	1	1	1	3	2	3	5	4	6	10	0	2	2	Indian zoos	102b
136	CHIMPANZEE (<i>Pan troglodytes</i>)	2	1	0	3	2	3	5	2	3	5	1	0	1	Indian zoos	101
137	GIRAFFE (<i>Giraffa camelopardalis</i>)	0	1	0	1	2	3	5	4	6	10	1	2	3	Indian zoos	96
138	HIPPOPOTAMUS (<i>Hippopotamus amphibius</i>)	3	4	0	7	2	3	5	4	6	10	0	1	1	Indian zoos	92
139	BROWN CAPUCHIN (<i>Sapajus apella</i>)	0	0	0	0	2	5	7	6	14	20	0	5	5	Indian zoos	102a
140	SQUIRREL MONKEY (<i>Saimeri sciureus</i>)	1	2	0	3	2	2	4	2	2	4	1	1	2	Indian zoos	102c
141	PYGMY HIPPOPOTAMUS (<i>Choeropsis liberiensis</i>)	0	0	0	0	2	2	4	2	2	4	1	1	2	Indian/ Intl zoos	92a
142	WHITAKER'S BOA (<i>Eryx whitakeri</i>)	2	2	0	4	2	5	7	3	6	9	2	2	4	Indian zoos	77
143	RED SAND BOA (<i>Eryx johnii</i>)	0	0	6	6	2	5	7	2	5	7	2	2	4	Indian zoos	77
144	CROCODILE - GHARIAL (<i>Gavialis gangeticus</i>)	2	4	2	8	2	5	7	6	14	20	0	3	3	Indian zoos	85

145	MARSH CROCODILE (<i>MUGGER</i>) (<i>Crocodylus palustris</i>)	20	52	15	87	2	5	7	6	14	20	20	20	40	Indian zoos	86A
146	SALT WATER CROCODILE (<i>Crocodylus porosus</i>)	2	0	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	79
147	KING COBRA (<i>Ophiophagus hannah</i>)	4	0	0	4	2	5	7	6	14	20	1	5	6	Indian zoos	78
148	INDIAN COBRA (<i>Naja naja</i>)	0	0	14	14	2	5	7	6	14	20	1	3	4	Indian zoos	77
149	WATER MONITOR (<i>Varanus salvator</i>)	1	1	0	2	2	5	7	6	14	20	1	4	5	Indian zoos	72
150	BENGAL MONITOR (<i>Varanus bengalensis</i>)	0	6	0	6	2	5	7	6	14	20	1	4	5	Indian zoos	74
151	CHECKERED KEELBACK SNAKE (<i>Fowlea piscator</i>)	0	2	8	10	2	5	7	6	14	20	1	1	2	Indian zoos	77
152	RUSSEL'S VIPER (<i>Daboia russelli</i>)	0	0	3	3	2	5	7	6	14	20	2	2	4	Indian zoos	77
153	PYTHON (<i>Python molurus</i>)	0	0	8	8	2	5	7	6	14	20	0	0	0	Indian zoos	77
154	RETICULATED PYTHON (<i>Malayopython reticulatus</i>)	0	1	14	15	2	5	7	6	14	20	0	0	0	Indian zoos	77
155	ASSAM ROOF TURTLE (<i>Pangshura sylhetensis</i>)	0	0	4	4	2	5	7	4	6	10	2	2	4	Indian zoos	70
156	INDIAN FLAP SHELL TURTLE (<i>Lissemys punctata</i>)	0	0	4	4	3	3	6	3	3	6	1	1	2	Indian zoos	70

157	INDIAN STAR TORTOISE (<i>Geochelone elegans</i>)	0	0	18	18	2	5	7	6	14	20	0	0	0	Indian zoos	70
158	SPOTTED POND TURTLE (<i>Geoclemys hamiltoni</i>)	0	0	45	45	2	5	7	6	14	20	0	0	0	Indian zoos	70
159	TRICARINATE HILL TURTLE (<i>Melanochelys tricarinata</i>)	0	0	2	2	2	5	7	3	6	9	0	0	0	Indian zoos	70
160	DHAMAN or INDIAN RAT SNAKE (<i>Ptyas mucosa</i>)	0	0	6	6	2	2	4	4	4	8	0	0	0	Indian zoos	77
161	SAW SCALED VIPER (<i>Echis carinatus</i>)	0	0	1	1	2	5	7	6	14	20	2	2	4	Indian zoos	77
162	COMMON SAND BOA (<i>Eryx conicus</i>)	0	0	5	5	2	5	7	2	5	7	2	2	4	Indian zoos	77
S.No	Schedule II	M	F	U	T	M	F	T	M	F	T	M	F	T		
163	INDIAN BLACK TURTLE (<i>Melanochelys trijuga</i>)	0	0	6	6	4	4	8	6	6	12	0	0	0	Indian zoos	70
164	STRIPPED KEELBACK SNAKE (<i>Amphiesma stolatum</i>)	0	0	4	4	2	5	7	2	5	7	1	2	3	Indian zoos	77
S.No	Schedule III, IV & Exotics	M	F	U	T	M	F	T	M	F	T	M	F	T		
165	SPECTACLED CAIMAN (<i>Caiman caiman</i>)	0	2	0	2	2	2	4	2	2	4	2	1	3	Indian zoos	75
166	MORLETT'S CROCODILE (<i>Crocodilus morletti</i>)	0	1	0	1	2	2	4	2	2	4	1	2	3	Indian zoos	88

167	SIAMESE CROCODILE (<i>Crocodylus siamensis</i>)	2	1	0	3	2	5	7	6	8	14	4	7	11	Indian zoos	76
168	NILE CROCODILE (<i>Crocodilus niloticus</i>)	1	2	0	3	2	2	4	2	2	4	1	1	2	Indian zoos	84
169	COMMON INDIAN KRAIT (<i>Bungarus caeruleus</i>)	0	0	2	2	2	2	4	2	2	4	1	1	2	Indian zoos	77
170	GREEN VINE SNAKE (<i>Ahaeutulla oxyryncha</i>)	0	0	4	4	2	5	7	2	5	7	1	2	3	Indian zoos	77
171	COMMON INDIAN TREE SNAKE (<i>Dendrelaphais tristis</i>)	0	0	2	2	2	5	7	2	5	7	2	2	4	Indian zoos	77
172	INDIAN TRINKET SNAKE (<i>Elaphe helena</i>)	0	0	2	2	2	5	7	2	5	7	2	2	4	Indian zoos	77
173	BALL PYTHON (<i>Python regius</i>)	1	1	0	2	1	1	2	1	1	2	0	0	0	Indian zoos	77
174	DWARF CAIMAN (<i>Paleosuchus palpebrosus</i>)	0	0	1	1	1	1	2	1	1	2	1	1	2	Indian zoos	82
175	WEST-AFRICAN DWARF CROCODILE (<i>Osteodamus</i>)	0	0	1	1	1	2	3	1	2	3	1	2	3	Indian zoos	83
176	GREEN IGUANA (<i>Iguana iguana</i>)	0	1	2	3	2	2	4	3	3	6	2	2	4	Indian zoos	77
177	RED IGUANA (<i>Iguana iguana</i>)	0	0	2	2	2	2	4	3	3	6	2	2	4	Indian zoos	77
178	YELLOW ANACONDA (<i>Eunectes notaeus</i>)	2	4	7	13	2	4	6	2	4	6	2	2	4	Indian zoos	71a
179	RED EARED TURTLE (<i>Chrysemys scripta elegans</i>)	0	0	22	22	2	5	7	6	10	16	5	5	10	Indian zoos	70
180	AMERICAN ALLIGATOR (<i>Alligator mississippiensis</i>)	0	0	0	0	2	5	7	6	14	20	0	5	5	Indian zoos	88b

ANNEXURE F : LIST OF FLORAL & FAUNA SPECIES FOUND IN ARIGNAR ANNA ZOOLOGICAL PARK

1. <i>Abrus precatorius</i>	47. <i>Cocculus hirsutus</i>	93. <i>Murraya koenigii</i>
2. <i>Abutilon indicum</i>	48. <i>Cochlospermum religiosum</i>	94. <i>Mitrgyana parviflora</i>
3. <i>Acacia auriculiformis</i>	49. <i>Comiphora caudata</i>	95. <i>Ocimum sanctum</i>
4. <i>Acacia leucopholea</i>	50. <i>Chordia dichotoma</i>	96. <i>Ocimum americanum</i>
5. <i>Acacia nilotica</i>	51. <i>Cynodon dactylon</i>	97. <i>Ocimum cannum</i>
6. <i>Acacia sundra</i>	52. <i>Dalbergia latifolia</i>	98. <i>Parika biglandulosa</i>
7. <i>Acalypha indica</i>	53. <i>Datura stramonium</i>	99. <i>Peltophorum pterocarpum</i>
8. <i>Acacia intsia</i>	54. <i>Debregeasia longifolia</i>	100. <i>Pergularia daemia</i>
9. <i>Achyranthus aspera</i>	55. <i>Delonix regia</i>	101. <i>Phoenix sylvestris</i>
10. <i>Actinodaphne madraspatna</i>	56. <i>Dendrocalamus strictus</i>	102. <i>Phyllanthus niruri</i>
11. <i>Adathoda zeylanica</i>	57. <i>Dendrophthoe falcate</i>	103. <i>Polyalthia longifolia</i>
12. <i>Adina cordifolia</i>	58. <i>Dysoxylum binectariferum</i>	104. <i>Pongamia pinnata</i>
13. <i>Agave vivipara</i>	59. <i>Emblica officinalis</i>	105. <i>Portulaca quadrifidia</i>
14. <i>Ailanthus excelsa</i>	60. <i>Erythrina indica</i>	106. <i>Prosopis juliflora</i>
15. <i>Alangium salvifolium</i>	61. <i>Euphorbia hirta</i>	107. <i>Prosopis spicigera</i>
16. <i>Albizia amara</i>	62. <i>Feronia limonia</i>	108. <i>Psidium guajava</i>
17. <i>Albezia lebbeck</i>	63. <i>Ficus bengalensis</i>	109. <i>Pterocarpus santalinus</i>
18. <i>Anacardium occidentale</i>	64. <i>Ficus religiosa</i>	110. <i>Randia dumetorum</i>
19. <i>Annon squamosa</i>	65. <i>Flacourtia indica</i>	111. <i>Samanea saman</i>
20. <i>Atlantia monophylla</i>	66. <i>Flacourtia ramontchi</i>	112. <i>Sansveria roxburghiana</i>
21. <i>Azadirachta indica</i>	67. <i>Gloriosa superba</i>	113. <i>Santalum album</i>
22. <i>Bauhinia variegata</i>	68. <i>Grewia tiliacifolia</i>	114. <i>Securinega leucopyrus</i>
23. <i>Bambusa arundinacea</i>	69. <i>Hardwickia binate</i>	115. <i>Sesbania grandiflora</i>
24. <i>Bambusa vulgaris</i>	70. <i>Hibiscus tiliaceus</i>	116. <i>Smilax zeylanica</i>
25. <i>Barleria prionitis</i>	71. <i>Inga dulcis</i>	117. <i>Solanum surattense</i>
26. <i>Basilla latifolia</i>	72. <i>Jasminum angustifolium</i>	118. <i>Solanum torvum</i>
27. <i>Bauhinia racemosa</i>	73. <i>Jatropha curcas</i>	119. <i>Solanum trilobatum</i>
28. <i>Berberis leschemonaltii</i>	74. <i>Jatropha glandulifera</i>	120. <i>Sphathodia companulata</i>
29. <i>Bothriochlora pertusa</i>	75. <i>Justicia tranquebarensis</i>	121. <i>Spinifex littoralis</i>
30. <i>Borassus flabellifer</i>	76. <i>Kygelia pinnata</i>	122. <i>Syzygium cumini</i>
31. <i>Butea monosperma</i>	77. <i>Lannea coromandelica</i>	123. <i>Sterculia foetida</i>
32. <i>Butea parviflora</i>	78. <i>Lantana camara</i>	124. <i>Tectona grandis</i>
33. <i>Calotropis gigantea</i>	79. <i>Lawsonia inermis</i>	125. <i>Tamarindus indicus</i>
34. <i>Capparis grandiflora</i>	80. <i>Leucaena leucocephalea</i>	126. <i>Terphrosia purpurea</i>
35. <i>Capparis sepiaris</i>	81. <i>Leucas aspera</i>	127. <i>Terminalia arjuna</i>
36. <i>Cardiospermum heliocarpum</i>	82. <i>Lycopersicon esculentum</i>	128. <i>Tabuybia rosea</i>
37. <i>Cassia auriculata</i>	83. <i>Mangifera indica</i>	129. <i>Thespesia populnea</i>
38. <i>Cassia fistula</i>	84. <i>Manikara achras</i>	130. <i>Tribulus terrestris</i>
39. <i>Cassia margarita</i>	85. <i>Marsdenia volubills</i>	131. <i>Tridax procumbens</i>
40. <i>Cassia mimosoides</i>	86. <i>Hemidesmus indicus</i>	132. <i>Vettiveria lawsonii</i>
41. <i>Casuarina equisetifolia</i>	87. <i>Michelia champaca</i>	133. <i>Vitex negundo</i>
42. <i>Cieba pentandra</i>	88. <i>Millingtonia hortensis</i>	134. <i>Wrightia tinctoria</i>
43. <i>Cissus quadrangularis</i>	89. <i>Mimosa pudica</i>	135. <i>Xantolis tomentosa</i>
44. <i>Citrus medica</i>	90. <i>Minusops elengi</i>	136. <i>Zanthoxylum rhetsa</i>
45. <i>Clitoria ternatia</i>	91. <i>Moringa oleifera</i>	137. <i>Ziziphus horrida</i>
46. <i>Cocos nucifera</i>	92. <i>Moringa tinctoria</i>	138. <i>Ziziphus jujube</i>

CHECKLIST OF BIRDS FOUND IN ARIGNAR ANNA ZOOLOGICAL PARK

S.No	Aquatic birds	S. No	Predator Birds
1	Little Grebe	34	Black Kite
2	Indian Spot Billed Duck	35	Black winged kite
3	Lesser Whistling Duck	36	Brahminy kite
4	Northern Shoveler	37	Barn Owl
5	Northern Pintail	38	Spotted owl
6	Eurasian coot	S.No	Ground Living birds
7	Common sandpiper	39	Grey Jungle Fowl
8	Little ringed Plover	40	Grey Francolin
9	Purple moorhen	41	Common quail
10	White breasted waterhen	42	House Crow
11	Bronze winged jacana	43	Large –billed Crow
12	Pheasant tailed jacana	44	Common babbler
13	Red wattled Lapwing	45	Yellow billed Babbler
14	Yellow wattled lapwing	46	Indian robin
15	Little Coromorant	47	Oriental Magpie Robin
16	Indian Coromorant	48	Indian Peafowl
17	Great Coromorant	49	Spotted Dove
18	Indian Darter	50	Rock Pigeon
19	Indian Pond heron	51	Bay Backed Shrike
20	Grey heron	52	Brown Shrike
21	Black crowned Night heron	53	Indian Roller
22	Little Egret	54	Grey Wagtail
23	Intermediate Egret	55	Western yellow wagtail
24	Great Egret	56	White browed wagtail
25	Cattle Egret	57	Paddyfield pipit
26	Black headed Ibis	58	Common myna
27	Glossy Ibis	59	Orange headed thrush
28	Eurasian Spoon bill	60	Brahminy starling
29	Asian openbill	61	House Sparrow
30	Painted Stork	62	Eurasian Hoopoe
S. No	Predator Birds	63	Black headed munia
31	Crested Honey buzzard	64	Spotted breast Munia
32	Common Kestrel	65	Pied bush chat
33	Shikra		

S. No	High Flying birds	S. No	High Flying birds
66	Barn Swallow	82	Green bee eater
67	Asian Palm Swift	83	Chestnut headed bee eater
68	Little Swift	84	Small minivet
69	Red vented bulbul	85	Indian Paradise flycatcher
70	White browed bulbul	86	Ashy Prinia
71	Red Whiskered bulbul	87	Plain Prinia
72	Coppersmith barbet	88	Blyth's Reed Warbler
73	Rose ringed parakeet	89	Common tailor bird
74	Rufous Tree pie	90	Common kingfisher
75	Asian koel	91	white throated kingfisher
76	Common hawk cuckoo	92	Pied kingfisher
77	Golden oriole	93	Purple sunbird
78	Common Iora	94	Purple rumped sunbird
79	Black rumped Flame back wood pecker	95	Loten sunbird
80	Black Drongo	96	Small minivet
81	Ashy Drongo	97	Common wood shrike

CHECKLIST OF BUTTERFLIES IN BUTTERFLY HOUSE

S. No	Common Name	Scientific Name
Papilionidae		
1	Lime butterfly	<i>Papilio demoleus</i>
2	Common jay	<i>Graphium doson</i>
3	Tailed jay	<i>Graphium agamenon</i>
4	Crimson rose	<i>Pachliopta hector</i>
5	Common Banded Peacock	<i>Papilio crino</i>
6	Common rose	<i>Pachliopta aristolochiae</i>
7	Paris peacock	<i>Papilio paris</i>
8	Paris blue peacock	<i>Papilio arcturus</i>
9	Common mormone	<i>Papilio polytes</i>
Pieridae		
10	Striped albatrose	<i>Appias libythea</i>
11	Small salmon arab	<i>Colotis amata</i>
12	Great orang tip	<i>Hebomoia glaucippe</i>
13	Common wanderers	<i>Pareronia valeria</i>
14	White orange tip	<i>Ixias Marianna</i>
15	Mottled emigrant	<i>Catosilia pyranthe</i>
16	Lesser gull	<i>Cepora nadina</i>
17	Indian cabbage white	<i>Pieris canidia</i>
18	Three sotted grass yellow	<i>Eurema blanda</i>
19	Common emigrant	<i>Catosilia pomona</i>
20	Psyche	<i>Leposia nina</i>
21	Little orange tip	<i>Catosilia etrida</i>
22	Yellow orange tip	<i>Ixias pyrene</i>
23	Small grass yellow	<i>Eurema brigitta</i>
24	Plinne orange tip	<i>Colotis aurora</i>
25	Pioneer	<i>Belenois aurota</i>
26	Common albatroses	<i>Appias albino</i>
Nymphalidae		
27	Angled caster	<i>Ariadne ariadne</i>
28	Yellow Pansy	<i>Junonia hierta</i>
29	Common caster	<i>Ariadne merione</i>
30	Lemmon pansy	<i>Junonia lemonias</i>
31	Black rajah	<i>Charaxes solon</i>
32	Common brand bush brown	<i>Mycalesis visala</i>
33	Chestnut streaked sailer	<i>Neptis jumbah</i>
34	Chocolate pansy	<i>Junonia iphita</i>
35	Common nawab	<i>Polyura athamas</i>

S. No	Common Name	Scientific Name
36	Dark brand bush brown	<i>Mycalesis mineus</i>
37	Common evening brown	<i>Melanitis leda</i>
38	Common leoard	<i>Phalanta phalantha</i>
39	Great eggfly	<i>Hypolimnas bolina</i>
40	Common palmfly	<i>Elymnias hypermnestra</i>
41	Common crow	<i>Euploea core</i>
42	Glossy blue tiger	<i>Ideosis vulgaris</i>
43	Dark blue tiger	<i>Thirukala setentrionis</i>
44	Striped tiger	<i>Danas genutia</i>
45	Common bushbrown	<i>Heteropsis malsara</i>
46	Tawny coster	<i>Acraea terpsicore</i>
47	Danaid eggfly	<i>Hyolimnas misippus</i>
48	Peacock pansy	<i>Junonia almanac</i>
49	Blue pansy	<i>Junonia orithya</i>
50	Plain tiger	<i>Danaus chrysippus</i>
51	Common sailer	<i>Neptis hylas</i>
Lycaenidae		
52	Indian cupid	<i>Everes lacturns</i>
53	Pline cupid	<i>Chilades pandava</i>
54	Cerulean	<i>Jamides celeno</i>
55	Grass jewel	<i>Chilades trochylus</i>
56	Pea blue	<i>Lampides boeticus</i>
57	Zebra blue	<i>Leptoes plinius</i>
58	Tiny grass blue	<i>Zizula hylax</i>
59	Pale grass blue	<i>Pseudozizeeria maha</i>
60	Pale grass yellow	<i>Eurema hecabe</i>
61	Common line blue	<i>Prosotas nora</i>
62	Small cupid	<i>Chilades parrhasius</i>
63	Common piorrot	<i>Castalius rosimon</i>
Hesperiidae		
64	Common awl	<i>Hasora badra</i>
65	Common banded awl	<i>Hasora chromus</i>
66	Small banded swift	<i>Peloidas mathias</i>

LIST OF HERPETO FAUNA AT AAZP

S. No.	Common Name	Scientific Name
Amphibia: Bufonidae		
1	Common Toad	<i>Duttaphrynus melaostictus</i>
2	Dwarf Toad	<i>Duttaphrynus scabr</i>
Microhylidae		
3	Marbled Balloon Frog	<i>Uperodon systoma</i>
4	Marbled Frog	<i>Uperodon variegatus</i>
	Painted Kaloula	<i>Uperodon taprobanicus</i>
5	Ornate small-mouthed frog	<i>Microhyla ornata</i>
6	Red small-mouthed frog	<i>Microhyla rubra</i>
Dicroglossidae		
7	Green Pond Frog	<i>Euphlyctis hexadactylus</i>
8	Skittering Frog	<i>Euphlyctis cyanophlyctis</i>
9	Common Cricket Frog	<i>Minervarya agricola</i>
10	Indian Bullfrog	<i>Hoplobatrachus tigerinus</i>
11	Jerdon's Bullfrog	<i>Hoplobatrachus crassus</i>
Rhacophoridae		
12	Common Tree Frog	<i>Polypedats maculatus</i>
Reptilia: Gekkonidae		
13	House Gecko	<i>Hemidactylus frenatus</i>
14	Bark Gecko	<i>Hemidactylus leschenaultia</i>
15	Brook's Gecko	<i>Hemidactylus parvimaculatus</i>
16	Termite-hill Gecko	<i>Hemidactylus triedrus</i>
Agamidae		
17	Common Garden Lizard	<i>Calotes versicolor</i>
18	Fan-throated lizard	<i>Sitana ponticeriana</i>
Scincidae		
19	Supple Skink	<i>Riopa punctate</i>
20	Keeled Grass skink	<i>Eutropis carnata</i>
21	Bronze Grass Skink	<i>Eutropis macularia</i>
Varanidae		
22	Common Monitor Lizard	<i>Varanus bengalensis</i>
Typhlopidae		
23	Common Worm Snake	<i>Indotyphlops braminus</i>

Erycidae		
24	Common Sand Boa	<i>Eryx conicus</i>
25	Red Sand Boa	<i>Eryx johnii</i>
Natricidae		
26	Checkered keelback	<i>Fowlea piscator</i>
27	Olive keelback	<i>Atrium schistosum</i>
28	Striped keelback	<i>Amphiesma stolatum</i>
Colubridae		
29	Rat snake	<i>Ptyas mucosa</i>
30	Common Trinket snake	<i>Coelognathus Helena</i>
31	Green vine snake	<i>Ahaetulla oxyrynchca</i>
32	Common Bronzeback	<i>Dendrelaphis tristis</i>
Elapidae		
33	Common Krait	<i>Bungarus caeruleus</i>
34	Slender Coral Snake	<i>Calliopsis melanurs</i>
35	Spectacled cobra	<i>Naja naja</i>
Viperidae		
36	Russell's Viper	<i>Daboia russellii</i>
37	Saw-scaled viper	<i>Echis carinatus</i>

LIST OF FREE-RANGING MAMMALS AT AAZP

S.no	Common Name	Scientific Name
1	Common Mongoose	<i>Herpestes edwardsii</i>
2	Three striped palm squirrel	<i>Funambulus penantii</i>
3	Golden Jackal	<i>Canis aureus</i>
4	Palm civet	<i>Paradoxurus hermaphrodites</i>
5	Small Indian Civet	<i>Viverricula indica</i>
6	Indian pangolin	<i>Manis crassicaudata</i>
7	Flying fox	<i>Pteropus giganteus</i>
8	Black-naped hare	<i>Lepus nigricollis</i>
9	Porcupine	<i>Hystix indica</i>
10	Spotted Deer	<i>Cervus axis</i>
11	Bonnet Macaque	<i>Macaca radiata</i>
12	Jungle Cat	<i>Felis chaus</i>

ANNEXURE G: ACTION PLAN REGARDING FREE RANGING WILD ANIMALS IN ZOO PREMISES

The zoo campus, being situated within a Reserve Forest ecosystem, supports a rich diversity of naturally occurring free-ranging wildlife. The extensive forested landscape of the zoo provides suitable habitat conditions including vegetation cover, perennial water sources, shade, and natural forage. These ecological features enable the survival and sustenance of free-ranging species within the defined boundaries of the zoo without direct dependence on captive management.

The zoo has diverse species of mammals, bird, reptiles and amphibians living freely and maintains a naturally balanced population. However, at present the is experiencing a steep rise in population of Spotted Deer (Axis axis) . They are roaming freely across various zones of the campus including visitor zone and hence need to be controlled to avoid problems due to negative human interaction.

Approximately 300 Spotted Deer (Axis axis) are presently observed roaming freely across various zones of Arignar Anna Zoological Park. While their presence contributes to the semi-natural landscape of the campus, a sustained increase in their population may lead to ecological concerns such as overgrazing, habitat degradation, reduction in ground vegetation and natural regeneration of plant species. Higher densities may also increase the likelihood of human-wildlife interactions near visitor pathways, animal enclosures, and service zones, potentially affecting both operational management and safety of animals and visitors.

In view of these factors, the park will undertake continuous monitoring of the free-ranging Spotted Deer population through periodic census, habitat impact assessments, and regular field surveillance to ensure that their numbers remain within the ecological carrying capacity of the campus. Appropriate management interventions will be implemented whenever necessary to maintain ecological balance.

If, in future, the deer population increases beyond manageable levels despite regular monitoring, a structured population management strategy will be implemented. Surplus individuals will be diverted to the designated Deer Safari Area within the zoo premises, where they can inhabit a semi-wild environment under regulated conditions with adequate space and monitoring. Capture and transfer will be undertaken using the Boma technique, a scientifically accepted low-stress and passive capture method that minimizes chasing, sedation, and excessive human interference, thereby ensuring animal welfare during the process.

Augmentation of Prey Base in Protected Areas

Augmentation of prey base in protected areas is occasionally considered as a wildlife management strategy to support predator populations and maintain ecological balance. However, translocation of free-ranging Spotted Deer (Axis axis) from the campus of Arignar Anna Zoological Park to distant protected forests involves several ecological, logistical, and animal welfare concerns and hence it not recommended.

Capture and transportation over long distances can subject deer to significant physiological stress. Even under controlled conditions, capture may induce trauma, while prolonged transport can lead to exhaustion, dehydration, injury, and heightened stress responses. Furthermore, post-release challenges such as adaptation to unfamiliar habitat, altered predator-prey dynamics, competition for forage, and navigation in new terrain may increase the risk of mortality

Considering these risks, long-distance translocation will not be the primary management strategy. The first priority will be in-situ population regulation within the zoo campus, including diversion to designated semi-wild zones such as the Deer Safari Area. However, if consistent surveillance and population assessments indicate overpopulation beyond the ecological carrying capacity of the campus, selective and carefully planned translocation to nearby reserved forests may be considered.

In such circumstances, deer will be captured using scientifically approved low-stress techniques, such as the Boma method, under veterinary supervision to minimize handling stress and human interference. Preference will be given to releasing animals in suitable nearby Reserve Forest areas within Chengalpattu District, subject to ecological feasibility, habitat assessment, and approval from the competent authority.

All actions will be carried out in coordination with the Tamil Nadu Forest Department and in compliance with established wildlife management and translocation guidelines

ANNEXURE H – SANCTIONED, PROPOSED & PRESENT STAFFING PATTERN AND POSITION AT ARIGNAR ANNA ZOOLOGICAL PARK

S. No.	Designation	Sanctioned	Filled	Vacant
1	Director	1	1	-
2	Deputy Director	1	1	-
3	Asst. Conserv. Forests	1	1	-
4	Personal Assistant	1	1	-
5	Superintendent	2	2	-
6	Assistant	6	6	-
7	Junior Accountant	1	1	-
8	Junior Assistant	3	3	-
9	Steno typist Gr. II	1	1	-
10	Typists	2	-	2
12	Asst. executive engineer	1	-	1
13	Junior Engineer	1	-	1
14	Senior Draughting Officer	1	1	-
15	Draughting Officer	1	1	-
16	Assistant Draughtsman	2	2	-
17	Veterinary Officer	1	1	0
18	Veterinary Asst. Surgeon	2	2	0
19	Biologist	3	1	2
20	Livestock inspector	1	-	1
21	Lab Technician	1	-	1
22	Office Assistant	7	4	3
23	Office Watchman	1	1	-
24	Sweeper	1	1	-
25	Electrician	1	-	1
26	Plumbers	1	-	1
27	Forest Range Officer	6	6	-
28	Forester	6	6	-
29	Forest Guard	9	7	2
30	Forest Guard with DL	5	3	2
31	Forest Watcher	2	2	-
32	Driver	14	7	7
33	Night watchman (FSS)	3	-	3
34	Mahout	1	-	1
35	Bungalow Watcher	1	-	1
36	Animal keepers	45	17	28
37	Sweeper cum scavenger	32	12	20
38	Mali	30	20	10
39	Night Watchman	11	2	9
40	Gate watchman	13	6	7
41	Food distribution helper	6	2	4
42	Plumber	3	2	1
43	Pump operator	10	2	8
44	Assistant Agricultural Officer	1	1	-
45	Gardener	4	2	2
46	Asst. Electrician	1	1	-
47	Driving – garbage collection worker	2	-	2
	TOTAL	248	129	121

ANNEXURE I - LIST OF BUILDINGS OTHER THAN ANIMAL ENCLOSURES

1. Director's office
2. Ticket counter
3. Range IV Office
4. Range II Office
5. Feed Store & Range III Office
6. Zoo Veterinary Hospital complex
7. Range V Office
8. Range I Office
9. Zoo School
10. Interpretation Centre
11. Tamil Nadu Hotel (TTDC)
12. Quick Bites (TTDC) - 3
13. Aavin Milk Parlour
14. EB substations
15. Heritage building (Herbal medicine outlet)
16. Guest house
17. First aid centre
18. Butterfly park maintenance room
19. Staff Quarters (37 nos.)
20. BOV charging point and shed
21. Visitors rest sheds – 11
22. Tea stalls – 6

ANNEXURE J- NOTIFICATIONS**ABSTRACT**

Societies Bringing Government Societies/Government controlled Societies under the domain of Finance (BPE) as a part of bringing parity among supervision of Government Companies and Government Societies / Government controlled Societies registered under Tamil Nadu Societies Registration Act, 1975)- Orders issued.

FINANCE (BPE) DEPARTMENT

G.O.Ms.No.290

Dated:9.9.2022

Subhakritu, Aavani -24

Thiruvalluvar Aandu, 2053

Read:

1. G.O.Ms.No.27, Finance (BPE) Department, dated 21.1.2002.
2. Government Letter No.59800/Finance(BPE)/2011, dated 9.3.2012.
3. Government Letter No.18062/Finance(BPE)/2012,dated 9.5.2012.
4. Government Letter No.23580/Finance(BPE)/2013, dated 2.7.2013.
5. G.O.Ms.No.436, Finance(BPE) Department, dated 23.11.2013.
6. Government Letter No.43784/Finance(BPE)/2019, dated 6.9.2019.
7. Government Letter No.2431/FS/T/2020, dated 2.2.2021.
8. Government Letter No.3157/Finance(BPE)/2022,dated 26.1.2022.
9. Government Letter No.43967/Finance(BPE)/2019, dated 19.2.2022.
10. Government Letter No.5938/Finance(BPE)/2022, dated 24.2.2022.
11. G.O.Ms.No.94, Finance(BPE) Department, dated 30.3.2022.

ORDER

The Government has carefully considered the need for the uniform management of Government Societies and Government Companies and to bring Government Societies/Government controlled Societies under the domain of Finance (BPE) in a phased manner as part of bringing parity among them. It was noted that the purpose of having both Government Companies and Government Societies is to serve as Special Purpose Vehicles (SPV). Both Government Companies and Government Societies operate outside the Treasury system and enjoy a degree of autonomy. Government Societies are managed by a Governing Board, whereas Government Companies are managed by the Board of Directors. Both are controlled by Government through nominated Directors/Members in the decision making Bodies. However, there are certain disparities viz. (a)Uniform policies are not available for Government Societies/Government controlled Societies unlike Government Companies thereby creating confusion and lack of excellence (b)Government Societies do not have systematic governance

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framework like Government Companies which have enhanced compliance requirements encompassing disclosures, transparency and governance procedures in line with the Companies Act, 2013. Government Societies and Government Companies are functioning largely with the taxpayers' money. But, Government Societies/ Government controlled Societies remain outside legislative scrutiny over its functioning through Comptroller and Auditor General of India audit and Legislative Committees like Committee on Public Undertakings, unlike Government Companies. Such differences require correction and calls for a uniform framework for managing Government Societies / Government Controlled Societies and Government companies.

2) Further, the Government has carefully considered the need for converting some Government Societies/Government controlled Societies into Companies registered under Section 8 of the Companies Act, 2013 duly following the procedures envisaged under section 366 and 374 of the Companies Act, 2013 in order to obtain the following benefits viz.

- (a) Well established Corporate governance processes under the Companies Act, 2013.
- (b) Timelines for finalization of Annual Accounts and filing financial statements to Registrar of Companies as a statutory obligation under Section 129 of the Companies Act, 2013.
- (c) Guidelines of Finance (BPE) and other Government norms viz. expenditure guidelines, Human resource policies, etc.
- (d) Comptroller and Auditor General of India Audit (*Supplementary Audit*), Statutory Audit, Internal Audit, Tax Audit, Secretarial Audit and other necessary check mechanisms under Companies Act, 2013.
- (e) Conducting Regular Board meetings, Audit Committee meetings as it is a statutory requirement under Section 173 and 177 of the Companies Act, 2013.
- (f) State Legislature's supervision and scrutiny by its various Committees like Public Accounts Committee, Committee on Public Undertakings etc.
- (g) Monitoring by Finance (BPE) through 'Companies Compliances and Financials Monitoring System' software application which has been recently developed by Finance (BPE) to monitor the Statutory compliance of all Government Companies [Including the Statutory Boards which are coming under Finance (BPE)].
- (h) Professional Assistance from the Project Management Unit proposed to be set up by Finance (BPE).

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3) Therefore, in view of the reasons indicated in para 1 and para 2 above, the Government hereby issues the following orders:

- (i) Government Societies/Government controlled Societies registered under Tamil Nadu Societies Registration Act, 1975 shall be brought under Finance (BPE) in a phased manner.
- (ii) The following Government Societies /Government controlled Societies shall be brought under Finance(BPE) in the first phase with immediate effect from the date of issue of this Government order
 - (1) Guidance, Tamil Nadu
 - (2) Tamil Nadu Text Book and Educational Services Corporation
 - (3) Tamil Nadu Energy Development Agency (TEDA)
 - (4) Sports Development Authority of Tamil Nadu (SDAT)
 - (5) Tamil Nadu e-Governance Agency(TNeGA)
 - (6) Zoo Authority of Tamil Nadu(ZAT)
 - (7) Tamil Nadu Horticulture Development Agency(TANHODA)
 - (8) Tamil Nadu State Seed Development Agency(TANSEEDA)
 - (9) Tamil Nadu Watershed Development Agency(TAWDEVA)
 - (10) Tamil Nadu Livestock Development Agency
 - (11) MSME Trade and Investment Promotion Bureau(M-TIPB)
[subsequently renamed as Facilitating MSMEs of Tamil Nadu (FaMe-TN)]
 - ✓(12) ICT Academy of Tamil Nadu ✓
 - (13) Sarva Shiksha Abhiyan[Now Tamil Nadu State Mission of Education for all Samagra Shiksha]
 - (14) State Health Society
- (iii) The above mentioned Government Societies/Government controlled Societies shall follow the instructions/Orders/guidelines issued by Finance(BPE) for the governance of Government companies from time to time, which without prejudice to the generality of the foregoing shall include those regarding
 - (a) Ban on creation of posts and surrendering of equivalent number of posts commensurate with the cost of creation of new posts in case of emergency needs vide Government letter 8th read above;
 - (b) Getting prior approval from the Government while carrying out recruitment for more than 25 posts vide Government order 11th read above;
 - (c) Getting prior approval from the Project Investment Committee for incurring capital and scheme expenditure by classifying such Government Societies under Category "D" Government Company for which the revised ceiling is Rs.10 crore and above, unless there are Government orders permitting enhanced delegation of powers vide Government order 11th read above;

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- (d) Appointment of Auditors(internal and external ie. Statutory Auditors) vide Government Letters 3rd and 9th read above;
- (e) Following certain other Government instructions viz. economy in expenditure vide Government order 1st read above, investment of surplus funds and 7 Bank policy vide Government Letters 2nd, 4th, 5th and 7th read above, periodical analysis of quarterly and half-yearly financial statements vide Government Letter 6th read above.

4) The Government further direct the Chief Executive Officers of all the Government Societies/Government controlled Societies mentioned above to take appropriate immediate action to convert their Societies into Section 8 Government Companies following due procedures as envisaged under section 366 and 374 of the Companies Act,2013 within 6 months time. Finance (BPE) is also empowered to take appropriate action to convert the above mentioned Government Societies/Government controlled Societies into Section 8 Government Companies in coordination with the respective Administrative Departments.

(BY ORDER OF THE GOVERNOR)

N.MURUGANANDAM

ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

To

Additional Chief Secretaries to Government/Principal Secretaries to Government/ Secretaries to Government of all departments, Secretariat, Chennai-9.

Inspector General of Registration, No.100, Santhome High Road, Chennai-600028.

Chief Executive Officers of
Guidance, Tamil Nadu

Tamil Nadu Text Book and Educational Services Corporation

Tamil Nadu Energy Development Agency

Sports Development Authority of Tamil Nadu

Tamil Nadu e-Governance Agency

Zoo Authority of Tamil Nadu

Tamil Nadu Horticulture Development Agency

Tamil Nadu State Seed Development Agency

Tamil Nadu Watershed Development Agency

Tamil Nadu Livestock Development Agency

Facilitating MSMEs of Tamil Nadu

ICT Academy of Tamil Nadu

Tamil Nadu State Mission of Education for all Samagra Shiksha

State Health Society.

Compliance report on the Do's and Don'ts as per S. No. 11.17 of "Consolidated Guidelines and Clarifications issued under Van (Samrakshan Evam Samvardhan) Adhiniyam, 1980 and Van (Samrakshan Evam Samvardhan) Rules, 2023 dated 29.12.2023.

1	Only degraded forest land i.e., with a crown density below 40 percent, may be used for the establishment of Zoo.	Arignar Anna Zoological Park was established in 1985, in the Vandalur Reserve Forest area, degraded area, where plantation was done to improve crown density.
2	Only zoos operated by State Forest Departments or State Zoo Authorities or a society formed by the State Forest Department or by any agency authorized by the State Forest Department under PPP mode or otherwise should be allowed to be established on forest lands under the guidelines.	Arignar Anna Zoological Park is a part of the Zoo Authority of Tamil Nadu (ZAT) which is a society registered under Societies Registration Act, 1975.
3	Zoos that intend to support in-situ conservation by the means of conservation outreach, conservation breeding of endangered species and providing rescue and veterinary health facilities to wild animals in accordance with the objectives of sub-section 4 of section 38H of the Wildlife (Protection) Act, 1972 shall be encouraged.	Arignar Anna Zoological Park is having a dedicated rescue centre for wild animals and a state of the art veterinary hospital for providing treatment to wild animals.
4	An application for obtaining prior approval of the Central Zoo Authority under sub-section (1A) of Section 38H of the Wildlife (Protection) Act, 1972 for the establishment of a new zoo over forest land should be made to the Central Zoo Authority in Form-I of the Recognition of Zoo Rules, 2009 along with a Detailed Project Report in terms of Rules 3(2) of the Recognition of Zoo Rules, 2009 and fee as applicable.	Not Applicable.
5	Guidelines for Establishment and Scientific Management of Zoos in India (2008) and Recognition of Zoo Rules, 2009 and the various Guidelines/Advisories issued by the Central Zoo Authority from time to time shall be followed in its letter and spirit.	Arignar Anna Zoological Park is strictly adhered to rules and guidelines issued by the Central Zoo Authority

6	A minimum of 70% of the total area of the zoo established on forest land shall be maintained as/ natural forest/ green cover. Enumeration of trees and vegetation mapping done by the concerned Divisional Forest Officer/Authority may be included in the Detailed Project Report for the establishment of zoo on forest land.	Yes, maintained
7	Zoo operating on forest land shall carry out its operation in a manner that causes minimum stress on natural resources by exploring eco-friendly construction methods.	Yes, maintained
8	Zoo established over forest land shall endeavor to achieve carbon neutrality by reducing energy consumption and emissions-producing activities and also exploring renewable/alternate/green sources of energy.	Arignar Anna Zoological Park is having 180 kW solar power plant, almost 80% of total energy demand. Also provide solar lights throughout the zoo campus.
9	Landscaping and aesthetical expansion etc., of a zoo established over forest land should be done with an emerging concept keeping an eco-sensitive approach.	Landscaping done in Arignar Anna Zoological Park based on eco-sensitive approach.
10	Forest fire disaster prevention and control measures, as applicable, may be strictly followed. Efforts for disaster preparedness/Forestalling may be taken to avert forest fire and disaster.	Disaster preparedness plan, in fire prevention SOP is followed.
11	Only rescue centres, conservation breeding centres and zoos with established links to an in-situ Government conservation program should be considered as forestry activities for the purpose of exemption under the Van (Samrakshan Evam Samvardhan) Adhiniyam, 1980.	Yes. Strictly followed.
12	The site selected for the zoos in the forest should not hinder the movements of mega faunal species, particularly elephants. Such zoos must cater to the need of housing rescued animals of the area.	Arignar Anna Zoological Park has small free ranging animals, but does not occur in the migration path of elephants or any other mega herbivores.



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