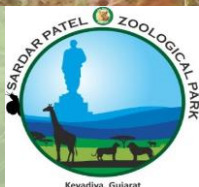


SARDAR PATEL ZOOLOGICAL PARK

EKTA NAGAR



Annual Report 2021-22



Central Zoo Authority

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Report of the Officer In-charge

Dear Readers,

Sardar Patel Zoological Park entered its second year of working since its establishment. The Zoological park is situated near the Statue of Unity, the tallest statue in the world. It is situated in the vicinity of the Sardar Sarovar Dam at Ekta Nagar. It is a part of the tourism circuit at Ekta Nagar along with other attractions such as Cactus garden, Butterfly garden, River rafting, Valley of flowers, Ekta Nursery, Arogya Van, Viswa Van, Children Nutrition Park, Plant Maze, Glow Garden etc. It snugly resides in between the Satpuda and the Vindhyanchal ranges. The beautiful backdrop of mountains has only elevated the zoo's charisma.

This year Sardar Patel Zoological Park welcomed new members like Sloth bears, Indian Wolves, Striped Hyenas, Marsh crocodiles, Indian Gharials and Hippopotamus. This not only increased the existing charm of the zoo but also has stepped ahead in its vision to conserve endangered pan-Indian wildlife. Even though the Zoo is in its infancy due to its recent establishment, the existing animals were reported to have acclimatized well, strengthening the fact that the zoo practiced good animal welfare practices and were able to provide an environment in which the animals are able to thrive.

A state-of-the-art veterinary hospital has been established and best of the facilities are being added with each passing day for treatment and disease diagnosis of the animals. Modern veterinary equipments like gas anesthesia unit along with ventilator has raised the bar for performing surgeries of zoo animals. The importance of correct diagnosis and then formulating a treatment plan is at the heart of all veterinary practices and hence the hospital is equipped with Ultrasonography unit, portable digital radiography, hematology analyzer, automatic serum-biochemistry unit, electric microscope, centrifuge, autoclave unit, operation tables, shadow less operation lights, nebulizer unit etc. Implementation of the best possible veterinary

practices is an unspoken policy of SPZP.

Multiple Zoo outreach activities were carried out by Sardar Patel Zoological Park. The technical staff visited schools in vicinity that predominantly educated school children and distributed stationary kits, gave awareness lectures and spoke about the importance of the role of students and society in conservation of our rich biodiversity. Annual celebration of important wildlife days at the Zoo was carried out.

We take this opportunity to express our sincere gratitude to the CZA, the MoEF & CC, The DGFT Office, Department of Animal Husbandry and Fisheries, Government of India, for their kind support and cooperation.

We appreciate all of our valued zoo guests for supporting Sardar Patel Zoological Park on a regular basis. We dedicate the progress of SPZP to them!

I must conclude by expressing my gratitude to all of my zoo colleagues for their tremendous efforts and commitment to the care of zoo visitors and animals. It's a privilege to work with such lovely folks!

Take care, stay safe.

Thank you all!

Director

Sardar Patel Zoological Park,
Ekta Nagar

History of the zoo

On October 31, 2018, the Statue of Unity, the tallest statue in the world, was dedicated to “Shri Sardar Vallabhbhai Patel” was made public near the Sardar Sarovar Dam in Gujarat. Arogya Van, Ekta Nursery, Sardar Patel Zoological Park, and many other new attractions have been created close to the Statue of Unity with the aim of developing this area into a tourism hub and destination. These locations include the Valley of Flowers, Glow Garden, Riverfront Cycling, Children Nutrition Park, River Rafting, and eco-tourism sites at Khalwani, Cactus Garden and Butterfly Garden. On the banks of the Narmada River, the Sardar Patel Zoological Park is surrounded by the picturesque Satpura and Vindhyanchal Mountain ranges.

Vision

- To complement ex-situ conservation of endangered wild animals and contribute towards raising awareness in masses, to strengthen conservation of wild life, in particular, and biodiversity as well as the environment.

Mission

- To provide better up-keep and best veterinary care to the captive animals and to create a centre of excellence for the tourists by providing an opportunity for better understanding of the animal world with education and recreation.

Objective

- The National Zoo Policy States:- “The main objective of the zoo shall be to complement and strengthen the National efforts in conservation and strengthen the National efforts in conservation of the rich biodiversity of the country, particularly the fauna.”

Thus, Zoo, keeping with the above goals have following objectives: -

- **Conservation:** To conserve and preserve wild fauna by improving and enhancing the Captive Breeding Program of selected endangered species.
- **Education:** To educate and create awareness amongst the visitors about importance of biodiversity and its conservation. It also helps us to raise awareness about protecting the environment.
- **Research and Training:** To facilitate research and training in the field of conservation of wildlife, its captive management and veterinary care of wild animals.
- **Recreation:** To entertain the visitors with a rich collection of flora and fauna, both native and exotic species.

About Us

Basic Information of the Zoo

❖ Name of the Zoo	: Sardar Patel Zoological Park	❖ Visitors Facility Available in Zoo :	- Drinking Water Kiosks
❖ Year of Establishment	: 2019		- Toilets at convenient locations
❖ Address of the Zoo	: Old JP Camp, Near Statue of Unity, Ekta Nagar, Garudheshwar, Dist: Narmada		- Special toilets, wheel chairs & ramps for differently abled person
❖ State	: Gujarat		- Rest areas, sit-outs, visitor's shed at various locations
❖ Telephone Number	: 02640232600		- Food Court / Canteen
❖ Email Address	: directorkjs@gmail.com		- Cloak room near the entrance gate
❖ Website	: https://statueofunity.in/jungle-safari/ https://www.soutickets.in/#/services-venue-detail/jungle-safari		- Perambulator for children
❖ Distance From Nearest	: Airport: 95 km (Vadodra) Railway Station: 9 km (Ekta Nagar) Bus Station: 8 km (Kevadia)		- First Aid & Help Booths
❖ Recognition Valid up to (date)	: 17/10/2022		- Battery operated Zero emission vehicle
❖ Category of the Zoo	: Medium	❖ Weekly Closure of the Zoo :	- Zoo Maps
❖ Area (in Hectares)	: 43.97		- Publications
❖ Number of Visitors	: 7,13,355		- Souvenir Shop

Management Personal of the zoo

Name with designation of the officer in-charge : Dr. Ram Ratan Nala (IFS)

Name of the Curator : Ravirajsinh Rathod

Name of the Veterinary Officer : 1. Dr. Jhanvi Chitariya 2. Dr. Nitesh Chaudhari

Name of the Biologist : Ravikumar Patel

Name of the Livestock Inspector : 1. Ketan Bhil 2. Shubham Lakhara

Owner/Operator of the zoo

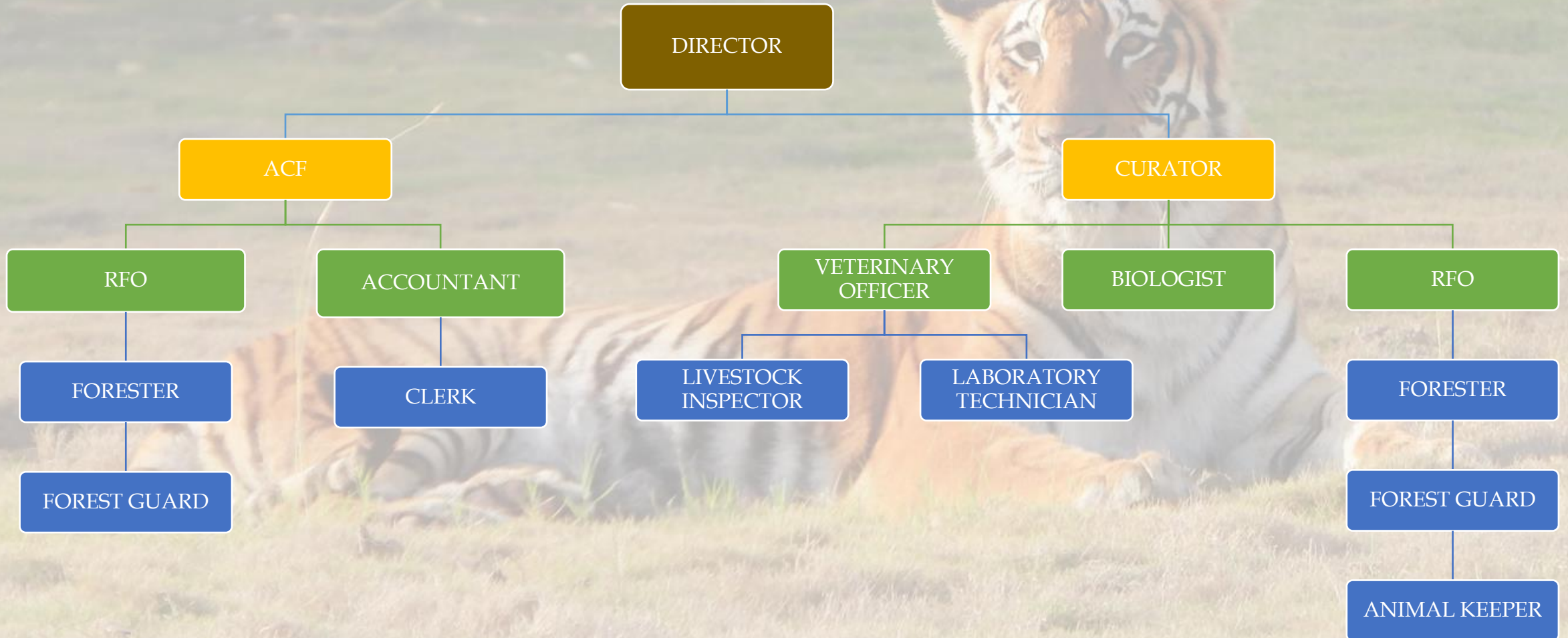
Name of the Operator : Additional Chief Secretary , Forest & Environment Department,
Government of Gujarat

Address of the Operator : Additional Chief Secretary (Forest & Env.), Forest and Environment
Department, Block 14, 8th floor, Gandhinagar.

Contact Details/Phone number of Operator : +91 7923251051

Email Address of the Operator : ds-f-fed@gujarat.gov.in

Organisational Chart of Sardar Patel Zoological Park



Human Resource

Officers/Officials working in Sardar Patel Zoological Park, Ekta Nagar

Sr. No.	Designation	Number of Post	Name of incumbent
1	Deputy Conservator of Forest	1	Dr. R. R. Nala (IFS)
2	Assistant Conservator of Forest	1	R. D. Jadeja
3	Curator	1	R. Rathod
4	Range Forest Officer	5	R. D. Jadav, M. Patel, C. Machi, B. Kahar, J. Vaja
5	Forester	5	N. H. Pancholi, R. S. Rathva, S. R. Chauhan, D. C. Vasava, J. R. Tadv
6	Beat Guard	14	A. K. Tadv, R. B. Tadv, S. R. Tadv, R. R. Vasava, H. G. Vasava, B. N. Machi, U. R. Rathva, K. M. Patel, K. B. Rathva, K. V. Gohel, Y. D. Vasava, K. P. Tadv, B. S. Vasava
7	Veterinary Officer	2	Dr. J. Chitariya, Dr. N. Chaudhary
8	Biologist	2	R. Patel, H. Patel
9	Accountant	1	P. L. Matroja
10	Clerk	2	D. C. Patel, R. B. Makvana

Out-source Employees working in Sardar Patel Zoological Park, Ekta Nagar

Sr. No.	Designation	Number of Post	Name of incumbent
1	Animal Keeper	66	D. Tadvı, A. Tadvı, G. Tadvı, N. Tadvı, J. Tadvı, J. Tadvı, K. Tadvı, K. Tadvı, T. Tadvı, J. Tadvı, S. Tadvı, H. Tadvı, P. Tadvı, D. Tadvı, H. Tadvı, K. Tadvı, A. Tadvı, C. Tadvı, N. Tadvı, A. Tadvı, N. Tadvı, D. Tadvı, K. Tadvı, J. Tadvı, J. Tadvı, A. Tadvı, H. Tadvı, K. Tadvı, R. Tadvı, G. Tadvı, D. Tadvı, N. Tadvı, H. Tadvı, S. Tadvı, B. Tadvı, D. Bariya, A. Tadvı, H. Tadvı, N. Tadvı, A. Tadvı, D. Vasava, R. Tadvı, Y. Tadvı, P. Tadvı, C. Tadvı, M. Vasava, R. Vasava, A. Tadvı, P. Tadvı, P. Tadvı, A. Tadvı, D. Tadvı, C. Tadvı, V. Bhil, U. Tadvı, J. Tadvı, S. Tadvı, A. Tadvı, J. Tadvı, N. Tadvı, M. Tadvı, R. Tadvı, V. Tadvı, V. Tadvı, B. Tadvı, D. Tadvı
2	Computer Operator	4	D. Tadvı, N. Tadvı, Y. Pathak, V. Chauhan
3	Receptionist	1	R. Tadvı
4	Office Assistant	1	P. Suthar
5	Store Keeper	2	Y. Tadvı, Y. Vasava
6	Driver	13	C. Tadvı, D. Tadvı, K. Vasava, A. Tadvı, V. Dave, R. Tadvı, C. Tadvı, V. Tadvı, A. Tadvı, A. Tadvı, L. Tadvı, F. Malek, B. Tadvı
7	Head Gardner	4	N. Tadvı, J. Tadvı, R. Tadvı, A. Vasava
8	Gardener	12	N. Tadvı, H. Tadvı, A. Tadvı, D. Tadvı, I. Tadvı, M. Tadvı, D. Vasava, C. Tadvı, R. Tadvı, H. Tadvı, M. Tadvı, J. Tadvı
9	Cleaner	12	S. Tadvı, K. Bariya, K. Tadvı, M. Tadvı, M. Tadvı, R. Harijan, M. Harijan, S. Harijan, P. Harijan, R. Harijan, V. Solanki, P. Tadvı
10	Electrician	2	J. Tadvı, M. Tadvı
11	Pump Operator	2	S. Patel, K. Tadvı
12	Cook & Kitchen Helper	5	V. Tadvı, S. Tadvı, R. Tadvı, V. Tadvı, D. Vasava
13	Security	20	A. Tadvı, H. Tadvı, B. Tadvı, S. Tadvı, P. Tadvı, S. Tadvı, D. Tadvı, N. Tadvı, A. Tadvı, G. Bhil, M. Tadvı, S. Tadvı, R. Tadvı, A. Tadvı, D. Dungrabhil, S. Tadvı, G. Tadvı, B. Tadvı, P. Tadvı, S. Tadvı

Zoo Advisory Committee

Retired IFS Shri Bharat Pathak has been appointed as Zoo Advisor for Sardar Patel Zoological Park. He was a member of Central Zoo Authority Of India, Gujarat Biodiversity Board, Govt. of Gujarat, Currently, Honorary State Academic. He has about 40 years of Forest and Wildlife Ecology/ Conservation as a member of Forest Service, focused on Forest and Wildlife Conservation management with ecosystem approach.

He visits Sardar Patel Zoological Park and continuously provides valuable guidance and steered the zoo in accomplishing its core vision, mission and objective.

Health Advisory Committee

Sr. No.	Name	Designation
1	Director, Sardar Patel Zoological Park	Chairman
2	Dy. Director, Animal Husbandry, Rajpipla	Member
3	HOD, Pathology/Parasitology/Microbiology, Navsari Agricultural University	Member
4	Veterinary Officer, Indroda Nature Park, Gandhinagar	Member
5	Veterinary Officer, Sardar Patel Zoological Park	Member
6	ADIO, Bharuch	Member
7	Curator, Sardar Patel Zoological Park	Member Secretary

Statement of Income & Expenditure of the Zoo

- **Year: 2021-22**
- **Income from Entry Fees**(Deposited in Society of Zoological Park) : ₹ 11,63,38,455
- **Expenditure** (Done from society accounts) : ₹ 6,95,98,257
- **Remarks:** The data is from audited sheets of society of Zoological Park. Income from entry fees of the zoological park is deposited in the society of the zoological park and expenses are the incurred from society as per approved budget of the society.

Daily Feed Schedule of Animals

Sr. No.	Species	Feed Item	Season	Feeding Time	Day of Fasting
1	Herbivores	Vegetables, fodder, concentrate, grains	All season	Twice a day	-
2	Carnivores	Beef , chicken, dry dog food	All season	Once a day	Thursday
3	Omnivores	Vegetables, fruits, eggs, worms, milk, grains, bread	All season	Twice a day	-
4	Aves	Vegetables, fruits, grains, worms, fish, eggs	All season	Twice a day	-
5	Reptiles (Crocodiles & Gharials)	Fish & beef	All season	Once every week	-
6	Reptiles (Iguana & Sulcata Tortoise)	Vegetables, fruits, flowers, leaves	All season	Twice a day	-

Vaccination Schedule of Animals

Sr. No.	Species	Disease vaccinated against	Name of the Vaccine and dosage/ quantity used	Periodicity
1	All Feline (Lion, Tiger, Leopard, Serval etc.)	Feline Panleukopenia, Feline Calciavirus, Feline Rehinotrachitis Rabies	Feligen (1ml / animal SC)	Annual
2	All Canines (Dhole, Wolf, Hyena, Silver Fox,	Canine Distemper Virus, Canine Adeno Virus, Canine Parvo Virus, Parainfluenza, Leptospirosis Rabies	Nobivac Dhappi, Nobivac Lepto, Nobivac R (1 ml / animal SC)	Annual
3	Omnivores (Sloth Bear)	Leptospirosis Rabies	Nobivac Lepto, Nobivac R (1 ml / animal SC)	Annual
4	Equus hemionus and Rhinoceros unicornis	Tetanus	Tetanus Toxoid (5 ml/ animal IM)	Annual
5	All Indian Birds	Lasota	Water based	Annual

Deworming Schedule of Animals

Sr. No.	Species	Drug used	Month
1	All Carnivores	Combination of 1) Albendazole 2) Praziquantel, 3) Ivermectin	Quarterly
2	All Herbivores	1) Albendazole 2) Fenbedazole 3) Ivermectin	Quarterly
3	All Birds	Combination of 1)Praziquantel 2)Fenbedazole 3)Amprolium	Quarterly
4	Primates	1) Albendazole 2) Fenbedazole	Quarterly
5	Reptiles	1) Fenbedazole	In case of positive faecal sample or annually (whichever is earlier)

Dis-infection Schedule

Sr. No.	Species	Type of enclosure	Disinfectant used and method	Frequency of disinfection
1	All Carnivores	- Night Shelter - Open Enclosure	- Chemical (Kohrsolin-TH) - Burning Method	Once in a week Once in a week
2	All Birds/ Herbivores/ Reptiles/ primates	- Night Shelter - Open Enclosure	- Chemical (Kohrsolin-TH) - Burning Method	Once in a week Twice in a month
3.	Zoo pathways, entry gate foot dips, goods carriage vehicles	Zoo pathways, entry gate	- Chemical (Kohrsolin-TH)	Alternate day

Abstract of Veterinary Activities of the Zoo (2021-2022)

No	Activities	Number of cases dealt
1	Cases treated	201
2	Surgery performed	3
3	De-worming	1600
4	Chemical Immobilizations	5
5	Screening of Blood samples	2
6	Biochemical assay	2
7	Bacteriological examination	5
8	Faecal sample examination	300

Health Check-up of employees for Zoonotic Diseases



- All employees are vaccinated for prevention of COVID-19 along with booster dose.
- Regular screening of all employees for COVID-19.

Development work carried out in the zoo during the year



Indian Wolf Enclosure



Sloth Bear Enclosure



Hippopotamus Enclosure



Gharial Enclosure



Marsh Crocodile Enclosure

Development work carried out in the zoo during the year



Chimpanzee Enclosure



Jaguar Enclosure



Wild Dog Enclosure



Leopard Enclosure



Small Primate Enclosure

Development work carried out in the zoo during the year

Veterinary Hospital & its Facilities



Veterinary Hospital Main Building



Waiting Area



Operation Theatre



Kraals



Veterinary Doctor Room



Pharmacy

Education and awareness programs during the year

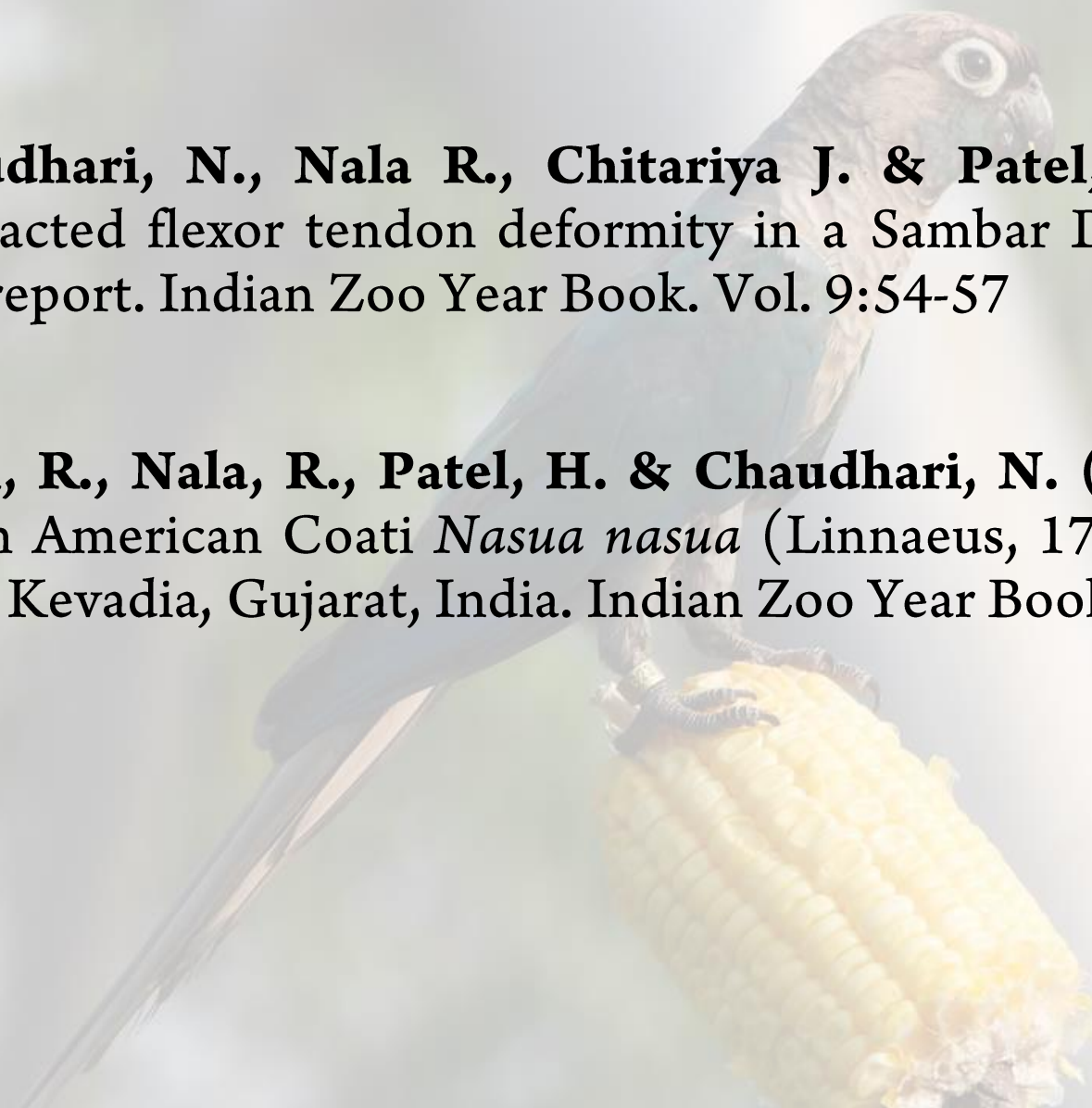
Sr. No.	Event Name	Date
1	World Tiger Day	29/07/2021
2	Wildlife Week / Azadi ka Amrut Mahotsav	02/08/2021 - 08/10/2021
3	World Lion Day	10/08/2021
4	World Rhino Day	22/09/2021
5	World Lemur Day	29/10/2021

Seasonal special arrangement for upkeeping of animals

Sr. No.	Season	Arrangements
1	Winter	<ul style="list-style-type: none">• Air heater are used in enclosures and night rooms.• Dry grass provided as bedding material to give warm and comfortable resting area.• Seasonal fruits and oily seeds provided to birds and animals.• Rocky and sandy area created for reptiles to bask.
2	Summer	<ul style="list-style-type: none">• Air cooler/Air Conditioner are used in enclosures and night rooms.• Water pools are provided in enclosures.• Electrolyte powder is given in drinking water.• Mist sprayers and sprinklers are installed in all enclosures.• Seasonal fruits and seeds are provided to birds and animals.

Research and Publication

- **Chaudhari, N., Nala R., Chitariya J. & Patel, R. (2022).** Management of contracted flexor tendon deformity in a Sambar Deer (*Rusa unicolor*) fawn – A case report. Indian Zoo Year Book. Vol. 9:54-57
- **Patel, R., Nala, R., Patel, H. & Chaudhari, N. (2022).** Successful breeding of South American Coati *Nasua nasua* (Linnaeus, 1766) in Sardar Patel Zoological Park, Kevadia, Gujarat, India. Indian Zoo Year Book. Vol. 9:6-8



Animal acquisition/transfer/exchange during the year

Sr No.	Species Name	Number (M:F:U)	From Which Zoo	Date of Arrival in the Zoo
1	Sloth Bear	1:1:0	Sakkarbaug Zoological Garden	03/12/2021
2	Indian Wolf	1:2:0	Sakkarbaug Zoological Garden	03/12/2021
3	Striped Hyena	1:1:0	Sakkarbaug Zoological Garden	03/12/2021
4	Marsh Crocodile	0:0:10	Indroda Nature Park	10/12/2021
5	Marsh Crocodile	0:0:8	Kevadia Rescue Division	10/12/2021
6	Gharial	2:4:0	Nawab Wajid Ali Shah Zoological Garden	07/12/2021
7	Hippopotamus	1:0:0	National Zoological Park	04/01/2022

Rescue and Rehabilitation of wild animals carried out by the Zoo

Sr. No	Date	Species	Rescue Location	Name of Rescuer	Condition of Animal	Status of Animal
1	30/04/21	Mottled Wood Owl	Kevadia	D. N. Vasava (Beat Guard, Kevadia)	Dehydrated and severely injured	Died on 02/05/21
2	07/06/21	Four-horned Antelope	Gora Range	Sanjay Bariya (Beat Guard, Kevadia)	Injured	Under observation
3	07/06/21	Star Tortoise	Rajpipla	-	Good and Active	Kept at zoo
4	18/08/21	Four-horned Antelope	Gora Range	P. R. Tadvil (Beat Guard)	Dehydrated and weak	Died after few days
5	07/10/21	Peafowl	Kevadia	D. N. Vasava (Beat Guard, Kevadia)	Injured	Released
6	10/11/21	Peafowl	Gora Range	V. P. Tadvil (Forester)	Injured	Released
7	21/12/21	Peafowl	Rajpipla	V. D. Gohil (Beat Guard)	Injured	Released
8	08/02/22	Oriental White Ibis	Bharuch	Akash Patel	Injured	Released
9	19/03/22	Oriental White Ibis	Kevadia	V. D. Gohil	Injured	Released
10	19/03/22	Indian Rock Pigeon	Gora Range	V. D. Gohil	Injured	Released
11	20/03/22	Indian Eagle Owl	Gora Range	Parimalsinh Rana	Dehydrated	Released

Annual Animal Inventory Report from April 2021 to March 2022

Sardar Patel Zoological Park, Ekta Nagar

	Stock as on				7April 2021 - March 2022												Stock as on			
	01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022			
Schedule I and II	M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
Mammals	16	17	19	52	1	5	7	9	17	10	0	0	0	7	8	0	23	41	22	86
Birds	5	7	0	12	0	0	5	0	0	0	0	0	0	1	0	0	5	7	7	19
Reptiles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	10	16
Total	21	24	19	64	0	0	15	0	0	0	0	0	0	0	0	0	30	52	39	121
Other Schedule Species																				
Mammals	11	15	20	46	0	0	10	2	2	0	0	0	0	5	3	0	17	25	10	25
Birds	15	16	163	194	0	0	26	55	40	7	0	0	0	4	9	0	68	52	189	309
Reptiles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	89	81	192	362	0	0	36	57	42	7	0	0	0	9	12	0	85	77	199	361
Exotic Species																				
Mammals	15	15	5	35	2	2	4	1	0	0	0	0	0	1	1	0	18	18	6	42
Birds	17	18	906	941	0	0	13	0	0	0	0	0	0	1	2	0	16	18	917	951
Reptiles	3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6
Total	35	36	911	982	2	2	17	1	0	0	0	0	0	3	3	0	37	38	923	998
Grand Total																				
Mammals	42	47	44	133	3	7	21	12	19	10	0	0	0	13	12	0	58	84	38	180
Birds	37	41	1069	1147	0	0	46	55	40	7	0	0	0	6	10	0	89	77	1113	1279
Reptiles	3	3	0	6	0	0	0	2	4	10	0	0	0	0	0	0	5	7	10	22
Total	82	91	1113	1259	3	7	67	69	63	27	0	0	0	19	22	0	153	168	1160	1481

Total species as on 31 st March 2022				
	Mammals	Birds	Reptiles	Total
Schedule I and II Species	14	2	2	18
Other Schedule Species	6	19	0	25
Exotics Species	17	20	3	40
Total	37	41	5	83

Inventory of Schedule I and II Species of Mammals (Wildlife Protection Act 1972), from April 2021 to March 2022

Sr. No.	Common Name	Scientific Name	Stock as on				April 2021 - March 2022												Stock as on				
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022				
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
1	ASIATIC LION	<i>Panthera leo persicus</i>	1	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
2	INDIAN LEOPARD	<i>Panthera pardus fusca</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
3	BENGAL TIGER	<i>Panthera tigris tigris</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
4	MANIPUR BROW-ANTLERED DEER	<i>Rucervus eldii eldii</i>	0	2	1	3	0	0	0	2	3	0	0	0	0	2	2	0	0	4	0	0	4
5	BLACKBUCK	<i>Antelope cervicapra</i>	4	6	10	20	0	0	5	0	0	0	0	0	0	2	3	0	5	10	5	20	
6	INDIAN GAZELLE	<i>Gazella bennettii</i>	1	2	2	5	0	4	0	0	0	0	0	0	0	0	0	0	1	4	4	9	
7	FOUR-HORNED ANTELOPE	<i>Tetracerus quadricornis</i>	2	2	6	10	0	0	2	0	0	0	0	0	0	2	3	0	1	3	3	7	
8	INDIAN GAUR	<i>Bos gaurus</i>	1	1		2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
9	INDIAN WILD ASS	<i>Equus hemionus khur</i>	4	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	3	
10	ONE HORNED RHINOCEROS	<i>Rhinoceros unicornis</i>	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	2	
11	INDIAN WOLF	<i>Canis lupus pallipas</i>	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	1	2	0	3	
12	BEAR SLOTH	<i>Melanurus ursinus</i>	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	2	
13	BLACKBUCK (WHITE)	<i>Antelope cervicapra</i>	0	0	0	0	0	0	0	5	10	10	0	0	0	0	0	0	5	10	10	25	
14	LEOPARD (MELANISTIC)	<i>Panthera pardus</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
	TOTAL		16	17	19	52	1	5	7	9	17	10	0	0	0	7	8	0	23	41	22	86	

Inventory of Schedule I and II Species of Birds (Wildlife Protection Act 1972), from April 2021 to March 2022

Sr. No.	Common Name	Scientific Name	Stock as on				April 2021 - March 2022												Stock as on				
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022				
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
1	EURASIAN SPOONBILL	<i>Platalea leucorodia</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
2	INDIAN PEAFAWL	<i>Pavo cristatus</i>	4	6	0	10	0	0	7	0	0	0	0	0	0	0	0	0	0	4	6	7	17
	TOTAL		5	7	0	12	0	0	7	0	0	0	0	0	0	0	0	0	0	5	7	7	19

Inventory of Schedule I and II Species of Reptiles (Wildlife Protection Act 1972), from April 2021 to March 2022

Sr. No.	Common Name	Scientific Name	Stock as on				April 2021 - March 2022												Stock as on				
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022				
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
1	MARSH CROCODILE	<i>Crocodylus palustris</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
2	GHARIAL	<i>Gavialis gangeticus</i>	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	2	4	0	6
	TOTAL		0	0	0	0	0	0	0	2	4	10	0	0	0	0	0	0	2	4	10	16	

Inventory of Other Schedule Species of Mammals (Wildlife Protection Act 1972), from April 2021 - March 2022

Sr. No.	Common Name	Scientific Name	Stock as on				July 2022 - September 2022												Stock as on				
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022				
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
1	SPOTTED DEER	<i>Axis axis</i>	4	6	8	18	0	0	3	0	0	0	0	0	0	0	0	0	0	6	7	3	16
2	INDIAN MUNTJAC	<i>Muntiacus muntjak</i>	2	2	1	5	0	0	1	0	0	0	0	0	0	0	0	0	1	3	1	5	
3	SAMBAR	<i>Rusa unicolor</i>	4	6	9	19	0	0	4	0	0	0	0	0	0	0	0	0	8	11	4	23	
4	HIMALAYAN GORAL	<i>Naemorhedus goral</i>	1	1	2	4	0	0	2	0	0	0	0	0	0	0	0	0	1	2	2	5	
5	INDIAN WILD DOG	<i>Cuon alpinus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
6	HYENA STRIPED	<i>Hyena hyaena</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
	TOTAL		11	15	20	46	0	0	1	0	0	0	0	0	0	0	0	0	17	25	10	52	

Inventory of Other Schedule Species of Birds (Wildlife Protection Act 1972), from April 2021 - March 2022

Sr. No.	Common Name	Scientific Name	Stock as on				July 2022 - September 2022												Stock as on			
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	PAINTED STORK	<i>Mycteria leucocephala</i>	1	2	20	23	0	0	17	0	0	0	0	0	0	0	0	0	0	0	40	40
2	GREAT WHITE PELICAN	<i>Pelecanus onocrotalus</i>	2	2	4	8	0	0	0	0	0	0	0	0	0	0	1	0	2	2	3	7
3	RED JUNGLEFOWL	<i>Gallus gallus</i>	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
4	ALEXANDRINE PARAKEET	<i>Psittacula eupatria</i>	9	10	6	25	0	0	0	0	0	0	0	0	0	0	0	0	9	10	6	25
5	PLUM-HEADED PARAKEET	<i>Psittacula cyanocephala</i>	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	22
6	ROSE RINGED PARAKEET	<i>Psittacula krameri</i>	0	0	0	0	0	0	0	55	40	7	0	0	0	0	0	0	55	40	7	102
7	WHITE IBIS	<i>Threskiornis melanocephalus</i>	1	2	4	7	0	0	2	0	0	0	0	0	0	1	0	0	0	0	8	8
8	RED NAPED IBIS	<i>Pseudibis papillosa</i>	0	0	20	20	0	0	0	0	0	0	0	0	0	2	0	0	0	0	18	18
9	LESSER FLAMINGO	<i>Phoeniconaias minor</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
10	COMMON CRANE	<i>Grus grus</i>	0	0	4	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	3
11	DEMOISELLE CRANE	<i>Grus virgo</i>	0	0	5	5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	4
12	SARUS CRANE	<i>Antigone antigone</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
13	EGRET	<i>Bubulcus ibis</i>	0	0	33	33	0	0	0	0	0	0	0	0	2	3	0	0	0	0	28	28
14	POND HERON	<i>Ardeola grayii</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
15	NIGHT HERON	<i>Nycticorax nycticorax</i>	0	0	10	10	0	0	3	0	0	0	0	0	0	0	0	0	0	0	13	13
16	LESSER WHISTLING TEAL	<i>Dendrocygna javanica</i>	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
17	COMB DUCK	<i>Sarkidiornis sylvicola</i>	0	0	16	16	0	0	4	0	0	0	0	0	0	0	0	0	0	0	20	20
18	BAR HEADED GOOSE	<i>Anser indicus</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
19	GREYLAG GOOSE	<i>Anser anser</i>	0	0	11	11	0	0	0	0	0	0	0	0	1	1	0	0	0	0	9	9
	TOTAL		15	16	163	194	0	0	26	55	40	7	0	0	0	4	9	0	68	52	189	309

Inventory of Exotic Species of Mammals from April 2021 - March 2022

Sr. No	Common Name	Scientific Name	Stock as on				July 2022 - September 2022												Stock as on						
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022						
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T			
1	SQUIRREL MONKEY	<i>Saimiri sciureus</i>	1	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4
2	COTTON-TOP TAMARIN	<i>Saguinus Oedipus</i>	1	1	2	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	4	
3	COATIMUNDI	<i>Nasua nasua</i>	1	1	2	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	
4	TUFTED CAPUCHIN	<i>Cebus paella</i>	1	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4	
5	LLAMA	<i>Lama glama</i>	1	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	
6	ALPACA	<i>Vicugna pacos</i>	1	2	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	
7	RED NECKED WALLABY	<i>Macropus rufogriseus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
8	BAT EARED FOX	<i>Otocyon megalotis</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
9	SERVAL CAT	<i>Leptailurus serval</i>	1	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	
10	GIRAFFE	<i>Giraffa camelopardalis</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
11	GEMSBOK / ORYX	<i>Oryx gazelle</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
12	ZEBRA	<i>Equus quagga</i>	2	1	0	3	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	1	
13	WILDBEEST	<i>Connochaetes taurinus</i>	1	2	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	
14	COMMON MARMOSET	<i>Callithrix jacchus</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
15	RED HANDED TAMARIN	<i>Saguinus midas</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
16	RING TAIL LEMUR	<i>Lemur catta</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
17	HIPPOPOTAMUS	<i>Hippopotamus amphibius</i>	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
	EXOTIC TOTAL		15	15	5	35	2	2	4	1	0	0	0	0	0	1	1	0	0	18	18	6	42		

Inventory of Exotic Species of Birds from April 2021 - March 2022

Sr. No.	Common Name	Scientific Name	Stock as on				April 2022 to June 2022												Stock as on				
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022				
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
1	GOLDEN PHEASANT	<i>Chrysolophus pictus</i>	1	1	0	2	0	0	1	0	0	0	0	0	0	1	1	0	0	0	1	1	
2	BUDGERIGAR	<i>Melopsittacus undulates</i>	0	0	330	330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	330	330
3	PEACH-FACED LOVEBIRD	<i>Agapornis roseicollis</i>	0	0	215	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215	215
4	GREEN CHEEKED CONURE	<i>Pyrrhura molinae</i>	0	0	49	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	49
5	COCKATIEL	<i>Nymphicus hollandicus</i>	0	0	66	66	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	68	68
6	BLUE GOLD MACAW	<i>Ara ara rauna</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
7	RED AND GREEN MACAW	<i>Ara chloropterus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
8	SCARLET MACAW	<i>Ara macao</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
9	ORANGE WINGED AMAZON	<i>Amazona amazonica</i>	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
10	OSTRICH	<i>Struthio molybdophanes</i>	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	
11	EMU	<i>Dromaius novaehollandiae</i>	0	0	8	8	0	0	3	0	0	0	0	0	0	0	0	0	0	0	11	11	
12	VIOLET TURACO	<i>Tauraco violaceus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
13	CHENNAL BILLED TOUCAN	<i>Ramphastos vitellinus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
14	LADY AMHERST PHEASANT	<i>Chrysolophus amherstiae</i>	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	
15	SIVER PHEASANT	<i>Lophura nycthemera</i>	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5		
16	BLUE MELANISTIC PHEASANT	<i>Lophura swinhoii</i>	4	3	0	7	0	0	0	0	0	0	0	0	1	1	0	3	2	0	5		
17	BLACK SWAN	<i>Cygnus atratus</i>	0	0	5	5	0	0	7	0	0	0	0	0	0	0	0	1	1	10	12		
18	CAROLINA DUCK	<i>Aix sponsa</i>	3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6		
19	FINCHES	<i>Fringillidae sp.</i>	0	0	200	200	0	0	0	0	0	0	0	0	0	0	0	0	0	200	200		
20	DAIMOND DOVE	<i>Geopelia cuneata</i>	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	30		
	EXOTIC TOTAL		17	18	906	941	0	0	13	0	0	0	0	0	1	2	0	16	18	917	951		

Inventory of Exotic Species of Reptiles from April 2021 - March 2022

Sr. No.	Common Name	Scientific Name	Stock as on				July 2022 - September 2022												Stock as on			
			01-04-2021				Births			Acquisitions			Disposals			Deaths			31-03-2022			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	GREEN IGUANA	<i>Iguana iguana</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
2	RED IGUANA	<i>Iguana iguana</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
3	SULCATA TORTOISE	<i>Centrochelys sulcata</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
	EXOTIC TOTAL		3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6

Mortality Report from April 2021 - March 2022

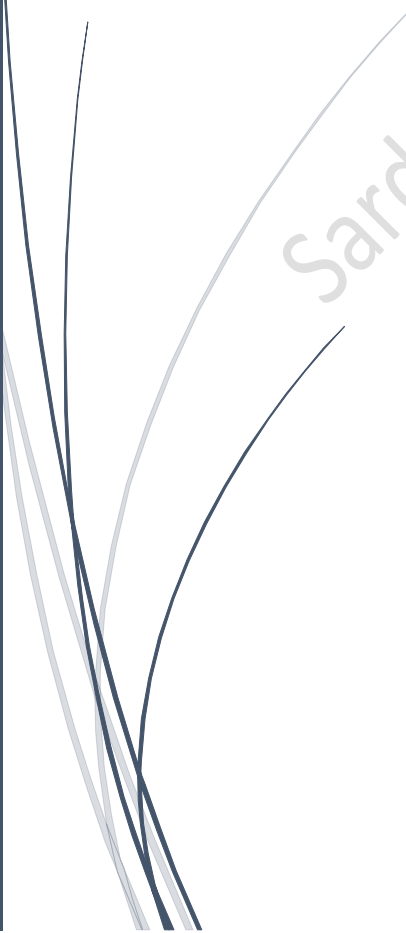

Sr No	Date	Species	M	F	U	T	Cause of Death
1	12/04/2021	THAMIN DEER	0	1	0	1	Septic Shock
2	27/04/2021	EGRET	0	1	0	1	Cardiac Failure
3	06/05/2021	GOLDEN PHEASANT	0	1	0	1	Hypovolemic Shock
4	11/05/2021	BLACK BUCK	1	0	0	1	Septic Shock
5	13/05/2021	BLACK BUCK	0	1	0	1	Septic Shock
6	14/05/2021	ZEBRA	1	0	0	1	Colic
7	14/05/2021	ZEBRA	0	1	0	1	Colic & Respiratory Failure
8	15/05/2021	BLACK BUCK	0	1	0	1	Respiratory Failure
9	03/06/2021	GREY LEG GOOSE	1	0	0	1	Asphyxia
10	20/06/2021	SPOTTED DEER	1	0	0	1	Chronic Respiratory Diseases
11	20/06/2021	SPOTTED DEER	0	1	0	1	Respiratory Failure
12	06/06/2021	INDIAN WILD ASS	1	0	0	1	Colic
13	08/06/2021	FOUR HORNED ANTELOPE	1	0	0	1	Septic Shock
14	29/06/2021	EGRET	1	0	0	1	Hypovolemic Shock
15	10/07/2021	DEMOISELLE CRANE	1	0	0	1	Traumatic Shock
16	22/07/2021	EGRET	0	1	0	1	Respiratory Failure
17	06/08/2021	FOUR HORNED ANTELOPE	0	1	0	1	Hypovolemic Shock
18	08/08/2021	GOLDEN PHEASANT	1	0	0	1	Septic Shock
19	28/08/2021	EGRET	0	1	0	1	Hypovolemic Shock
20	21/09/2021	SPOTTED DEER	0	1	0	1	Septic Shock
21	22/09/2021	BLACK BUCK	1	0	0	1	Respiratory Failure
22	24/04/2021	BARKING DEER	1	0	0	1	Hypovolemic Shock
23	03/10/2021	RED NAPED IBIS	0	1	0	1	Traumatic Shock

Sr No	Date	Species	M	F	U	T	Cause of Death
24	21/10/2021	THAMIN DEER	0	1	0	1	Respiratory Failure
25	25/10/2021	GREAT WHITE PELICAN	0	1	0	1	Hypovolemic Shock
26	11/11/2021	BLACK BUCK	0	1	0	1	Respiratory Failure
27	27/11/2021	SPOTTED DEER	0	1	0	1	Dystocia
28	29/11/2021	COMMON CRANE	0	1	0	1	Traumatic Shock
29	14/11/2021	WHITE IBIS	0	1	0	1	Asphyxia
30	25/12/2021	SPOTTED DEER	1	0	0	1	Pneumonia
31	12/01/2022	EGRET	1	0	0	1	Head Injury
32	02/02/2022	RED NAPED IBIS	0	1	0	1	Respiratory Failure
33	07/02/2022	THAMIN DEER	1	0	0	1	Cardio-Respiratory Failure
34	09/02/2022	STRIPPED HYENA	1	0	0	1	Respiratory Failure
35	02/03/2022	GREY LEG GOOSE	0	1	0	1	Hypovolemic Shock
36	04/03/2022	THAMIN DEER	1	0	0	1	Hypovolemic Shock
37	17/03/2022	BLUE MELANISTIC PHEASANT	1	0	0	1	Respiratory Failure
38	24/03/2022	BLUE MELANISTIC PHEASANT	0	1	0	1	Traumatic Shock
39	29/03/2022	HIMALYAN GORAL	1	0	0	1	Respiratory Failure
40	29/03/2022	FOUR HORNED ANTELOPE	0	1	0	1	Respiratory Failure
41	29/03/2022	FOUR HORNED ANTELOPE	1	0	0	1	Respiratory Failure
42	29/03/2022	FOUR HORNED ANTELOPE	0	1	0	1	Respiratory Failure
		TOTAL	19	23	0	42	

Mammals	
1	Five-striped palm squirrel (<i>Funambulus pennant</i>)
2	Indian grey mongoose (<i>Herpestes edwardsii</i>)
3	Indian flying fox (<i>Pteropus giganteus</i>)
4	Indian porcupine (<i>Hystrix indica</i>)
Birds	
5	Indian grey hornbill (<i>Ocyrceros birostris</i>)
6	White-browed fantail (<i>Rhipidura eureola</i>)
7	Indian peafowl (<i>Pavo cristus</i>)
8	Red-wattle lapwing (<i>Vanellus indicus</i>)
9	Gray francolin (<i>Francolinus pondicerianus</i>)
10	Shikra (<i>Accipiter badius</i>)
11	Mottled wood owl (<i>Strix ocellata</i>)
12	Spotted owlet (<i>Athene brama</i>)
13	Jungle-babbler (<i>Turdoides striata</i>)
14	Baya weaver (<i>Ploceus philippinus</i>)
15	Crested bunting (<i>Melophus lathamii</i>)
16	Indian grey hornbill (<i>Ocyrceros birostris</i>)
17	White-browed fantail (<i>Rhipidura eureola</i>)
18	Indian peafowl (<i>Pavo cristus</i>)
Reptiles	
19	Fan-throated lizard (<i>Sitana ponticeriana</i>)
20	Monitor lizard (<i>Varanus bengalensis</i>)
21	Oriental garden lizard (<i>Calotes versicolor</i>)
22	Bronzeback tree snake (<i>Dendrelaphis tristis</i>)
23	Checkered keelback (<i>Xenochrophils piscator</i>)
24	Common krait (<i>Bungarus caeruleus</i>)
25	Common sand boa (<i>Eryx conicus</i>)
26	Indian cobra (<i>Naja naja</i>)
27	Indian rock python (<i>Python molurus</i>)
28	Indian wolf snake (<i>Lycodon aulicus</i>)
29	Rat snake (<i>Ptyas mucosa</i>)
30	Red sand boa (<i>Eryx johnii</i>)
31	Trinket snake (<i>Coelognathus Helena</i>)



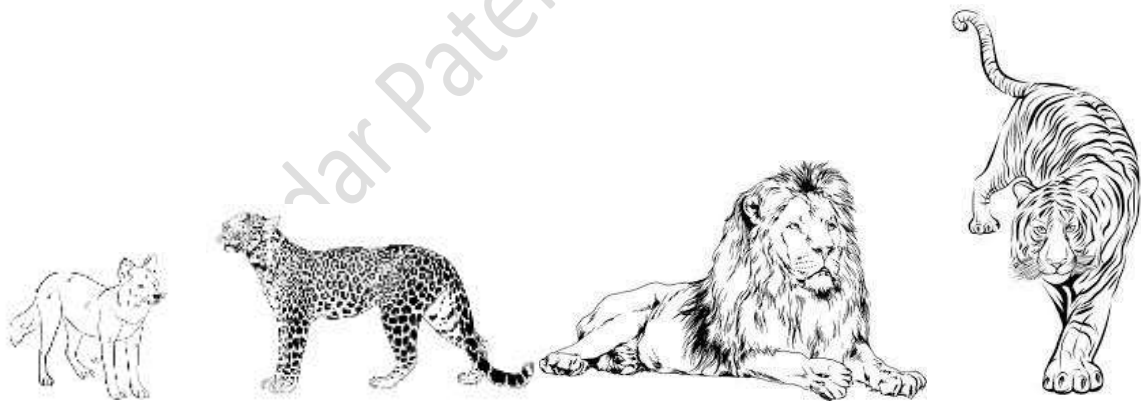
List of free living wild animals within the zoo premises



**Feeding Requirement and
Feeding Schedule of animals
Sardar Patel Zoological Park,
Ekta Nagar, Gujarat**

Sardar Patel Zoological Park

CARNIVORES



Sardar Patel Zoological Park

Tiger		No of Animals in Enclosure 2			
		Average adult body weight 160 kg			
SN	Particular	Male	Female	Total (kg)	Remark
1	Beef with bones	8 kg	7 kg	15 kg	Meat Quality Assessment to be carried out on daily basis
2	Chicken	2 kg	2 kg	4 kg	
4	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)			
5	Suggestions	One day off in a week			

Asiatic Lion		No of Animals in Enclosure 2 + 2				
		Average adult body weight 140 kg				
SN	Particular	Male	Female	Cub - 2 cubs (Up to 1.5 year)	Total (kg)	Remark
1	Beef with bone	7 kg	7 kg	6 kg	20 kg	(Boneless in Male) Meat quality assessment to be carried out on daily basis
2	Chicken	1 kg	1 kg	3 kg	5 kg	
4	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				
5	Suggestions	One day off in a week				

Leopard		No of Animals in Enclosure 3				
		Average adult body weight 55 kg				
SN	Particular	Male	Female (2 Animals)	Cub (up to 1.5 year)	Total (In Kg)	Remark
1	Beef with bones	2 kg	4 kg	-	6 kg	Meat quality assessment to be carried out on daily basis
2	Chicken	1.5 kg	2 kg	-	3.5 kg	
3	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				
4	Suggestions	One day off in a week				

Hyena		No of Animals in Enclosure 1				
		Average adult body weight 40 kg				
SN	Particular	Male	Female	Cub	Total (in kg)	Remark
1	Beef with bones	2 kg	-	-	2 kg	Meat quality assessment to be carried out on daily basis
2	Chicken	1 kg	-	-	1 kg	
3	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				
4	Suggestions	One day off in a week				

Serval Cat		No of Animals in Enclosure 3				
		Average adult body weight 8 kg				
SN	Particular	Male	Female	Cub (up to 1 year)	Total	Remark
1	Dry Cat Food	30g	30g	30 gm	90 gm	Meat quality assessment to be carried out on daily basis
2	Wet cat Food	40g	40 g	40 gm	120 gm	
3	Boiled Beef	200 g	200 g	200 gm	600 gm	
4	Boiled Chicken	400 g	400 g	200 gm	1000 gm	
5	Boiled Egg	3	3	2	8	
6	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				
7	Suggestions	Provide food all days in week				

Silver Fox		No of Animals in Enclosure 2				
		Average adult body weight 7 kg				
SN	Particular	Male	Female	Cub	Total	Remark
1	Dry Food Royal Canine	40 g	40 g	-	80 gm	Meat quality assessment to be carried out on daily basis
2	Wet Food / Gravy Me-o Fish	40 g	40 g	-	80 gm	
3	Boiled Chicken	400 g	400 g	-	800 gm	
4	Boiled Egg	1	1	-	2	
5	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				
6	Suggestions	Provide food all days in week				

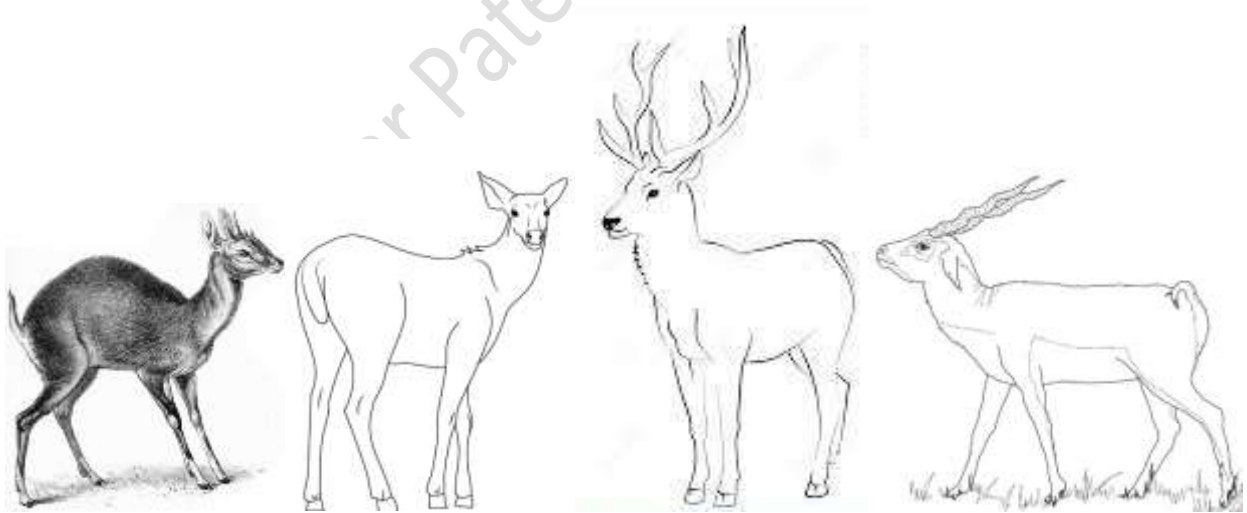
Wild Dog		No of Animals in Enclosure 2				
		Average adult body weight 17 kg				
SN	Particular	Male	Female	Cub	Total (in Kg)	Remark
1	Beef with bones	1 kg	1 kg	-	2 kg	Meat quality assessment to be carried out on daily basis
2	Chicken	1 kg	1 kg	-	2 kg	
3	Egg	1 egg	1 egg	-	2 eggs	
4	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				
5	Suggestions	One day off in a week				

Wolf		No of Animals in Enclosure 2				
		Average adult body weight 20 kg				
SN	Particular	Male	Female	Cub	Total (in kg)	Remark
1	Beef with bones	1 kg	1 kg	-	2 kg	Meat quality assessment to be carried out on daily basis
2	Chicken	1 kg	1 kg	-	2 kg	
3	Egg	1 egg	1 egg	-	2 eggs	
4	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				
5	Suggestions	One day off in a week				

Raccoon Dog		No of Animals in Enclosure 1				
		Average adult body weight 13 kg				
SN	Particular	Male	Female	Cub	Total	Remark
1	Dry Food (Royal Canine)		50 g	-	50 gm	Meat quality assessment to be carried out on daily basis
2	Chicken		250 g	-	250 gm	
3	Egg		2-3 eggs	-	2-3 eggs	
4	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)				

Sloth Bear		No of Animals in Enclosure 2			
		Average adult body weight 100 kg			
SN	Particular	Male (in kg)	Female (in kg)	Cub	Total (in kg)
1	Watermelon	1.5	1.5		3
2	Papaya	1	1		2
3	Apple	0.5	0.5		1
4	Sapota (Chickoo)	1	1		2
5	Banana	1	1		2
6	Pineapple	1	1		2
7	Pomegranate	0.5	0.5		1
8	Guava (Jam)	1	1		2
9	Honey	0.3	0.3		0.6
10	Egg	3 eggs (150 gm)	3 eggs (150 gm)		6 eggs (300 gm)
11	Rice	0.75-1	0.75-1		1.5 -2
12	Jaggery	0.1	0.1		0.2
13	Bread	0.15 (4-5 piece)	0.15 (4-5 piece)		0.3 (8-10 piece)
14	Milk	0.5	0.5		1
15	Sweet Lime mosambi Or Oranges	0.5 As per availability	0.5 As per availability		1 As per availability
16	Mealworm As per availability	0.05 (50 g) As per availability	0.05 (50 g) As per availability		0.1 (100 g) As per availability
17	Total feed intake	10 – 10.25	10 – 10.25		20 – 20.50
18	Supplements	<ul style="list-style-type: none"> • Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week) • Liver supplement (Minimum 3 times a week) 			
19	Suggestions	<ul style="list-style-type: none"> • Distribute food in the morning, afternoon and evening session for enrichment • Small portion to be hide in the enclosure very day for enrichment • Provide food all days in a week 			
Feeding Schedule- All Days					
Morning - 9:00 AM to 10:00 AM		Afternoon 12:00 PM to 2:00 PM		Evening 5:00 PM to 6:00 PM	
Fruits – 5 kg (Any combination of 2-3 fruits)		Fruits – 5 kg Jaggery – 200 gm		Rest of the fruits, food, worms etc. (Rice+ Bread+Jaggery+Honey+Eggs)	

HERBIVORES



Sardar Patel Zoological Park

Spotted Deer		No of Animals in Enclosure 41	
		Average adult body weight 45 kg	
SN	Particular	Average Requirement for 1 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier /maize)	6 kg	246 kg
2.	Dry fodder / Hay	0.6 kg	24.6 kg
3.	Antelope Feed	0.5 kg	20.5 kg
4.	Soaked Bengal Gram (or Chick Pea)	0.3 kg	12 kg
5.	Mineral Mixture / Salt	10 gm per day	410 gm
6.	Suggestions	1. Fruits and vegetable not recommended 2. Bamboo/ Acacia browsing by keeper once a week. Monday.	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed Soaked Bengal Gram or Chick Pea Mineral Mixture Green Fodder – Half Portion		Hay / Dry fodder	Green Fodder – Half portion

Sambar		No of Animals in Enclosure 56	
		Average adult body weight 150 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier /maize)	10	560
2.	Dry fodder / Hay	1	56
3.	Antelope Feed	0.7	40
4.	Alfa Alfa pellet	0.5	27 Kg
5.	Soaked Bengal Gram (or Chick Pea)	0.5	28
6.	Mineral Mixture/ Salt	20 gm per day	1120 gm
7.	Suggestions	1. Tree Fodder @ 1 kg /animal by keeper	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed Soaked Bengal Gram or Chick Pea Mineral Mixture Green Fodder – Half Portion		Hay / Dry fodder	Green Fodder – Half Portion

Mix Species		No of Animals in Enclosure 38	
		Average adult body weight 40 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier /maize)	3.5	133
2.	Dry fodder / Hay	0.65	25
3.	Antelope Feed	0.5	19
4.	Soaked Bengal Gram (or Chick Pea)	0.25	9.5
5.	Mineral Mixture / Salt	10 gm /day	380 gm /day
6.	Suggestions		
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed Soaked Bengal Gram or Chick Pea Mineral Mixture Green Fodder – Half Portion		Hay / Dry fodder	Green Fodder – Half Portion

Black Buck		No of Animals in Enclosure 80	
		Average adult body weight 40 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier /maize)	3	240
2.	Dry fodder / Hay	0.3	24
3.	Antelope Feed	0.4	32
4.	Soaked Bengal Gram (or Chick Pea)	0.25	20
5.	Mineral Mixture / Salt	5gm /day	400 gm
6.	Suggestions	Tree Fodder @ 0.5 kg /animal by keeper	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed Soaked Bengal Gram or Chick Pea Mineral Mixture Green Fodder – Half Portion		Hay / Dry fodder	Green Fodder – Half Portion

White Black Buck		No of Animals in Enclosure 40	
		Average adult body weight 40 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier + Maize)	3	120
2.	Dry fodder / Hay	0.3	12
3.	Antelope Feed	0.4	16
4.	Soaked Bengal Gram (or Chick Pea)	0.25	10
5.	Mineral Mixture / Salt	5gm /day	200 gm
6.	Suggestions	Bamboo / Acacia similar browsing by keeper once in a week Monday .	

Feeding Schedule

Morning - 8:00 AM to 9:00 AM	Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed Soaked Bengal Gram or Chick Pea Mineral Mixture Green Fodder – Half Portion	Hay / Dry fodder	Green Fodder – Half Portion

Chinkara		No of Animals in Enclosure 10	
		Average adult body weight 20 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier + Maize)	2	20
2.	Dry fodder / Hay Peanut Hay	0.25	2.5
3.	Antelope Feed	0.25	2.5
4.	Soaked Bengal Gram (or Chick Pea)	0.2	2
5.	Mineral Mixture / Salt	3gm	30gm
6.	Suggestions	Bamboo / Acacia similar browsing by keeper once in a week Monday.	

Feeding Schedule

Morning - 8:00 AM to 9:00 AM	Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed Soaked Bengal Gram or Chick Pea Mineral Mixture Green Fodder – Half Portion	Hay / Dry fodder	Green Fodder – Half Portion

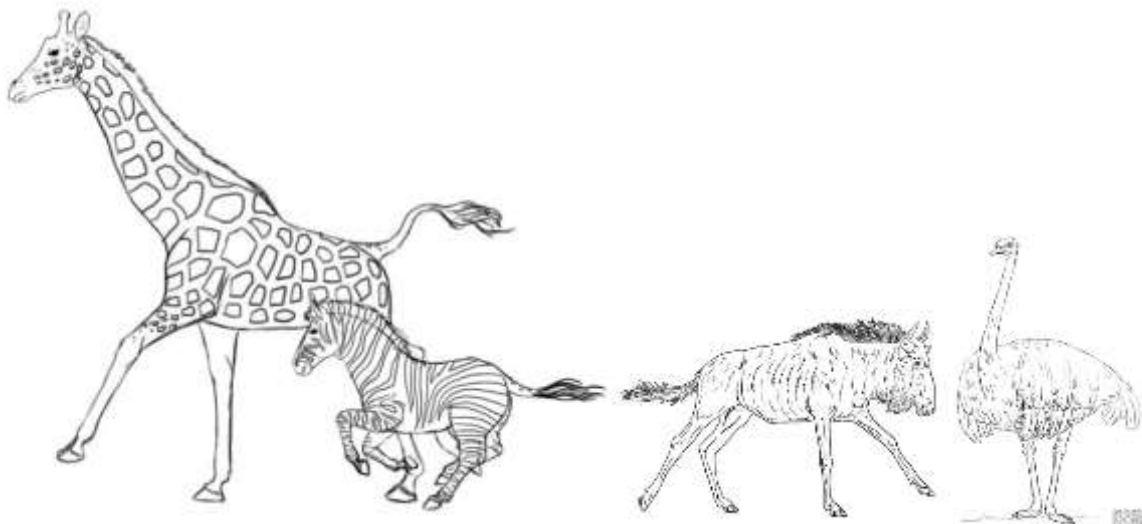
Wild Ass		No of Animals in Enclosure 3	
		Average adult body weight 250 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier)	15	45
2.	Dry fodder / Hay	3	9
3.	Antelope Feed	1.5	4.5
4.	Alfa Alfa Pellet	1	3
5.	Soaked Bengal Gram (or Chick Pea)	1	3
6.	Mineral Mixture / Salt (Horse Mass)	50	150
7.	Suggestions	Salt Lick / Salt Block to be provided	
Feeding Schedule			
Morning - 8:00 AM to 11:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Alfa Alfa Pellet – 3 kg Soaked Bengal Gram/Chick Pea 3 kg Mineral Mixture 150 gm Green Fodder – Half Portion		Hay/ Dry Fodder	Antelope feed 4.5kg Green Fodder – Half Portion

Rhino		No of Animals in Enclosure 2	
		Average adult body weight 2000 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier/Maize)	150+110 (M: F)	260
2.	Sugarcane	10	20
3.	Dry fodder / Hay	3 (Gradually may increase up to 5-6 kg)	6
4.	Antelope Feed	3	6
5.	Alfa Alfa Pellet	2	4
6.	Soaked Bengal Gram (or Chick Pea)	3+2 (M:F)	5
7.	Carrot	2	4
8.	Banana	1.5	3
9.	Cucumber	1	2
10.	Coriander	250 gm	500 gm
11.	Mineral Mixture / Salt	200	400
12.	Suggestions	Apple 2 kg /animal on Monday	
Feeding Schedule			
Morning - 8:00 AM to 11:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Soaked Bengal Gram or Chick Pea Mineral Mixture Sugarcane 10 kg Green Fodder – Half Portion		Alfa Alfa Pellet Vegetables and fruits Hay / Dry fodder	Antelope Feed: 6 kg Vegetables and fruits Sugarcane 10 kg Green Fodder – Half Portion

Bison		No of Animals in Enclosure 2	
		Average adult body weight 800 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder (Hybrid Napier + Maize)	50	100
2	Dry fodder / Hay	5	10
3	Antelope Feed	2.5	5
4	Alfa Alfa Pellet	2.5	5
5	Soaked Bengal Gram (or Chick Pea)	1	2
6	Wheat Bran	0.5 kg	1
7	Mineral Mixture / Salt	100 gm	200 gm
8	Carrot	1	2
9	Cucumber	1	2
10	Tomato	1	2
11	Suggestions	Tree Fodder @ 5 kg per day by keeper	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Soaked Bengal Gram	2 kg	Vegetables and fruits: Treats or while handling animals	Antelope Feed: 6 kg
Wheat Bran	1 kg		Vegetables and fruits: Treats or while handling animals
Alfa Alfa Pellet Feed	5 kg		
Mineral Mixture	200 gm		
Green Fodder – Half Portion		Hay / Dry fodder	Green Fodder – Half Portion

Sardar Patel Zoological Park

AFRICA SECTION And EXOTIC SECTION



Sardar Patel Zoological Park

Hippopotamus		No of Animals in Enclosure 1	
		Average adult body weight 1700 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder	100	100
2.	Hay/ Dry fodder	5	5
3.	Antelope Feed	6	6
4.	Soaked Bengal Gram (or Chick Pea)	2	2
5.	Mineral Mixture / Salt	200 gm	200 gm
6.	Carrot	1	1
7.	Cucumber	1	1
8.	Tomato	1	1
9.	Watermelon	2	2
10.	Banana	2	2
11.	Pumkin	2	2
12.	Suggestions	1. To offer major feed portion in the evening and night hours	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Soaked Bengal Gram or Chick Pea 1 kg		Antelope Feed 2 kg	Soaked Bengal Gram 1 kg
Antelope Feed 2 kg		Vegetables and fruits: Treats or while handling animals	Antelope Feed 2 kg
Mineral Mixture 200 gm			Vegetables and fruits: Treats or while handling animals
Green Fodder – 40 kg		Hay / Dry fodder: 5 kg	Green Fodder 60 kg

Giraffe		No of Animals in Enclosure 1	
		Average adult body weight 1400 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier + Maize)	45	45
2.	Alfa Alfa Pellet	2	2 kg
3.	Antelope Feed	5	5 kg
4.	Soaked Bengal Gram (or Chick Pea)	1	1 kg
5.	Mineral Mixture/ Salt	100 gm	100 gm
6.	Carrot	2	2 kg
7.	Cucumber	2	2 kg
8.	Apple	1	1 kg
9.	Banana	2	2 kg
10.	Onion	1	1 kg
11.	Cabbage	1	1 kg
12.	Supplements		
13.	Suggestions	Tree browsing - Acacia and bamboo Browsing by keeper Wheat bran and sweet potato addition	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Soaked Bengal Gram or Chick Pea 1 kg		Antelope Feed 3 kg	Alfa Alfa Pellet 2 kg
Antelope Feed 2 kg		Chopped Vegetables and fruits (Half Portion)	Chopped Vegetables and fruits (Half Portion)
Mineral Mixture 200 gm			
Green Fodder –	15 kg	Green Fodder –	15 kg

Zebra		No of Animals in Enclosure 1	
		Average adult body weight 300 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1.	Green Fodder (Hybrid Napier + maize)	15	15
2.	Dry fodder / Hay	3	3
3.	Antelope Feed	2	2
4.	Alfa Alfa Pellet	3	3
5.	Soaked Bengal Gram (or Chick Pea)	1	1
6.	Mineral Mixture / Salt	50 gm (Horse Mass)	50 gm (Horse Mass)
7.	Carrot	1	1
8.	Cucumber	1	1
9.	Suggestions	To feed smaller quantity in multiple times a day	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed	2 kg	Chopped Carrot and Cucumber	Alfa Alfa Pellet food 3 kg
Soaked Bengal Gram or Chick Pea	1 kg	Hay / Dry Fodder 3 kg	
Mineral Mixture	50 gm		
Green Fodder	5 kg	Green Fodder 5 kg	Green Fodder 5 kg

Wildebeest		No of Animals in Enclosure 5	
		Average adult body weight 200 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder (Hybrid Napier + Maize)	10	50
2	Dry fodder / Hay	2	10
3	Antelope Feed	1.5	7.5
4	Alfa Alfa Pellet	1.5	7.5
5	Soaked Bengal Gram (or Chick Pea)	0.5	2.5
6	Mineral Mixture / Salt	30 gm	150 gm
7	Carrot	0.5	2.5
8	Cucumber	0.5	2.5
9	Sweet Potato (as per Seasonal availability)	0.5	2.5
10	Suggestions		
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed	7.5 kg	Chopped Carrot and Cucumber	Alfa Alfa Pellet Food 7.5 kg
Soaked Bengal Gram	2.5 kg	Sweet Potato- as per availability	
Mineral Mixture	150 gm		
Green Fodder –	25 kg	Dry Fodder / Hay - 10 kg	Green Fodder 25 kg

Gemsbok Oryx		No of Animals in Enclosure 2	
		Average adult body weight 200 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder	10	20
2	Dry fodder / Hay	2	4
3	Antelope Feed	1.5	3
4	Alfa Alfa Pellet	1.5	3
5	Soaked Bengal Gram or Chick Pea	0.5	1
6	Mineral Mixture / Salt	30 gm	60 gm
7	Carrot	0.5	1
8	Cucumber	0.5	1
9	Sweet Potato (Seasonal)	0.5	1
10	Suggestions		
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed	3 kg	Chopped Carrot and Cucumber	Alfa Alfa Pellet Food 3 kg
Soaked Bengal Gram	1 kg	Sweet Potato (Seasonal)	
Mineral Mixture	60 gm		
Green Fodder –	10 kg	Peanut Hay - 4 kg	Green Fodder 10 kg

Ostrich		No of Animals in Enclosure 3	
		Average adult body weight 100 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder	2	6
2	Hay / Dry Fodder	0.5 kg	1.5 kg
3	Hay – Alfa Alfa hay	0.5 kg	1.5 kg
4	Ostrich feed	1 kg	3 kg
5	Coriander	50 gm	150 gm
6	Spinach	50 gm	150 gm
7	Cabbage	100 gm	300 gm
8	Carrot	100 gm	300 gm
9	Cucumber	100 gm	300 gm
10	Beet Root	100 gm	300 gm
11	Sprout	200 gm	600 gm
12	Boiled Egg	2 eggs (100 gm)	6 eggs (300 gm)
13	Supplements	Calcium Supplement / Shell Grit twice per week Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)	
14	Suggestions	Orange – Once a week as a treat 2 kg	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Soft Food - Coriander, Spinach, Cabbage, Carrot, Cucumber, Beet Root, Sprout, Boiled Egg		Ostrich Feed - 3 kg	
Alfa Alfa Hay 1.5 kg		Green Fodder- 6 kg	Peanut Hay 1.5 kg

Emu		No of Animals in Enclosure 12	
		Average adult body weight 30-35kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Hay- Peanut Hay	0.25 kg	1.5 kg
2	Hay – Alfa Alfa hay	0.25 kg	1.5 kg
3	Ostrich feed	0.5 kg	6 kg
4	Coriander	50 gm	0.6 kg
5	Spinach	50 gm	0.6 kg
6	Cabbage	50 gm	0.6 kg
7	Carrot	50 gm	0.6 kg
8	Cucumber	50 gm	0.6 kg
9	Beet Root	50 gm	0.6 kg
10	Sprout or Channa or Soaked Bengal Gram	100 gm	1.2 kg
11	Boiled Egg	½ egg	6 eggs
12	Supplements	Calcium Supplement / Shell Grit twice per week Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)	
13	Suggestions	1. Grass collection from surrounding by keeper- Daily 10 kg	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Soft Food Coriander, Spinach, Cabbage, Carrot, Cucumber, Beet Root, Sprout, Boiled Egg		Ostrich Feed - 6 kg Alfa Alfa Hay 1.5 kg	Grass feeding by keeper 5 kg Peanut Hay 1.5 kg

Llama		No of Animals in Enclosure 3	
		Average adult body weight 150 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder	7	21
2	Dry fodder- Peanut Hay	1.5 kg	4.5 kg
3	Dry Fodder- Alfa Alfa Hay	1 kg	3 kg
4	Antelope Feed	1.5	4.5
5	Mineral Mix (Agrimin Fort)	20 gm	60 gm
6	Cucumber	0.5 kg	1.5 kg
7	Apple	0.5 kg	1.5 kg
8	Carrot	0.5 kg	1.5 kg
9	Suggestions	Tree fodder/ Grass feeding to be done by keeper daily (10-12 kg)	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed	4.5 kg	Chopped Fruits and Vegetables	
Mineral Mixture	60 gm		Alfa Alfa hay 3 kg
Green Fodder –	10 kg	Peanut Hay - 4.5 kg	Green Fodder 11 kg

Alpaca		No of Animals in Enclosure 3	
		Average adult body weight 65 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder	5	15 kg
2	Dry fodder-Peanut Hay	0.5 kg	1.5 kg
3	Dry Fodder- Alfa Alfa Hay	0.5 kg	1.5 kg
4	Antelope Feed	0.7 kg	2.1 kg
5	Mineral Mix (Agrimin Fort)	15 gm	45 gm
6	Cucumber	0.4 kg	1.2 kg
7	Apple	0.4 kg	1.2 kg
8	Carrot	0.4 kg	1.2 kg
9	Suggestions	Tree fodder/ Grass feeding to be done by keeper daily (5-7 kg)	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Antelope feed	2.1 kg	Chopped Fruits and Vegetables	
Mineral Mixture	45 gm		Alfa Alfa hay 1.5 kg
Green Fodder –	10 kg	Peanut Hay - 1.5 kg	Green Fodder 5 kg

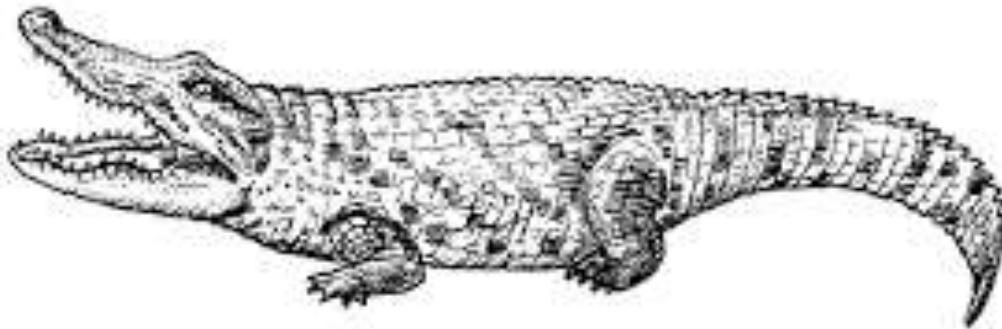
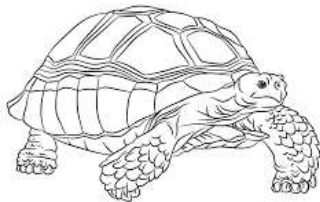
Wallaby		No of Animals in Enclosure 2	
		Average adult body weight 13 kg	
SN	Particular	Average Requirement for 01 Adult Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder	1	2
2	Alfa Alfa Hay	1	2
3	Crispy Museli	100 gm	200 gm
4	Alfa Alfa Pellet	100 gm	200 gm
5	Carrot	100 gm (1 Unit)	200 gm
6	Cucumber	100 gm (1 Unit)	200 gm
7	Apple	100 gm (1 Unit)	200 gm
8	Supplement	Selenium and Vitamin E (Powder E-Care-Se) (Minimum 4 times a week) Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)	
9	Suggestions	Bamboo or grass by keeper 500 gm (2-3 sticks) per day	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Crispy Musali	200 gm	Chopped Fruits and vegetables (Half Portion)	Chopped Fruits and vegetables (Half Portion)
Supplement		Alfa Alfa Pellet	Alfa Alfa Hay
Green Fodder	2 kg	200 gm	2 kg

Mara		No of Animals in Enclosure 1	
		Average adult body weight 9 kg	
SN	Particular	Average Requirement for 01 Animal Kg/Day	Total Requirement for Enclosure Kg/Day
1	Green Fodder	1	1
2	Alfa Alfa Hay	1	1
3	Peanut Hay	1	1
4	Crispy Museli	100 gm	100 gm
5	Alfa Alfa Pellet	100 gm	100 gm
6	Carrot	100 gm (1 Unit)	100 gm
7	Cucumber	100 gm (1 Unit)	100 gm
8	Coriander	50 gm	50 gm
9	Supplement	Selenium and Vitamin E (Powder E-Care-Se) (Minimum 4 times a week) Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)	
10	Suggestions	Bamboo or grass by keeper 500 gm (2-3 sticks) per day	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Crispy Musali	100 gm	Chopped Fruits and vegetables (Half Portion)	Chopped Fruits and vegetables (Half Portion)
Supplements		Alfa Alfa Pellet	Alfa Alfa Hay
Green Fodder	1 kg	100 gm Peanut Hay	1 kg

Coati		No of Animals in Enclosure 6	
		Average adult body weight 5 kg	
SN	Particular	Avg Requirement for 01 Adult Animal	Total Requirement for enclosure
1	Dry Cat or Dog Food	30 gm	180 gm
2	Fruit Mix Apple, Watermelon, Muskmelon, Banana, Guava, Sapota etc. Grapes (Seasonal) Mango (Seasonal)	300 gm	1.8 kg
3	Vegetable Mix Carrot Cucumber Corn Sprout- Moong + Chana	100 gm	600 gm
4	Boiled Chicken Soup	350 gm	2.1 kg
5	Boiled Egg	½ egg	3 eggs
6	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)	
Feeding Schedule			
Morning - 8:00 AM to 9:00 AM		Afternoon 12:00 PM to 2:00 PM	Evening 5:00 PM to 6:00 PM
Dry Cat or Dog Food Boiled eggs + Supplement		Fruit Mix Vegetables Mix	Boiled Chicken Soup

Capuchin Monkey		No of Animals in Enclosure 2	
		Average adult body weight 10 kg	
SN	Particular	Avg Requirement for 01 Adult Animal	Total Requirement for Enclosure
1	Fruit Mix Apple, Watermelon Muskmelon, Banana Guava, orange, sweet lime, pomegranate etc. Grapes (Seasonal) Mango (Seasonal)	500 gm	1 kg
2	Vegetable Mix Boiled peas, Sweet Potato, Carrot, Corn Boiled Moong + Chana	400 gm	800 gm
3	Boiled Chicken	50 gm	100 gm
4	Boiled Egg	1 egg	2 eggs
5	Insects	As treat 8-10 per animal	
6	Boiled Rice+ Curd+ Honey : 100 gm per animal alternate day		
7	Nestum : 20 gm + 80 ml water = 100 gm alternate days		
8	Supplement	Vitamin, Mineral and Amino Acid supplement (Minimum 3 times a week)	
Feeding Schedule			
Morning - 6:00 am		Morning – 10 am	Afternoon
7 am: Nestum + Supplement Boiled Vegetables		Fruit Mix	Boiled Rice + Curd + Honey
			Evening 4 to 5 pm Nestum + Insects (as treat)

Reptile



Sardar Patel Zoological Park

Marsh Crocodile		No. of animals in the enclosure: 16 (Adult & Sub adult mix)	
		Average body weight: 90 kg	
Sr. No.	Particular	Average requirement for 1 animal kg/per week	Total Requirement for Enclosure kg/per week
1	Beef	1.5kg	24 kg
2	Fish	1.5kg	24 kg
3	Supplement	Vitamin, Mineral and Amino Acid supplement (Once a week)	
Note: Beef & Fish should be given alternately every week.			
Feeding Schedule		Every Monday Morning	

Gharial Crocodile		No. of animas in the enclosure: 5 (Sub adults)	
		Average body weight: 20 kg	
Sr. No.	Particular	Average requirement for 1 animal kg/per week	Total Requirement for Enclosure kg/per week
1	Fish	1.4 kg	7 kg
2	Supplement	Vitamin, Mineral and Amino Acid supplement (Once a week)	
Note: Fish should be given twice a week.			
Feeding Schedule		3.5 kg Fish every Monday & Friday morning	

Ball Python		No. of animals in the enclosure: 1	
		Average body weight: 550 gm	
Sr. No.	Particular	Average requirement for 1 animal per week	Total Requirement for Enclosure per week
1	Mice/Rat	15-20g	15-20g
2	Poultry Chicks	15-20g	15-20g
3	Supplement	Vitamin, Mineral and Amino Acid supplement (Once a week)	
Note: Feeding should be done under supervision and should be documented on regular basis			
Feeding Schedule		Every Wednesday	

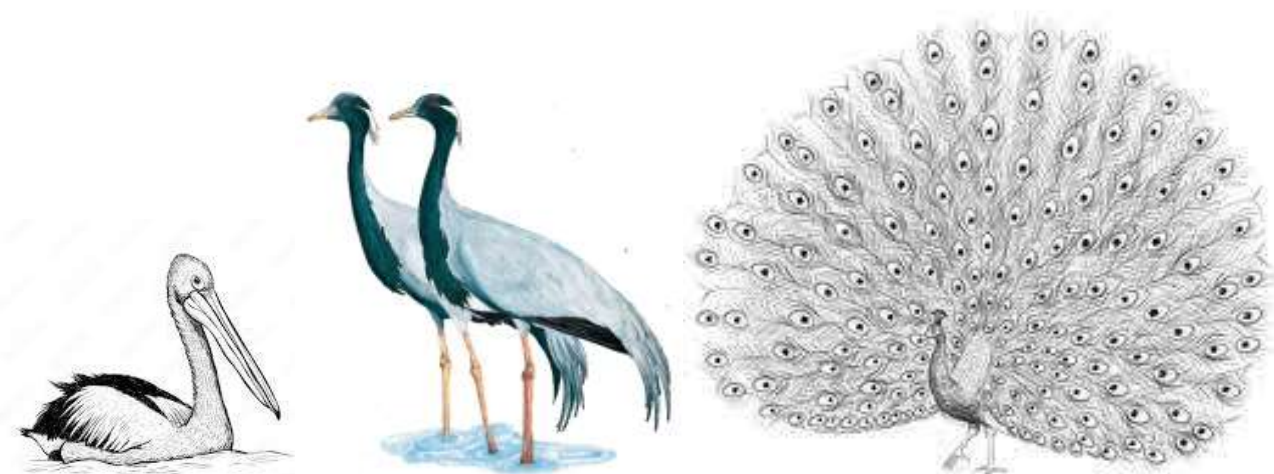
Iguana		No. of animals in the enclosure: 7	
		Average body weight: 1.5 kg	
Sr. No.	Particular	Average requirement for 1 animal grams/per day	Total Requirement for Enclosure grams/per day
1	Spinach	100g	700g
2	Coriander	100g	700g
3	Pumpkin	200g	1400g
4	Hibiscus flower	50g	350g
5	Moringa leaves	50g	350g
6	Supplement	Vitamin, Mineral and Amino Acid supplement (twice a week)	
Note: Spinach and coriander should be fine chopped and mixed with grated pumpkin			
Feeding Schedule		Morning: Hibiscus flower and Moringa leaves	
		Afternoon: Feed Mix of Spinach, coriander and pumpkin	

Sulcata Tortoise		No. of animals in the enclosure: 2	
		Average body weight: 6 kg	
Sr. No.	Particular	Average requirement for 1 animal grams/per day	Total Requirement for Enclosure grams/per day
1	Spinach	200g	400g
2	Coriander	200g	400g
3	Banana	100g	200g
4	Hibiscus leaves	100g	200g
5	Moringa leaves	100g	200g
6	Papaya	100g	200g
7	Supplement	Vitamin, Mineral and Amino Acid supplement (twice a week)	
Note: Spinach and coriander should be fine chopped and mixed with grated papaya and banana			
Feeding Schedule		Morning: Hibiscus leaves and moringa leaves	
		Afternoon: Feed Mix of spinach, coriander, banana & papaya	

Star Tortoise		No. of animals in the enclosure: 3	
		Average body weight: 1.1 kg	
Sr. No.	Particular	Average requirement for 1 animal g/per day	Total Requirement for Enclosure g/per day
1	Spinach	30g	90g
2	Coriander	20g	60g
3	Banana	10g	30g
4	Hibiscus leaves	30g	90g
5	Moringa leaves	30g	90g
6	Papaya	20g	60g
7	Carrot	20g	60g
8	Supplement	Vitamin, Mineral and Amino Acid supplement (twice a week)	
Note: Spinach and coriander should be fine chopped and mixed with grated papaya, carrot & banana			
Feeding Schedule		Morning: Hibiscus leaves and moringa leaves	
		Afternoon: Feed mix of papaya, carrot & banana	



Primate Section And Aviaries



Sardar Patel Zoological Park

Feed / Food requirement and distribution plan for Indian Aviary

SN	Particulars	Morning Feed	Mid-Day Feed	Evening Feed
1	Jowar	0.25	-	-
2	Bajara (Pearl Millet)	0.25	-	-
3	Moong	1	-	-
4	Wheat	1	-	-
5	Horse Gram (Channa)	0.5	-	-
6	Sun Flower Seeds	0.5	-	-
7	Carrot	2.5	-	-
8	Beet Root	2.5	-	-
9	Cucumber	1.5	-	-
10	Corn Cobbs	3.2	-	-
11	Coriander	2.5	-	-
12	Spinach	1	-	-
13	Walnut	0.05	-	-
14	Cashew	0.1	-	-
15	Almond	0.1	-	-
16	Musk Melon	-	1	-
17	Water Melon	-	3	-
18	Papaya	-	2	-
19	Pomegranate	-	2	-
20	Guava	-	2	-
21	Apple	-	3	-
22	Orange	-	0.5	-
23	Mosambi	-	0.5	-
24	Banana	-	1	-
25	Sapota (chikoo)	-	2	-
26	Eggs	-	26	-
27	Fish	-	35	-
28	Seed Mix	-	-	1
29	Fox tail Millet	-	-	1
30	Poultry Starter	2	-	-
Total Feed Consumption		18.95	78	2

Supplement							
Day	Mon	Tue	Wed	Thus	Friday	Sat	Sunday
Liver Supplements							
Broton Liv 52 Livoster	50 ml in food		50 ml		50 ml		
Calcium / Multimineral / Multivitamins							
Ostopet Viemerol Calcilux		50 ml 20 ml		50 ml 20 ml	50 ml 20 ml		100 gm

Feed / Food requirement and distribution plan for Exotic Aviary

SN	Particulars	Morning	Mid-Day	Evening Feed
1	Jowar	0.25	-	-
2	Bajara (Pearl Millet)	0.25	-	-
3	Moong	1	-	-
4	Wheat	1	-	-
5	Soaked Bengal Gram (Channa)	0.5	-	-
6	Sun Flower Seeds	0.5	-	-
7	Carrot	1.4	-	-
8	Beet Root	1.4	-	-
9	Cucumber	1.4	-	-
10	Corn Cobbs	1.5	-	-
11	Coriander	2.5	-	-
12	Spinach	1	-	-
13	Walnut	0.05	-	-
14	Cashew	0.1	-	-
15	Almond	0.1	-	-
16	Musk Melon	-	1	-
17	Water Melon	-	2	-
18	Papaya	-	1	-
19	Pomegranate	-	1	-
20	Guava	-	1.5	-
21	Apple	-	2	-
22	Orange	-	0.5	-
23	Sweet Lime (Mosambi)	-	0.5	-
24	Banana	-	1	-
26	Bread	0.2		-
27	Eggs		7	-
28	Chicken	0.2	-	-
29	Seed Mix	-	-	2
30	Fox tail Millet	-	-	1
31	Poultry Starter	-	-	1
32	Palmnut	-	-	-
Total Feed Consumption				

Supplement							
Day	Mon	Tue	Wed	Thus	Friday	Sat	Sunday
Liver Supplements							
Broton Liv 52 Livoster	50 ml in food		50 ml		50 ml		
Calcium / Multimineral / Multivitamins							
Ostopet Vimeral		50 ml 20 ml		50 ml 20 ml	50 ml 20 ml		

All Primates Feed Requirements and Distribution

SN	Particulars	Morning Feed	Mid-Day Feed	Evening Feed
1	Moong	0.1	-	-
2	Soaked Bengal Gram (Channa)	0.1	-	-
3	Carrot	0.1	-	-
4	Beet Root	0.1	-	-
5	Cucumber	0.1	-	-
6	Corn Cobbs	0.3	-	-
7	Coriander	-	-	-
8	Spinach	-	-	-
9	Walnut	-	-	0.01
10	Cashew	-	-	0.01
11	Almond	-	-	0.01
12	Musk Melon	-	1	-
13	Water Melon	-	1	-
14	Papaya	-	0.25	-
15	Pomegranate	-	0.25	-
16	Guava	-	0.25	-
17	Apple	-	0.25	-
18	Mosambi	-	0.2	-
19	Banana	-	0.2	-
20	Sapota (chikoo)	-	0.5	-
21	Bread	-	7	-
22	Eggs	-	6	-
23	Chicken	0.5	-	-
24	Nestum	0.2	-	0.2
25	Gum	0.1	-	-
Total Feed Consumption				

Total: Total Number of Monkeys – Cotton Top Tamarin – 5 – 400 grams | Red Hand Tamarin – 3 – 400 grams | Squirrel Monkey – 900 grams | Marmoset – 1 – 300 grams | Ring Tailed Lemur – 1 -2.2 Kg | Tufted Capuchin – 4 – 4kg

Day	Mon	Tue	Wed	Thus	Friday	Sat	Sunday
Liver Supplements							
Broton Liv 52 Livoster	50 ml in food		50 ml		50 ml		
Calcium / Multimineral / Multivitamins							
Ostopet Viemerol Calcilux		50 ml 20 ml		50 ml 20 ml	50 ml 20 ml		
Zinc & Vitamin D							
Z&D	10 ml			10 ml			10 ml

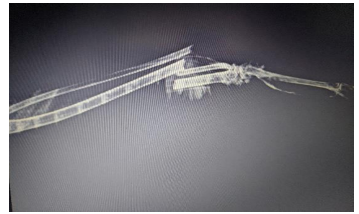
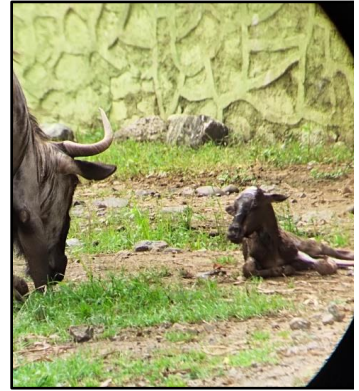
Feed requirements for Indian aviary, exotic aviary and all primates combined

SN	Particulars	Indian Aviary Feed Distribution			Exotic Aviary Feed Distribution			All Primates Feed Distribution			Total in kg
		Morning Feed	Mid-Day Feed	Evening Feed	Morning Feed	Mid-Day Feed	Evening Feed	Morning Feed	Mid-Day Feed	Evening Feed	
1	Jowar	0.25	-	-	0.25	-	-		-	-	0.5
2	Bajara	0.25	-	-	0.25	-	-		-	-	0.5
3	Moong	1	-	-	1	-	-	0.1	-	-	2.1
4	Wheat	1	-	-	1	-	-		-	-	2
5	Bengal Gram	0.5	-	-	0.5	-	-	0.1	-	-	1.1
6	Sun Flower Seeds	0.5	-	-	0.5	-	-		-	-	1
7	Carrot	2.5	-	-	1.4	-	-	0.1	-	-	4
8	Beet Root	2.5	-	-	1.4	-	-	0.1	-	-	4
9	Cucumber	1.5	-	-	1.4	-	-	0.1	-	-	3
10	Corn Cobbs	3.2	-	-	1.5	-	-	0.3	-	-	5
11	Coriander	2.5	-	-	2.5	-	-	-	-	-	5
12	Spinach	1	-	-	1	-	-	-	-	-	2
13	Walnut	0.05	-	-	0.05	-	-	-	-	0.01	0.11
14	Cashew	0.1	-	-	0.1	-	-	-	-	0.01	0.21
15	Almond	0.1	-	-	0.1	-	-	-	-	0.01	0.21
16	Musk Melon	-	1	-	-	1	-	-	1	-	3
17	Water Melon	-	3	-	-	2	-	-	1	-	6
18	Papaya	-	2	-	-	1	-	-	0.25	-	3.25
19	Pomegranate	-	2	-	-	1	-	-	0.25	-	3.25
20	Guava	-	2	-	-	1.5	-	-	0.25	-	3.75
21	Apple	-	3	-	-	2	-	-	0.25	-	5.25
22	Orange	-	0.5	-	-	0.5	-	-		-	1
23	Mosambi	-	0.5	-	-	0.5	-	-	0.2	-	1.2
24	Banana	-	1	-	-	1	-	-	0.2	-	2.2
25	Sapota (chikoo)	-	2	-	-		-	-	0.5	-	2.5
26	Bread	-	0.2	-	-	0.2	-	-	7	-	7
27	Eggs	-	26	-	-	7	-	-	6	-	2
28	Fish	-	35	-	-	-		-	-	-	35
29	Seed Mix	-	-	1	-	-	2	-	-	-	3
30	Fox tail Millet	-	-	1	-	-	1	-	-	-	2
31	Poultry Starter	2	-		1	-	-	-	-	-	0
32	Nestum		-			-	-	0.2	-	0.2	0.4
33	Gum		-			-	-	0.1	-	-	0.1
34	Chicken	0.25	-		0.25	-	-	0.5	-	-	1
Total Feed Consumption											116.3



Animal Health Management Practices

At
Sardar Patel Zoological Park,
Ekta Nagar



Introduction:

The veterinary practises at the Zoo are vast, variable, and highly species-specific. These practises have evolved over time to meet the needs of each species. Sardar Patel Zoological Park follows animal health management practises with modern infrastructure and experienced human resources. SPZP has an up-to-date veterinary hospital with equipment and instruments that are routinely used in practices. There are 90 species of Indian and exotic wildlife. The veterinary practises focused on disease prevention and animal wellbeing. It includes various aspects of nutritional, behavioural, preventive, and reproductive health.

Veterinary practises are broadly classified as follows:

1. Preventive
2. Diagnostic
3. Therapeutic

Preventive veterinary practices include: -

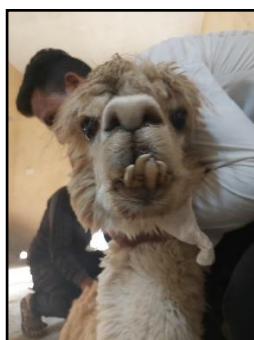
1. **Routine Health Check:** All animals' health checks are carried out from a distance. To learn about the health of the animals, dialogue and proper communication with keepers are maintained. Weight loss or weight gain, skin condition, gait, etc. are being regularly observed, and if required, interventions are being undertaken.

All animals in the collection are observed daily by trained and dedicated staff. All keepers are trained to recognise abnormal behaviour and clinical signs of illness. Diseased, injured, or stressed animals are reported promptly by keepers, and then a team of veterinarians and paraveterinary professionals work on the diagnostic and treatment parts of the cases.

e.g., chronic weight loss in CKD in felines and canine and osteoarthritis in old animals



Pic: Dermatological Examination of a Raccoon Dog



Pic: Dental and oral cavity Examination of an Alpaca



Pic: Observation of black buck from a distance. Change in behaviour due to injury can be observed

Deworming: All individuals are dewormed at a regular interval with a combination of drugs. Deworming reduces the transmission of worm or infection in the zoo animals as well as in the humans, thus it prevents Zoonosis in the animal health care community. It substantially improves health and immunity.

Commonly used molecules for deworming at Sardar Patel Zoological Park are as follows:

S.N.	Species	Drug used	Frequency	Remarks
1	Carnivores	Praziquantel, Febantel Pyrantel Pamoate Ivermectin, Albendazole	Quarterly	Drugs are used alone or in combination of as per requirements and species-specific standard guidelines
2	Herbivores	Albendazole, Fenbendazole, Ivermectin	Quarterly	
3	Birds	Praziquantel, Fenbendazole Amprolium	Quarterly	
4	Primates	Albendazole, Fenbedazole	Quarterly	
5	Reptiles	Fenbedazole	Annually or in case of positive faecal sample	



Pic: Weighing of bird before deworming



Pic: Deworming of bird using Crop Tube



Pic: Deworming of RHT using syringe



Pic: Water based deworming of birds in the aviary

Vaccination: There are many viral and bacterial diseases that affect wild animals and birds. Some of the diseases have zoonotic importance. Vaccinations play a crucial role in disease prevention, transmission, and infection. The vaccination of all possible individual animals is done as per standard protocol.

Vaccination protocols at Sardar Patel Zoological Park are as follows:

Sr. No.	Species	Disease vaccinated for	Vaccine Used	Periodicity
1	All Feline (Lion, Tiger, Leopard, serval cat etc.)	Feline Panleukopenia, Feline Calcivirus, Feline Rhinotrachitis Rabies	Feligen	Annual
2	All Canines (Wolf, Wild Dog, Silver Fox, South American Coati etc.)	Canine Distemper Virus, Canine Adeno Virus, Canine Parvo Virus, Parainfluenza Leptospirosis, Rabies	Nobivac Dhappi, Nobivac Lepto, Nobivac R	Annual
3	Omnivores (Sloth Bear)	Leptospirosis Rabies	Nobivac Lepto, Nobivac R	Annual
4	Wild Ass Rhinoceros unicornis Hippopotamus Zebra	Tetanus	Tetanus Toxoid	Annual

Ectoparasite control: There are many ectoparasites, e.g., ticks, fleas, and mites, found on zoo animals. Ectoparasitic infestation and secondary infections are very common in a few species. These ectoparasites may act as a transmitter or carrier of disease-causing pathogens, and occasionally it may even lead to mortality. E.g., transmission of tick-borne haemoprotozoan diseases

The presence of such ectoparasites is ruled out during routine health analysis, and effective prevention and treatment measures are implemented.



Pic: Microscopic examination ectoparasites from the Peacock

Feeding

The nutritional requirements of every species of animal, bird, and reptile are different. Nutrition is critical to the overall well-being of the animals. A dedicated team of veterinarians, biologists, and head keepers has designed a species-specific diet chart and schedule for all individuals at Sardar Patel Zoological Park. Every aspect of food requirements and food preparation is taken care of by the team with the help of dedicated kitchen staff.

The SPZP Zoo Kitchen opens at 5 a.m. The first feed is served to birds and primates by 6 a.m. daily, followed by other animals.



Pic: Food Preparation at SPZP Kitchen

Supplementation:

Regular supplementation is provided to all species. Captivity feeding and husbandry management practises have limitations in terms of providing food and habitat as compared to those of natural or wild habitats. Hence, some species may suffer nutritional deficiencies. To overcome this challenge, preventive supplementation is provided. It includes multi-vitamin, multi-mineral, trace-mineral, and amino acid supplementation.

For reptiles, adequate sunlight is provided for their normal metabolic activities. In cases of low sunlight, UV lights are provided.



Pic: Clinical examination of Sulcata in the enclosure

Commonly use supplements at Sardar Patel Zoological Park

SN	Species	Supplement Content	Brand (if any)	Days/week	
A	Carnivores:				
1	Feline: Tiger, Lion, Leopard, Serval	Multivitamin, Multimineral, Amino acid combinations	Amimeo Vimeral Osto pet/Vet	3	
2	Canine: Wild Dog, Wolf, Hyena, Silver Fox	Multivitamin, Multimineral, Amino acid combinations	Vimeral Nutropet 21 Osto pet/Vet	3	
B	Herbivores:				
1	Spotted Deer, Black buck, White Black buck, Chinkara, Sambar Deer, Mix Species, Bison, Rhino	Amino acid, multivitamin, multimineral combinations	Agrimin Fort Vimeral Osto pet/Vet	4	
2	Equine: Wild Ass, Zebra, Mini Horse	Amino acid, multivitamin, multimineral combinations	Hoss Mix Agrimin Fort Vimeral	4	
3	Africa: Wildebeest, Oryx, Giraffe	Amino acid, multivitamin, multimineral combinations	Agrimin Fort Vimeral	4	
4	Primate: Cotton Top, Capuchin Squirrel Monkey, Golden Hand tamarin, Common marmoset	Amino acid, multivitamin, multimineral combinations	Vimeral Becadexamin Nutropet 21	3	
		Liver Supplement	Broton Liv 52	3	
6	Indian Aviary: Multiple species	Amino acid, multivitamin, multimineral combinations	Bird plus Vimeral	3	
		Liver Supplement	Broton Liv 52	3	
7	Exotic Aviary: Multiple species	Amino acid, multivitamin, multimineral combinations	Bird Plus Nutropet 21	3	
		Liver Supplement	Broton Liv 52	3	
8	Species Specific Supplements	Wallaby	Selenium and Vit E 5 gm/day/animal	E-Care-SE Agrimin Fort Vimeral Nutropet 21	4 3
		Mara	Amino acid, multivitamin, multimineral combinations		
9	Pet Zone: Rabbit, Duck and geese, Mini Cow, Sheep, Goat, birds	Amino acid, multivitamin, multimineral combinations	Bird plus Nutropet 21 Agrimin Fort Vimeral	2-3	
	Pet Zone: Guinea Pig	Vitamin C 10 mg/ animal	Limcee 500	5	

Enrichment:

It plays a very important role in the mental, social, and physiological well-being of animals, birds, and reptiles. The animal keeper and biologist play key roles in decoding the food and enclosure enrichment practises and their implementation. Wild animals and birds have access to a variety of food options in nature and spend a lot of time in food search, capture, consumption, etc. Similar concepts are implemented in routine practises for enrichment purposes.



Disinfection

Disinfection of all enclosures is carried out by various methods. Night shelters are cleaned regularly using floor cleanser and detergent. Chemical sterilisation using Kohrsolin-TH solution spray, Formaldehyde -Potassium Permagnet fumigation etc. is carried out as per the standard protocols. The burning method is used once a month or as per requirements.



Pic: Cleaning and disinfection of Hippopotamus enclosure



Pic: Cleaning of Indian Aviary



Pic: Cleaning and lime painting of Indian Aviary

Diagnostic aspects of veterinary practises include:

Routine haematological and serological examination:

Blood samples from sick people are routinely collected for haematological and serological analysis. Microscopic examination of the blood smear is carried out to rule on the findings and cause of disease.

Faecal sample analysis:

Random faecal sample analysis is carried out for animals, birds, and reptiles. Faecal sample examination of quarantined individuals is undertaken to rule out the presence of any endo-parasitic infestation. Accordingly, treatment protocols are programmed.



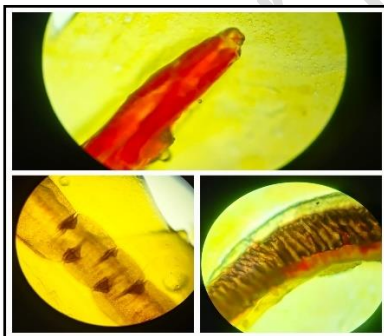
Pic: Microscopic examination of faecal and blood samples



Pic: Serum biochemistry analyser at SPZP laboratory



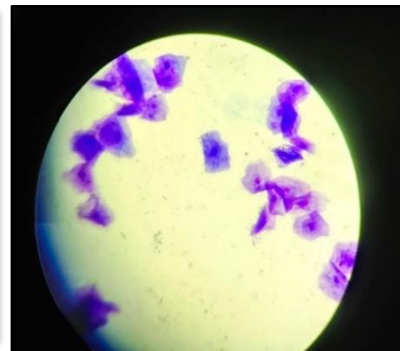
Pic: Complete Blood Count (CBC) machine at SPZP



Pic: Microscopic examination of faecal sample of snake



Pic: Microscopic examination of faecal sample of Iguana



Pic: Microscopic examination of vaginal smear of Wild dog

Necropsy (Post Mortem Examination): -

A post-mortem examination of each and every species is carried out. Necropsy examinations aid in determining the precise cause of death and its impact on other individuals in the enclosure and zoo. In cases of infectious or contagious diseases, necropsy helps identify the causative agent, its transmission, incubation, etc. It also aids in breaking the transmission cycle and in disease prevention. A team of dedicated veterinarians is available to carry out all procedures.



Collaboration with other veterinary organisations or institutes:

The pathology laboratory at Veterinary Hospital Sardar Patel Zoological Park has basic diagnostic facilities. Hence, collaboration with veterinary colleges, veterinary universities, and disease investigation laboratories of the Gujarat State Animal Husbandry Department is made to carry out investigations on various samples for confirmatory diagnosis.

SPZP has a health advisory committee consisting of expert members from Navsari Veterinary College and the State Animal Husbandry Department. Health advisory committee meetings are called to obtain input and suggestions related to animal health management practices.



Pic: Health Advisory Committee Visit to Veterinary Hospital, Sardar Patel Zoological Park.

Veterinary treatments include: -

Emergencies:

Emergencies and their fundamentals in zoos are highly variable and depend on the species involved. Preparations, diagnosis, treatment aspects, etc. depend on the type of emergency. E.g., a snake bite in big cats is different from evisceration in herbivores and colic in equines. Sardar Patel Zoological Park has a team of veterinarians, Para-veterinary staff, biologists, keepers, and staff to tackle any kind of medical or non-medical emergency. A kit of equipment, instruments, medicine, drugs, etc. has been prepared to reduce response time.



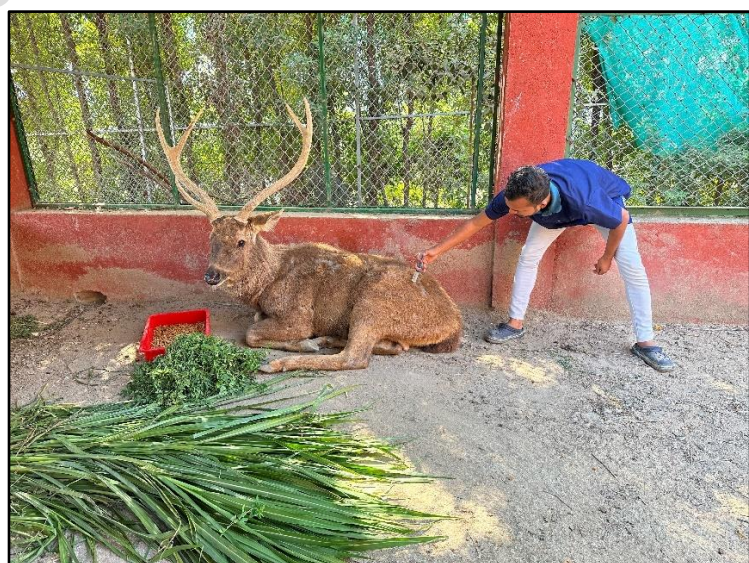
Pic: Treatment of in-fight Injuries in birds



Pic: Treatment of in-fight Injuries in birds under Isoflurane gas anaesthesia at Veterinary Hospital



Black buck fawn under treatment of Naval ill and maggot wounds at VH



Pic: Treatment of Sambar inside the enclosure for infight injuries and maggot wounds

Routine Medical Treatment:

SPZP has various species of Indian and exotic animals, birds, and reptiles. Medical conditions are highly variable and are treated on a regular basis. The most common conditions include common diseases caused by bacteria, viruses, fungus, parasites, etc. At the same time, myiasis, dental problems, skin problems, and other ailments are also common.



Treatment of Maggot wound in Sambar.
Flushing of Wound using Pressure Pump



Treatment of In-fight injury in Rhinoceros



Emergency cases are attended at enclosure itself. If required animals are kept under observation in soft release enclosures. If there is any requirement of diagnostic equipment or in case of invasive procedure, the animals shifted to veterinary Hospital, SPZP.

Restraining, anaesthesia and surgical interventions:

SPZP has a well-established veterinary hospital equipped with an operation theatre, radiography, and an ultrasonography unit. Restraint is critical for performing any diagnostic or therapeutic procedure, as well as for the safety of all humans and animals involved. Physical restraint is used for birds and reptiles, chemical immobilisation is preferred for aggressive and agile carnivores, and a combination of both methods is commonly used for herbivores, as per situation and individual condition.



Physical Restraining of Marsh Crocodile for treatment



Restraining of Iguana using Isoflurane gas anaesthesia



Oesophagostomy in iguana was performed to fix infant feeding tube

Chemical immobilisation is obligatory to perform any invasive procedure on animals, birds, and reptiles due to the aggressive nature of wild animals and to avoid pain. Necessary medicines, drugs, and machines are available for sedation, tranquilization, and anaesthesia in all species. Surgical interventions are performed as and when required by a team of veterinarians. E.g., Emergency Herniorrhaphy in the Blue Wildebeest Female was performed post-infight. Oesophagostomy in Green Iguana performed for stomach feeding in sore mouth condition.



Sedation and treatment of Peacock under Gas Anaesthesia for infight injuries in Indian Aviary



Treatment of Duck for Dehydration and Jaundice

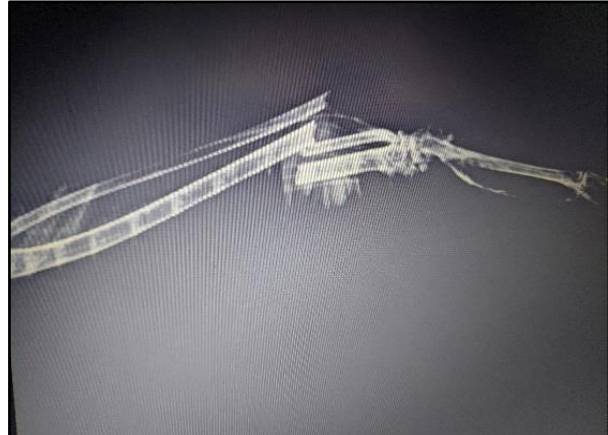
Diagnostic Facilities:

X-ray / Radiology Unit:

SPZP has a portable X-ray facility and it is used in hospital as well as directly in enclosures as and when required. SPZP also provide technical services in rescue, treatment, fracture management of various species.



Pic: Radiography of a rescued bird



Pic: Radiographic examination bird showing complete fracture of radius and ulna

Ultrasonography Unit:

SPZP has a portable sonography machine and it is also used in veterinary hospital or directly in enclosures if required. It provides valuable information for diagnosis and treatment of various ailments.



Intensive Care Unit (ICU):

Sardar Patel Zoological Park has an intensive care unit (ICU) with adequate facilities and human resources. Newborns, abandoned, sick, rescued animals, birds, reptiles, etc. are treated and cared for with the utmost precautions and responsibilities in a controlled atmosphere. The diet, nutritional, and managemental aspects of every species are designed by a team of veterinarians, biologists, and head keepers. Tube feeding, crop feeding, intensive rehydration therapy, and other treatments are routinely undertaken to get the best results for the animal's health.



Tube feeding of Python



Emergency Treatment of Wallaby for infectious disease



Team SPZP for Treatment of Wallaby for infectious disease

Infant Care:

Sardar Patel Zoological Park successfully hand-raises many Indian and exotic species of animals and birds. At present, Gemsbok oryx, Serval, Capuchin, Red-necked Wallaby, Southern Pig Tailed Macaque etc. are successfully hand raised.

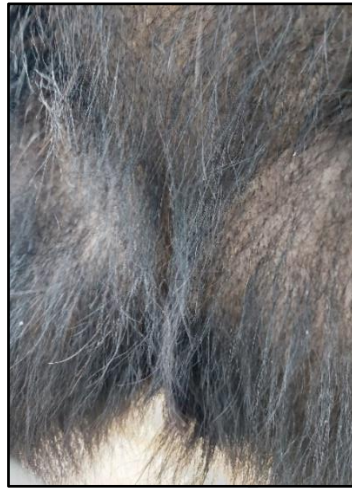


Reproductive Health:

Breeding of certain animal, bird, reptile etc. is indicative of acclimatization of species to the environment, proper feeding, enrichment and overall, well-being. In order to promote population sustainability overall health of the animals is being monitored over time.



Pic: Monitoring of gestational signs in Sloth bear



Pic: Monitoring of gestational signs in Sloth Bear



Pic: Post-parturition monitoring of a blue wildebeest female and calf

Breeding status of animal is monitored by keepers, biologist and veterinarians. Observations on mating behaviours, laying of egg, gestational activities, act of parturition etc. notified to concern staff and veterinarians. All due precautions are undertaken for successful breeding of animals in terms of feeding, supplementation, housing, bedding, enrichment etc. Data on breeding status monitored through various ways such visual observations and audio- visual data using camera traps and CCTV monitoring.



Pic: Monitoring of painted stork nesting activities using camera trap



Pic: Monitoring of painted stork nesting activities using camera trap

Keepers Training:

Keeper's training and meeting is undertaken at regular interval to update knowledge of keepers and to know the management issues and requirements of animal enclosures. Keepers spend most the time with animals in the enclosure and they provide valuable information for animal health care and zoo management. Keepers observe behaviours, feeding status, health conditions and any signs of illness in animals and they also help in training and restraining of animals whenever required.

As Zoo keepers help Zoo to achieve many goals with a positive impact on an animal welfare, it is important for zookeepers to know the basic zoo management principles, purpose, do's and don'ts. Hence keepers meeting is undertaken at regular interval.



Keepers Meeting with ACF, RFO, Veterinary Officer, Biologist, Head Keepers etc.
at Veterinary Hospital, Sardar Patel Zoological Park.



Enclosure Enrichment Activities

Sardar Patel Zoological Park, Ekta Nagar

The instinctual behaviours that are typical to a species must be displayed by wild animals kept in zoos in order to be like their wild conspecifics. Environmental enrichment is a concept in animal husbandry that entails making adjustments to an animal's environment or quality of life in captivity in order to ensure their psychological and physiological wellbeing. It also creates opportunities for the expression of suitable, naturalistic or wild behavioural patterns. By encouraging an animal to explore and interact with their surroundings, enrichment can improve the zoo habitat for that particular animal. Because the animals are more active and exhibit more natural behaviour, enrichment also improves the visitor experience. At Sardar Patel Zoological Park, we focus on improving species specific enrichment as a part of the multimodal approach to improve the welfare of the animals housed here.

Types of enrichment provided at Sardar Patel Zoological Park:

Material Used: Ropes, Wooden Logs of variable size,

- 1. Physical Enrichment:** All animals are provided sufficient space and natural habitat as per their species specific needs. Natural and artificial elements such as logs, boulders, trees, grass and wooden structures are added to stimulate natural behavior. Artificial pools and mud is provided in the enclosure for animals to swim and wallow.



Shade & climbing platform provided with wooden log structure for the leopards.



Rope hammock provided in the Cotton Top Tamarin enclosure.

2. Feeding Enrichment: there are more than 90 species of animals, birds and reptiles at SPZP and their nutritional requirements are variable. To overcome this, variety of diet is provided to all the animals and birds as per their species specific requirement. Seasonal changes and nutritional value is also considered while providing the feed. Various feeding devices are used as an enrichment activity to stimulate their natural behaviour.



Dietary enrichment provided to Channel Billed Toucan.

3. Sensory Enrichment: Sensory enrichment a type of enrichment where different senses of individual get stimulated using sensory response. It includes enrichment scratch boards, new smells, moving toys, or different sounds are used to stimulate animal's senses.



Sensory Enrichment by providing honey in dry coconut.

4. Social Enrichment: SPZP provided equal importance of natural social groupings for animal welfare and consider the normal social structure of each species when designing and maintaining exhibits.



Social grouping of Black Swan at SPZP

The following factors were taken into account while choosing the enrichment:

- The activity that the animal spent the most energy on in the wild. Simply because the animal will be motivated by that activity to engage in its natural behaviour and will feel frustrated otherwise.
- Determining the behavior's objective, which enabled us to order the behaviours in chronological order. It is crucial to keep it if it is the outcome of a physiological process. When compared to how much time and effort is put into the behaviour in the wild, it can be helpful in determining what behaviours to promote in captivity for satisfying experiences.
- Depending on the time of day, the season, and the stage of their life cycle, animals will have varied behavioural needs. As a result, the daily or temporary enrichment routines were organised according to a particular time of day, season, and life cycle.
- New enrichment was added gradually and slowly to avoid fights or nervousness.
- Consideration was be given to social groupings and hierarchy – careful observation ensured enrichment given or to be removed at appropriate times.
- Plants or parts of plants may be toxic to animals – prior treatment of plants with pesticides or fire-retardant chemicals can be toxic – only non-toxic plants were introduced in the enclosure.
- Carefully choosing novel foods for enrichment – dietary enrichment consisting of inappropriate food can lead to tooth decay, obesity, allergic reactions, impaction, diarrhoea, choking or aggression from other animals.
- Observing new enrichment objects when being used – objects, if broken, can produce sharp edges that can cut animals.

Enrichment activities undertaken at Sardar Patel Zoological Park:

- Enclosures are designed to replicate the natural surrounding considering the space, terrain, habitat, temperature and humidity required for the species.
- Climbing structures such as trees, wooden poles, ropes, logs, rocks, hammocks, etc were introduced in various enclosures.
- Substrates for lying or sleeping on or buildings such as grass, moss, hay, straw, leaves, etc. were provided within enclosure and night shelters.
- Visual barriers as brush or log piles, trees, rocks, hills, weeds, etc. were provided to stimulate natural environment.
- A variety of feeding sites and stations were provided to ensure all the animals get their feed properly and no infight occurs for food.
- Water features such as pools, waterfalls, moats, sprinklers, misters, etc. are installed in all the enclosures to stimulate natural habitat and help the animals to maintain their body temperature.
- Browsing and grazing areas for herbivores species are provided within the enclosures.
- Variety of diet is provided to all the animals and birds as per their species specific requirement. Seasonal changes and nutritional value is also considered while providing the feed.
- Live insects are provided to birds and primates in their diet.
- Feeding enrichment devices are installed in some species such as primates, birds, etc.
- Natural and artificial shades are provided for animals to take shelter from harsh sunlight or rains.
- Basking sites and perches are provided in reptiles to help in regulating their body temperature.



Perching areas and feeding stations installed for birds at exotic aviary.



Logs, plants, and feeding station installed in South American Coati enclosure.



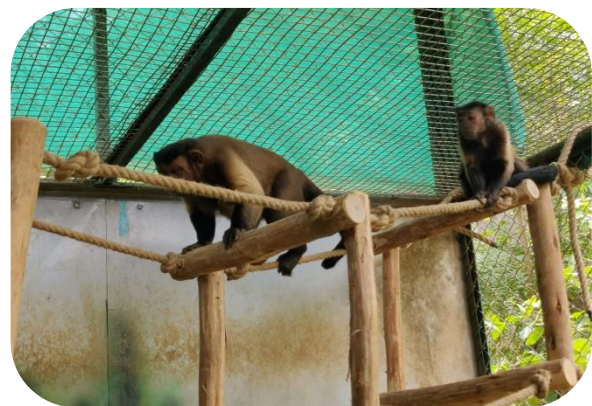
Hanging Rope bridge provided in small primate dome.



Water body and basking area provided in Crocodile enclosure.



Climbing perches, shallow pool and feeding station provided in Iguana enclosure.



Hanging rope bridge provided in Tufted Capuchin enclosure.



Animal Hand Rearing in Captivity

**Sardar Patel Zoological Park,
Ekta Nagar**

Introduction:

Hand-rearing is a deliberate effort to keep and care for a new-born by someone other than the mother. The primary objective of hand rearing is to keep the infant animal alive. The primary goal of hand-rearing is to save the vulnerable newborns and infants who can't be taken care of by their mother.

There are many factors responsible for the rejection of newborns by parents. The major external factor in captivity is the continuous stress on the animals because of surrounding and ambient factors. Similarly, internal factors such as hormonal changes and nutritional deficiencies in the mother may lead to her inability to take care of newborns.

Zoos play an important role in the breeding and conservation of scheduled and endangered species of wildlife. Postpartum parenteral care by the dam and sire is equally important. If not taken by parents, hand rearing plays important role in conservation breeding.

For successful hand rearing, selecting a feed, formula, or combination that supports adequate, healthy growth without Gastro-intestinal upset is important. Furthermore, feeding amount, intervals, medium, and feeding techniques are critical for successful animal hand rearing. Proper feeding procedures are crucial to ensure acceptance and prevent overfeeding, underfeeding, and aspiration into the lungs.

Optimal atmospheric temperature and humidity are another important factor in maintaining basic metabolism, which should be maintained using conditioners, heaters, and humidifiers.

Cleanliness, hygiene, sanitization, and sterilisation are vital to keep an area pathogen-free. All utensils and devices used for feeding should be cleaned and disinfected. The enclosures, cages, sheds, kraals etc, to be disinfected at regular interval for better up keep of animals. Chemical sterilisation and burning help achieve the same.

Sardar Patel Zoological Park has followed best of practices for hand rearing of animals which are as follows-

Hand Rearing of Serval Cat (*Leptailurus serval*)

Sardar Patel Zoological Park has a pair of Serval Cat. In October 2020, mating was observed in Serval Cat. The mating was observed for an average time of 30-40 minutes from early morning hours to late evening for two consecutive days. On 31st December 2020, at 11:30 in the morning, two kittens were delivered. The approximate gestation period was of 69 days. On the day of queening, in the afternoon hours, at 15:30, queen (mother) killed one of its kitten. Looking at the circumstances, second kitten was quickly taken out of the enclosure by biologist and animal keeper. The same kitten was hand reared for a year at Sardar Patel Zoological Park.



Feeding

Electrolyte solution and diluted milk/goat milk was given orally on the first 24 hours. From second day, Lactol Kitten milk (LKM) was started. Feeding bottle and nipple size plays a crucial role during feeding. In accordance with size of animal, Lactol feeding set of 25 ml bottle with four opening in the nipple was used. The neonate was kept on the sternal recumbency with slightly elevated head during feeding. At the same time, feeding bottle was tilted upside down to ensures proper flow of milk and milk consumption.

Body weight

At the time of birth, the body weight of the kitten was 181g. Every day body weight was measured to check growth and weight gain. The body weight of kitten on completion of eight months was 3140 gm .

Care and Management

Kitten was kept in a small box for 60 days. Ano-genital area is required to rubbed gently to stimulate urination and defecation. Defecation may not be observed after every feeding and rubbing while urination was observed after every rubbing. It is important to clean and dry ano-genital area post urination and defecation to avoid any kind of infection. After 60 days, the kitten was kept open in incubation room from a box, with slight rough surface for proper locomotion. The water bowl, feeding dish, dry soil tray for urination and defecation was kept inside the housing. The result of successful hand-reared kitten can be

achieving by following milk formula, feed quantity, feeding position, housing atmosphere, hygiene, disinfections, equipment sterilization, body growth, urination and defecation.



Pic: Feeding a Serval Cat in an ICU



Pic: A Serval cat in an enclosure after 11 months

Tufted Capuchin Monkey (*Cebus paella*)

Tufted Capuchin is found east of the Andes, from Colombia and Venezuela to Paraguay and northern Argentina. One pair has been successfully hand-reared in the Sardar Patel Zoological Park. Capuchin monkey mating was seen from 28 to 30 November 2020; 155 days later, on 14 April 2021, a female infant was born. However, the parents did not show any parental care. Therefore, it was decided to raise the new-born Capuchin infant by hand. The capuchin monkey was shifted from the enclosure to the ICU Veterinary Hospital, SPZP. All necessary safety measures were taken in this nursing room, including feeding, bedding, thermoregulation, humidity, cleaning, and hygiene.

Feeding

Nestle Lactogen-1 and Lactogen-2 human milk replacers were used as a feed to the infant. Lactogen-1 was used up to six months, and lactogen-2 was used from six to eighteen months. Lactogen milk replacer was prepared as per the standard guidelines given by the company for humans, except that milk was used in lesser quantity to avoid diarrhea and any other gastric upset. The total lactogen formula, after preparation, was given at the rate of 6–10% of the body weight per day, divided into 8 intervals. After four months of nursing the baby, water was introduced twice daily. After 4 months, Nestle Cerelac was given as the first food of the day at 2% of body weight. Along with Lactogen-2 (6–18 months), fruits were offered, which included apples, bananas, orange slices, and juice. Similarly, boiled eggs were introduced after six months. The quantity of lactogen reduced after eight months as the animal started consuming all the fruits and boiled eggs regularly. After one year of age, Lactogen-2 milk replacer (30–40 ml), Cerelac (15–20 g), fruits (60–70 g), and boiled eggs (8–12 g) were given.

Thermoregulation and Humidity

The veterinary hospital at Sardar Patel Zoological Park is well-established and equipped with all the amenities needed for animals. Throughout the year, the temperature in the nursing room was maintained between 25 and 32 degrees Celsius. Electric fans, air conditioners, and air heaters are used to regulate temperature. Additionally, the humidity in the space is controlled at 40–50%; a water bowl with lights is placed to maintain humidity.

Cleaning and hygiene

Cleanliness and hygiene are maintained at the veterinary hospital and in every enclosure of the Sardar Patel Zoological Park. Chemical disinfection is carried out regularly using Kohrsolin TH solution in the

veterinary hospital building and other zoo areas. Additionally, the burning of the nursing room is carried out twice a month. Foot baths, wash basins, and hand sanitization sites are provided for hygiene and the prevention of zoonotic diseases.

Body weight

Body weight measurement in infants has great significance, and it is crucial to measure body weight to know the growth of an animal. It is also helpful during the treatment. Hence, the body weight of the animal was recorded at regular intervals. On day 1, the infant was weighing 165 gm, and after one year, it was 1036 gm.

The weights of infants measured at different intervals are as follows:

Interval	Infant 1 (Weight in gm)	Infant 2 (Weight in gm)
Day 1	165	181
Day 7	200	211
Day 15	238	241
Day 30	255	269
Month 2	289	301
Month 3	340	369
Month 4	401	449
Month 5	474	489
Month 6	501	538
Month 7	571	590
Month 8	669	702
Month 9	770	799
Month 10	864	884
Month 11	947	1014
Month 12	1036	1240



Pic: Tufted Capuchins being fed in an ICU



Pic: Weighing of Capuchin Monkey



Pic: Access to adequate sunlight

Oryx or Gemsbok (*Oryx gazelle*)

Gemsbok Oryx (Oryx gazella) inhabitant of southern and eastern Africa. Sardar Patel Zoological Park has a pair of adult Oryx species. They are herbivorous and their captive diet consists of dry hay, green fodders, lucerne grass, concentrate palate and dry hay. The mating behavior in Oryx was observed from 10 to 16 September. The female gave birth to male fawn in the late evening hours after a gestation period of 264 (+/- 4) days. Post-parturition, the fawn was unable to stand and consume milk from mother. However, sire and dam were showing parental care for few initial hours. After 14 hours, both the parents left the fawn unattended and moved to other part of the enclosure. Looking at the circumstances, SPZP team had decided to intervene and to take care of fawn on hand-rearing and Oryx fawn was sifted in nursing kraal of veterinary hospital.

Shelter Room

An open Kraal with night shelter along with all essential amenities was dedicated for hand rearing of oryx fawn. Regular measures were taken to keep everything clean and hygienic. Regular burning of kraal and night shelter was carried out at an interval of week. Air conditioner and heater were placed to maintain temperature and humidity. Regular cleaning of feeding bowl and water bowl was undertaken by keepers.



Feeding and other Management

Newborn oryx fawn was shifted to Veterinary Hospital kraal from the Africa section after through clinical examination as parents were not showing parental care. The fawn was fed Amul Calf Milk replacer at 10% of the body weight at interval of four hours initially. Newly born goat kids were kept along with Oryx calf for social enrichment. The prepared calf milk replacer was given to fawn up to 160 ml and later on it went up to 1250 - 1350 ml per feeding. After two months, fawn started nibbling the green fodder and followed by fruits like apple and carrot. Similarly, the solid feed chewing was noticed after four months which include grasses, hay and antelope feed. After 150 days, the frequency of milk replacer was reduced to twice daily along with increased amount of solid food. The milk replacer was then gradually discontinued after 6 months. The Oryx fawn was re-introduced to Africa section of Sardar Patel Zoological Park after 6 months. In the open Africa enclosure, the oryx fawn was kept in soft release area for a month, followed by released in open area.



Pic: A group of goats was kept along with an oryx fawn for social enrichment.



Pic: Soft release of an oryx fawn in the Africa section.