

2020

**PARASSINIKKADAVU
SNAKE PARK & ZOO- MASTERPLAN**



OPERATOR - PAPPINISSERI VISHA CHIKITSA SOCIETY







DURATION - 10 YEARS

YEAR OF SUBMISSION - 2020

24 / 11 / 2020

CERTIFICATE

This is to certify that the document entitled Master Plan, Parassinikkadavu Snake Park & Zoo is prepared by,







SI No	Name	Designation	Signature
1.	Prof. E. Kunhiraman	Director, Parassinikkadavu Snake Park & Zoo.	
2	Mr. Rajan V.A.	Chief Finance Officer, Pappinisseri Visha Chikitsa Society	
3.	Mr. Avinash Giriya	Chief Executive Officer, Parassinikkadavu Snake Park & Zoo.	
4	Dr. Anju Mohan S.	Veterinary Officer, Parassinikkadavu Snake Park & Zoo.	
5	Mr. Marinath L.	Curator Parassinikkadavu Snake Park & Zoo.	
6	Mr. V. Ganesan	Asst. Engineer, Pappinisseri Visha Chikitsa Society	

This is prepared according to the Guidelines of Central Zoo Authority

Member Secretary
Central Zoo Authority

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1	Prof. E. Kunhiraman	Director Parassinikkadavu Snake Park & Zoo	
2	Mr. Rajan V. A	Chief Financing Officer Pappinisery Visha Chikitsa Society	
3	Mr. Avinash Giriya	Chief Executive Officer Parassinikkadavu Snake Park & Zoo	
4	Dr. Vimal Raj P G	Veterinary Officer Parassinikkadavu Snake Park & Zoo	
5	Mr. Nandan Vijayakumar	Curator Parassinikkadavu Snake Park & Zoo	
6	Mr. M. V Ganeshan	Asst. Engineer Pappinisery Visha Chikitsa Society	

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PREFACE

The Parassinikkadavu Snake Park was established by Social activists lead by Hon. Ex-minister of state, M.V. Raghavan on January 8th, 1982 at the site purchased from Kerala Government. This snake park is an offshoot of Pappinisseri ‘Visha Chikitsa Kendra’ intended for Snake bite treatments, at present the Post-graduation department of Agadathantra (Toxicology) – M. V. R. Ayurveda Medical College.

The Pappinisseri snake bite treatment centre was established in the year 1964. This is a centre for curing patients of snake bite using the combination of Ayurvedic, Allopathic and Traditional practices. It was quite common that people bringing the victims of snake bites, used to carry the snakes also, as alive, killed or hurt in many cases. Such snakes played a vital role in treatment since the treatment for snake bite differed for Vipers, Cobras, Kraits etc. It was easy for the physicians to provide immediate treatment once the snake is identified and the symptoms are tallying with the particular species of snake. The abundance in number of such captive snakes was a practical problem for the founders of the snake bite treatment centre. They got inspiration from Sri. Romulus Whitaker, the famous conservationist and Herpetologist who was instrumental for the establishment of Snake Park and Crocodile Park in Chennai. Providing a practical opportunity to create awareness about the ecological significance of Snakes was the biggest motivation for Social activists of this region for establishing this Park. More than 50 lakhs people visited this Park during the last decade.

This park has turned out to be significant education centre for students and general public for last 34 years. This has found a major place in the tourist map of Kerala also. The Kannur International Airport which is to be opened this year would facilitate more acclaim & reachability. The awareness that the general public gets and the fact that they have taken into hearts, the need of conservation is the main success factor of Parassinikkadavu Snake Park. The park will continue sensitizing the people about the importance of conserving Environment and its resources.

Parassinikkadavu,
24. 11. 2020

Prof. E. Kunhiraman
Director
Parassinikkadavu Snake Park

PART - I

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CHAPTER 1

INTRODUCTION

a. History of the Zoo

The Parassinikkadavu Snake Park was established by Social activists lead by Hon. Ex-minister of state, M.V. Raghavan on January 8th, 1982 at the site purchased from Kerala Government. This snake park is an offshoot of Pappinisseri ‘VishaChikitsa Kendra’ intended for Snake bite treatments.

The Pappinisseri snake bite treatment centre was established in the year 1964. This is a centre for curing patients of snake bite using the combination of Ayurvedic, Allopathic and Traditional practices. It was quite common that people bringing the victims of snake bites used to carry the snakes also, as alive, killed or hurt in many cases. Such snakes played a vital role in treatment since the treatment for snake bite differed for Vipers, Cobras, Kraits etc. It was easy for the physicians to provide immediate treatment once the snake is identified and the symptoms are tallying with the particular species of snake. The abundance in number of such captive snakes was a practical problem for the founders of the snake bite treatment centre. Understanding the magnitude of these incidences and to expand the research activities later in 1982 Parassinikkadavu Snake Park was established under the leadership of Sri. M. V. Raghavan the then President of Pappinisseri Visha Chikitsa Society with a noble intention for the conservation and protection of reptiles especially snakes and also to provide awareness for the protection of Wildlife and environment.

The founders got inspiration from Sri. Romulus Whitaker, the famous conservationist and Herpetologist who was instrumental for the establishment of Snake Park and Crocodile Park in Chennai. Providing a practical opportunity to create awareness about the ecological significance of Snakes was the biggest motivation for Social activists of this region for establishing this Park. More than 50 lakhs people visited this Park during the last decade.

This park has turned out to be significant education centre for students and general public for last 34 years. This has found a major place in the tourist map of Kerala also. The nearest Zoos in this region are located in Mangalore and Trichur. Almost seventy lakhs’ people of the Malabar Region are to be satisfied with this small zoo to see a few wild animal species directly, apart from Protected Areas.

b. Vision of the Zoo

- Transform the Snake Park to a comprehensive Reptile Park.
- Conservation of Snake species and developing a breeding policy for snakes in captivity.

c. Mission of the Zoo

- To mitigate the fear and hatred towards the snakes and other wild animals and to instigate love and compassion towards such animals.
- To provide a congenial environment for rescue and conservation of wild animals and to create a forum for holistic approach in the field of nature conservation.
- To develop Herpetology Institute, Research Centre and Wildlife & Forestry Institute for awareness programme championing the need of wildlife protection and to create a knowledge centre for conservation efforts.

d. Strategy of the Zoo

The Parassinikkadavu Snake Park solely depends on income generated through visitors & public.

e. Objectives

- Public education and creating awareness about Wildlife conservation.
- Captive breeding of endangered reptiles for conservation.
- Publication, Documentation & Research.

f. Physical Features

Parassinikkadavu Snake Park is located on plane land with no hills, mountains and natural water bodies. All the water bodies are artificially made. Details of physical structures are depicted in Master Plan Lay out.

g. Geology

Kannur district lies between latitudes 11° 40' to 12° 48' North and longitudes 74° 52' to 76° 07' East. The district is bound by the Western Ghats in the East (Coorg district of Karnataka State), Kozhikkode and Wayanad districts, in the South, Arabian Sea in the West and Kasaragod,

the northern most district of Kerala, in the North. The district can be divided into three geographical regions - Highlands, Midlands and Lowlands.

h. Rock and Soil

The geological formations in the district are of Archean and recent age. Archean formations comprise of greisses and charrockiates. Recent formations are alluvium and laterite. Archeans occupy the midland and highland regions of the district having rock types of basic charrockiates and hornblende-biotitegreiss. The remaining portions in the coastal area are covered by laterite, alluvium, lime, lignified woods, etc. Archean formations like foliated hornblende-biotitegreiss (gray or white in colour) is one of the main rock types in the northern portion of the district. Recent formations like laterite are developed on a limited scale along the coastal areas.

i. Flora and Fauna in Zoo Premises

The Parassinikkadavu Snake Park contains 46 numbers of flora and 30 numbers of fauna. The list of flora and fauna is given in Annexure-e.

j. Climate

The district has a humid climate with an oppressive hot season from March to the end of May. This is followed by the South-West monsoon which, continues till the end of September.

October and November form the post-monsoon or retreating monsoon season. The North East monsoon which follows extends up to the end of February, although the rain generally ceases after December.

During the months of April and May, the Mean Daily Maximum Temperature is about 35° Celsius. Temperature is low in December and January about 20⁰ Celsius. On certain days the night temperature may go down to 16° Celsius.

k. Rainfall

The annual average rainfall is 3438 mm and more than 80 percent of it occurs during the period of South -West monsoon. The rainfall during July is very heavy and the district receives 68 per cent of the annual rainfall during this season.

I. Seasons

Winter Season: Starts with the end of the northeast monsoons i.e. from the later part of November lasting till the middle of February. During this season temperature is comparatively low but as does not vary much from other seasons.

Summer Season: At the end of Feb. temperature starts rising and this marks the beginning of summer in Kerala. Relatively higher temperature, low rainfall and slightly humid weather are the characteristics of this season.

South West Monsoon Season: Southwest monsoon is the main rainy season of Kerala. This season begins around the end of May or early June with the outset of the southwest monsoon winds.

North East Monsoon also known as the Retreating Monsoon or the Reverse monsoon: During the return of the southwest monsoon winds. These rains are in the months of October and November and sometimes it can last till December. Days are warm and humid but there is not much variation in temperature.

m. Approach

The Parassinikkadavu Snake Park is located in Anthur Municipality of Kannur District, Kerala State. The Exact location is in Survey No. 7/11 of Andoor Village, Thaliparamba Municipality. This Park is about 18 km North East of Kannur Town deviating about 1.5 km East from National Highway 17 at a place called Dharmasala about 16 km towards north of Kannur Town. The road from Dharmasala to Parassinikkadavu takes a visitor through Parassinikkadavu Snake Park & Zoo, Vismaya, the biggest water theme park of Malabar and the famous Parassinikkadavu Sreemuthappan Temple which is situated at the terminal point of this road. The nearest & important Railway Station to this location is Kannur Railway Station with a distance of 18 km. The nearest Airports are Mangalore & Karipur (Calicut) with a distance of about 142 km either way. The Kannur International Airport which is to be opened by this year would reduce the distance to Snake Park within 40 kms. Parassinikkadavu can be reached by boat also from Valappatanam and Kattampally River.

n. Demography of the surrounding area

Kannur Government Engineering College, National Institute of Fashion Technology, Kendriya Vidyalaya, Prasad Bharathi Broadcasting Corporation etc. and many other institutions are situated in this locality. So most people settled around Snake Park are employees of these

institution and students. There are settlements of village people also and they are getting the benefits of development in this area due to tourists.

o. Legal status of the Land

All the land on which the Parassinikkadavu Snake Park is situated, 2.45 Acres, and the Rescue Center 5 Acres, is owned by the Pappinisseri Visha Chikitsa Society. (Annexure h)

p. Sources of pollution, if any

No potent sources of pollution have been noted.

q. Difficulties and Achievements

Unlike any other park or zoo in India, the Parassinikkadavu Snake Park has a history of miraculous survival from a mob attack in 1993 and thereafter from an attempt of winding up of the Park by the State Govt. itself in 2000.

The former President of this Park was a prominent political leader. He served as the minister of the Kerala State for two terms. During 1993, while the President of Snake Park was serving as minister in Kerala, there was an organized mob attack in the Snake Park as retaliation due to political animosity towards the Minister. A mob of antisocial elements forcefully entered in to the park and gutted the cages of almost all animals. Several snakes including King Cobra and animals like Lion Tailed Macaque and several birds were brutally burnt alive by the mob. This was a dark day in the history of Animal conservation in Kerala.

Another drastic action was taken by Kerala Forest Department on December 10, 2000 by making an attempt of closing down the park after translocating all the animals to various preplanned destinations. For this purpose the department seized all the animals and packed them alive in various cages, ready for transportation. During the process several casualties occurred. Fortunately for the sake of animals, the Hon'ble High Court of Kerala intervened and ordered to replace the captured animals safely to their respective cages. The Kerala Forest Department wanted to abolish this Snake Park under the pretext that the snake park was run illegally violating various provisions of the Wildlife Protection Act of India. If not for the judicious order issued by the Hon'ble High Court of Kerala, The Parassinikkadavu Snake Park would have been closed down by the Kerala Forest Department through this operation on December 10, 2000. If so, the entire people of North Kerala would have lost an excellent Centre for Awareness towards Wildlife Conservation.

Since 1982, after the establishment of the Snake Park, the people considered this Institution as a Conservation centre for snakes as well as various other wild animals. The people stopped wanton killing of the snakes as well as other animals when they came to know that these animals are essential components of the ecosystem. Thus a holistic approach towards conservation could be achieved through the snake park.

CHAPTER II

APPRAISAL OF PRESENT ARRANGEMENT & CONSTRAINTS

a. Animal Section, Veterinary section, store and feed etc.

Parassinikadavu Snake Park houses mammals, reptiles and birds.

SI No	Animals	Number of Species
1.	Reptiles	19
2.	Mammals	4
3.	Birds	9

Current Housing Facility

SL.NO	Animals	Enclosure size	Enclosure design	Enrichments
1	Bonnet Macaque	Total area - 400 sq.m Height – 8.2m Water body area - 6 sq.m; Depth: 1.5m	Closed enclosure with chain link fencing	Trees for climbing, Wooden rings for hanging.
2	Asian Palm Civet	Total area – 70 sq.m Height – 5.3m Water body area – 5 sq.m	Closed enclosure with chain link fencing; Kraals and keeper's area is laterite wall and concrete roof	Trees for climbing and resting; wooden logs, rocks and Soil substrate.
3	Jungle Cat	Total area – 50 sq.m Height – 5m Water body area – 2 sq.m	Closed enclosure with chain link fencing; Kraals and keeper's area is laterite wall and concrete roof	Trees for climbing and resting; wooden logs, rocks and Soil substrate
4	Indian Crested Porcupine	Total area – 30 sq.m Water body area – 5 sq.m	Open enclosure surrounding with wall, other side laterite masonry cement plastering wall	Concrete floor with sand substrate; natural hollow wooden logs; rocks with cavities covered with sand.
5	Marsh Crocodile	Total area – 560 sq.m Holding pan area – 12 sq.m Water body area – 190 sq.m	Open enclosure surrounded with wall on back side; viewing side covered with chain link fence with 2.1m height and standoff barrier with 1.2m height	Three separate water pools.
6	Bengal Monitor	Total area – 80 sq.m Water body area – 8 sq.m	Open enclosure surrounding with wall, other side laterite masonry cement plastering wall	Concrete floor with thick sand substrate; natural hollow wooden logs; rocks with cavities covered with sand.

7	Indian Pond Terrapin	Total area – 40 sq.m Water body area – 6 sq.m; depth – 1m	Open enclosure surrounding with wall, other side laterite masonry cement plastering wall	Concrete floor with thick sand substrate; wooden logs.
8	King Cobra	Total area – 150 sq.m Water body area – 20 sq.m	Closed enclosure covered with glass anteriorly and meshed roof; Keeper's area is laterite wall and concrete roof	Elevated landscape with rocks and small trees; Soil substrate covered with litter.
9	Indian Rock Python	Total area – 60 sq.m Water body area – 2.5 sq.m	Closed enclosure covered with glass anteriorly for visitor viewing and laterite wall behind with mesh roof	Elevated landscape with rocks and small trees; wooden logs for resting; Concrete flooring with thick soil substrate.
10	Spectacled Cobra Russell's Viper Common Rat Snake Common Trinket	Total area – 15 sq.m Water body area – 1.5 sq.m	Closed enclosure covered with glass anteriorly for visitor viewing and laterite wall behind with mesh roof	Elevated natural landscape; rocks with caved structures or resting and small plants.
11	Common Wolf Snake Common Krait Hump-Nosed Pit Viper Red Sand Boa Common Sand Boa	Total area – 3.5 sq.m Water body area – 0.5 sq.m	Closed enclosure covered with glass anteriorly for visitor viewing and laterite wall behind with mesh roof	Elevated natural landscape; rocks with caved structures or resting and small plants.
12	Checkered Keel Back	Total area – 20 sq.m Depth – 2m Water body area – 17 sq.m	Open enclosure surrounding with wall	Island at centre with Soil substrate and vegetation surrounded by water of 1m high.
13	Indian Peafowl	Total area – 160 sq.m Height – 8m Water body area – 8 sq.m	Closed enclosure with chain link fencing	Trees, rocks and elevated landscape.
14	White Necked Stork Barn Owl Brown Fish Owl Black Kite	Total area – 300 sq.m Height – 10m Water body area – 6 sq.m	Closed enclosure with chain link fencing	Trees, rocks and elevated landscape.
15	Emu	Total area – 500 sq.m Water body area – 8 sq.m	Open enclosure surrounded with wall on back side; viewing side covered with chain link fence with 2m height	Trees, rocks and soil substrate.
16	Love Birds	Total area – 20 sq.m Height – 7m Water body area – 2 sq.m	Closed enclosure with chain link fencing	Concrete floor with sand and stones.

Veterinary section

The Veterinary Section is handled by Dr. Anju Mohan S., M. V. Sc. The veterinary care and management practices are of such standards that mortality is minimal at the facility. In our observation endo-ecto parasitism is major problems in snake. Pneumonia and infightings are major problems in crocodiles.

- i) Screening for endo-ecto parasites in all species, using direct smears, impression smear, sedimentation technique, and zinc-sulphate centrifugation technique are conducted; Samples containing unidentifiable parasites are sent to experts for verification.
- ii) All animals that die are subjected to a detailed postmortem examination.
- iii) Baseline information collections on reproductive performance of all animals that are housed in the zoo are done.

Current Facilities:

1. Laboratory for conducting routine manual blood and stool analysis.

Equipments available- Oil immersion light microscope, Manual blood count analysis equipment and Manual centrifuge. There is sample collection containers and formalin.

2. A Post mortem area and equipments.

3. A basic surgery set-up.

4. Record maintenance as per CZA requirements.

Store and Feed supply section

Snakes have day old live chicks and an in-house mice breeding unit provides pinkies for snakes. Crocodiles, Monitor lizard, Jungle cat and Toddy cat are fed with chicken meat on daily basis. Monkeys are fed with soaked Bengal gram, cooked rice, mixed vegetable and fruits. Toddy cat also gets mixed fruits. Kites, Stork and Owls have mixed leafy vegetables in the morning and chicken and fish on alternate days. Any feed given is inspected by Veterinary officer prior to feeding. No feed supplements were added in the diet other than during treatment.

Some constraints include:

1. Refrigeration facility is not available so we can't store rapidly perishable feed items, which are now purchased on a daily basis. Fresh vegetables and fruits stored for 2 days. Rice and pulses are stored on large quantity.

Sanitation section

Garbage is removed properly on a day to day basis. All cages are cleaned daily. Artificial ponds in crocodile enclosures are cleaned weekly and if it appears contaminated there will be no delay to clean and refill. Clinical waste is disposed in an approved manner. Toilets are cleaned hourly.

Maintenance section

Routine cleaning work starts at 8.00 AM and lasts till 1.00 PM. Two staffs (zookeepers) are engaged in cleaning and maintenance of cages and enclosure and another three staffs (Sweepers) are engaged in cleaning the litter left behind by visitors, the foot path, administrative office and veterinary building. One staff (Keeper) is deployed for feed preparation which starts at 9.00 AM and feeding at 10.00 AM, 2.30 PM and 5.30 PM. After lunch break zookeepers are engaged in assisting treatment, routine operations of mice breeding unit and some special job assigned to them.

Security section

Enclosures and cages are designed in such a way that no attack occurs to the visitors. Visitors are given proper guidance from gate itself and there are sufficient warning boards. Proper standoff barriers are constructed for all enclosures. Animals are also protected from teasing by visitors. This is communicated to the visitors through signage and zookeepers are given charge to look in to these matters. Round the clock security is provided at the entrance gate and he will walk the perimeters and inner paths.

Water supply section

Water is available throughout the year and is acquired from two bore wells (300 ft depth-can get up to 25,000L water daily) and Japan Water Supply Scheme. There are pipe lines linking all the enclosures making cleaning and refilling of water with ease. Water samples are sent for quality assessment routinely.

Disposal of solid and liquid waste - sewerage

Waste disposal is a challenging field for us. Plastic wastes are collected separately and sent to local vendor. Combustible wastes like paper, dried leaf, twigs etc. were used for cooking purpose. Kitchen waste is dumped in compost pit. Bird dropping and animal manure are used as fertilizer on garden. An aerobic compost unit (Thumburmoozhi Model Aerobic Compost Unit), one of the efficient bio waste management systems is used for organic waste disposal.

Visitors' Amenities

Parassinikadavu Snake Park is provided with lot of facilities like lavatory complex, resting corner, cafeteria and awareness classes. Pamphlets, books & other information are available at the administrative block. Food and beverages are provided separately outside the park.

Lawns and Garden – Landscape Section

The Parassinikadavu Snake Park was established on 8th January, 1982. From the inception point itself special attention is given to gardening and landscaping. King cobra's cage contains ecologically related Bamboo (Bambuseae) and Nagalingam (*Couroupitaguiensis*). A detailed listing of Parassinikadavu Snake Park's flora, is given in Annexure- e.

b. Animal Collection Plan (Existing)

This snake park is an offshoot of Pappinisseri 'Visha Chikitsa Kendra' intended for Snake bite treatments. It was quite common that people bringing the victims of snake bites used to carry the snakes also, either alive or dead in many cases. The abundance in number of such captive snakes was a practical problem for the founders of the snake bite treatment centre. It was at this juncture that a long term vision of establishing a snake park came into the minds of the founders of the Pappinisseri snake bite treatment centre. Subsequently the mission was transformed or translated into the holistic approach of total conservation of the nature.

The current animal collection plan is rescue and rearing depending upon the space available at Parassinikadavu Snake Park, the conservation significance of the species, and the availability of suitable feed and maintenance expertise. In our collection King cobra has the most conservation significance.

Annexure- d: Outlines the existing collection of animals.

c. General Zoo Administration Section

ADMINISTRATIVE / RESEARCH PERSONNEL

Director : Prof. E. Kunhiraman
Chief Executive Officer : Mr. AvinashGiriya
Veterinary officer : Dr. Vimal Raj P G
Curator : Mr. Nandan Vijayakumar
Biologist : Mr. Unnikrishnan P. V
HR Manager : Mrs. Bindu MK.
Chief Supervisor : Mr. Sudhakaran TV.

OTHER STAFF

Cashier : 1. Mrs. Pradeepa KV.
Junior Clerk : 1. Mrs. Aswathy K.
Zookeepers : 1. Mr. Sajeevan O.
2. Mr. Jayesh AJ
3. Mr. Santhosh PV.
4. Mr. Prakashan PV.
5. Mr. Sajeesh

Shop keepers : 1. Mrs. Sheeba V
2. Mrs. Preetha E.
3. Mrs. Preetha P.

Gardeners : 1. Mrs. Leela P.
2. Mrs. Thanka P.
3. Mrs. Bindu T
4. Mrs. Beena MP.
5. Mrs. Sreeja PV.

Security : 1. Mr. Bhavadasan E.
2. Mr. Rajendran PV.

d. Research

The master plan envisages constituting an R & D wing for Research activities in the small zoo providing special attention to ecology of reptiles, snake bites, breeding behaviors of reptiles, Identification of venom of venomous species, possibilities of toxicity studies, identification of active ingredients present in Ayurveda medicines used in the treatment of envenomation, studies on immunity to snake venom and philanthropic application etc. A regular Journal is also being planned.

e. Conservation breeding

Parassinikadavu Snake Park & Zoo is conducting breeding program for all the animals housed. Success is achieved in Indian Rock Python, Marsh crocodile, Russell's viper, Indian cobra and Bonnet macaque & King cobra.

f. Education and Awareness

Visitors are getting good awareness classes and during Interaction session they have the opportunity to clarify doubts. Informative sign boards are placed in front of each Cages. Conservation messages are displayed along the inner paths. Published one book titled 'All about Snakes and Snake Bite Treatment' compiled and edited by Dr. Vineeth George. World Environment Day, World Wildlife Day, World Snake Day etc are being celebrated every year and participation of School and College students are ensured by organizing competitions for them and also involving the students and the public in interactive discussions. Conservation awareness programmes are held and saplings are supplied to students.

g. Other activity peculiar to zoo

Parassinikadavu Snake Park is giving helpings hands to NGOs working in the field of wildlife conservation for conducting seminars and rallies. Parassinikkadavu Snake Park volunteers in rescuing snakes and releasing them away from human settlements in flood affected areas of Kerala joining hands with group of rescuers and Forest Department.

PART - II

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CHAPTER III

FUTURE OBJECTIVES INCLUDING VISION, MISSION STATEMENT / THEME AND STRATEGY

The future objective of the Parassinikadavu Snake Park is the transformation of this Snake Park to an International Standard Reptile Park. In order to achieve that, we are in need of

- a) More land
- b) Constituting a good research and development wing and facility.
- c) Conservation breeding of housed animals and acquisition of breeding stock of animals that are valuable in the sense of conservation.
- d) Initiation of ex-situ conservation programs for endangered reptiles.
- e) Improvement of existing enclosure to meet the behavioral and ecological needs of animals. Also construction of new enclosures as per CZA guidelines.
- f) Implementation of more effective waste disposal systems.
- g) Construction of a Conference hall with audio visual aids.
- h) Improving husbandry and management practices.
- i) Starting a separate rescue, rearing and rehabilitation centre at Kurumathur, Thaliparamba.
- j) Improving the educational facility by starting short term courses, expanding the library, conducting short term camps to attract wildlife enthusiasts and children, preparing more leaflets and pamphlets etc.
- k) Improve networking with other national and international zoos.

CHAPTER IV FUTURE ACTION PLAN

i) Proposed/Recommended animal collection plan

A list of proposed animals to be collected is included for Parassinikkadavu Snake Park & Zoo

Animal	Scientific Name	Proposed collection plan		
		M	F	T
Birds				
Indian Peafowl	<i>Pavo cristatus</i>	1	1	2
White peafowl	<i>Pavo cristatus</i>	2	2	4
White Necked Stork	<i>Ciconia episcopus</i>	2	1	3
Barn Owl	<i>Tyto alba</i>	1	2	3
Black Fish Owl	<i>Bubo zeylonensis</i>	2	1	3
Mottled wood owl	<i>Strix ocellata</i>	2	2	4
Ostrich	<i>Struthio camelus</i>	2	2	4
Scops Owl	<i>Otus sp.</i>	2	2	4
Swan	<i>Cygnus sp.</i>	2	2	4
Night heron`	<i>Nycticorax sp.</i>	2	2	4
Open billed stork	<i>Anastomus oscitans</i>	1	1	2
Painted stork	<i>Mycteria leucocephala</i>	1	1	2
Rosy pelican	<i>Pelecanus onocrotalus</i>	2	2	4
Glossy ibis	<i>Plegadis falcinellus</i>			
Reptiles				
Reticulated python	<i>Python reticulatus</i>	2	2	4
Dog faced water snake	<i>Cerberus rynchops</i>	2	2	4
King Cobra	<i>Ophiophagus hannah</i>	1	1	2
Green/yellow anaconda	<i>Eunectus sp.</i>	2	2	4
Monocled Cobra	<i>Naja kaouthia</i>	2	2	4
Spectacled caiman	<i>Caiman crocodilus</i>	2	2	4
Malabar pit viper	<i>Trimeresurus malabaricus</i>	2	2	4
Saw Scaled Viper	<i>Echis carinatus</i>	2	2	4
Travancore tortoise	<i>Indotestudo travancorica</i>	1	2	3
Red Sand Boa	<i>Eryx johnii</i>	2	1	3

Mammals				
Jungle Cat	<i>Felis chaus</i>	1	2	3
Indian Crested Porcupine	<i>Hystrix indica</i>	2	4	6
Bonnet Macaque	<i>Macaca radiata</i>	10	20	30
Asian Palm Civet	<i>Paradoxurus hermaphroditus</i>	4	6	10

ii) Layout map (Approved)

The proposed layout map has been submitted and has been approved by the CZA. Soft copy of the layout map is being submitted along with this Master Plan. (Annexure c)

iii) Proposal to address the inadequacies and shortcomings identified in appraisal report

Animal Section

Proposed future enclosures and exhibit facilities are detailed in the layout map. It is also proposed that a rescue center, off display conservation breeding center is to be constructed.

Veterinary Section

Improve the quarantine facility, laboratory facilities, construct new squeeze cages and capture cages and facility for conservation breeding is to be developed. It is also planned to have multifaceted data collection program for research purpose. For that maximum-minimum thermometer, wet and dry bulb thermometer, small incubator etc to be procured.

Starting a separate rescue, rearing and rehabilitation centre at Kurumathur, Thaliparamba where Pappinisseri Visha Chikitsa Society own 5 Acres of land. We are also planning to set up off-exhibit breeding areas at Kurumathur.

Store and feed supply section

A refrigeration facility should be set up for storage of perishable goods so as to tackle an unexpected hartal or strike.

Maintenance section

Additional staffs if any requirement arises would be appointed for smooth functioning.

Water supply section

Sprinklers net work is set up for temperature control during summer season.

Security Section

The contract is given to an external agency which is providing Security staffs as per requirement.

Disposal of solid and liquid waste

An incinerator is to be set up for efficient disposal of biomedical waste. One more Aerobic waste composting unit will be set up like the one which is functioning now.

Power supply

A 160 KV generator is available in Parassinikadavu Ayurveda Medical College Hospital. This will take over during power cuts or breakdowns. Even though, installation of a separate generator exclusively for Parassinikkadavu Snake Park is under consideration.

Visitors Amenities

Increasing the number of benches in the visitor's corner, resting places at different areas for visitors, Cloak room etc.

iv. Peculiar problems of the zoo

Fund raising for the development: A large amounts of money will have to be raised for the developments proposed in the plan.

CHAPTER V

PERSONNEL PLANNING

The staff profile will remain as per the list given in the General Zoo Administration section (Chapter II, c).

ADMINISTRATIVE / RESEARCH PERSONNEL

Director	:	Prof. E. Kunhiraman
Chief Executive Officer	:	Mr. AvinashGirija
Veterinary officer	:	Dr. Vimal Raj. P G
Curator	:	Mr. Nandan Vijayakumar.
Biologist	:	Mr. Unnikrishnan P V
HR Manager	:	Mrs. Bindu MK.
Chief Supervisor	:	Mr. Sudhakaran TV.

OTHER STAFF

Cashier	:	1. Mrs. Pradeepa KV.
Junior Clerk	:	1. Mrs. Aswathy K.
Zookeepers	:	1. Mr. Sajeewan O. 2. Mr. Jayesh AJ 3. Mr. Santhosh PV. 4. Mr. Prakashan PV. 5. Mr. Sajeesh
Shop keepers	:	1. Mrs. Sheeba V 2. Mrs. Preetha E. 3. Mrs. Preetha P. 4. Mrs. Sruthy 5. Mrs. Sindhu
Gardeners	:	1. Mrs. Leela P. 2. Mrs. Thanka P. 3. Mrs. Bindu T 4. Mrs. Beena MP. 5. Mrs. Sreeja PV.
Security	:	1. Mr. Bhavadasan E. 2. Mr. Rajendran PV.

CHAPTER VI

DISASTER MANAGEMENT

Zoo will be closed immediately after any natural disaster warning.

Fire: Fire extinguishers are available in the park. Nearest Fire Station is located at Taliparamba, which is 9.1 km away from Snake Park.

Cyclone: Trees are pruned prior to the monsoon season. In case of a specific cyclone warning, all potential "flying debris" that is lying around is stored away and all windows shuttered. Animals that need to be moved to safer enclosures within the zoo are moved. Extra food is provided. Vehicles are put in safe locations.

In the event of a storm surge warning, sand bags are placed along pen walls at a height of 3-4 bags, in addition to a line of bags along chain-link fence on beach. Staff evacuation procedure, if necessary, is in place with only skeleton staff staying on duty.

Law and Order: In case of law and order breakdown the situation is handled by security staff and informs the Mayyil or Kannapuram Police Station which is near to the Snake Park.

Feed Supply: There is store room for keeping nonperishable goods. Perishable goods are purchased on a day to day basis for which we have multiple sources to procure so as to ensure ample supply of feed.

CHAPTER VII

CONTINGENCY PLAN

1) Animal rescued from wild

Whenever we got injured or orphaned wild animals, we were providing Veterinary care and Housing facility. They were reared and rehabilitated; if unfit for reintroduction to wild we used to inform forest officials. But currently if injured or orphaned wild animals are brought to park, we are informing the Forest Officials and redirecting them to the nearest Forest Office which is at Thaliparamba.

2) Escape of animals from enclosures

Whenever such things happens all staff is advised to inform the Supervisor, Curator, Veterinary officer and Chief executive Officer. Safety of the visitors, staff and animal is evaluated. Based on that decision is taken like,

- i. Moving the visitors to a safer area or evacuate them as soon as possible.
- ii. Zookeepers are deployed for capture of animal with appropriate instruments such as snake hook, rope, poles, squeeze cage, trap cage etc.

3) Monkey and dog menace

There has been no incidence of monkey menace inside the park. The boundary protects Snake Park from stray dogs.

4) Arrangement of food in case of strike (non-supply by contractor)

A small stock of live chicken and mice breeding unit are maintained in the Park which will be utilized in critical situations. Vegetables needed for two days are usually procured and is available in the stock.

5) Snakebite

If a snake bite occurs, the victim is provided with first aid and immediately transfered to Parassinikadavu Ayurveda Medical College Hospital, Pappineseri Visha Chikitsa Society which is situated adjacent to Snake Park.

First aid:

1. Remove all rings, bracelets, jewellery, etc.
2. Keep bitten area immobilized at or below heart level.

3. For Elapid bites apply elastic bandage tightly.
4. For Viperid bites. DO NOT use a constriction band or tourniquet.

6) Visitors getting injured/visitors falling inside enclosure

The chance of visitor falling inside enclosure is practically nil. In case of any injury or medical emergency the victim is immediately transferred to Parassinikadavu Ayurveda Medical College Hospital after first aid treatment.

7) Fighting among animals

Whenever fights are observed by keepers, they interfere by physically entering the enclosure with suitable equipments. In case of any injury Veterinary care is given.

8) Epidemics

All animal diseased are treated in the Veterinary hospital and samples are taken for laboratory analysis whenever necessary. All animals died are subjected to a detailed postmortem examination and samples are analyzed within our lab or sent to other labs including District Veterinary Laboratory, Kannur. Upon arriving at a specific diagnosis, proper control and disposal methods are implemented.

9) Breakdown of power supply

A 160 KV generator is available in Parassinikadavu Ayurveda Medical College Hospital. This will take over during power cuts or breakdowns.

10) Free ranging/feral animal menace

Does not occur because of the boundary wall.

CHAPTER VIII

CAPACITY BUILDING

Skills and knowledge of the staff are improved by giving training from other institutions like Madras Crocodile Bank, Dr. K. Shivarma Karanth Pililkula Biological Park, Thiruvananthapuram Zoological Park, Department of Forest & Wildlife etc. Discussions are on to make Memorandum of Understanding with research stations like Department of Wildlife, College of Veterinary and Animal Sciences, Pookode, Wayanad.

CHAPTER IX

E-GOVERNANCE

Website of Parassinikkadavu Snake Park & Zoo is under development and will be launched soon. The information of upcoming events, informative articles, and details of animals housed, publications and photo graphs are uploaded in Social media (Faceboook) for better reachability.

- Ticket Counter has been computerized.
- There is full time Internet connection with Wi-Fi facility.

Active Email Address : mail@thesnakepark.com

Active Facebook ID : Parassinikadavu Snake Park @thesnakeparkandzoo

Website Address : www.thesnakepark.com

CHAPTER X

BUDGET

a. Broad budget analysis for implementing the plan

Estimated budgets for the proposed infrastructure development are given in Annexure - i. The budget provided includes the expenditures for demolition works, construction of new enclosure, construction of pathways, purchase of furniture, purchase of electric goods, construction of office buildings and buildings like rest room, cloak room etc. Parassinikkadavu Snake Park expects Rs. 27923200 /- (Two Crores Seventy-Nine Lakhs Twenty-Three Thousand and Two Hundred Rupees Only) for the proposed development work and this is to be arranged through ticket sale, capital campaigns and fund-raising drives. The implementation of the Master Plan and the proposed budget will also require funding from government and other sources, which shall be explored as applicable.

Any construction works which are not included in approved master plan like enclosures for animals in the proposed animal collection plan will be carried out with prior notification to CZA.

b. Construction & development

It is included in broad budget analysis.

c. Day to day maintenance

During all the proposed development and construction work the day-to-day maintenance schedule needs to be secured. It is not possible and not proposed to close the zoo during all these activities of development.

BUDGET ESTIMATE (2020 – 2040)			
Sl No	Construction of new enclosures at snake park including electrification and plumbing work	Area (m²)	Amount (Rs.)
1	Demolition works		2000000
2	Asian Palm Civet (Modification)	160	800000
3	Common Krait (Modification)	40	100000
4	Malabar pit viper	40	100000
5	Saw scaled viper	40	100000
6	Humped nose Pit Viper	40	100000
7	Nocturnal house	490	1800000
8	Monocled cobra	40	100000
9	Emu and ostrich	500	150000
10	Green anaconda	80	300000
11	Travancore tortoise	80	100000
12	Water bird's enclosure	300	300000
13	Mugger Crocodile	600	200000
14	Reticulated python	80	200000
15	Bengal monitor lizard	80	100000
16	Indian rock python	80	150000
17	Interpretation center	100	1200000
18	Over head water tank	50000L	2000000
19	Organic garden	300	100000
20	Entry gate		200000
21	Ticket counter (Modification)	50	100000
22	Veterinary clinic (Modification)	100	1500000
23	Installation of incinerator	1 nos	800000
24	Store	80	960000
25	Installation of Refrigerator at store	2 nos	30000
26	Office furniture		100000
27	Chain link pathways		200000
28	Research		1000000
29	Installation of CCTV at Snake Park		500000
30	Landscaping and Gardening		1500000
	Aquarium Hall	Area (m²)	Amount (Rs.)
31	Installation of Air conditioners at aquarium	3 nos	120000
32	Building Modification	65	900000
33	Aquarium Modification		700000
	Construction of new enclosures at Kurumathur, rescue center including electrification and plumbing work	Area (m²)	Amount (Rs.)
34	Brown wood owl	42	252000
35	Barn owl	35	210000
36	Fish owl	35	210000
37	Eagle	90	300000
38	Mongoose	42	252000
39	Porcupine	250	300000

40	Rat snake	42	200000
41	Trinket snake	42	200000
42	Water snake	42	200000
43	Green whip snake	42	200000
44	tortoise	90	108000
45	Python	140	168000
46	Cobra	93	111600
47	Russels viper	93	111600
48	crocodile	1050	500000
49	Jungle cat	70	120000
50	Indian fox	70	120000
51	Lion tailed macaque	600	400000
52	Office	80	1500000
53	Kitchen	40	500000
54	Water tank	25,000L	800000
55	Well	1 nos	300000
56	Construction of trap cages and squeeze cages for capture and release into wild	2 nos each	300000
57	Tranquilizing equipments		100000
58	Animal handling equipments		100000
	GRAND TOTAL		25923200

PART - III

Chapters	Title	Page
XI	MANAGEMENT PLAN (BUDGET)	36

CHAPTER XI

MANAGEMENT PLAN (BUDGET)

The estimate for development plan is huge and will be implemented as per funds received. It shall be the goal of the Parassinikkadavu Snake Park to implement the various changes indicated in the Master Plan in a phased manner, in a way which causes least disturbance to the animals at the zoo and as little interruption of the zoo operations as possible.

PART - IV

ANNEXURES

ANNEXURES

a. Layout Plan

Appendix I: Proposed layout plan of Parassinikkadavu Snake Park & Zoo

Appendix II: Proposed layout plan of Parassinikkadavu Snake Park Rescue Centre

b. Electricity Line Distribution

c. Approved layout plan

d. Existing Animal Collection Plan

e. Free living species occurring in the zoo campus (Flora and Fauna)

f. Present Staffing pattern.

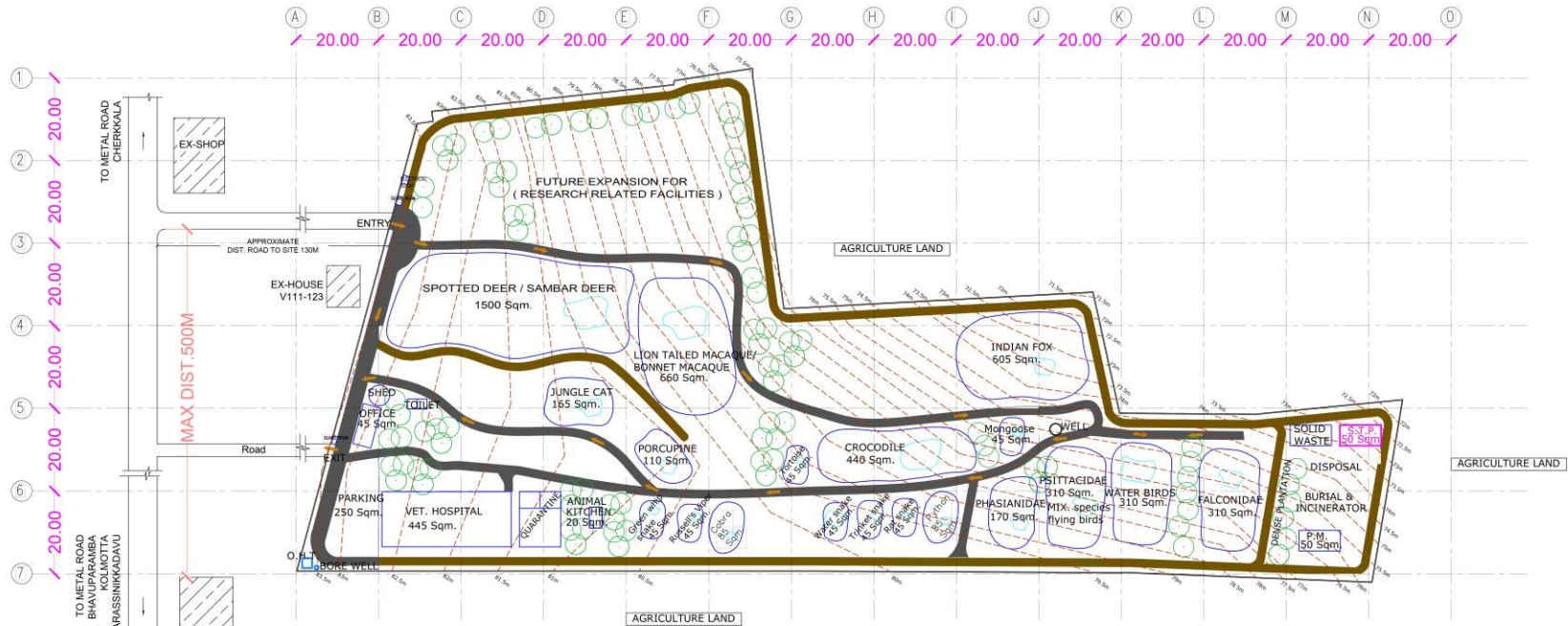
g. List of buildings, other than animal enclosures.

h. Document evidencing legal status of land.

Annexure a. Layout Plan

Appendix II: Proposed layout plan of Parassinikkadavu Snake Park Rescue Centre

REVISED MASTER LAYOUT PLAN OF RESCUE CENTER, PARASSINIKKADAVU SNAKE PARK & ZOO AT KURUMATHUR, KANNUR, KERALA.



REVISED MASTER LAYOUT PLAN OF RESCUE CENTER PARASSINIKKADAVU SNAKE PARK & ZOO, AT KURUMATHUR, KANNUR, KERALA

S/No	Enclosure	IDENTIFY NAME	LOCATION	PROPOSED AREA (Sq.m)	EXISTING AREA (Sq.m)	PROPOSED FENCE (Sq.m)	REMARKS	Comments
A. MAMMALS								
MAMMALS								
1.	Lion Tailed Macaque / Bonnet Macaque	Macaca silenus / Macaca radiata	4-C-D	660 Sqm	660 Sqm	50 Sqm	37.48 Sqm	
2.	Jungle Cat	Felis chaus	5-C-D	165 Sqm	165 Sqm	50 Sqm	37.48 Sqm	
CANIDS								
3.	Porcupine	Hystrix indica	6-E, E-F	110 Sqm	110 Sqm	50 Sqm	37.48 Sqm	
CANIDS								
4.	Indian Fox	Vulpes bengalensis	4-S-1J	400 Sqm	605 Sqm	50 Sqm	37.48 Sqm	
HERPETOIDS								
5.	Grey Mongoose	Herpestes edwardsi	6-S-I	45 Sqm	45 Sqm	50 Sqm	37.48 Sqm	
6.	Spotted Deer / Sambar Deer	Axis deer	4-C,D,E	1500 Sqm	1500 Sqm	100 Sqm	100 Sqm	
B. BIRDS								
7.	Water Birds (Sarus / Herons)	6-M	300 Sqm	310 Sqm	--	28.99 Sqm		
8.	Falconidae (Kites, Eagles)	6-L	300 Sqm	310 Sqm	--	18.79 Sqm		
9.	Psittacidae (Parakeets)	6-K,L	300 Sqm	310 Sqm	--	18.79 Sqm		
10.	Phasianidae (Pheas)	6-K	180 Sqm	170 Sqm	--	18.79 Sqm		

S/No	Enclosure	IDENTIFY NAME	LOCATION	PROPOSED AREA (Sq.m)	EXISTING AREA (Sq.m)	PROPOSED FENCE (Sq.m)	REMARKS	Comments
C. REPTILES								
VENOMOUS SNAKES								
11.	Green Whip Snake	Hoplocheilichthys	67-E	40 Sqm	45 Sqm	45 Sqm		
12.	Russett's Viper	Daboia russelii	67-E,F	40 Sqm	45 Sqm	45 Sqm		
13.	Spectacled cobra	Naja naja	67-F	80 Sqm	85 Sqm	85 Sqm		
NON-VENOMOUS SNAKES								
14.	King cobra	Ophiophagus hannah	67-G,H	40 Sqm	45 Sqm	45 Sqm		
15.	Tropical snake	Colubrocheilus	67-H	40 Sqm	45 Sqm	45 Sqm		
16.	Rat snake	Ptychocheilus	67-H,I	40 Sqm	45 Sqm	45 Sqm		
17.	Indian Rock Python	Python molurus	67-H	80 Sqm	85 Sqm	85 Sqm		
OTHER REPTILES								
18.	Tamias trivirostris	Indotestudo trivirostris	58-G	40 Sqm	45 Sqm	45 Sqm		
19.	Crocodile	Crocodylus palustris	58-H,I	400 Sqm	440 Sqm	440 Sqm		
TOTAL								
				4610 Sqm	5085 Sqm	250 Sqm	329.8 Sqm	

NAME	SYMBOL
OFFICES	[Symbol]
TOILETS	[Symbol]
DRINKING WATER	[Symbol]
SHELTER	[Symbol]
SAFETY ROAD (2.1 m wide RW)	[Symbol]
SAFETY ROAD (2.1 m wide RW)	[Symbol]
GREEN AREAS / TREES	[Symbol]
BUILDINGS / ENCLOSURES	[Symbol]
WATER BODY	[Symbol]
SERVICE ROOMS	[Symbol]

AREA STATEMENTS
SITE AREA FOR RESCUE CENTER = 1642 SQM
PLANT COVER COVERAGE = 10 % = 164.2 SQM
NET PLANT COVER COVERAGE = 30 % = 492.6 SQM
TOTAL GREEN COVERAGE ON SITE = 656.8 SQM = 40 % OF TOTAL SITE AREA
REMAINING AREA OF GREEN AREA = 1642 - 492.6 = 1149.4 SQM

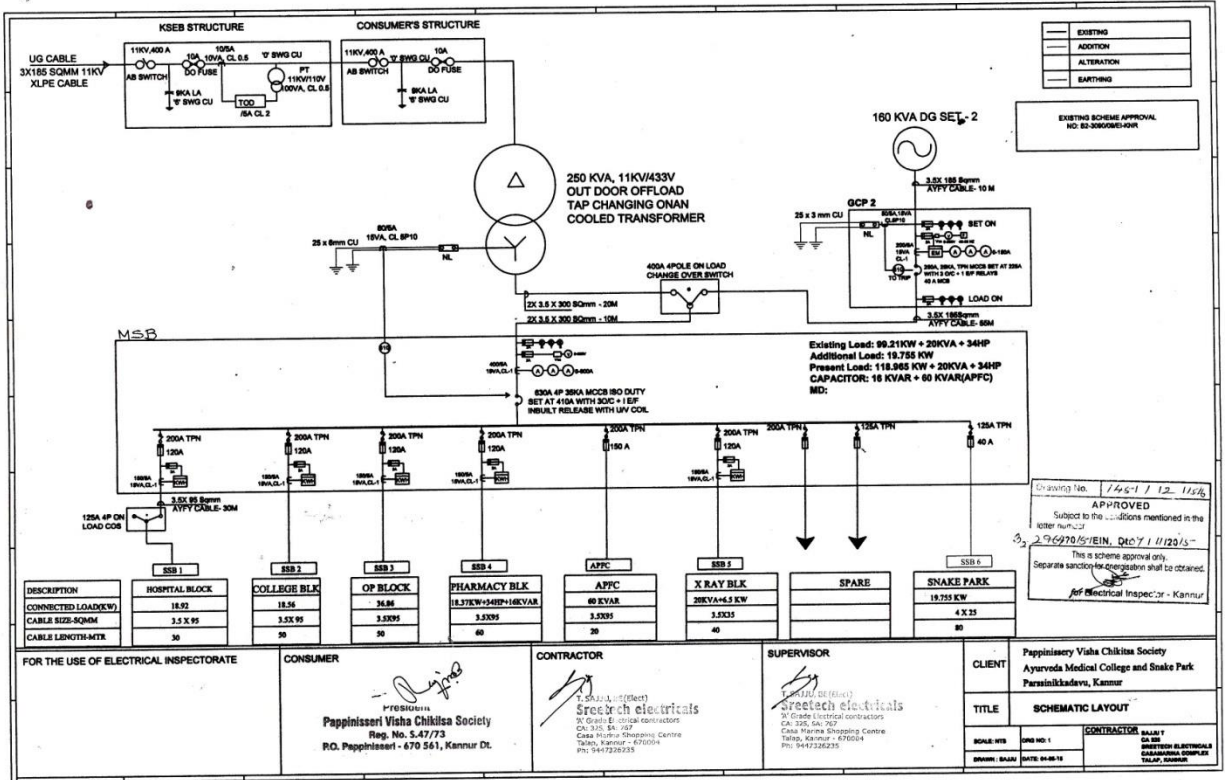
LEGENDS	
NAME	SYMBOL
OFFICES	[Symbol]
TOILETS	[Symbol]
DRINKING WATER	[Symbol]
SHELTER	[Symbol]
SAFETY ROAD (2.1 m wide RW)	[Symbol]
SAFETY ROAD (2.1 m wide RW)	[Symbol]
GREEN AREAS / TREES	[Symbol]
BUILDINGS / ENCLOSURES	[Symbol]
WATER BODY	[Symbol]
SERVICE ROOMS	[Symbol]

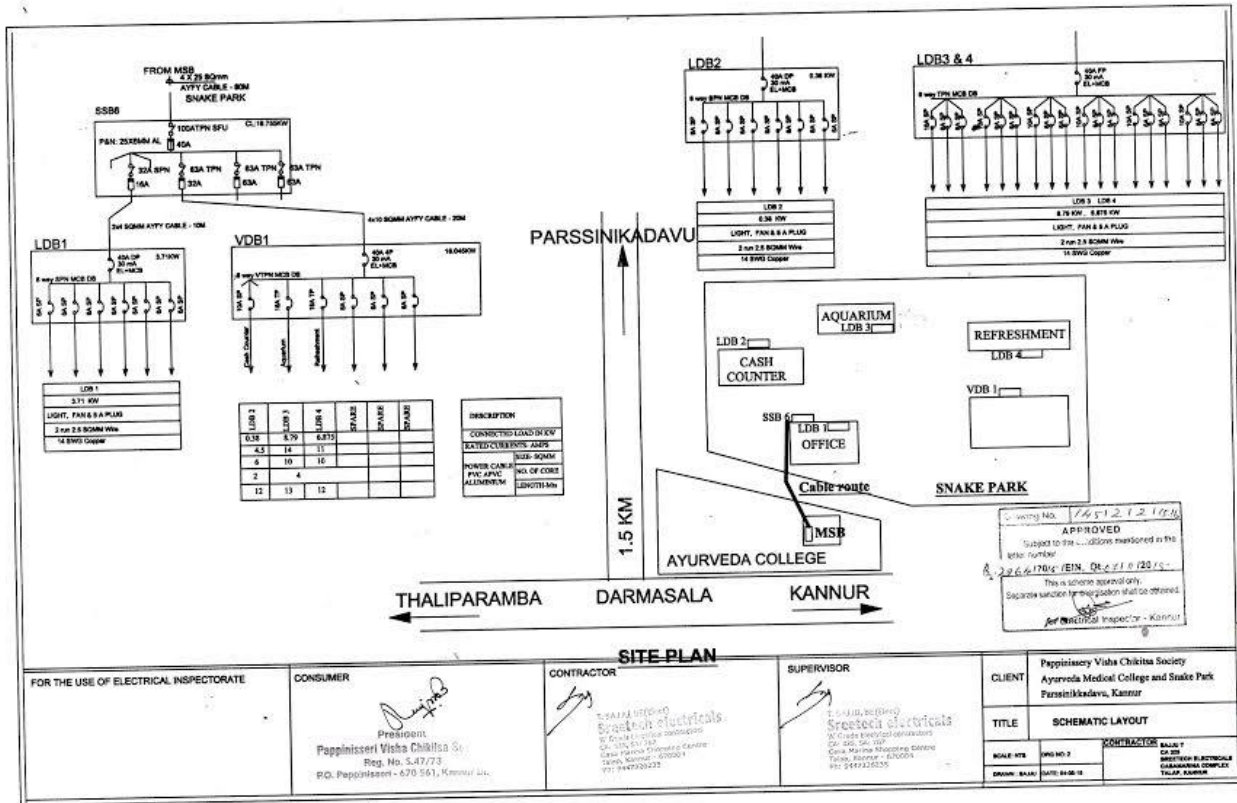
NOTES
1. 2.1 m HIGH BRICK PERIMETER WALL WITH 1 m HIGH BARBED WIRE FENCE TO ENCLOSE THE WHOLE SITE AS SECURITY BARRIERS FOR BOTH HUMAN ESCAPE AND TO PREVENT HUMAN ENTRY BOTH.
2. CURVES AND ANGLE POINTS IN ROADS AND PATHWAYS SHOULD MATCH WITH THE SAFETY STANDARDS OF N.E.C.-2016.
3. Copy right of this drawing rests with GENESIS CONSULTANTS New Delhi.
4. This drawing is to be used for the purpose it is intended for.
5. Detailed working drawings should take into account location of trees. Suitable changes in working drawings are to be made to avoid tree felling.

PROJECT	PARASSINIKKADAVU SNAKE PARK & ZOO, RESCUE CENTER, KANNUR, KERALA
TITLE	REVISED LAYOUT PLAN (Appendix - II (A))
DATE: 22.04.2021	SCALE: 1:500 (A1 sheet)
DRAWING NO: PSPRC - 02(A)	FOR SUBMISSION
ARCHITECTS:	
GENESIS CONSULTANTS 8F, P. Sankarapuram, Kankayam, Kollam, Kerala, India Email: architect@genesisindia.com, contact: 08957865400, 08750232195	

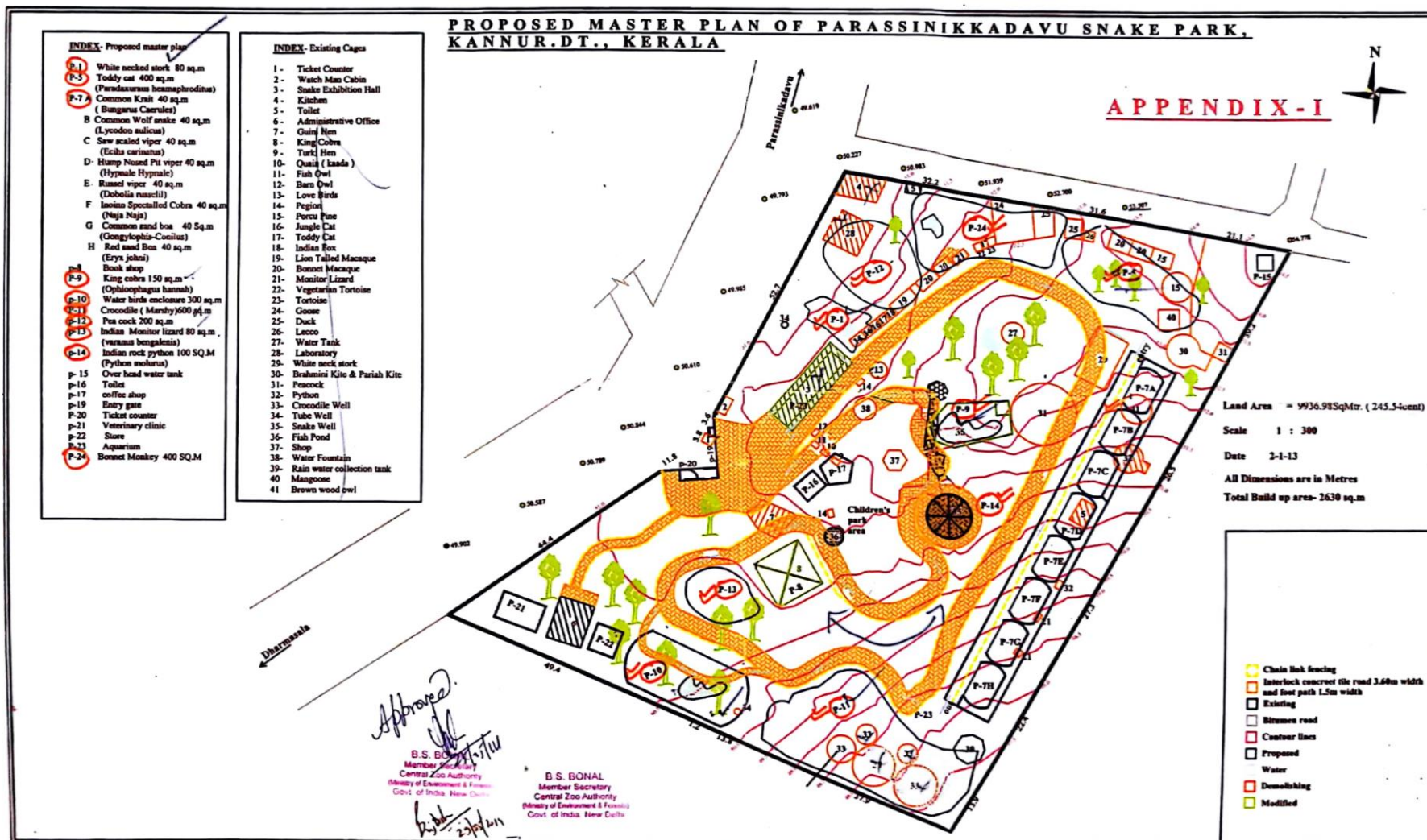
Prof. E. Kuthiraman

Annexure b. Electricity Line Distribution





Annexure c. Older map (Already approved layout of Parassinikkadavu Snake Park & Zoo)



Approved

B.S. BONAL
Member Secretary
Central Zoo Authority
Ministry of Environment & Forests
Govt. of India, New Delhi

B.S. BONAL
Member Secretary
Central Zoo Authority
Ministry of Environment & Forests
Govt. of India, New Delhi

Central Zoo Authority
Ministry of Environment and Forests
Govt. of India, New Delhi

Annexure d. Existing Animal Collection Plan / Inventory

PART - A
3rd Quarterly Inventory Report of PARASSINIKKADAVU SNAKE PARK (2020-2021)
 (01st OCTOBER, 2020 – 31st DECEMBER, 2020)

*Endangered species

Part- 1A

S. No	Animal name	Scientific name	Opening stock as on 01-10-2020				Births			Acquisitions			Disposals			Death			Closing stock as on 31-12-2020								
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T					
Birds																											
1.	Peafowl	<i>Pavo cristatus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Total birds			1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Reptiles																											
1.	King Cobra	<i>Ophiophagus hannah</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
2.	Indian Cobra	<i>Naja naja</i>	14	9	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	9	0	23
3.	Indian rock Python	<i>Python molurus</i>	18	17	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	17	0	35
4.	Russell's Viper	<i>Daboia russelii</i>	14	11	5	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	11	5	30
6.	Checkered Keel back	<i>Xenochrophis piscator</i>	16	12	3	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	12	3	31
7.	Marsh Crocodile	<i>Crocodylus palustris</i>	18	10	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	10	0	28
8.	Indian Monitor Lizard	<i>Varanus bengalensis</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Total reptiles			82	61	3	146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	61	3	146
Mammals																											

1.	Jungle Cat	<i>Felis chaus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
2.	Bonnet Macaque	<i>Macaca radiata</i>	10	6	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	6	1	17
3.	Asian Palm Civet	<i>Paradoxurus hermaphroditus</i>	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
Total Mammals			14	7	1	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	7	1	22
Total animals			101	71	7	179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	69	4	170

*Animals under wildlife (Protection) Act, 1972

3rd Quarterly Inventory Report of PARASSINIKKADAVU SNAKE PARK (2020-2021)
(01st OCTOBER, 2020 – 31st DECEMBER, 2020)

*Other than Endangered species

Part- B

Sl. No	Animal name	Scientific name	Opening stock as on 01-07-2020				Births			Acquisitions			Disposals			Death			Closing stock as on 30-09-2020						
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T			
Birds																									
1.	Barn Owl	<i>Tyto alba</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
2.	Fish Owl	<i>Ketuna zeylanensis</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
3.	Black Kite	<i>Milvus migrans</i>	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
4.	Brahminy Kite	<i>Haliastur indicus</i>	4	3	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	7
5.	White neck Stork	<i>Ciconia episcopus</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6.	Rose Ringed Parakeet	<i>Psittacula krameri</i>	7	4	0	11	0	0	0	0	0	0	7	4	0	0	0	0	0	0	0	0	0	0	0
7.	Love Birds	<i>Agapornis</i>	5	5	0	10	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0
8.	Silver Pheasant	<i>Lophura wythemera</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9.	Emu	<i>Dromaius novaehollandias</i>	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5
Total birds			22	19	0	41	0	0	0	0	0	0	12	9	0	0	0	0	0	0	0	10	10	0	20
Reptiles																									

1.	Rat Snake	<i>Erpias mucosa</i>	11	9	4	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	9	4	24
2.	Common Krait	<i>Bungarus caeruleus</i>	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
3.	Red Sand Boa	<i>Erex jabutii</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4.	Common Sand boa	<i>Erex conicus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
5.	Green Vine Snake	<i>Ahaetulla nasuta</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
6.	Montane Trinket Snake	<i>Coelognathus Helena manticollax</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
7.	Common Wolf Snake	<i>Lycodon aulicus</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8.	Hump nosed pit Viper	<i>Hypnale hypnale</i>	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
9.	Pond Terrapin	<i>Melanochelys triungua triungua</i>	15	9	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	9	0	24
10.	Red Eared Terrapin	<i>Trachemys scripta elegans</i>	2	7	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	9
11.	Travancore Tortoise	<i>Indotestudo travancorica</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12.	Indian star tortoise	<i>Geochelone elegans</i>	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total reptiles			35	33	4	72	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	37	33	4	74

Mammals																							
1.	Indian Porcupine	<i>Hystrix indica</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Total mammals			1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2

S. No	Animal name	Scientific name	Opening stock as on 01-07-2020				Births			Acquisitions			Disposals			Death			Closing stock as on 30-09-2020			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
Aquarium Species																						
1.	Red Parrot Fish	<i>Cichla samatins</i>	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
2.	Morph Fish	<i>Cichlidas</i>	6	6	0	12	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	12
3.	Black Ghost Knife	<i>Apteronotus albifrons</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4
4.	Carp	<i>Cyprinidae</i>	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8
5.	Black Shark	<i>Pangasiidae</i>	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
6.	White Shark	<i>Pangasiidae</i>	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9
7.	Tiger Oscar	<i>Astronotus ocellatus</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8.	Gold Fish	<i>Carassius auratus</i>	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20
9.	Koi Carp	<i>Cyprinus carpio</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
10.	Angel Fish	<i>Pterophyllum</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11.	Black Moor	<i>Carassius auratus</i>	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
12.	Flower Horn	<i>Cichlasomatins</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
13.	Tetra Widow	<i>Gymnocorambus tetra</i>	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7
14.	Neon Tetra	<i>Paracheirodon innesi</i>	0	0	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	28
15.	Albino Piranha	<i>Serrasalmidas</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16.	Giant Gourami	<i>Ospkranemus goramy</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
17.	Silver Arowana	<i>Osteoglossum bicirrhosum</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
18.	Sucker Fish	<i>Echeneis naucrates</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Total Aquarium Species			9	11	91	112	0	0	0	0	0	0	0	0	0	0	0	0	9	11	91	112
Total animals			159	101	17	298	0	0	0	0	2	0	12	9	0	0	0	0	149	92	17	279
Total animals in Snake Park and Zoo			168	122	108	410	0	0	0	0	2	0	12	9	0	0	0	0	158	113	108	380



Curator



Director



Annexure – Free Living Species

Flora

Sl.No	Common Name	Scientific name
1	Teak	<i>Tectona grandis</i>
2	Mango Tree	<i>Mangifera indica</i>
3	Jackfruit	<i>Artocarpus heterophyllus</i>
4	Common Guava	<i>Psidium guajava</i>
5	Chikoo/Sapota	<i>Manilkara zapota</i>
6	Indian Gooseberry	<i>Emblica officinalis</i>
7	Neem	<i>Azadirachta indica</i>
8	Peepal Tree	<i>Ficus religiosa</i>
9	West Indian Mahogany	<i>Swietenia mahagoni</i>
10	Subabul	<i>Leucaena leucocephala</i>
11	Bamboo	<i>Dentro calamus strictus</i>
12	Cannonball Tree	<i>Couropita guianensis</i>
13	Vasaca	<i>Adhatoda vasica</i>
14	Black Pepper	<i>Piper nigrum</i>
15	Passionfruit	<i>Passiflora edulis</i>
16	Indian Kinotree	<i>Pterocarpus marsupeum</i>
17	Sissoo	<i>Dalbergia sissoo</i>
18	Purging Cassia	<i>Cassia fistula</i>
19	Beetle Nut Tree	<i>Areca catechu</i>
20	Belliric Myrobalan	<i>Terminalia bellirica</i>
21	Indian Coral Tree	<i>Erythrina variegata</i>
22	Drum Stick Tree	<i>Moringa oleifera</i>
23	Lucky Bean Tree	<i>Drypetes roxburghii</i>
24	Himalayan Wild Cherry	<i>Prunus cerasoides</i>
25	Malabar Nut	<i>Justicia adhatoda</i>
26	Cluster Fig Tree	<i>Ficus glomerata</i>
27	Indian Devil Tree	<i>Alstonia scholaris</i>
28	Asafetida	<i>Ferula narthex</i>
29	Clove Tree	<i>Syzygium aromaticum</i>
30	Marotti Tree	<i>Hydnocarpus wightianus</i>
31	Cashew Nut Tree	<i>Anacardium occidentale</i>
32	Asoka	<i>Saraca asoca</i>
33	Kadam	<i>Neolamarckia cadamba</i>
34	Indian Beach	<i>Pongamia pinnata</i>
35	Tamarind Tree	<i>Tamarindus indicus</i>
36	Snake Wood Tree	<i>Strychnos nux vomica</i>
37	Five -leaved Chaste Tree	<i>Vitex negundo</i>
38	Willow-Leaved Justicia	<i>Justicia gendarussa</i>
39	Flame of the Forest	<i>Butea monosperma</i>
40	ChebolicMycobalan	<i>Terminalia chebula</i>

41	Utrasum Bead Tree	<i>Elaeocarpus sphaericus</i>
42	Iron Wood Tree	<i>Mesua ferrea</i>
43	White Teak	<i>Gmelina arborea</i>
44	Greater Galangal	<i>Alpinia galangal</i>
45	Slow Match Tree/ Kumbhi	<i>Careya arborea</i>
46	GarciniaCambogia	<i>Garcinia gummi gutta</i>

Fauna

Sl.No	Common Name	Scientific name
Mammals		
1	Indian grey mongoose	<i>Herpestes edwardsii</i>
2	Asian house shrew	<i>Suncus murinus</i>
3	Brown rat	<i>Rattus norvegicus</i>
4	Indian palm squirrel	<i>Funambulus palmarum</i>
Birds		
5	House crow	<i>Corvus splendens</i>
6	Jungle crow	<i>Corvus macrorhynchos</i>
7	House Sparrow	<i>Passer domesticus</i>
8	Indian Robin	<i>Saxicoloides fulicatus</i>
9	White browed Wagtail	<i>Motacilla maderaspatensis</i>
10	Ashy Prinia	<i>Prinia socialis</i>
11	Cattle egret	<i>Bubulcus ibis</i>
12	Black Kite	<i>Milvus migrans</i>
13	Brahminy Kite	<i>Haliastur indus</i>
14	Barn Owl	<i>Tyto alba</i>
15	Rose ringed patakeet	<i>Psittacula krameri</i>
16	Coppersmith Barbet	<i>Psilopogon haemacephalus</i>
17	White throated kingfisher	<i>Halcyon smyrnensis</i>
18	Greater Coucal	<i>Centropus sinensis</i>
19	Spotted dove	<i>Spilopelia chinensis</i>
Reptiles		
20	Common garden lizard	<i>Calotes versicolor</i>
21	Brahminy skink	<i>Mabuya carinata</i>
22	Bengal Monitor	<i>Varanus bengalensis</i>
23	Common vine snake	<i>Ahaetulla nasuta</i>
24	Buffstriped Keelback	<i>Amphiesma stolatum</i>
25	Common Rat Snake	<i>Ptyas mucosa</i>
26	Ornate flying snake	<i>Chrysopelea ornata</i>
27	Common Bronzeback Tree Snake	<i>Dendrelaphis tristis</i>
28	Dumeril's Black-headed Snake	<i>Sibynophis subpunctatus</i>
29	Russell's Viper	<i>Daboia russellii</i>
30	Common Wolf Snake	<i>Lycodon aulicus</i>

Annexure - f

Staffing pattern

The staff profile will remain as per the list given in the General Zoo Administration section (Chapter II, c).

ADMINISTRATIVE / RESEARCH PERSONNEL

Director	: Prof. E. Kunhiraman
Chief Executive Officer	: Mr. AvinashGirija
Veterinary officer	: Dr. Vimal Raj P G.
Curator/ Biologist	: Mr. Nandan Vijayakumar
HR Manager	: Mrs. Bindu MK.
Chief Supervisor	: Mr. Sudhakaran TV.

OTHER STAFF

Cashier	: 1. Mrs. Pradeepa KV.
Junior Clerk	: 1. Mrs. Aswathy K.
Zookeepers	: 1. Mr. Sajeevan O. 2. Mr. Jayesh AJ 3. Mr. Santhosh PV. 4. Mr. Prakashan PV 5. Mr. Sajeesh
Shop keepers	: 1. Mrs. Sheeba V 2. Mrs. Preetha E. 3. Mrs. Preetha P. 4. Mrs. Sindhu 5. Mrs. Shruthy
Gardeners	: 1. Mrs. Leela P. 2. Mrs. Thanka P. 3. Mrs. Bindu T 4. Mrs. Beena MP. 5. Mrs. Sreeja PV.
Security	: 1. Mr. Bhavadasan E. 2. Mr. Rajendran PV.

Annexure - g

List of buildings other than animal enclosures

1. Lavatory Complex
2. Ticket Counter
3. Watchman's cabin
4. Shop
5. Veterinary hospital
6. Administrative Office
7. Feed storage room and kitchen
8. Coffee Shop

Annexure -h
Document evidencing legal status of land

GOVERNMENT OF KERALA

ABSTRACT

Land - Assignment - Cannanore District - Taliparamba Taluk - 10 acres of land in B.S. No. 7 of Andoor Anson and Desam - Assignment to the Pappinisseri Visha Chikilsa Kendras - Sanctioned.

Revenue (L) Department

G.O.M.S. No. 1187/80/RD.

Trivandrum, Dt. 20-8-1980.

Read: Letter No. K.Dis. 1187/80/LSJ6 dt. 9-4-1980 from the Secretary, Board of Revenue.

ORDER.

Shri M.V. Raghavan, M.L.A., President, Pappinisseri Visha Chikilsa Kendras has requested for assignment of an extent of 10 acres of porembake land in B.S. No. 7 of Andoor Anson and Desam of Taliparamba Taluk to the Visha Chikilsa Kendras for establishing a snake park. The District Collector, Cannanore has submitted necessary proposals in the matter which has been endorsed by Board of Revenue. It has reported that no objection has been received in response the notice published under rule 12 (1) of the K.L.A. Rules and that the value of land and other charges to be collected from the assignees will come to Rs.20094 as detailed below:

1. Land value for 10.00 acres @ Rs.20,000/- per acre	:	Rs.2,00,000.00
2. Tree value	:	20.00
3. Survey Charges	:	50.00
4. Demarcation charges.	:	24.50
		2,00,094.50

In the meantime, Shri Raghavan has represented that the Pappinisseri Visha Chikilsa Society is a Charitable one receiving aid from Government and it is rendering medical aid to the poor people affected by the snake bites and requesting that the land may be assigned free of cost.

The Government have considered the matter and are pleased to sanction assignment or registry of 10 acres of land in K.Sy.No.7 of Andoor Anson and Desam Taliparamba Taluk in favour of the Pappinisseri Visha Chikilsa Society S.No. 47/73. Pappinisseri free of land value and tree value on realisation of survey and demarcation charges amounting to Rs.94.50 (Survey charges Rs.50 and demarcation charges Rs.24.50) for the establishment of a snake park by the society subject to the usual terms and conditions laid down in the K.L.A. Rules and also subject to the following special conditions.

- (i) The land shall not be utilised for any purpose other than that for which it is assigned.
- (ii) The land is not alienable in any form.

4. The land shall be returned by the Government without payment or compensation for improvements if any of the above conditions are violated.

(By order of the Governor)

Neela Sengadharan, N. Gopalakrishnan Nair
Special Deputy-Secretary to Government.

To
The Secretary, Board of Revenue, Trivandrum.
The District Collector, Cannanore.
The Tahsildar, Taliparamba.
The President, Pappinisseri Visha Chikilsa Society

GOVERNMENT OF KERALA

ABSTRACT

Land Assignment - Cannanore District - Taliparamba Taluk
10 acres of land in R.S.No.7 of Andoor Village to the
Pappinissery Visba Chikilsa Society for snake park -
Utilisation of the land for other purposes - Sanctioned -
Orders issued.

REVENUE (L) DEPARTMENT

G.O.MS.NO.92/87/ND Dated, Trivandrum 9-2-1987

- Read: (1) G.O.MS.No.1127/80/ND dated 20-8-80.
(2) Letter dated 2-6-86 from Sri.M.V.Baghavan M.L.A.,
President, Pappinissery Visba Chikilsa Society,
Pappinissery.
(3) Correspondence resting with Teletypewriter Message
No.12/41131/85 dated 5-6-1986 from the District
Collector, Cannanore.

O R D E R
= = = = =

In G.O. read as first paper above, sanction
was accorded for assignment on registry of an extent of
10 acres of land in R.S.No.7 of Andoor Amsamand Desam
of Taliparamba Taluk in favour of Secretary, Pappinissery
Visba Chikilsa Society, Pappinissery for the establish-
ment of snake park free of land value and tree value.

Sri.M.V. Baghavan M.L.A., President of the
Society has requested that another extent of 10 acres
from the Perambake land in the same Sy.No. may be
assigned to the Society for the purpose of planting
Ayurveda Herbs and for the construction of the
Ayurveda Hospital Building for the Society. The
Society has also requested Government to accord sanc-
tion to the Society to utilize 7 acres of land in R.S.No.7

(Contd.....)

: - 2 - :

of Andoor Village already assigned to them in the G.O. read as first paper above for the specific purpose of snake park, for the establishment of an Ayurvedic Hospital and Ayurvedic Medicine Preparation Centre in modification of the order already issued.

Government after examining the requests in detail are pleased to accord sanction to the Pappinissery Visha Chikilsa Society to construct an Ayurvedic Hospital and Research Centre in a portion of the 10 acres of land assigned to them in the G.O. read as first paper above for the purpose of the snake park.

The G.O. read as first paper above stands modified to the above extent.

The request of the Society for the assignment of an additional extent of 10 acres of land^s nearby is rejected.

(BY ORDER OF THE GOVERNOR)

SARALA GOPIALAN
SECRETARY.

To

The District Collector, Cannanore.
The Secretary, Board of Revenue, Trivandrum.
The Secretary, Pappinissery Visha Chikilsa Society,
Pappinissery, Cannanore.
The General Administration (S.C) Department - vide
item 4607 dated 22-1-1987.

Forwarded/By Order

Section Officer.

cs/9-2.