



TATA STEEL ZOOLOGICAL PARK

(A constituent body of Tata Steel Zoological Society, Jamshedpur, Jharkhand)



**ANNUAL REPORT
2018-19**

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REPORT OF THE DIRECTOR

Tata Steel Zoological Park completed 24 years of its being in operation. The quest to achieve perfection doesn't have an ending and we will keep on striving every year as we have always done.

This year too we had the ups and down moments, but our main goal remained towards providing best of care to our wild inmates and their security, visitor satisfaction as well as driving home the message of wildlife conservation through awareness and educational programmes.

Major highlights of the year were:

- Height of Zoo boundary wall was increased for over 100 mtrs. in length along the marine drive road to meet Central Zoo Authority specification
- Renovation of feeding house of grey langurs
- Renovation of feeding houses of tiger and lion and replacement of top soil in the paddock/display area
- Renovation of the existing blackbuck enclosure
- Renovation of capuchin monkey enclosure & aquarium
- Renovation of emu & ostrich enclosure
- Renovation of the peafowl enclosure
- Mixed herbivore enclosure provided with feeding troughs and shade
- Creation of office space for Field personnel, Curator & common meeting shelter for zoo personnel
- Subsidized tea facility for zoo personnel
- Creation of new lawns & flower beds
- Creation of visitor shelter and opening of an exclusive outlet for Nestle food products
- Introduction of GPS fitted bicycles for use by visitors
- Installation of a plastic bottle crusher

Over and above, the zoo like every year organised Wildlife Week, Nature camp for girl students, Van Mahotsav and Keeper talks to generate awareness among the common masses for the need to conserve Indian Wildlife. Zoo Foundation day, World Environment day, International Day of Biodiversity, Tiger and Vulture were also commemorated.

Heartfelt thanks to all officers & staff of the Zoological Park and the citizens of Jamshedpur at large for keeping the Zoo live and running during FY2018-19.


(Bipul Chakrabarty)
DIRECTOR

TATA STEEL ZOOLOGICAL PARK

Tata Steel Zoological Park (Zoo), established in 1990, is the nucleus of the beautiful, green city of Jamshedpur. It was gifted to its people and was opened for public visitation on 3rd March, 1994. Currently, it is managed in entirety by the Tata Steel Zoological Society.

Housed within the extremely alluring Jubilee Park site and spread over a stretched area of 25 hectares, the Zoo is aesthetically and exotically maintained with scenic gardens, sprawling forest patches and beautiful promenades with one of the most exquisite variety of free ranging birds, mammals, reptiles and amphibians. Zoo was provided conditional recognition as a Medium category zoo by Central Zoo Authority u/s 38H of the Wild Life (Protection) Act, 1972 in April 2017. The recognition to the zoo is valid till 21/03/2020.



Our Vision:

We envision an earth in which human values protect and preserve the flora and fauna of the world

Our Mission:

We shall strive to provide natural habitats to various animals suitable for their conservation and propagation and act as a facilitator to spread the message of Nature Conservation by Awareness and Educational Programme

Our objective:

To manage the Zoo as per the prescribed standards and norms of 'Recognition of Zoo Rules, 2009' of Wild Life (Protection) Act, 1972 and the National Zoo Policy, 1998.

ZOO AT A GLANCE

ADMINISTRATION:

The administrative control of Zoological park day to day operation lies with the Director. Key functional areas being overseen by the Director are General administration & Planning. The Director is assisted in his work by an Office supervisor, two Office assistants, a Sr. attendant and a Sr. driver. The Director reports to Secretary of Tata Steel Zoological Society Board.

Deputy Director, who is a professional veterinarian, looks after the upkeep and Health care of animals. Deputy Director is head of entire Field Operations. His core activities being health care of animals, food & nutrition, maintenance of animal enclosures and general hygiene in zoo campus. The Deputy Director reports to Secretary of Tata Steel Zoological Society Board.

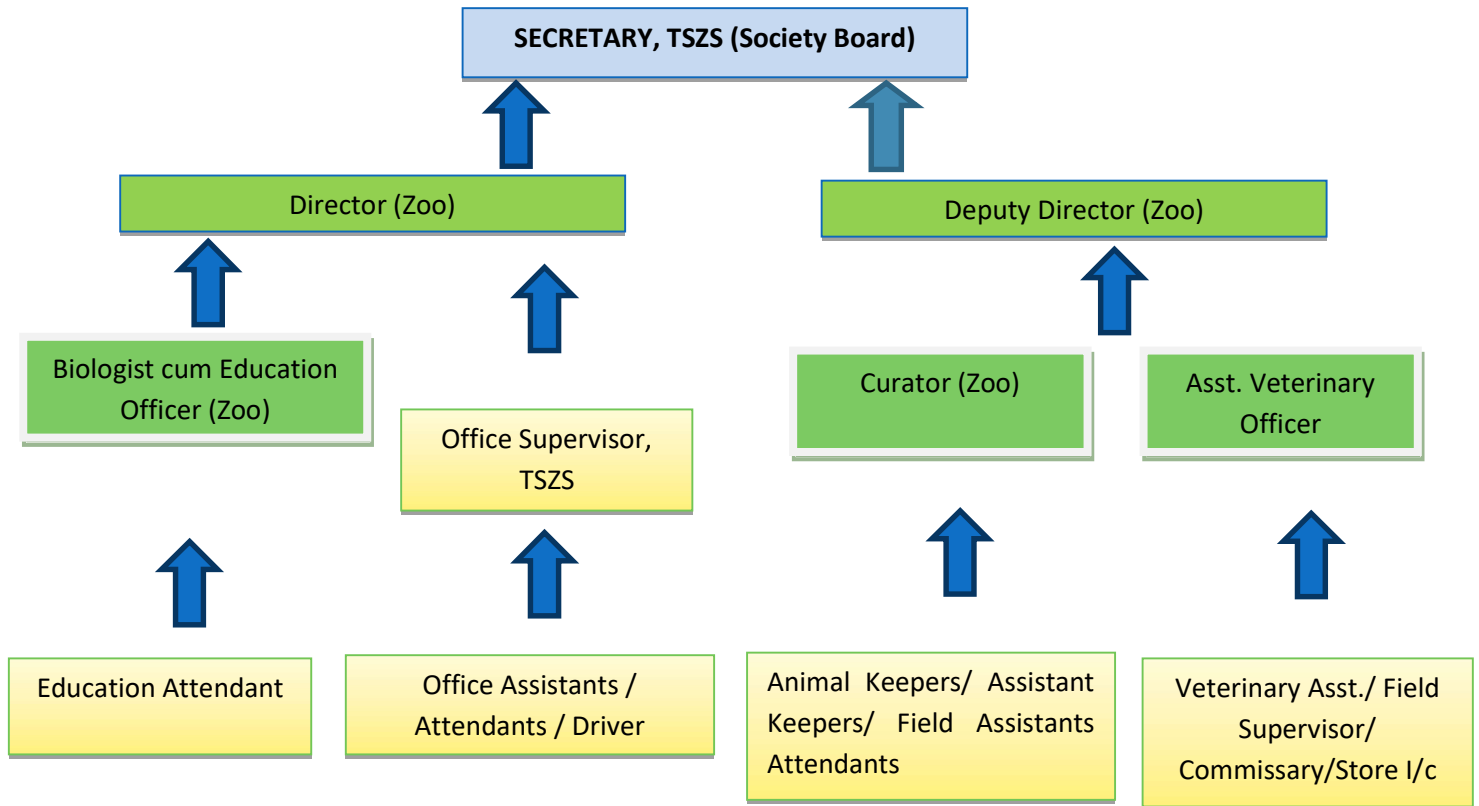
Curator looks after day to day management of captive wild animals. The core activities being maintenance /renovation & enrichment of animal enclosures, feeding of animals, disinfection of enclosure & layout designing of animal's enclosures. The Curator is also convenor of the Zoo Civil Construction Committee. All Keeper, Asst. keepers and utility hands report to the Curator. The Curator reports to the Deputy Director of the Zoo for all purpose.

Biologist cum Education officer looks after the Zoo Biology, Education & Research programmes. Core activities involve recording of animal behavior, studbooks, compiling of daily reports, quarterly & annual animal inventory, preparation of annual reports and brochures and organizing education awareness programmes and sharing press briefings with Tata Steel Corporate Communication division. The Biologist cum Education Officer also oversees running of the zoo information center cum library. The officer is assisted in day to day work by an office attendant and volunteers. The Biologist cum Education Officer reports to the Director for all purposes.

S.No.	Particulars	Information
Basic Information about the Zoo		
1	Name of the Zoo	Tata Steel Zoological Park
2	Year of Establishment	1994
3	Address of the Zoo	At- Jubilee Park, P.O.-Bistupur, Jamshedpur, District East Singhbhum, PIN-831001
4	State	Jharkhand
5	Telephone Number	0657-6645081 / 9297953437 /9297953439
6	Fax Number	Nil
7	E-mail address	tatasteelzoo@gmail.com
8	Website	http://www.tatazoo.com
9	Distance from nearest	Airport: 145Km (Ranchi Airport)
		Railway Station: 5Km (Tatanagar)
		Bus Stand: 3Km (ISBT)
10	Recognition Valid upto (Date)	21/03/2020
11	Category of zoo	Medium
12	Area (in Hectares)	25

S.No.	Particulars	Information
13	Number of Visitors (Financial Year)	Adult :347323
		Children :95981
		Total Indian: 443304
		Total Foreigners: -- NIL
		Total Visitors: 443304
14	Visitors' Facilities Available in Zoo	Shelters, benches, cold drinking water, toilets, wheelchair, battery operated carts, food court
15	Weekly Closure Day of the Zoo	Monday
Management Personnel of the zoo		
16	Name with designation of the Officer in-charge	Mr. Bipul Chakrabarty, Director
	Name of the Veterinary Officer	Dr. Manik Palit, Deputy Director
	Name of the Curator	Dr. Sanjay Kumar Mahato
	Name of the Biologist	Dr. Seema Rani
	Name of the Education Officer	Dr. Seema Rani
	Name of the Compounder/Lab assistant	Mr. Sushen Mahato
Owner / Operator of the Zoo		
17	Name of the Operator	Tata Steel Limited through Secretary, Tata Steel Zoological Society
18	Address of the Operator	At Tata Steel Zoological Park, Jubilee Park, P.O. Bistupur, Jamshedpur, East Singhbhum, Jharkhand.Pincode:831001
19	Contact details/Phone number of Operator	Secretary, Tata Steel Zoological Society Mb. 9899115591
20	E-mail address of Operator	radhika.singh@tatasteel.com

ORGANIZATIONAL CHART



CAPACITY BUILDING & HUMAN RESOURCE

- Dr. Sanjay Kumar Mahato, Curator, participated in Middle Level Officers Training Programme organized by Central Zoo Authority, New Delhi from 15th to 16th March, 2019 at New Delhi.
- Mr. Binod Sharma, Assistant Keeper, participated in Central Zoo Authority sponsored keeper Training programme held at Bhagwan Birsa Biological Park, Ormanjhi, Jharkhand from 17th to 21st December 2018.

Sl. No.	Designation	Sanctioned post/posts	Incumbency	Names of the Incumbent
Administration				
1.	Director	One	One	Mr. Bipul Chakrabarty
2.	Deputy Director	One	One	Dr. Manik Palit
3.	Office Supervisor	One		Mr. Mritunjay Kumar (Acting)
4.	Accountant	One	One	Outsourced
5.	Sr. Office Assistant	One	One	Mr. Mritunjay Kumar
6.	Office Assistant	Three	Three	Mr. Shyam Ranjan Mahato, Mr. Sunil Kar & Mrs. Monalisa Banerjee (cont.)
7.	Sr. Office Attendant	Two	Two	Mr. Pratap Gill & Mr. Kartik Gorai
8.	Senior driver	One	One	Mr. B. N. Mazumdar
Captive animal management & Conservation education				
9.	Curator	One	One	Dr. Sanjay Kumar Mahato

10	Biologist cum Education Officer	One	One	Dr. Seema Rani
11	Asst. Veterinary Officer	One		Shivam Jar (Sept.-October 2018)
12	Veterinary Asst.	One		Mr. Sushen Chandra Mahato
13	Field supervisor	One	One	Mr. Sushen Chandra Mahato
14	Animal Keeper	Four	Three	Mr. Dilip Dey, Mr. S. A. Ansari & Mr.Tarkeswar Ram
15	Asst. Animal Keeper	Fourteen	Seven	Mr. Sulendra Das; Mr. Bijoy Mukhi; Mr.Binod Sharma; Mr. Surendra Kumar Singh; Mr. Lalan Kumar; Mr. Dinesh Mahato & Mr. Linsa Harpal
16	Field assistant	Two	Two	Mr. Ali Akhtar Khan & Mr. R. Srinivasan
17	Animal attendants	Temporary	Eleven	Mrs. Shefali Das, Mrs. Malti Manjhi; Mr.Mazumdar Mahato; Mrs. Gyani Devi; Mr. Rajkishor Harpal; Mr. Manoj Nag; & Mr. Rajesh Pal, Mr. Bharat Chandra Mahato, Mr. Vishal Singh, Mr. Sunny Mukhi, Mr. Chunnu Sona
	Total	Thirty-Six	Thirty-Six	

ZOO ADVISORY COMMITTEE

The Zoo Advisory committee was reconstituted on 15/11/2018. Following are the members of the committee:

1	Vice President, Corporate Services, Tata Steel	President
2	Chief, Corporate Social Responsibility, Tata Steel	Vice President
3	Ms. Radhika Singh-Head, HRM, Tata Steel	Secretary
4	Mr. Sanjeet Kumar, Sr. Manager, Direct Taxes, Tata Steel	Treasurer
5	Mr. Ritu Raj Sinha-Chief Corporate Services, Tata Steel	Member
6	Capt. Dhananjay Mishra- Sr. G.M, JUSCO	Member
7	Mr. Sanjay Kumar- Head, HR, Tata Steel	Member
8	Mr. Siddartha Gupta-Sr.Mgr., Legal Services, Tata Steel	Member
9	Mr. Amresh Sinha- Sr.Mgr.Corp. Communication, Tata Steel	Member
	Permanent Invitees From Zoo	
10	Mr. Bipul Chakrabarty	Director
11	Dr. Manik Palit	Deputy Director

The Zoo advisory committee met twice during the year on 5th Sept. and 19th December, 2018 respectively.

HEALTH ADVISORY COMMITTEE:

A zoo health advisory committee was initially constituted during December, 2009 and the same was reconstituted again on 17th February 2018 with following as members:

1	Dr. M. Naveen Kumar, Deputy Director (Retd.), Nehru Zoological Park, Hyderabad, Telangana	Chairperson
2	Dr. A.B. Srivastava, Director(Retd), School of Wildlife Forensic and Health, Veterinary College Jabalpur, Madhya Pradesh	Member
3	Prof. Niranjana Sahoo- Coordinator, Centre for Wildlife Health, College of Veterinary Science & Animal Husbandry, OUAT, Bhubaneswar, Odisha	Member
4	Dr. ManikPalit, Deputy Director, Tata Steel Zoological Park, Jamshedpur, Jharkhand	Coordinator

The Zoo health advisory committee met three times during the year on 8th April, 8th September, 2018 and 9th March, 2019 respectively.

Major recommendations of the committee were:

- a) In light of complete ban on beef in Jharkhand, provide pork meat without lard to the zoo carnivores and reduce the same gradually by replacing with goat meat.
- b) Improve the feeding cells of lion and tiger.
- c) Equip the zoo hospital with diagnostic equipment's.

Investigation for Canine Distemper Virus in Zoo Felids

The Zoological Park had lost two healthy tigers due to Babesiosis in the year 2017-18. On the recommendation of the Central Zoo Authority, Govt. of India and advise of the Chief Wildlife Warden, Govt. Of Jharkhand, blood sample was collected from all surviving lion, tiger and leopard in the zoo to ascertain presence of haemoprotezoan. The blood samples were got tested through Centre for Wildlife Conservation Management & Disease Surveillance, Indian Veterinary Research Institute, Bareilly, Uttar Pradesh; Institute of Animal Health and Veterinary Biologicals, Kolkata, West Bengal and Centre for Wildlife Health, College of Veterinary Science & Animal Husbandry, Orissa University of Agriculture & Technology, Bhubaneswar, Odisha. Laboratories in Bareilly & Kolkata confirmed of presence of Canine Distemper Virus antibody (CDV). Presence of haemoprotezoa was ruled out by all the labs.

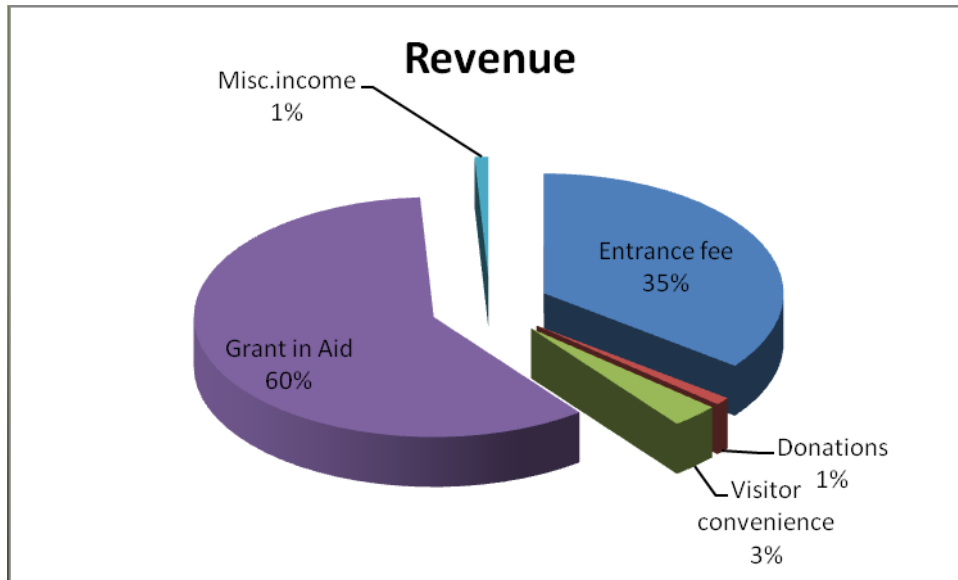
ICMR-National Institute of Virology (NIV), Pune, Maharashtra who had recently helped the Gujarat Forest Department in analysis of CDV antibody in Lions were requested to help us in final confirmation of presence of CDV antibody in our zoo felids. A team of Scientists from NIV, Pune visited our zoological park from 22nd to 24th November, 2018 and collected blood sample, nasal swab, ocular swab and rectal swab of all surviving twelve felines in the zoo. Tests carried on the samples confirmed that all felines of Zoo were -ve for CDV by RT-PCR and Paramyxovirus by nested RT-PCR.

FINANCIAL PERFORMANCE

Statement of Income & Expenditure

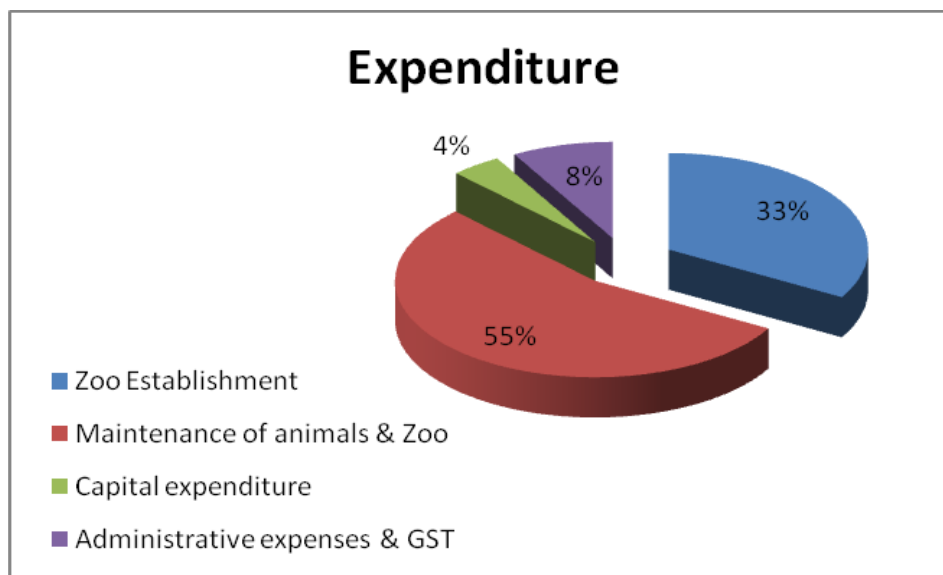
Revenue:

Tata Steel Limited during the financial year 2018-19 provided Grant in Aid of Rs. 200 lakhs to Tata Steel Zoological Society for annual maintenance & operation of Zoo. The Society through the zoo generated revenue worth Rs.136.30 Lakhs. Major revenue earnings were through entry fee, contracts and donations.



Expenditure:

Total amount spent by Tata Steel Zoological Society for running the Zoological Park during 2018-19 zoo was Rs.358.83 lakhs, major expenditure being on maintenance of animals and their enclosures & establishment.



DAILY FEED SCHEDULE OF ANIMALS:

Captive Animals are provided with a balanced diet drawn up in consultation with the Veterinary Wing of the Zoo. Accordingly, they are prepared and distributed on daily basis by concerned staff and animal keepers. All large cats are put on a day's fast every Monday. Details are provided below:

Sl	Name of Animal	Diet Prescribed for each animal	Quantity
<u>BIRDS</u>			
1	Pheasants & Fowls	Mixed Grain (with 10% germinated green gram)	100gms
		Roasted Gram Powder (Sattoo)	10 gms
		Boiled Egg	15 gms (1/4)
		Green Vegetable Leaves	25 gms
2	Peacocks	Mixed Grain (with 10% germinated green gram)	200 gms
		Roasted Gram Powder (Sattoo)	20 gms
		Boiled Egg	30 gms (1/2)
		Green Vegetable Leaves	50 gms
3	Doves and Francolin	Mixed Grain (with 10% germinated green gram)	50 gms
		Roasted Gram Powder (Sattoo)	5 gms
		Boiled Egg	5 gms (1/8)
		Green Vegetable Leaves	15 gms
4	Hill Myna	Roasted Gram Powder (Sattoo)	50 gms
		Banana	100 gms
		Germinated Green Gram (Moong)	25 gms
		Mango / Guava/ Seasonal Fruit	25 gms
		Papaya	50 gms
5	Ostrich	Mix Grain	2.5 kg
		Banana	
		Green Vegetable Leaves	
6	Emu	Mix Grain	1.5 kg
		Boiled Egg (Seasonal)	1 pc
		Banana	2 pc
		Green Vegetable Leaves	250 gms
		Green Grass	Ad Lib
7	Bar headed Goose	Paddy	100 gms
		Polished Rice	100 gms
		Green Vegetable Leaves	250 gms
		Green Grass	Ad Lib
8	Mandarin Duck	Crushed Maize	100 gms
		Crushed Sorghum (Jowar)	25 gms
		Pearl Millet (Bajra)	25 gms
		Foxtail Millet (Cheena Dana)	25 gms
		Green Vegetable Leaves	50 gms
9	White Ibis	Fish	200 gms
10	Rosy Pelican	Fish	300 gms

SI	Name of Animal	Diet Prescribed for each animal	Quantity	
WORLD OF PARROTS				
1	Parakeets: Morning 9.00 a.m.	Soaked Gram (Chana)	25 gms	
		Groundnut	25 gms	
		Sunflower, Kusum Seeds (Seasonal)	10 gms	
		Germinated Green Gram (Moong)	10 gms	
	Parakeets: Forenoon 11.00 a.m – 12 noon	Carrots / Beetroot	25 gms	
		Seasonal Fruit / Peas	25 gms	
		Green Chillies	5 gms	
		Banana	10 gms	
		Papaya / Guava	10 gms	
		Soaked Corn Kernels	25 gms	
	2	Cockatiel: Morning 9.00 a.m.	Soaked Gram (Chana)	25 gms
			Sunflower, Kusum Seeds (Seasonal)	10 gms
Germinated Green Gram (Moong)			10 gms	
Cockatiel: Forenoon 11.00 a.m – 12 noon		Carrots / Beetroot	25 gms	
		Seasonal Fruit / Peas	25 gms	
		Green Chillies	5 gms	
		Banana	10 gms	
		Papaya / Guava	10 gms	
		Foxtail Millet (Cheena Dana) with 10% Paddy Whole	10 gms	
3		Cockatoo: Morning 9.00 a.m.	Soaked Gram (Chana)	50 gms
			Groundnut	50 gms
			Sunflower, Kusum Seeds (Seasonal)	20 gms
	Germinated Green Gram (Moong)		10 gms	
	Cockatoo: Forenoon 11.00 a.m – 12 noon	Carrots / Beetroot	25 gms	
		Peas / Seasonal Fruit	25 gms	
		Green Chillies	5 gms	
		Banana	50 gms	
		Papaya / Guava	10 gms	
		Pedigree Pellets	10 gms	
		Soaked Corn Kernels	25 gms	
		4	Jenday Conure	Groundnut
Sorghum (Jawar) –Pearl Millet (Bajra)	20 gms			
Papaya	20 gms			
Soaked Gram	20 gms			
Germinated Green Gram (Moong)	20 gms			
Sunflower Seeds	10 gms			
5	Rainbow Lorikeet	Milk	30 ml	
		Honey	2.5 ml	
REPTILES				
1	Star Tortoise	Carrots / Sweet Potato	10 gms	
		Papaya	10 gms	
		Tomato / Banana / Watermelon	10 gms	
		Cucumber	10 gms	
		Green Vegetable Leaves -Spinach (Palak)	10 gms	
		Bengal Gram	10 gms	
		Calcium granules	5 gms	
2	Marsh Crocodile	Meat: Winter (Weekly thrice)	1 kg	
		Other season (Alternate days)	2 kg	
3	Gharial	Fish	250-500 gms	

SI	Name of Animal	Diet Prescribed for each animal	Quantity
MAMMALS			
1	Nilgai & Sambar	Concentrated Mixture	1.5 kg
		Chaff (Kutti)	500 gms
		Molasses (Seasonal)	100 gms
		Tree Leaves	20 kg
		Green Grass	Ad Lib
2	Spotted Deer, Blackbuck, Barking Deer, Hog Deer	Concentrated Mixture	750 gms
		Chaff (Kutti)	250 gms
		Molasses (Seasonal)	50 gms
		Tree Leaves	10 kg
		Green Grass	Ad Lib
3	Hippopotamus	Concentrated Mixture	10 kg
		Chaff (Kutti)	5 kg
		Molasses (Seasonal)	250 gms
		Green Grass	40 kg
		Banana	1.5 kg
		Bread	1.5 kg
		Potato	2 kg
		Sweet Pumpkin	2 kg
4	Sloth Bear: Morning	Groundnut	100 gms
		Sweet Potato / Potato	200 gms
		Cucumber / Carrot	200 gms
		Honey / Molasses (Braising of tree branches)	50 gms
		Banana	200 gms
	Sloth Bear: Afternoon	Khichdi – Broken Wheat (Dalia), Green Gram (Moong Dal) cooked	1 kg
		Milk	½ litre
		Boiled egg / Meat	1 pc / 100 gms
	Sloth Bear: Evening	Cooked Bread (Chapati)	750 gms
	5	Indian Crested Porcupine	Soaked Gram
Groundnut			100 gms
Carrot / Beetroot			100 gms
Potato			100 gms
Banana			100 gms
Papaya			50 gms
Pumpkin			50 gms
Green Vegetable Leaves			50 gms
6	Macaque (Bonnet / Rhesus): 9.00 am	Banana	100 gms(1 pc)
		Apple	50 gms(½ pc)
	Macaque (Bonnet / Rhesus): 11.00 am	Banana	200 gms
		Soaked Gram (Chana)	100 gms
		Groundnut	100 gms
		Carrot / Beetroot / Sweet Potato	100 gms
		Papaya / Corn / Guava	100 gms
		Green Vegetable Leaves	100 gms
		Capsicum (Simla Mirch)	50 gms
		Citrus fruits	50 gms
	Macaque (Bonnet / Rhesus): 4.00 pm	Cooked Bread (Chapati)	100 gms

Sl	Name of Animal	Diet Prescribed for each animal	Quantity
MAMMALS (Continued)			
7	Hanuman Langur: 9.00 am	Green Leaves	Ad Lib
		Banana	100 gms (1 pc)
		Apple	50 gms (1/2 pc)
	Hanuman Langur: 11.00 am	Banana	300 gms
		Soaked Gram (Chana)	100 gms
		Groundnut	100 gms
		Carrot / Beetroot / Sweet Potato	100 gms
		Papaya / Corn / Guava	100 gms
Hanuman Langur: 3.00 pm	Tree Leaves	Ad Lib	
Hanuman Langur: 4.30 pm	Cooked Bread (Chapati)	100 gms	
8	White Throated Capuchin: 9.00 am	Banana	100 gms (1 pc)
		Apple	50 gms (1/2 pc)
		Dog food (spread in display)	20 gms
		Sunflower seeds (spread in display)	15 gms
	White Throated Capuchin: 11.00 am	Banana	200 gms
		Soaked Gram (Chana)	50 gms
		Groundnut	50 gms
		Carrot / Beetroot / Sweet Potato	100 gms
		Papaya / Corn / Guava / Green Peas	100 gms
		Green Vegetable Leaves	50 gms
		Citrus fruits / Mango / Awla	100 gms
White Throated Capuchin: 4.00 pm	Boiled Egg	50 gms	
	Boiled Snail (2 days a week)	25 gms	
White Throated Capuchin: 4.00 pm	Cooked Bread (Chapati)	100 gms	
9	Mandrill: 9.00 am	Banana	1 pc
		Apple	1 pc
	Mandrill: 11.00 am	Apple	200 gms
		Banana	200 gms
		Papaya	200 gms
		Seasonal Fruit-Guava/Mango/Corn	200 gms
		Carrot/beetroot	200 gms
		Sweet Pumpkin	200 gms
		Sweet Potato	200 gms
		Cabbage	200 gms
	Capsicum (Simla Mirch)	100 gms	
Boiled Egg (once a week)	67 gms (1 pc)		
Mandrill: 2.00-3.00 pm	Cooked Mixed Grain Bread (Chapati)	50 gms	
Mandrill: 4.00 pm	Cooked Rice + Soya	400 gms	
	Groundnut (whole) / Sunflower seeds	50 gms	
10	African Lion / Bengal Tiger	Winter: Meat (6 days a week)	10 kg
		Other Seasons: Meat (6 days a week)	8 kg
11	Leopard	Male: Meat (6 days a week)	4 kg
		Female: Meat (6 days a week)	3 kg
12	Hyaena	Meat (6 days a week)	2 -2.5 kg

Formula for Deer concentrated mixture		Formula for Emu mix grain	
Bran Choker	20%	Crushed Maize	45%
Gram (Chana)	10%	Oil Cake	5%
Corn (Makai)	17%	Bird Mix. Grain	35%
Barley (Jau)	20%	Rice Bran	10%
Green Gram (Moong)	15%	Mineral Mixture	2%
Oil Cake (Khalli)	15%	Stone Grit	3%
Mineral Mixture	3%		
Formula for Birds mix grain		Formula for Ostrich mix grain	
Crushed Gram (Chana)	20%	Maize	30%
Whole Paddy	20%	Pearl Millets (Bajra)	10%
Crushed Maize	20%	Sorghum (Jawar)	10%
Wheat	15%	Soya Beans	6%
Split Red Lentils (Masoor Dal)	6%	Wheat Bran	20%
Sorghum (Jawar)	5%	Crushed Gram	10%
Pearl Millets (Bajra)	5%	Mineral Mixture	5%
Germinated Green Gram (Moong)	5%	Vegetable Oil	2%
Mineral Salt	2%	Vita Prot Mixture	2%
Stone Grit	2%	Germinated Green Gram (Moong)	5%

Note: During the year we provided Pork (de-skinned), goat meat and chicken to the carnivores.

Vaccination & De-worming Schedule: In compliance to Recognition of Zoo Rules, 2009 a vaccination and de-worming schedule has been drawn up by the veterinary wing of the zoo and the same is implemented as per details provided below:

Vaccination Schedule

Sl.no	Species	Diseases covers		Name of the vaccine and	Dose and route	Periodicity
1	Tiger, Lion & Leopard	Feline Distemper,	Calcivirus, Herpes virus and Rabies infection	Biofel PCHR	1.00 ml S/C or I/M	Annual
2.	Cloven footed Herbivores	Foot & Mouth diseases	FMD virus	Clovax/Rakcha Ovac	2.00 ml S/C or I/M	Every nine month
3	Large cats	Haemo-protozoan infection	Trypanosomiasis	Triquine injection	2.00-- 3.00 ml for Body weight up-to 200 kg	Every nine month

Deworming Schedule

Sl.No.	Species	Drug used	Month
1.	Carnivores	Fenbendazole, praziquantel, pyrantal pamoate +febantel	March, June, September & December
2.	Herbivores	Rafoxanide & ivermectin	February, May and September
3.	Primates	Albendazole	February, May, August and November
4.	Aves	Albendazole	February, June and October
5.	Reptiles	Albendazole / Fenbendazole, praziquantel, pyrantal pamoate +febantel	March & September

Disinfection Schedule: Zoo Curator in consultation with the veterinary wing draws up the annual schedule for disinfection of animal enclosures. While cleaning the feeding cells, 'Nimyl' (neem & eucalyptus oil-based disinfectant) is used. In open enclosures lime and turmeric powder are spread ad libitum. Details of the schedule are provided below:

Disinfection / Cleaning Schedule of Zoo Animal Enclosures

Sl	Enclosure	Activity	Schedule
1	Hippopotamus	Change of water	4 times a month
		Removal of dung & silt, Lime spreading in moat & enclosure	Once a month
2	Langur & Monkeys	Cleaning of night shelter & cell with lime-bleach	4 times a month
		Sterilization of cells with blow lamp	Twice a month
		Tall grass cutting in Langur & Mandrill island	As per requirement
3	Birds & Pheasants	Lime spreading around cells	4 times a month
		Turning of soil inside the cells	Once a month
		Change of water in pelican pond	Once a month
4	Deer & Antelope	Removal of dung from enclosure & spreading of lime bleach	Twice a month
		Cleaning of cells verandah with lime each	4 times a month
5	Bear	Cleaning of cells with lime /bleach	4 times a month
		Sterilization of cells with blow lamp	Twice a month
		Bush cutting in enclosure area	As per requirement
6	Lion, Tiger, Leopard & Hyena	Cleaning of cells with lime/bleach	4 times a month
		Sterilization of cells with blow lamp	Twice a month *
		Cleaning of tiger moat	As per requirement
		Bush cutting of enclosures	As per requirement
7	Mugger & Gharial	Change of water	Once a month
8	Ostrich & Emu	Removal of dung	Once a month
		Lime /Bleach spreading in enclosure	4 times a month
9	Deer safari	Change of water from Drink water pool	Twice a month
		Bush cutting of safari area	As per requirement
10	Butterfly Park	Lime spreading in & around the Centre.	As per requirement
11	Herbivores & carnivores	Turning of Soil of display area	Once in 5 years/ as per requirement

The above schedule may change as per requirement; it may increase or decrease the frequency of the work.* This year we increase the frequency (Weekly) of blow lamp lighting in large cats enclosures due to suspected tick born disease in Tigers.

Health checkup of Zoo Employees: All zoo employees including outsourced persons are subjected an annual medical examination through a Tata Main hospital. During the year under report, medical examination of all staff including laboratory tests for their sputum, feaces and blood was carried out on 14th July 2018. Records are maintained by the hospital themselves.

DEVELOPMENTAL ACTIVITIES

ANIMAL HABITATS AND UPKEEP



Being the centre of public attention, Zoos have the responsibility to keep evolving and improving upon the various amenities and facilities it provides for both animals and to the visitors. Thus, changes are imminent to happen.

During the year under report following activities were taken up as part of improving upon the existing enclosures and enhancing the enrichment activities to improve the condition of animal enclosures:



Ecological enrichment was carried out in all primates' enclosure to naturally induce their wild behavior.



- Rain-sheds constructed in the composite Deer enclosure for feeding of animals
- The grey Langur, Capuchin, small mammals Emu and ostrich enclosures have been renovated and opened for the visitors after needful habitat enrichment.
- Stand-off barriers of animal enclosures have been evenly given an olive green coat of paint, as per the guideline of

Central Zoo Authority under compliance of recognition of zoo.

- Display area of Butterfly Park has been renovated by replacing the agronet cover, etc. The facility was re-established after needful ecological enrichment of the park.

AWARENESS AND EDUCATION- MEETING THE AICHI BIODIVERSITY TARGET 2020

Zoo has constantly strived in its quest of spreading awareness for biodiversity Conservation and has conducted numerous educational programmes and events throughout the year with the support of local NGO's and sponsors to fulfill its primary objective and also to meet AICHI TARGET-1 of its strategic plan for biodiversity conservation 2011-2020. Through its educational activities, it encourages the youth to conserve nature and use it sustainably, especially the students of school and colleges. More than 27000 students were made aware of biodiversity and wildlife conservation through the above programmes, of which 9122 were through the 'Touch & learn' programme only. Major awareness activities undertaken during the year were:

- a. **Celebration of International Biodiversity Day** – Tata Steel Zoological Park organised an “Art workshop cum exhibition of painting and sculpture” on occasion of International Biodiversity Day from 18th to 22nd May, 2018 with theme “Shimul”. 40 professional and amateur artists from Jamshedpur participated’. The exhibition was opened to public by Mr. Sanjay kumar Pandey JAS special officer JNAC
- b. **World Environment Day:** To raise the global awareness about declining condition of the environment on occasion of World Environment Day, Tata Steel Zoological Park and the International Association of Lions Clubs, District 322A jointly organised a weeklong awareness programme on the said theme of United Nations “Beat plastic pollution”. During the occasion, a slew of events such as rally for river, on the spot essay writing competition, workshop on ‘Best out of waste’ and face and hands painting competition were organized for



school/college students from 1-5 June at Zoo Nature Education Center (NEC). At the same day two more events were organized parallely, first an awareness campaign inside the zoo premises for the visitors in association with ANWESHA, a local NGO, to make people aware of “plastic Ban”. Second, a sit and draw competition was organized in association with Jaiswal Samaj, in which more than 500 students participated.

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In all, more than 800 children from different schools, institute and local NGOs of Jamshedpur participated in various events during the Celebrations.

- c. **Van Mahotsav 2018** - Tata Steel Zoo has been celebrating Van Mahotsav for many years now with the sole intention of instilling and reinforcing the value of afforestation and seeks to promote inclusive participation in this initiative from diverse sections of the society from in and around Jamshedpur.

Like every year, this year Tata Zoo celebrated Van Mahotsav from 1st July to 31st July. During this period members Lions club of Jamshedpur, Inner Wheel Club of Jamshedpur and Morning walkers

were took part in the plantation initiative. This year former Managing Director of Tata steel Ltd Mr J.J. Irani with their family members was also been a part of our van mahotsava programme. More than 50 tree saplings were planted.



- d. **International Tiger Day-** On occasion of International Tiger Day, 29th July 2018, Tata Steel Zoological Park organized the programmes like “Poster presentation on save tigers”, “Keeper talk”, “Touch n Learn” and naming of the tiger cubs. Nominations for naming of Tiger cubs were invited via email and directly through the drop boxes. A total of 457 entrees of suggested names received. Major objective of this programme was to make aware more and more people of the diversity through organizing awareness programs as well as aligning with ongoing international campaigns like ‘Save the tigers’.



need to conserve and preserve country’s wild fauna

- e. **Friendship Day** – Friendship Day was celebrated in Tata Zoological Park with the school children of Little Flower School, Telco and local NGO Anwasha by taking oath to protect the trees as they are our providers and now friends. They tied friendship bands around trees and animal cages to denote friendship with them and also did plantation. A



keeper talk on Pheasantry was given by Mr. Dilip Dey (Keeper) and briefing about the role of plants and animals in our life was done by Zoo Biologist cum education officer, Dr. Seema Rani. A total of 120 school children participated in the programme

f. International Vulture Awareness Day

Tata Zoological Park celebrated Vulture Awareness Day on September 1st 2018. The main objectives of the programme were to publicize the need of vultures' conservation to a wider audience especially the school children and highlight about the importance of vultures for a balanced ecosystem. During the occasion eco club students of Kerala Samajam Model School had presented few programs such as speech, choral recitation, skit and a PPT. More than 100 school children and others attended the programme.



g. Wildlife Week Celebration

Tata Steel Zoological Park has been celebrating Wildlife Week continuously every year since 1994 and is one of the longest running educational programme at the Zoo. As with every year, Tata Zoo organised a week-long celebration packed full of activities and events from 2nd to 6th October, 2018 on the theme "BEAT PLASTIC POLLUTION".



The chief guest of the programme was Shri V.N. Shah, I.F.S.–Regional Chief



Conservator of Forests, Singhbhum. A number of events including Best Eco Club Award, Inter School Essay Competition on topic "Plastics are harmful to life system" ("प्लास्टिक जीवन-प्रणाली के लिए हानिकारक हैं"), Inter School Debate Competition on theme "Should plastic producing industries be banned?" ("प्लास्टिक उत्पादन उद्योगों पर प्रतिबंध लगाया जाना चाहिए?"), Fancy Dress Competition and On the Spot Painting Competition were conducted. A Total of 1400 students from 30

institutions participated in the programmes.

h. Animal Welfare Fortnight –To spread awareness among the young generations about the welfare of animals by standing against cruelty, Tata Zoological Park organized Animal Welfare Fortnight during 16th to 30th January. The celebration was kick off on 16th Jan 2019 with “Nukkad Natak” and continued till 30th January. Mrs. Radhika Singh honorable secretary TSZS was guest for the startup day. Zoo Biologist cum Education officer Dr. Seema Rani, gave insight on animal welfare during the entire fortnight. The celebration of the Fortnight was successfully completed with the young ones leaving with immense knowledge on animal welfare. Around 517 participants participated from 8 different schools in celebration during the fortnight.



i. World Wetland Day 2019 --- World Wetlands Day was celebrated at Tata Zoo to make the general public as well as school children aware the crisis of losing of natural wetlands of developing city of us.

A lecture was organized on “Importance of wetlands and their sustainable use” (“झीलों/जलाशयों का महत्व और उनका स्थायी उपयोग”) by Dr. Hishmi Jamil Husain, Head, Environment and Forest Management total of 125 School Children participated in the programme.



Raw Material- Strategy Group, Tata Steel Ltd. A

j. Residential Nature Camp –Tata Steel Zoological Park was organised “Residential Nature Camp for girl students on Biodiversity & Wildlife Conservation from 26th-28th March 2019. A total of 48 girl students alongwith their teacher participated in the camp.



The Camp was focused on educating the interested and conversant young campers, to preserve and protect the environment and its ecology through different technical and non technical sessions by subject matter specialist so, that they would become avengers to conserve earth's resources and its natural beauty. Chief guest Dr. Shukla Mahanty, Vice- Chancellor, Kolhan University, Chaibasa was formally inaugurated the camp alongwith Ms Radhika Singh, Hon. Secretary TSZS and Zoo officers.



K.

I. Keeper Talk: As part of wildlife conservation awareness programme Tata Steel Zoological Park have initiated 'Keeper talk' programme, which have been successful and continuing. Last year, fourteen keeper talks were organized on weekend in which 1065 general public /visitors attended. During the talk animal keepers shared their experiences on the animals they are taking care.



Happenings in the Zoo:

- On the request of Bhagwan Birsa Biological Park, Ormanjhi, Dr.Sanjay Kumar Mahato, Curator, contributed as a resource person during the Zoo Keeper Training Programme held in Ranchi Zoo from 17th to 21st December, 2018.
- Dr.Sanjay Kumar Mahato, Curator was deputed to Bhagwan Birsa Biological Park, Ormanjhi, Jharkhand from 25th August to 30th August, 2018 for helping the zoo authorities in developing a Butterfly Park.

VISITORS TO ZOOLOGICAL PARK- ONSITE & OFFSITE

During the year under report from 1stApril, 2018 to 31st March 2019, the Zoo was physically visited by 443304 visitors.

The Zoo has a website of its own <http://www.tatazoo.com> and a Facebook profile <http://facebook.com/jamshedpurzoo>. The Zoo has 1342 friends on Facebook. These platforms are utilized by the Zoo to engage visitors and convey its ideology and mission among the people at large. The zoo has been reviewed by more that 2500 visitors on google and has a 4.3 rating. The zoo has also received reviews on tripadvisor and has a rating of 4.

SEASONAL MANAGEMENT OF CAPTIVE ANIMALS:

Zoo has prepared three action plans namely Monsoon Action Plan, Summer Action Plan and Winter Action Plan for managing its captive inmates as per the seasonal and environmental changes. The action plans are prepared and implemented by the Curator along with his team of staff.



RESEARCH WORK & PUBLICATIONS:

Ms. Bharti, M.Sc Zoology student from Cooperative college (Kolhan University), Jamshedpur carried out a six month research work on “food intake and leftover measurement of captive animals” from October, 2018.

Title	Where published
Report on Celebration of World Environment Day	Zoo's Print Magazine/Vol.33/No.6/June 2018 & Local NEWS paper
Report on Celebration of International Tiger Day	Zoo's Print Magazine/Vol.33/No.8/Sept. 2018 & Local NEWS paper
Report on Wildlife Week Celebrations	Zoo's Print Magazine/Vol.33/No.11/Nov 2018 & Local NEWS paper
Report on Celebration of Animal Welfare Fortnight	Zoo's Print Magazine/Vol.34/No.3/March 2019 & Local NEWS paper
Report on Celebration of World Wetland Day	Zoo's Print Magazine/Vol.34/No.3/March 2019
Report on organization of Residential Nature Camp	Zoo's Print Magazine/Vol.34/No.5/May 2018 & Local NEWS paper

Note: Volunteers were engaged in carrying out the Zoo education activities and commemoration of Wildlife Week.

ACQUISITIONS & BIRTH OF ANIMALS

During the year under report following acquisitions, birth, death and disposal of endangered animals in the zoo took place:

Sl.no	Name of Species	Sex				Remarks
		M	F	U	T	
ACQUISITION						
1.	Cockatiel	0	0	2	2	Handed over by Mr. Kundu from Sonari area.
2.	Rose ring parakeet	1	0	0	1	Donation.

3.	Hill Myna	0	0	1	1	Donated
4.	Large Indian Parakeet	0	2	0	2	Donated
5	Love bird	0	1	0	1	Donated
BIRTHS						
Mammals		M	F	U	T	
1	Black buck	0	0	21	21	
2	Indian Hog deer	0	0	7	7	
3	Northern plains grey langur	0	0	1	1	
4	Mandrill monkey	0	0	4	4	
5	Barking deer	0	0	3	3	
6	Spotted deer	0	0	10	10	
7	Sambar deer	0	0	1	1	
8	Nilgai	0	0	2	2	
Birds		M	F	U	T	
1.	Pea fowl	0	0	4	4	
2.	Cockatiel	0	0	5	5	
3.	Red jungle fowl	0	0	4	4	
4.	Zebra finch	0	0	2	2	
5.	Guinea fowl	0	0	2	2	
6.	Rainbow lorry	0	0	1	1	
7	Reeves pheasant	0	0	1	1	
8	Ring necked pheasant	0	0	2	2	
Reptiles						
1.	Indian star tortoise	0	0	1	1	
DISPOSALS						
Nil						

RESCUE AND REHABILITATION OF WILD ANIMALS

The Zoo is nestled near the Dalma Wild Life Sanctuary. Owing to this, the zoo is involved on regular basis in rescue and rehabilitation of wild animals with active support from the Forest Department. During the year under report various species of animals rescued by the Forest Department and locals either in injured or orphaned condition were provided veterinary care at Zoo Veterinary Hospital before being rehabilitated back to their wild habitat. List of rescues attended during 2018-19 are provided below:

Sl. no	Name of Species	No. of Specimen	Date	Cause of rescue	Action Taken/ Outcome
1	Pariah Kite	1, Unsexed	5.04.18	Unable to fly due to fractured wing –irreversible damage –Rescued from Tata Steel area and transferred to the zoo for treatment and care.	Treated and got shelter in the zoo
2	Barking deer fawn	Male	6.04.18	Abandoned fawn - Rescued from F.R.O. Musaboni and transferred to zoo for care.	Died due to enteric infection on 10.04.18
3.	Alexandrine	1, Unsexed	11.06.18	Rescued from Sonari area	Under care at Zoo

	parakeet			in sick condition , transferred to zoo for treatment and care	Hospital
4.	Ring- necked parakeet	1, Unsexed	11.06.18	Rescued from Sonari area in sick condition , transferred to zoo for treatment and care	Under care at Zoo Hospital
5	H. Langoor	M, 1	21.06.18	Rescued from Tata Steel Works gen. office area	Revived from anesthesia and kept under observation at Zoo hospital. Thereafter, implanted microchip (No- 00075F6D25) in the neck region and released in the Dalma forest area smoothly on 25.06.18 .
6	Parakeet chick	Unsexed ,8 nos	22.01.19	Handed over by Dinesh Chandra, Forester, Jamshedpur Forest dept. for care and shelter	Till date are being taken care at Zoo hospital and are fit for disposal.
7	Parakeet	U, 1	1.02.19	Sofia Khanam, Mango	For care and shelter
8	Sloth Bear Cub	Male-1	7.02.19	The cub was rescued by DFO, Kolhan, Forest depart Chaibasa and was sent to Tata Zoo for care and rearing	Till date the cub is being hand fed and taken care at Zoo Vety Hospital round the clock.
9	Barking Deer fawn,	1, Male	19.02.19	Fractured leg- rescued by Forest dept, Saraikela	For treatment and care
10.	Parakeet chick	Unsexed 6 nos	25.02.19	Rescued and handed over by Mr. Kundu, Sonari	For treatment, care and rehabilitation Till date are at Hospital and are fit for disposal.
11.	Cheetal	2 (1 :1)	23.03.19	Rescued by Jamshedpur Forest dept and handed over to Zoo for treatment, care & shelter, as animals were severely injured and were suspected for dog bite	Both the animals are cured of wound and injuries, treated for a dog bite (Vaccination) and now are fit for disposal.

ANNUAL INVENTORY: FY 18-19 (1.04.2018 to 31.03.2019)

SCHEDULE I & II (WILD LIFE PROTECTION ACT,1972)

S. No	Name of species	Scientific Name	Opening stock as on		PERIOD 01.04.18 to 31.03.19				Closing stock as on								
			01.04.2018				BIRTHS	ACQUISITION	DISPOSALS	DEATHS	31.03.2019						
	BIRDS		M	F	U	T	M	F	U	M	F	U	T				
1	Pea Fowl (normal)	<i>Pavo cristatus</i>	2	7	2	11	0	0	4	0	0	0	0	4	4	2	10
2	Hill myna	<i>Gracula religiosa</i>	0	0	1	1	0	0	0	0	0	1	0	0	0	2	2
3	Grey Jungle fowl	<i>Gallus sonnererati</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
	TOTAL BIRD		2	8	3	13	0	0	4	0	0	1	0	4	5	4	13
	REPTILE																
1	Gharial	<i>Gavialis gangeticus</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	4
2	Mugger	<i>Crocodylus palustris</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
	TOTAL REPTILE		1	4	0	5	0	0	0	0	0	0	0	0	0	1	5
	MAMMALS																
1	Sloth Bear	<i>Melursus ursinus</i>	0	2	0	2	0	0	0	0	0	0	0	0	0	2	2
2	Black Buck	<i>Antelope cervicapra</i>	22	28	5	55	0	0	21	0	0	0	0	5	3	5	63
3	Indian Hog deer	<i>Axis porcinus</i>	3	9	3	15	0	0	7	0	0	0	0	1	1	1	19
4	Northern plain Gray Langur	<i>Semnopithecus entellus</i>	1	5	4	10	0	0	1	0	0	0	0	0	1	0	10
5	Leopard	<i>Panthera pardus</i>	2	1	0	3	0	0	0	0	0	0	0	0	0	0	3
6	Bonnet Macaque	<i>Macaca radiata</i>	1	4	1	6	0	0	0	0	0	0	0	0	1	0	5
7	Rhesus Monkey	<i>Macaca mulata</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	4
8	Tiger Bengal (Normal)	<i>Panthera tigris tigris</i>	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
9	Tiger Bengal (White)	<i>Panthera tigris tigris</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	TOTAL MAMMALS		31	55	13	99	0	0	29	0	0	0	0	6	6	6	110

OTHER SCHEDULE

S. No	Name of species	Scientific Name	STOCK AS ON		PERIOD 1.04.18 to 31.03.19				STOCK AS ON								
			31.03.2018				BIRTHS	ACQUISITION	DISPOSALS	DEATHS	31.03.2019						
			M	F	U	T	M	F	U	M	F	U	T				
	OTHER SCHEDULE																
	REPTILE																
3	Red-	<i>Trachemys scripta</i>	1	1	0	2	0	0	0	0	0	0	0	1	1	0	2

6	Rose Ring. Parakeet	<i>Psittacula krameri</i>	1 1 0 2	0 0 0	1 0 0	0 0 0	0 0 0	2 1 0 3
7	Red Breasted parakeet	<i>Psittacula alexandri</i>	1 2 0 3	0 0 0	0 0 0	0 0 0	0 0 0	1 2 0 3
8	Red Jungle Fowl	<i>Gallus gallus</i>	5 10 2 17	0 0 4	0 0 0	0 0 0	1 1 4	5 10 0 15
9	Silver pheasant	<i>Lophura nycthemera</i>	2 2 0 4	0 0 0	0 0 0	0 0 0	0 1 0	2 1 0 3
10	Golden pheasant	<i>Chrysolophus pictus</i>	1 0 0 1	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0 1
11	Reeves pheasant	<i>Syrnaticus reevesi</i>	1 2 0 3	0 0 1	0 0 0	0 0 0	0 1 0	1 1 1 3
12	Lady Amherst pheasant	<i>Chrysolophus amherstiae</i>	1 1 0 2	0 0 0	0 0 0	0 0 0	1 0 0	0 1 0 1
13	Ring nacked pheasant	<i>Phasianus colchicus</i>	1 2 0 3	0 0 2	0 0 0	0 0 0	1 1 1	0 2 0 2
14	Emu	<i>Dromaius novaehollandiae</i>	5 8 0 13	0 0 0	0 0 0	0 0 0	1 1 0	4 7 0 11
15	Ostrich	<i>Struthio camelus</i>	0 1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 1 0 1
16	Sulphur crest. Cockatoo	<i>Cocatoe galarita</i>	2 1 0 3	0 0 0	0 0 0	0 0 0	0 0 0	2 1 0 3
17	African Grey Parrot	<i>Psittacus erithacus</i>	2 2 0 4	0 0 0	0 0 0	0 0 0	0 0 0	2 2 0 4
		TOTAL	27 36 29 92	0 0 13	1 2 0	0 0 0	4 6 8	25 34 31 90

INVENTORY OF ANIMALS LISTED IN OTHER SCHEDULES OF ACT & EXOTIC

S. No	Name of species	Scientific Name	STOCK AS ON		PERIOD 1.04.18 to 31.03.19				STOCK AS ON												
			01.04.2018				BIRTHS	ACQUISITION	DISPOSALS	DEATHS	31.03.2019										
			M	F	U	T	M	F	U	M	F	U	T								
BIRDS																					
B/F			27	36	29	92	0	0	13	1	2	0	0	0	4	6	8	25	34	31	90
18	Rosy Pelican	<i>Pelecanus Onocrotalus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
19	Grey Lag Goose	<i>Anser anser</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
20	Bengal Eagle owl	<i>Bubo begalensis</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
21	Zebra Finch	<i>Taeniopygia guttata</i>	0	0	22	22	0	0	2	0	0	0	0	0	0	0	6	0	0	18	18
22	Budgerigar	<i>Melopsittacus undulatus</i>	0	0	12	12	0	0	0	0	0	0	0	0	0	0	9	0	0	3	3

23	Love Bird	Agapornis roseicollis	0 0 0 0	0 0 0	0 1 0	0 0 0	0 0 0	0 0 1 1
24	Guinea Fowl	Numida meleagris	0 0 7 7	0 0 2	0 0 0	0 0 0	0 0 6	0 0 3 3
		TOTAL	29 37 71 137	0 0 17	1 3 0	0 0 0	4 6 29	27 35 57 119

ANNUAL MORTALITY REPORT (Deaths during 2018-19)

SI.No	Name of animal	Scientific name	Sex	Date of death	Reason of Death
	Mammals				
1	Cheetal	<i>Axis axis</i>	Male	15.04.18	In-fight injury and internal haemorrhage
2	Barking deer	<i>Muntiacus muntjack</i>	Male	25.04.18	In-fight injury and septcaemia shock
3	Cheetal	<i>Axis axis</i>	Male	29.04.18	Internal haemorrhage caused due to in-fight injury.
4	Black buck fawn	<i>Antilope cervipra</i>	Male	14.05.18	Internal haemorrhage, Chest injury due to in-fight
5	Barking deer	<i>Muntiacus muntjack</i>	Female	18.05.18	Chest injury and eneritis
6	Black buck fawn	<i>Antilope cervipra</i>	Male	7.06.18	Open wound in the injunal area-lead to septicaemia
7	Black buck fawn,	<i>Antilope cervipra</i>	Male	9.06.18	Maternal rejection
8	Barking deer	<i>Muntiacus muntjack</i>	Male	9.06.18	In-fight fatal injury
9	Cheetal	<i>Axis axis</i>	Male	20.07.18	In-fight injury and septcaemia shock
10	Indian Hog Deer	<i>Axis porcinus</i>	Male	28.08.2018	Cardio-respiratory failure after thoracic injury
11	Indian Hog Deer	<i>Axis porcinus</i>	Female	1.09.2018	Internal haemorrhage and septicaemia due to in-fight injury
12	Black buck (Fawn),	<i>Antilope cervicapra</i>	Female	7.10.18	Maternal rejection
13	Barking deer	<i>Muntiacus muntjack</i>	Female	7.10.18	In-fight injury lead to spticaemia and death
14	Hog deer (Fawn)	<i>Axis porcinus</i>	Female	11.10.18	Naval ill and opmhalitis
15	Black buck (Fawn)	<i>Antilope cervicapra</i>	Male	11.10.18	Unknown etiology
16	Black buck	<i>Antilope cervicapra</i>	Male	13.10.18	Senilty , old age organ failure
17	Cheetal	<i>Axis axis</i>	Male	30.10.18	Capture mayopathy
18	Cheetal	<i>Axis axis</i>	Female	15.11.18	Foeta death and septicaemia of dam
19	Black buck	<i>Antilope cervicapra</i>	Male	16.11.18	Multi-organ failure due to old age
20	Black buck (Fawn)	<i>Antilope cervicapra</i>	Female	19.11.18	Internal haemorrhage and neck injury due to in-fight
21	Black buck (Sub adult)	<i>Antilope cervicapra</i>	Female	25.11.18	Cold expose and pneumonia
22	Nilgai calf (day old)	<i>Boselaphus tragocamelus</i>	Male	6.12.18	Urine retainsion
23	Black buck	<i>Antilope cervicapra</i>	Female	26.12.18	Cold expose and pneumonia
24	Barking deer	<i>Muntiacus muntjack</i>	Male	26.12.18	Internal haemorrhage cause by accompanying male
25	Bonnet Monkey	<i>Macaca radiata</i>	Female	1.01.19	Acute RTI , due to cold expose, poor immunity and old age
26	Hanuman Langoor	<i>Semnopithicus</i>	Female	4.01.19	Cardio-respiratory failure

		<i>entelus</i>			predisposed with cold expose
27	Sambhar deer, fawn	<i>Cervus uniclor</i>	Female	9.01.19	Cold expose and pneumonia
28	Black buck (Fawn),	<i>Antilope cervicapra</i>	Male	16.02.19	Died due to exposure to rain and hail storm
29	Black buck (Fawn)	<i>Antilope cervicapra</i>	Male	18.02.19	Maternal rejection
30	Cheetal	<i>Axis axis</i>	Male	24.02.19	Pulmonary T.B
31	Porcupine	<i>Hystrix indica</i>	Male	4.03.19	Cardiac arrest
32	Albino Buck	<i>Antilope cervicapra</i>	Female	24.03.19	Internal haemorrhage, dystocia and shock
	Birds				
1	Red Jungle fowl (chick)	<i>Gallus gallus</i>	Male	4.04.18	Congenital defective born
1,A	Zebra finch	<i>Taeniopygia guttata</i>	unsexed	15.04.18	Unknown etiology
2	Cockatiel	<i>Nymphicus hollandicus</i>	Female	25.04.18	Enteric infection
3	Guinea fowl	<i>Numida meleagris</i>	female	3.05.18	Enteric infection and shock
4	Cockatiel	<i>Nymphicus hollandicus</i>	unsexed	11.05.18	predation
5	Guinea fowl	<i>Numida meleagris</i>	female	18.05.18	Enteric infection and shock
6	Reeves pheasant	<i>Syrmaticus reevesii</i>	Female	23.05.18	Chronic hepatitis and tumor growth over liver
7	Gunea fowl	<i>Numida meleagris</i>	Male	14.06.18	Necrosis of crop and enteric infection
8	Gunea fowl	<i>Numida meleagris</i>	Male	20.06.18	Necrosis of crop and enteric infection
9	Ring neck pheasnt chick	<i>Phasiunus colchinus</i>	Female	21.06.18	Congenital deformity
10	Pea fowl chick	<i>Pavo cristatus</i>	Female	29.06.18	Pox like wound on on face
11	Pea fowl , chick	<i>Pavo cristatus</i>	Female	3.07.2018	Pox like infection
12	Rain bow lorry chick	<i>Trycoglossus moluccanus</i>	unsexed	9.07.18	predated by Rat snake
13	Red Jungle fowl (chick)	<i>Gallus gallus</i>	Unsexed	11.07.18	Predated by snake
14	Red Jungle fowl (chick)	<i>Gallus gallus</i>	Male	24.07.18	Died due to ascitis
15	Indian Pea Fowl (Juvenile)	<i>Pavo cristatus</i>	Female	5.08.18	Traumatic injury and Shock
16	R.J.Fowl chick	<i>Gallus gallus</i>	Unsex	6.08.18	Congeital defective
17	R.J.Fowl chick	<i>Gallus gallus</i>	male	14.08.18	Congenital defective
18	Indian Pea Fowl	<i>Pavo cristatus</i>	Unsexed	20.08.18	Putrified Carcass cause of death unknown
19	white d Ibis	<i>Threskiornis aethionica</i>	Male	6.09.18	Old age complication
20	Indian Pea Fowl	<i>Pavo cristatus</i>	Female	13.09.18	Infighting
21	Ring Necked Pheasant	<i>Phasiunus colchinus</i>	Male	14.09.18	Internal haemorrhage due to traumatic injury
22	Budgerigar	<i>Melopsittacus undulatus</i>	Male	23.09.18	Enteric infection
23	Lady Amherst Pheasant	<i>Chrysolphus amherstae</i>	Male	30.09.18	Multi organ failure and Respiratory distress
24	Guinea fowl -2 nos		unsexed	1.10.18	Predation
25	Budgerigar	<i>Melopsittacus undulatus</i>	Male	20.10.18	Hepatitis
26	Budgerigar	<i>Melopsittacus undulatus</i>	Female	23.10.18	Enteric infection
27	Budgerigar	<i>Melopsittacus undulatus</i>	Female	27.11.18	Cold expose
28	Budgerigar	<i>Melopsittacus</i>	Male	11.12.18	Respiratory tract infection

		<i>undulatus</i>			
29	Zebra finch	<i>Taeniopygia guttata</i>	Unsexed	16.12.18	Died due predation
30	Budgerigar	<i>Melopsittacus undulatus</i>	Unsexed	21.12.18	Pneumonia and cold expose
31	Budgerigar	<i>Melopsittacus undulatus</i>	Male	24.12.18	Cold expose
33	Zebra finch-2	<i>Taeniopygia guttata</i>	unsexed	29.01.19	Cold expose
34	Budgerigar-2	<i>Melopsittacus undulatus</i>	Female	29.01.19	Cold expose
35	Red Jungle fowl	<i>Gallus gallus</i>	Female	30.01.19	Tumor growth in the abdomen
36	Emu	<i>Dromaius novaehollandiae</i>	Male	28.02.19	Exposer to hailstorm and rain ,
37	Japnise quail	<i>Cotornix coturnix japonica</i>		1.03.19	Cold Expose
38	Ring necked pheasant	<i>Phasiunus colchinus</i>	Female	2.03.19	Tumor growth in the abdomen
39	Silver pheasant	<i>Lophuran nictamera</i>	Female	6.03.19	Hepatitis, Enlargement of liver (ALC)
40	Zebra finch-2	<i>Taeniopygia guttata</i>	Unsexed	19.03.19	Predation
41	Emu	<i>Dromaius novaehollandiae</i>	Male	21.03.19	Hepatitis
	Reptiles				
1	Indian Star tortoise	<i>Goechen elegans</i>	Female	10.0918	Egg bound condition
2	Indian Star tortoise	<i>Goechen elegans</i>	Unsexed	18.10.18	Died due to season change , (New hatchling)



**STATUS OF COMPLIANCE W.R.T CONDITIONS CONVEYED BY CENTRAL ZOO
AUTHORITY VIDE THEIR LETTER NO.19-47/92-CZA(52)(VOL.V)/735/2017 DATED
03/04/2017**

S.No.	Norm No.	Violation of Recognition of Zoo Rules, 2009	Status of compliance as on 31/03/2019
(1) General requirements			
1	10.1(9)	The Guinea fowls housed next to Red jungle fowl aviary should be removed from the zoo.	Request to retain Guinea Fowl submitted to CZA vide letter dated 04/04/2013 & 09/06/2017. Reply still awaited. Not done
(3) Development and Planning			
2	10.3(6)	The Zoo has not adopted population control measures for the excess population of herbivores (Spotted deer & Blackbuck). Efforts should be made to control their population immediately.	Population control measures are underway. 6 male spotted deer have been sterilized.
(4) Animal housing, display of animals and animal enclosures			
3	10.4(2)	The present area (3.5 Hectares) of the Herbivore Safari does not meet minimum specification of the Central Zoo Authority. The Zoo should increase the area of the Herbivore Safari to 30 Hectares.	Area for increasing the space of safari park does not exist. Zoo Master plan is being revisited to accommodate individual species in separate enclosure.
4	10.4(2)	Enclosure for Rhesus macaque does not meet the minimum dimension requirement as of prescribed by the CZA. The same should be provided with the size as prescribed by the CZA.	Zoo Master plan is being revisited. New enclosure design has been approved by CZA.
5	10.4(3)	A rusted frame made of metal lying inside the enclosure for Common Langur should be removed as it may injure the animals housed therein. Instead the Zoo may provide large wooden logs.	Done
(9) Acquisition and breeding of Animals			
6	10.9(3)	The Zoo should find appropriate mate for single Hippo & Mugger. They should either be paired or be sent to nearby recognized Zoos on breeding loan.	Proposal with other Indian zoos being explored for pairing.

S.No.	Norm No.	Violation of Recognition of Zoo Rules, 2009	Status of compliance as on 31/05/2018
(2) Administrative and staffing pattern			
7	10.2(2)	It is understood that the Zoo is in the process of appointing the Junior Veterinary Officer. It is suggested that while appointing the Veterinary Officer, preference should be given to those who have experience in Wildlife & Zoo Animal Management.	The post was filled up as per the guideline (September-October2018). Currently vacant.
(3) Developing and Planning			
8	10.3(5)	The natural landscape of the Zoo and animal enclosures should be kept clean in such a way that hygiene at the Zoo is not affected.	On going
9	10.3(6)	The Rhesus macaque and Common Langur housed at the Zoo should be provided animals enclosure of the dimension as prescribed by the CZA else these animals may be shifted to a recognized Zoo after screening their health and following the protocols and prior approval from CZA.	Master plan is being revisited. New enclosure design has been approved by CZA. Feeding cells of Common langur has modified to meet CZA standard.
10	10.3(7)	The isolation and Quarantine wards should be improved with respect to space and hygiene.	Not done
(4) Animal housing, display of animals and animal enclosures			
11	10.4(1)	Animal houses of Zebra and Blackbuck towards the visitor's pathway should be camouflaged by planting trees, bushes and climbers.	On going. Climbers' planted for camouflage landscapes.
12	10.4(1)	The Night house in the enclosure for Spotted deer is visible to the visitors. It should be screened by planting appropriate trees/shrubs.	The enclosure is used by the black bucks (Albino). Effort to camouflage the house with unpalatable climbers.
13	10.4(1)	The Keeper's entry to enclosure for the Barking deer and Hog deer has been provided on front side towards the visitors viewing side. The same should be shifted away from visitors' pathway.	Partial compliance made
14	10.4(1)	The Machan restaurant which is not in operation, it should be covered suitably to avoid unpleasant look to the visitors.	Covered as suggested

S.No.	Norm No.	Violation of Recognition of Zoo Rules, 2009	Status of compliance as on 31/05/2018
15	10.4(1.3 & 9)	Rusted chain-link steel pipes, stand-off barriers used at various enclosures and aviaries should be repaired/replaced and painted with olive green colour. The stand-off barrier should follow a uniform design in the Zoo.	Done
16	10.4(2)	Old abandoned aviary next to enclosure for Capuchin monkey should be demolished.	Done
17	10.4(2)	Kraal of the African lion (40 Sq. mtrs.) and Bengal tiger (64 Sq. mtrs.) are very small. Its size should be increased to at least 100 Sq.mtrs. As per CZA's norms. Further Zoo may opt for construction of additional Kraals since it was seen that Zoo is housing 2 -4 animals together in a Kraal.	Not done. Space not available.
18	10.4(2)	Kraal in the enclosure for Sloth bear should have adequate sun light and aeration.	Done
19	10.4(3)	Pots made of Plastic used in the Zoo to provide food & drinking water to the animals should be replaced.	Done
20	10.4(3)	Gharial and Muggler enclosures as well as others should be planted with live plants, bushes & grass of various species as per physical need of the animals housed therein. These enclosures should be filled with additional sand/soil for basking preferably around the water pool to facilitate easy climbing of animal from the water body.	Done
21	10.4(3)	Keeper's entry gate provided towards visitor's side in most Herbivore enclosures may be shifted to an appropriate place away from visitors' reach.	Not done
22	10.4(6)	New aviaries for Pheasants constructed in the Zoo may be provided with appropriate size wooden logs as an enrichment of the pheasants.	Done
23	10.4(6)	The iron pipes used in aviaries either to be covered by jute rope or should be replaced with Bamboo or Wooden logs.	Done
24	10.4(6)	The new aviaries constructed at the Zoo to house exotic birds should be provided adequate enrichment artefacts.	Done
(5) Upkeep and healthcare of animals			
25	10.5(2)	The feed trough provided to the Ostrich is too high. The height of the same should be reduced.	Done

CAMPUS WILD ANIMAL DIVERSITY -LIST OF WILD ANIMALS FREELY LIVING

Mammal diversity:

- Jungle cat
- Palm civet
- Lesser bandicoots
- Indian Grey mongoose
- Indian Flying Fox
- Indian palm squirrel

Bird Diversity:

Red Vented Bulbul	Green Bee-Eater
Red whiskered bulbul	Black Drongo
Grey Partridge	Magpie Robin
Stone Curlew	Spotted Dove
Purple Sunbird	Ring Necked dove
Hoopoe	Spotted munia
Golden Oriole	Rock Pigeon
Coppersmith Barbet	Little Cormorant
Common Mynah	Darter
Asian pied starling	White Breasted Water Hen
Brahmny Mynah	Lesser whistling teal
Small blue kingfisher	Common Coot
White Breasted Kingfisher	Bronze winged Jacana
Asian Koel	Pond heron
Common Crow	Night heron
Crow Pheasant	Cattle egret
Baya	Little Egret
Pariah Kite	Indian peafowl
Rose ring Parakeet	

Reptile Diversity:

- Indian Rat Snake
- Common krait
- Indian rock python
- Common trinket
- Indian cobra
- Checkered keelback
- Indian soft-shell turtle
- Bengal Monitor lizard