



Govt Of Maharashtra
Office of the Chief Conservator and Director
Sanjay Gandhi National Park Borivali (E) Mumbai
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O.W.No: *Desk 8/144/ 60 12020-21* Date: *22/5/2020*

To,
The Director
Central Zoo Authority
New Delhi.

Subject: - Submission Of annual inventory for the year 2019-20

Reference: Your circular dated 15th April 2020

Respected sir/madam,

With reference to above mentioned subject, Annual Inventory and annual report for the year 2019-2020 is submitted herewith.

Attachment:- Annual Inventory and report.

Chief Conservator of Forest and Director
Sanjay Gandhi National Park
Borivali (E)

Copy :- 1) Maharashtra Zoo Authority, Nagpur.

Sanjay Gandhi National Park & Zoo

Annual Report for the year

2019-20



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1. Report of the Officer-in-charge

The Sanjay Gandhi National Park & Zoo presently displays a Tiger Safari, Lion Safari & Deer Park.

- | | |
|------------------|---|
| 1. Tiger Safari | 6 Tigers |
| 2. Lion Safari | 3 Lions |
| 3. Deer Park | 52 Deer Park (Choushinga, Spotted Deer, Nilgai) |
| 4. Other Animals | 22 (Leopards, Peafowl, Rusty Spotted Cat, etc) |

In addition to this the zoo also houses leopards & rusty spotted cats in a non-display area. Leopard rescue center has been constructed in 7/12 Magathane 34 B (P). It is in a designated an un-classed land & outside the notified forest area of Sanjay Gandhi National Park. The area is commonly called MAFCO since previously a MAFCO bacon factory was operated in this land. The tiger safari, lion safari & deer park are operated in the recreational zone of the Sanjay Gandhi National Park, Division area.

A master plan was submitted to Center Zoo Authority on June 16th 2011 under which the zoo was designed in the area of 110 ha, Magathane S/no. 34/b un-classed forest land outside notified area of Sanjay Gandhi National Park. Presently the Sanjay Gandhi National Park & Zoo recommends & proposes the zoo to be established in the 110 ha MAFCO area & thereby submitting the vision document for the same area.

The management of the Zoo proposes to have following enclosures. The detailed proposal for the same will be submitted to the CZA for approval in near future.

1. Tiger Safari
2. Lion Safari
3. Herbivore Safari
4. Leopard Safari
5. Reptile Enclosure
6. Primate Enclosure
7. Aviary
8. Herbivore Enclosure
9. Nocturnal animal house

The visitors vehicles will be parked in the proposed parking enclosure; and then the visitors will be taken in BOV to various enclosures / ticketing area of various safari's and enclosure areas. The enclosures can be visited by foot, whereas the various safaris can be visited by the BOV operated vehicles at the safari ticket counter on a circular route.

2. History of the Zoo

The Sanjay Gandhi National Park and Zoo is a unique facility as the zoo is on the fringe of Mumbai city and on the border of Sanjay Gandhi National Park. This is an unquestionable asset for citizen of Mumbai for creating conservation awareness and knowledge of India's wild creatures. Apart from its superb landscape the zoo is virtually within an evergreen forest ecosystem of both recreational and educational value. In fact few zoos in India are better situated to meet the needs of different categories of zoo visitors. A visit to this zoo even though it has a handful of species is a memorable experience. The capacity of the zoo to cater to the needs of public awareness and conservation research is a major opportunity that needs development. The zoo also incorporates a major off-display rescue and lifetime care facility that houses a large number of leopards that the Forest Department has rescued over the last several years. This also should be developed into a state of the art Leopard Safari display facility.

This unique zoo is contiguous with the Sanjay Gandhi National Park and is pertinent to note that it is situated outside the notified area of Sanjay Gandhi National Park. The zoo area has a combination of rich wild biodiversity in the term of forest ecosystem this gives it a high status as an eco sensitive area, with very high biotic pressures due to its location on the fringes of Mumbai. The zoo also traditionally is great asset for nature awareness and wildlife tourism for citizen Mumbai. Sanjay Gandhi National Park and adjacent zoo area has immense environmental importance due to its life support services for Mumbai as a major green space and water catchment.

3. Vision

The zoo will foster conservation awareness through the safari experience and a walk through the forested paths of a well designed and easily interpreted nature trail. As a modern zoo is expected to act as ex-situ conservation centre to safeguard endangered species, this zoo will strive to save species such as the Rusty Spotted Cat from extinction using its existing unique initiative in successively breeding this endangered species to enhance its population in the wild.

4. Mission

Create and develop 'near natural' wilderness ecosystem through four major unique safaris for predators such as lion, tiger, leopard, and herbivorous animals sambar, chital, barking deer etc. through which a pro conservation ethos will be developed among the people of Mumbai.

5. Objective

Sanjay Gandhi National Park and the zoo's new objectives are to fulfill all the functions of a modern zoo. Its new thrust will be to enhance its collection and to establish a major conservation breeding facility for the Rusty spotted cat to begin with and other important species in future. The zoo has reviewed its mission and vision to align itself with the new needs of a state of the art zoo. As the major thrust is to offer naturalistic safari parks, the up gradation of this zoo style will be consciously advanced in the new mission statement.

A comprehensive vision document for the future course and action plan have been considered based on its currently well known environmental asset's.

The objectives that the zoo has envisioned include:

1. To expand the scope and unique features of a safari experience
2. To conserve protected fauna and establish scientific breeding of endangered species.
3. To bring home to the people of Mumbai the needs of both in-situ and ex-situ conservation through a major conservation education outreach facility.
4. To provide a real life nature experience for the people of Mumbai which is an expanding megacity.

6. About us

S.No.	Particulars	Information
Basic Information about the zoo		
1.	Name of the zoo	Sanjay Gandhi National Park and Zoo
2.	Year of Establishment	Lion Safari 1975-76 Tiger Safari 1998
3.	Address of the zoo	Sanjay Gandhi National Park and zoo, Borivli West, Mumbai-66
4.	State	Maharashtra
5.	Telephone Number	(022) 28860716/28864567/28860362
6.	Fax Number	
7.	E-mail address	ccfsgnp@mahaforest.gov.in lionsafaripark@gmail.com
8.	Website	https://sgnp.maharashtra.gov.in
9.	Distance form nearest	Airport: CST Mumbai Railway Station: Borivli Bus Stand: Borivli
10.	Recognition Valid up to (Date)	March 2020
11.	Category of zoo	Mini Zoo
12.	Area (in Hectares)	110 hectares
13.	Number of Visitors (Financial Year)	Adult: 1031382 Children: 104932 Total Visitors: 1136314
14.	Visitor's Facilities Available in Zoo	1. Deer Park 2. Tiger Safari 3. Lion Safari 4. Mini Train
15.	Weekly Closure Day of the Zoo	Monday

Management Personnel of the zoo

16.	Name with designation of the Officer in - Charge	1. Mr. Anwar Ahmed IFS CCF & Director 2. Mr. Vijay R. Barabde Superintendent Lion Safari Park
	Name of the Veterinary Officer	Dr. Shailesh G Pethe
	Name of the Curator	1. Mr. Anwar Ahmed IFS CCF & Director
	Name of the Biologist	
	Name of the Education Officer	
	Name of the Compounder/ Lab Assistant	

Owner / Operator of the zoo

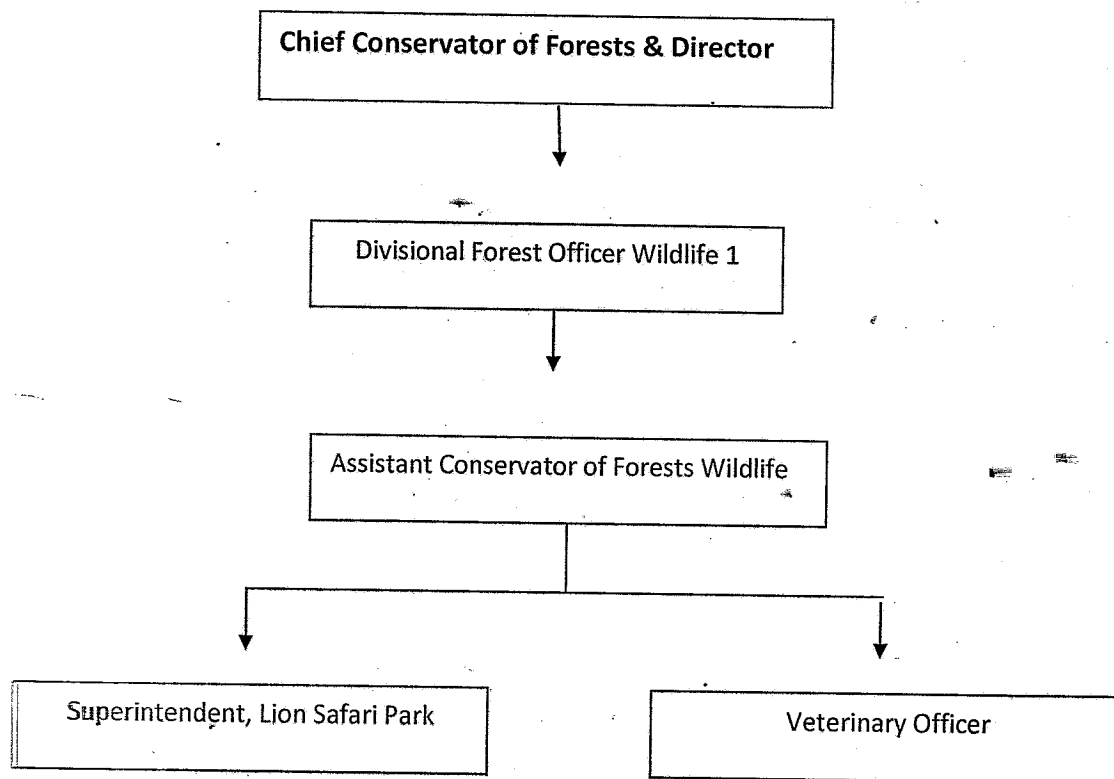
17.	Name of the Operator	1. Mr. Anwar Ahmed IFS CCF & Director
18.	Adders of the Operator	Sanjay Gandhi National Park, Borivli (E) Mumbai-66
19.	Contact details/phone number of Operator	(022) 28860716/28864567/28860362
20.	E-mail address of Operator	ccfsgnp@mahaforest.gov.in , lionsafaripark@gmail.com

Rule 2(m) of the Recognition of Zoo Rules, 2009.

"Zoo Operator" means the person who has ultimate control over the affairs of the zoos provided that

- I. In the case of a firm or other association of individuals, any one of the individual partners or members thereof; or*
- II. In the case of a company, any director, manager, secretary or other officer, who is in-charge of and responsible to the company for the affairs of the zoo; or*
- III. In case of zoo owned or controlled by the Central Government or any State Government or Union Territory Administration or any Trust or Society Funded by the Central Government or a State Government or a Union Territory Administration, the Secretary of the concerned Department of the Government, or as the case may be the Union Territory Administration, shall be deemed to be the zoo Operator.*

7. Organization Chart



8. Human Resources

Manpower of the zoo

S.No	Designation	Number of Sanctioned Posts	Name of the incumbent
1.	Chief Conservator and Director	1	Shri Anwar Ahmed
2.	Superintendent Lion Safari Park Officer In Charge	1	Mr. Vijay R. Barabde
3.	Veterinary Officer SGNP	1	Dr Shailesh G Pethe.
4.	Animal Keeper	2	Shri Namdeo Jirve. Shri Harishchandra Bhoir
5.	Animal Keeper	3	On Daily Temporary Basis

Please give above mentioned information in respect of all zoo personnel, from the Officer in-charge up to the Animal Keeper.

9. Capacity Building of zoo personnel

S.No	Name of designation of the zoo personnel	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
				Nil

10. Zoo Advisory Committee:-

At present not independently constituted however the health committee in discussion with the senior officers of the SGNP management taking appropriate decisions

- Date of constitution
- Members.
- Dates on which Meetings Held during the year

11. Health Advisory Committee:-

- Date of Constitution: 29/07/2016
- Member: As under

Sr.No	Name of Committee Members	Post
1.	Dr. Chandrakant. C.Wakankar	Retd Professor Department of Surgery
2.	Dr. K. D.Batve	Retd Veterinary Officer, SGNP, Borivli

3.	Dr. Rajeev. V. Gaikwad	Professor Department of Medicine
4.	Dr. D. U.Lokhande	Professor Department of Surgery
5.	Dr. Ramteke	Asso Professor Department of Nutrition
6.	Dr. G. P.Bharkad	Asso Professor Department of Parsitology
7.	Dr. Prashant Gadhave	Pathologist Dept of Pathology
8.	Dr. R. R.Pharande	Assistant Professor Dept of Microbiology
9.	Dr. Manish Pingle	Veterinary Practitioner.
10.	Dr. Kazvin Umrikar	Veterinarian, Wildlife Consultant.

c. Dates on which Meetings held during the year

Date:- a) 10/05/2019 b)11/10/2019 c) 27/11/2019 d) 14/02/2020

12. Statement of income and Expenditure of the zoo

Income

Year	Adult	Adult Amt	Child	Child Amt
2019-20 Lion Safari	861149	4632866	104932	322183

Expenditure

Year	Wages	Maintenance and Upkeep	Diet and Medical	Total
2019-20 Lion Safari In lakhs	6293250	4847264	1221576	12362090

13. Daily feed Schedule of animals

Sr.No	Species	Feed item	Quantity		Day of Fasting
			Winter	Summer	
1.	Panthera Leo	Fresh	8-10 kgs	8-10kgs	Thursday
2.	Panthera Pardus	Buffalo Beef	2.5-3.0 kgs	2.5-3.0 kgs	Thursday
3.	Panthera Tigris		8-10 kgs	8-10 kgs	Thursday
4.	Prionailarus Rubiginosus	Fresh Chicken	150-200gms	150-200gms	Thursday
5.	Axis axis	As Under			
6.	Teracerus Quadricornis				
7.	Boselaphus Tragocamelus				

Below the Feeding regime for herbivores animals:-

1. Chital:
Concentrate mixture: 1.25 kg/head/day
Greens – 1 kg or 5 kg
2. Choushinga:
Concentrate mixture: 0.5 kg/head/day
Greens 0.5 kg or 2.5 kg
3. Nilgai:
Concentrate mixture: 2.5 kg/head/day
Greens: 4-5 kg
Below the example of concentrate mixture

Ingredients	Parte per 100 kg concentrate mixture
Maize	25
Jowar	10
Soybean meal	20
Chana/ Tur Chuni	22
Wheat bran	20
Mineral mixture	02
Salt	01
Total	100

Ingredients can be changed depending on availability and cost

Note:-

1. Concentrate contain: crude protein : 16-18% and TDN: 65-70%
2. If legume roughages like Lucerne are not available roughages which are conventionally / regularly fed on park can be utilized for feeding.

14. Vaccination Schedule of Animals

Sr.No	Species	Disease vaccinated for	Name of the Vaccine and dosage/quantity used	Periodicity	Remarks
1.	Panthera Leo	Panleucopenia Calici Herpes Rabies	Biofel PCHR 1 ml S/c	Yearly basis	
2.	Panthera Pardus				
3.	Panthera Tigris				

15. De-worming Schedule of Animals

Sr.No	Species	Drug used	Month
		The following drugs have been used on alternate basis	
1.	Panthera Leo	Panacur powder / Praziplus	26/04/2019, 23/07/2019, 22/11/2019
2.	Panthera Pardus	Panacur powder / Praziplus	26/04/2019, 23/07/2019, 22/11/2019
3.	Panthera Tigris	Panacur powder / Praziplus	26/04/2019, 23/07/2019, 22/11/2019
4.	Prionailarus Rubiginosus	Panacur powder / Praziplus	26/04/2019, 23/07/2019, 22/11/2019
5.	Axis axis	Albomar / Zyclox	26/04/2019, 23/07/2019, 22/11/2019
6.	Tetracerus Quadricornis	Albomar / Zyclox	26/04/2019, 23/07/2019, 22/11/2019
7.	Multiacus Muntjak	Albomar / Zyclox	26/04/2019, 23/07/2019, 22/11/2019
8.	Boselaphus Trangocamelus	Albomar / Zyclox	26/04/2019, 23/07/2019, 22/11/2019

16. Disinfection Schedule

Sr.No	Species	Type of Enclosure	Disinfectant used and method	Frequency of disinfection
1.	Panthera Leo	Cages, Kraal	Korsulin Washing	Complete washing with water on daily basis. Twice a week. korsulin
2.	Panthera Pardus			
3.	Panthera Tigris			
4.	Prionailarus Rubiginosus	Night Shelter	Na hypochloride spraying	Once a week
5.	Axis axis			
6.	Tetracerus Quadricornis			
7.	Prionailarus Rubiginosus			

17. Health Check-up of employees for zoonotic diseases

Sr.No	Name	Designation	Date of Health Check-up	Findings of Health Check-up
1.	The employees have been sent for medical checkup.			

18. Development Work carried out in the zoo during the year

1. Construction of enlarged Lion Safari.
2. Repair of Lion & Tiger cages.
3. Repair of Deer enclosure fencing & internal watering & feeding areas.
4. Providing Strengthening & repairing to G.I. Chain Link Fencing of tiger safari in LSP range in SGNP Borivali
5. Repair Beef Room in front of Lion cage in LSP range in SGNP Borivali

19. Education and Awareness programs during the year

Sanjay Gandhi National Park Authority conducts awareness programs various cooperative housing societies, govt institutions, schools, fire brigade, police stations.

Sr.No	Venue (Place)	Date
1.	Indira Gandhi institute of Development Research Goegaon	27th September 2019
2.	Satya Shankar society, Thane	11th August 2019
3.	La Vista, Rishivan, Borivali	8th September 2019
4.	Interdepartmental meeting, Koprri, Thane	21st September 2019
5.	BMC staff and security, Bhandup complex	5th November 2019
6.	DCP meeting, Kasarvadavli	16th November 2019
7.	Shrinagar Police Station	19th November 2019
8.	Wagle estate Police Station	20th November 2019
9.	Kapubaudi Police Station	21st November 2019
10.	Kopri Police Station	22nd November 2019
11.	Chitalsar Police Station	23rd November 2019
12.	BMC staff quarters, Bhandup complex	24th November 2019
13.	Kasarvadavli Police Station	25th November 2019
14.	BMC staff, Bhandup complex	26th November 2019
15.	Rahul nagar pada, Mulund	4th December 2019
16.	Murbad	5th December 2019
17.	Raheja heights , Dhindoshi, Goregaon	14th December 2019

20. Important Events and happenings

The following were celebrated in the SGNP Nature Information Centre to make the citizens of Mumbai aware of the importance of nature, ecology and biodiversity

Sr. No	Date	Celebrated Day
1.	22 April	World Biodiversity Day
2.	5 th June	World Environment Day
3.	28 th July	World Nature Day
4.	1 to 7 th July	Forest Day
5.	29 th July	World Tiger Day
6.	1-7th Oct	World Wildlife week
7.	9 th Jan	Swatch Bharat Abhiyan
8.	8 th March	World Women Day
9.	20 th March	World Sparrow Day

21. Seasonal special arrangements for upkeep of animals

Mumbai being a hot, humid and high rainfall climate following measures have been undertaken at the animal's cages and display enclosures

1. Heavy duty fans have been installed at all the tiger, lion and leopard cages.
2. Water showers/ spraying facilities are done at all cages esp Tigers
3. The animals are given wooden platforms for resting to prevent winter stress.
4. Herbivores are given mineral-lick blocks

22. Research work carried out and publications

Research Projects.

Also ongoing research from previous years.

Sr No	Researcher Name	Project Name	Period for Research
1.	Nikit Survey	Monitoring Density and Movement of Leopards and its prey base within Sanjay Gandhi National Park and along its periphery.	January 2017 to July 2017
2.	Dr. Jitendra Ramgaokar DCF Thane forest Division thane	Proposal for study of disease prevalence in Stray dog population around SGNP and its implication for wild carnivores in SGNP	
3.	Dr Kazveen Umrigar	Ascertaining the sero-prevalence of	

		Antibodies of Canine Distemper Virus in Leopards at the Rescue Centre of Sanjay Gandhi National Park, Borivali Maharashtra	
4.	Vidya Athreya and Nikit Surve	Long term Monitoring of Density and Movement of Leopards in the Sanjay Gandhi National park landscape	
5.	Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	Catchment Area Treatment plan for management of Ecosystem Services for Human Well being A Sanjay Gandhi National Park Perspective	
6.	Mr. Shivaji Chavan Wildlife and we protection foundation	Develop payment of Ecosystem services Mechanisms for Sanjay Gandhi National Park- A Revenue Generating Model	
7.	Mr. Raza Hussain M.Sc. Student Bhavan's College	Development of a wildlife Monitoring Protocol in Sanjay Gandhi National Park, with emphasis on mammals	
8.	Dr. Bilal Habib Faculty WII	Tracking the Urban Leopards; Understanding the Space use and Movement in and around Sanjay Gandhi National Park Mumbai India.	
9.	Miss Priya James M. Sc. Student B.N. Bandodkar College	Assessment of Human-monkey conflict/ interaction in and around Sanjay Gandhi National Park	

23. Conservation Breeding Program of the zoo

A major interact of the zoo is to breed the Rusty Spotted Cat that is extremely endangered. This rare species is occasionally encountered in the vicinity of the zoo and in the adjacent Sanjay Gandhi National Park. No other National Park is known to have a single population of this species that was thought to be extinct in the 1950s. It was rediscovered in Dangs and later in the Sanjay Gandhi National Park, Gir and a few other locations but is evidently present in very small pockets in extremely small and isolated populations. This zoo has been able to breed 6 kittens from a founding stock of 2 males and a female acquired from different locations. These 9 animals are the only known animals of this species in captivity in the world. Presently the female cats have aged out and new individuals are planned to be collected for further breeding of the RSC species.

24. Animal acquisition / transfer / exchange during the year

A.	Animal arriving in the zoo				
	H.No.	Species	Number (M:F)	From which zoo	Date of arrival in the zoo
		Panthera Tigris	1Male Name : Sultan	Gorewada Rescue Centre, Nagpur Maharashtra	26 December 2019
B.	Animals going from the zoo				
	H.No.	Species	Number (M:F)	From which zoo	Date of arrival in the zoo
	Nil				

25. Rescue and Rehabilitation of wild animals carried out by the zoo

Sl.No	Date of Rescue	Species with number of animals rescued with their sex (M:F:T)	Received form	Date of Submission of Report to the CWLW / CZA	Action taken	
					Date and place rehabilitation in their habitat	Reasons for housing in the zoo, if not released in their habitat
Separate Sheet Attached Annexure 1						

26. Annual Inventory of animals

Sl. No	Animal Name	Scientific Name	Opening Stock as on				Births			Acquisition			Disposal			Death			Closing Stock as on			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
Separate Sheet Attached Annexure 2																						

Animals under Schedule I and Schedule II of the Wild Life (Protection) Act, 1972

Other than Endangered Species

Sl. No	Animal Name	Scientific Name	Opening Stock as on				Births			Acquisition			Disposal			Death			Closing Stock as on			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
Separate Sheet Attached Annexure 2																						

27. Mortality of animals

Sl.No	Animal Name (with individual identification mark, if any)	Scientific Name	Sex	Date of Death	Reason of Death as per the Post-mortem report
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Separate Sheet Attached Annexure 3				

28. Compliance with conditions stipulated by the Central Zoo Authority

Sl. No	Norm No.	Condition Stipulated	Time period to comply	Since when pending	Status with regard to compliance of the conditions
Separate Sheet Attached Annexure 4					

29. List of free living wild animals within the zoo premises

Separate Sheet Attached Annexure 5

a. Mammals

b. Birds

c. Reptiles

Annexure 1

Rescue and Rehabilitation of Wild animals carried out by the Zoo

Sl. No.	Date of Rescue	Species with Number of Animal Rescued with their Sex (M/F/U)	Received form	Date if submission of report to the CWLW/CZA	Action Taken	
					Date and Place of rehabilitation in their habitat	Reasons for housing in the zoo, if not released in their habitat
1	01/04/2019	Panthera pardus (Male)	Woodland Avenue, Marol		Released in SGNP core forest by DCF Thane	
2	02/12/2019	Panthera pardus (Male)	Yeur Thane			10 day cub found abandoned by mother. Retained in Rescue centre after failed reunion attempts
3	04/02/2020	Panthera pardus (Female)	Nasik Division Sent to SGNP Rescue centre after failed reunion attempts			Abandoned cub. Retained in Rescue centre

Annexure - 2

Proforma for Quarterly / Annual Inventory Report

Inventory Report for the Quarter/ Year 2019-20

Sr No	Animal Name	Scientific Name	Opening Stock 01/04/2019				Birth			Acquisitions			Disposal			Deaths			Closing Stock as on 31/03/2020					
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T		
	Bird						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1	Vulture (Unidentified)		0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		
2	Peafowl	Pavo Cristatus	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5
	Total Bird		2	3	1	6	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	5	
	Mammal																							
3	Lion	Panthera Leo	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	
4	Tiger Bengal (White)	Panthera Tigris	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
5	Tiger Bengal	Panthera Tigris	2	4	0	6	0	0	0	1	0	0	0	0	0	1	0	0	2	4	0	6		
6	Leopard (Panthera)	Panthera Paradus	8	3	0	11	0	0	0	1	1	0	0	0	0	1	0	0	7	4	0	11		
7	Cat Rusty Spotted	Prionailurus rubiginosus	4	2	0	6	0	0	0	0	1	0	0	0	0	3	1	0	1	2	0	3		
8	Deer Spotted (Chital)	Axis axis	10	27	2	39	0	1	0	0	0	0	0	0	0	0	2	0	10	26	2	38		
9	Antelope Four Horned (Chowsingha)	Tetracerus quadricornis	3	10	2	15	2	1	0	1	2	0	0	0	0	5	2	0	2	10	2	14		
10	Nilgai - Blue Bull	Boselaphus tragocamelus	0	2	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	3	
	Total Mammal		32	52	5	89	2	2	0	3	5	0	0	0	0	11	5	2	26	53	4	83		

Annexure 3

Sr No	Animal Name	Sex	Date of death	Cause of Death
1	Spotted Deer (Axis axis)	Male	16/04/2018	Death due to Septicemia & injuries (inflicted by goring between competitive males & infighting).
2	Choushinga	Female	10/05/2018	Death due generalised septicemia caused by multiple wound (due to in fighting).
3	Rusty Spotted Cat (Anjali)	Female	18/05/2018	The post mortem examination revealed thoracic cavity filled with serosanguinous fluid, severe nodular enlargement of ovary, mesentric lymph nodes & nodular growth on the liver suggesting possibility of metastatic neoplasm affecting functioning of the visceral organs like lung, kidney & liver resulting into the death.
4	Choushinga	Male	15/06/2018	Death due to hemotoxic snake bite.
5	Rusty Spotted Cat (Bhagya)	Male	26/06/2018	The post mortem examination revealing external gangrenous wound, congestion & haemorrhages on visceral organ like heart liver, kidney, lung & brain. Empty gastrointestinal tract & urinary bladder suggestive of toxemia complicated with inanition as a probable cause of death.
6	Leopard (William)	Male	20/08/2018	Above post mortem lesions were suggestive of cardio-respiratory complications as a cause of death.
7	Leopard (Suraj)	Male	12/09/2018	Post mortem lesions were suggestive of Toxemia accompanied with cardio-respiratory complications.
8	Leopard (Bhandara)	Male	18/09/2018	The post mortem findings such as generalized edema & congestion of visceral organs including brain, subcutaneous tissue and fat along with pneumonic lesions in the lungs were suggestive of toxemia complicated with respiratory failure as probable cause of death.
9	Choushinga	Male	14/10/2018	Death due to goring & infighting between rival & competitive males causing traumatic shock & hypovolemia
10	Choushinga	Female	22/10/2018	Death due to cardio-respiratory failure (animal has struggled a lot before death leading to respiratory distress & failure.
11	Choushinga	Female	18/01/2019	Death due to multiple hemorrhages in the chest cavity, lungs causing hypovolemic shock.
12	Spotted Deer	Male	25/03/2019	Death due to suppurative pneumonia & haemorrhage in the thoracic cavity.

Annexure 4

Compliance with conditions stipulated by the Central Zoo Authority

Sr No	Norm under RZR, 2009	Particulars of suggestions / recommendation	Time Period to Comply	Since when pending	Status with regard to compliance of the conditions
6	10 (5.5)	The zoo should ensure that the left over feed, excreta of animals and all other wastes are removed promptly from the feeding cells and kraals	March 2020	2018	Complied. The leftover feed and other waste has been instructed to be removed aseptically. The kraal and feeding area is disinfected on daily basis with proper disinfectant. The solid and liquid waste products are effectively disposed off.
7	10 (5.8)	All the animals at the zoo should be screened for parasitic loads as per written schedule			Complied. The deworming of all animal is done on tri monthly basis with appropriate dewormers. Following which stool examination is done from veterinary pathology laboratory for screening. As per the reports, animals are re-dewormed if required.
8	10 (5.10)	The zoo should maintain detailed records of observations of biological and social behavior and health status of the animals including			Complied. The records are been maintained as recommended by CZA guidelines. Weekly and daily reports are submitted regularly by concerned staff.
9	10 (6.1) a	The zoo should have veterinary facilities with all basic diagnostic facilities, comprehensive range of drugs, operation theatre and in-patients wards. The present veterinary dispensary at the zoo does not have any equipment to carry out the daily routine examination.			The construction of the hospital building has been given to PWD authorities. The process is presently at tendering stage. The authorities have been informed for expediting the matter. Following the construction of new hospital building the recommended Infrastructure can be accommodated and maintained

10	10 (6.1) b	The veterinary unit should have a large space with provision of operation theater and animal treatment room, medicine room, doctor and compounder room and lab etc. with all basis diagnostic facilities including in-patient wards.		The construction of the hospital building has been given to PWD authorities. The process is presently at tendering stage. The authorities have been informed for expediting the matter. Following the construction of new hospital building the recommended Infrastructure can be accommodated and maintained
Sr. No	Norm No.	Particular of suggestions/ recommendation		Time period to comply
General Requirements				
1	10 (1.3)	The train being operated inside the zoo should operate either on battery or electric. It should be noise and pollution free and should not affect the natural behavior of animals housed in adjoining areas near railway track else it should be closed.		The Train is operated by KUB range. The process of operating the train on battery or electric is in process.
Administrative and staffing Pattern				
2	10 (2.2)& (6.5)	The Sanjay Gandhi National Park zoo being categorized as Small zoo should have a Curator, a Biologist cum Education Officer and a Compounder as mandatory under the rules.		The Director is curator himself. Superintendent, Lion Safari is manager. The Biologist is at NIC.
Development and Planning				
3	10 (3.1,2 & 3)	The zoo should expedite the submission of Master. (Layout) plan of the area which is in possession of the zoo since its establishment. No new are of Sanjay Gandhi National Park should be included or added into the existing area of the zoo. In case the area of the zoo is to be increased from the existing area, the necessary statutory formalities in this regard should be observed first & all.		The tender process for is in process.
4	10 (3.7)	The zoo shall not accept any rescued animal unless it has appropriately designed enclosure and upkeep facilities for the animal as well as the facilities for keeping it in isolation during quarantine period. Further it is advised that the rescue centre should not house Leopard beyond its carrying capacity.		Complied.
Animal housing, display of animals and animal enclosure				
5	10 (4.10)	The signage should be provided in such way those visitors understand the type of Safari available and time taken for each safari. The signage near the interpretation centre should		Complied.

		brief the visitors about Do's and Don'ts.	
Upkeep and healthcare of animals			
6	10 (5.5)	The zoo should ensure that the left over feed, excreta of animals and all other wastes are removed promptly from the feeding cells and Kraals and the feeding cells and Kraals are washed and disinfected as per the advice of the authorized Veterinary Officer and the solid and the liquid waste generated during the process should be disposed off in such a manner that it has no adverse impact in the hygiene and cleanliness of the zoo and the landscape surrounding the zoo.	As per the agreement, the meat supplier takes away the left over.
7	10 (5.8)	All the animals at the zoo should be screened for parasitic loads as per written schedule prepared by the zoo in consultation with the Veterinary Officer and prophylactic medicines administered as per clinical requirements.	Regularly maintained.
8	10 (5.10)	The zoo should maintain detailed records of observations of biological and social behavior and health status of the animals including feed intake, medication and treatment provided in the Keeper's Diary, Daily Reports, Animal History Cards and Treatment Cards, as per standards specified by the Central Zoo Authority.	Record maintained.
9	10 (6.1) a	The zoo should have veterinary facilities with all basic diagnostic facilities, comprehensive range of Drugs, Operation Theatre and In-Patient Wards. The present veterinary dispensary at the zoo does not have any equipment to carry out the daily routine examination.	The construction of well equipments is in final stage.
10	10 (6.1) b	The veterinary unit should have a large space with provision of Operation Theater and Animal Treatment Room, Medicine Room, Doctor & Compounder Room and Lab etc. With all basis diagnostic facilities including in-Patient wards.	The construction of well equipments is in final stage.
Maintenance of Records and submission of Inventory			
11	11 (1)	The zoo should submit record of the Births, Acquisitions, Deaths and Disposals of animals of each species in its collection in the manner and in the format prescribed by the Central Zoo Authority.	Record maintained. The inventory records have been submitted to CZA on routine basis.
Non Statutory			
12		The office files dumped inside the hospital building should be removed.	The office files dumped in the hospital are categorized and essential files have been maintained and disposable files

			have been disposed.
13		The 3 hybrid lions in the Lion Safari should be phased out. The zoo is also directed not to breed any further the hybrid lions and may replace Hybrid lions with Asiatic lions by way of acquisition from recognized zoos.	The request proposal for acquisition of lions has been sent to various zoos in India.
14		The Lion Safari should have minimum area 20 hectares as prescribed by the CZA.	Proposal sent to PCCF Office for scrutiny.

Annexure 5

Statement showing check list of Mammals

Sr No	Family	Scientific Name	Common English Name
1.	Pterodidae	Suncus Murinus	Common English Name
2.	Pterodidae	Rousettus leschenaulti	Fulvous Fruit Bat
3.		Pteropus giganteus	Indian Flying Fox
4.		Cynopterus Sphinx	Shortnosed Fruit Bat
5.	Emballonuridae	Taphozous Melanopgon	Black-Beared Tomb Bat
6.		Taphozous Socolaimus	Pouch Bearing Bat
7.	Megadermatidae	Megaderma Spasma	Malay False Vampire
8.		Megaderma Iyra	Indian False Vampire
9.		Rhinolophus Rouxi	Roux's Horseshoe Bat
10.		Hipposideros Sperosis	Schenider's Leaf-nosed Bat
11.		Hipposideros Bicolox	Bicoloured Leaf-nosed Bat
12.		Hipposiderous Gakeritus	Cantor's Leaf-nosed Bat
13.	Vespertilionidae	Pipistrellus Coromandra	Indian Pipistrelle
14.		Pipistrellus Minus	Indian Pigmy Pipstrelle
15.		Pipistrellus Dormeri	Dormer's Bat
16.		Hesperoptenus Tickelli	Indian Tickell's
17.		Scotophilus Heathi	Coomon Yellow Bat
18.		Kerivoula Picta	Painted Bat
19.	Cercopithecidae	Macaca Radiata	Bonnet Macaque
20.		Macaca Mulata	Rhesus Macaque
21.		Presbytis Entellus	Common Langur
22.	Canidae	Canis Aureus	Jackal
23.	Viverridae	Viverricula Indica	Samll Indian Civet
24.		Paradoxurus Hermaphroditus	Toddy cat or Small Indian Civet
25.		Herpestes Edwardsi	Indian Grey Mongoose
26.	Hyaenidae	Hyaena Hyaena	Striped Hyaena
27.	Felidae	Felis Chaus	Jungle cat
28.		Oanthera Pardus	Leopard
29.		Felis Rubiginos	Rusty Spotted Cat
30.	Suidae	Sus Scrofa	Wild Boar
31.	Tragulidae	Trangulus Meminna	Mause Deer or Indian Spotted Chevrotain
32.	Cervidae	Axis axis	Spotted Deer
33.		Cervus Unicolor	Sambar
34.		Muntiacus Muntjac	Barking Deer or Muntjac

35.	Boridae	Teracerus quadricornis	Fourhorned Antelope or Chaousinga
36.	Leoporidae	Lepus nigricollis	Indian Black Naped Hare
37.	Sciuridae	Funambulus palmarum	Three Stripped Palm Squirrel
38.		Funambulus pennanti	Five striped Palm Squirrel
39.		Hystrix Indica	Indian Crested Porcupine
40.	Muridae	Ruttus Blanfordi	Whitetailed Wood Rat or Blanford's Rat
41.		Rattus Rattus	House Rat
42.		Mus musculus	House Mouse
43.		Bandicota Bengalensis	Indian Mouse, Rat or Lesser Bandicoot

Statement showing check list of birds


	Family	Scientific Name	Common English Name
	2	3	4
1.	Podicipitide-Grebes	Podiceps Ruficollis capensis	Little Grebe or Dabckick
2.	Phalacrocoacidae	Phaiaerocorax Niger	Little of Pigmy cormorant
3.		Anhinga Rufa Melanogaster	Dartar
4.	Ardeidae	Ardeola-Gray	Pond Heron or paddy bird
5.		Bubulcus ibis, Coromandus	Cattle Egret
6.		Egretta alub modesta	Large Egret
7.		Egretta gazzetta gazzetta	Little Egret
8.		Nicticorax nicticarax nicticorex	Night Heron
9.		Ixobrychus cinnamomeus	Chestnut Bitters
10.		Ciconidae	Anastomus Ositanas
11.	Ciconia episcopus episcopus		White Necked Stork
12.	Anatidae	Dendrocygna javanica	Lesser Whistling Teal
13.		Anas Acuta	Pintail
14.		Anas poecilorhyncha Poecilor hyncha	Common Teal
15.		Anas quercquedula	Gazganey or Blue Winged Teal
16.		Aythaya Ferina	Comman or Redneded Pochard
17.		Aythaya nyroca	White Eyed Pochard
18.		Aythaya Fuligula	Tuffed Duck
19.		Nettapus Coromandelianus	Cotton Teal

		Coromandelianus		
20.	Accipitridae	Elanus caeruleus vociferus	Black Winged kite	
21.		Pernis ptilorhyncus ruficollis	Crested Honey Buzzard	
22.		Milvus migrans govinda	Pariah kite	
23.		Haliastur Indus indus	Brahminy kite	
24.		Accipiter trivirgatus	Crested Goshawk	
25.		Accuoter Nisys melaschistos	Sparrow Hawk	
26.		Butastur teesa	White Eyed Buzzard	
27.		Aquila ropax vindhina	Ta wny Eagle	
28.		Ictinactus Malayensis Perniger	Black Eagle	
29.		Haliaeetus leucogaster	White Bellied Sea Eagle	
30.		Gyps indicus indicus	Indian Longbilled Vulture	
31.		Gyps bengalensis	Indian Whitebacked Vulture	
32.		Neophron Perenopterus	Indian Scavenger Vulture	
33.		Circus macrourus	Pale Harrier	
34.		Circus Pygarus	Montagus Harrier	
35.		Spilornis Cheel melanotis	Crested Serpent Eagle	
36.		Pandion hatiaetus haliaetus	Osprey	
37.		Falconidae	Falco tinnunculus tinnunculus	European Kestrel
38.		Phasianidae	Francolinus Pictus	Painted Partridge
39.			Coturnix coturnix coturnix	Common Grey Quail
40.	Coturnix Coromandelica		Blackbreasted or Rain Quail	
41.	Perdicula asiatica asiatica		Jungle Bush Quail	
42.	Galloperdix Spadicea spadicea		Red Spurfoud	
43.	Gallus Sonneratti		Red Jungke Fowl	
44.	Gallus Gallus		Red Jungle Fowl	
45.	Pavo Cristatus		Common Peafowl	
46.	Turnix sylvatica dussumier		Liggle Bustard Quail	
47.	Turnix Suscicator Taigoor		Common Bustard Quail	
48.	Rallidae	Rallus stviatus albiventer	Blue Brested Banded Rail	
49.		Porxana pusilla pusilla	Baillon's Grake	
50.		Porzane porzane	Spotted Crake	
51.		Amaurarnis phoenicurus phoenicurus	White Brested Waterhen	
52.		Amaurornis fuscus zeloncus	Ruddy Crake	
53.		Gallicrex Chinerea cinerea	Water Gock or Kora	
54.		Gallinula Chloropus indica	Moorhen	
55.		Porohyrio Porphyrio poliocephalus	Purple Moorhen	
56.		Fulica atra atra	Coot	

57.	Jacaniidae	Hydropha Sianus chirurgus	Pheasant Tailed Jacana
58.		Metopidicus	Bribzewubged Jacana
59.		Haematopus ostralegus.	Dyster catcher
60.		Venellus indicus indicus	Red watted lapwing
61.		Vanellus malbaricus	Yellow wattled lapwing
62.		Numeniua Phaeopus	Whimbrel
63.		Numenius orquata	Curlew
64.		Tringa tetanus eurhinus	Common Redshank
65.		Tringa stagnatills	Marsh sandpiper
66.		Tringa nebularia	Green shank
67.		Tringa ochropus	Green sand piper
68.		Tringa hypoleucos hypoleuccos	Common sand piper
69.		Gappela stenura	Pintail Snipe
70.		Gapella gallinago	Fantail ship
71.		Gapella mihima	Jack shipe
72.		Caldris minutus	Little stint
73.		Caldris temminckii	Temminck's Stint
74.		Phiomachus pugnax	Ruft and Reeve
75.	Rostratulidae	Rostratula benghalensis benghalensis	Painted shipe
76.	Recurvirostridae	Himantopus himantopus himantopus	Blackwinged stilt
77.	Burhinidae	Burhinus oedicephalus	Stone curlew
78.	Glareolidae	Burhinus	Oedicephalus
79.	Lariidae	Larus brunnicephalus	Brown-headed Gull
80.		Larus Brunnicephalus	Brown-headed Gull
81.		Chlidonias Bybridia indica	Whiskered Tern
82.		Gelochelidon nilotica nilotica	Gull-billed tern
83.		Sterna aurantia	Indian River Tern
84.		Sterna acuticauda	Black-bellied Tern
85.		Sterna albifrons	Little Tern
86.	Pteroclididae	Pterocles exustus	Indian sandgrouse
87.	Columbidae	Treron pompadora affinis	Grey-fronted Pouter
88.		Treron pheonicoptera chlorogaster	Pigeon yellow-legged green pigeon
89.		Columba livia intermedia	Blue Rock pigeon
90.		Streptopelia decaocto	Indian Ring Dove
91.		Streptopelia tranquebarica	Red Turtle Dove
92.		Streptopelia chinensis suranensis	Spotted Dove
93.		Streptopelia Senegalensis Combayensis	Little Brown Dove
94.		Chalcophaps indica indica	Emerald Dove
95.	Psittacidae	Psittacula eupatria eupatria	Large Alexandrine Parakeet
96.		Psittacula krameri manillensis	Roseringed Parakeet
97.		Psittacula cyanocephala	Blossom-headed Parakeet

Annexure - 2
Proforma for Quarterly / Annual Inventory Report
Inventory Report for the Quarter/ Year 2019-20

Sr No	Animal Name	Scientific Name	Opening Stock 01/04/2019				Birth			Acquisitions			Disposal			Deaths			Closing Stock as on 31/03/2020					
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T		
	Bird						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1	Vulture (Unidentified)		0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2	Peafowl	Pavo Cristatus	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5
	Total Bird		2	3	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	5
	Mammal																							
3	Lion	Panthera Leo	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3
4	Tiger Bengal (White)	Panthera Tigris	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
5	Tiger Bengal	Panthera Tigris	2	4	0	6	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2	4	0	6
6	Leopard (Panthera)	Panthera Paradus	8	3	0	11	0	0	0	1	1	0	0	0	0	0	1	0	0	0	7	4	0	11
7	Cat Rusty Spotted	Prionailurus rubiginosus	4	2	0	6	0	0	0	0	1	0	0	0	0	0	3	1	0	0	1	2	0	3
8	Deer Spotted (Chital)	Axis axis	10	27	2	39	0	1	0	0	0	0	0	0	0	0	0	2	0	0	10	26	2	38
9	Antelope Four Horned (Chowsingha)	Tetracerus quadricornis	3	10	2	15	2	1	0	1	2	0	0	0	0	0	5	2	0	0	2	10	2	14
10	Nilgai - Blue Bull	Boselaphus tragocamelus	0	2	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	3
	Total Mammal		32	52	5	89	2	2	0	3	5	0	0	0	0	0	11	5	2	26	53	4	83	


 Chief Conservator of Forest & Director
 Sanjay Gandhi National Park
 Borivali (E)
 Mumbai