

TATA STEEL ZOOLOGICAL PARK

Annual Report 2019-2020



ANNUAL REPORT- 2019-20

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टाटा स्टील जूलाँजिकल पार्क

(टाटा स्टील जूलाँजिकल सोसायटी का एक घटक निकाय)

जुबिली पार्क, जम्शेदपुर-८३१००१ (झारखण्ड)

TATA STEEL ZOOLOGICAL PARK

(A constituent body of Tata Steel Zoological Society)

Jubilee Park, Jamshedpur-831001(Jharkhand)

REPORT OF THE DIRECTOR

Greetings to our Friends & Supporters,

Tata Steel Zoological Park completed 25 years of its being in operation in Jamshedpur. Though these were all challenging years, the quest to achieve perfection didn't have an ending and we kept on striving to do better every year, as we have always done.

2019-20 too had the ups and down moments, but our main goal remained towards providing best of care to our over 400+ captive wild inmates and their security, visitor satisfaction as well as driving home the message of wildlife conservation through year round awareness and educational programs.

The Central Zoo Authority deputed a two-member team comprising of Dr. Jagdish Kishwan, IFS (Retd.) & Dr. A. K. Sharma Principle Scientist, IVRI (Retd.) for evaluation of our Zoological Park on 11th & 12th February 2020, for purpose of renewal of recognition u/s38H of the Wild Life (P) Act beyond 21/03/2020.

Over and above, the zoo like every year organised Wildlife Week, Keeper talks and Keeper for a day program to generate awareness among the common masses for conservation of Indian Wildlife. Zoo Foundation day, World Environment day, International Day of Biodiversity, Tiger & Vulture Day were also commemorated.

All above activities could not have happened if we did not have the support of entire zoo team. We extend our deepest gratitude to all our officers & staff, volunteers, donors, guests and Members of Board of Tata Steel Zoological Society for continued support.

As per the advisory of the Central Zoo Authority on prevention of spread of novel coronavirus (COVID-19) disease among the visitors and to keep our animals & staff safe, we closed the zoo for visitors from 17th March 2020. The entire zoo team since then has been putting in a comprehensive strategy to keep all our animals well cared, staff safety and overall, the resources carefully managed.

We do not know when we will open again, but we would like you to continue your support for the wild world we all depend upon. Until then, thankyou for your unwavering support and commitment to Tata Steel Zoological Park.

With sincere gratitude,

(Bipul Chakrabarty)

Director

Tata Steel Zoological Park

Tata Steel Zoological Park (Zoo) which lies within the heart of the beautiful, green city of Jamshedpur (Jharkhand) was established in 1990. Zoo is operated by Tata Steel Zoological Society, an NGO fully supported by Tata Steel Limited. The Society is registered under Societies Registration Act, Govt. of Jharkhand and as a 'Charitable' institution under section 12AA of the Income Tax Act.

Zoo was formally opened for public visitation on 3rd March 1994. The Zoo is recognized as a 'Medium' category zoo by Central Zoo Authority u/s 38H of the Wild Life (Protection) Act, 1972.

The 25 hectares Zoo campus is located between two wetlands on either side, the Subarnarekha River to its north and Jayanti Sarovar to its south; both these wetlands are famous for attracting large number of bird species hence adding to the intrinsic value of fauna. Animal enclosures are thoughtfully positioned to give the best immersive and naturalistic experience to the visitors and the lush environment does justice to the prime goal of preserving animals and helping them propagate in captivity



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.

ABOUT US- ZOO OPERATIONS

The Zoo has a full time 'Director' as the Officer-in-Charge. The functional areas being overseeing day to day Zoo operation & Planning. In discharge of responsibilities, Director is assisted by team of officers and staff, which is explained as below. Director reports to Hon. Secretary, Tata Steel Zoological Society for all purpose.

Deputy Director (Zoo) looks after the Health care of animals. Major activities of the team being health care of animals, food & nutrition & general hygiene of zoo campus. For smooth discharge of responsibilities, Deputy Director is assisted by Asst. Veterinary Officer and a Field Supervisor/Veterinary Assistant. Deputy Director reports to Hon. Secretary, Tata Steel Zoological Society.

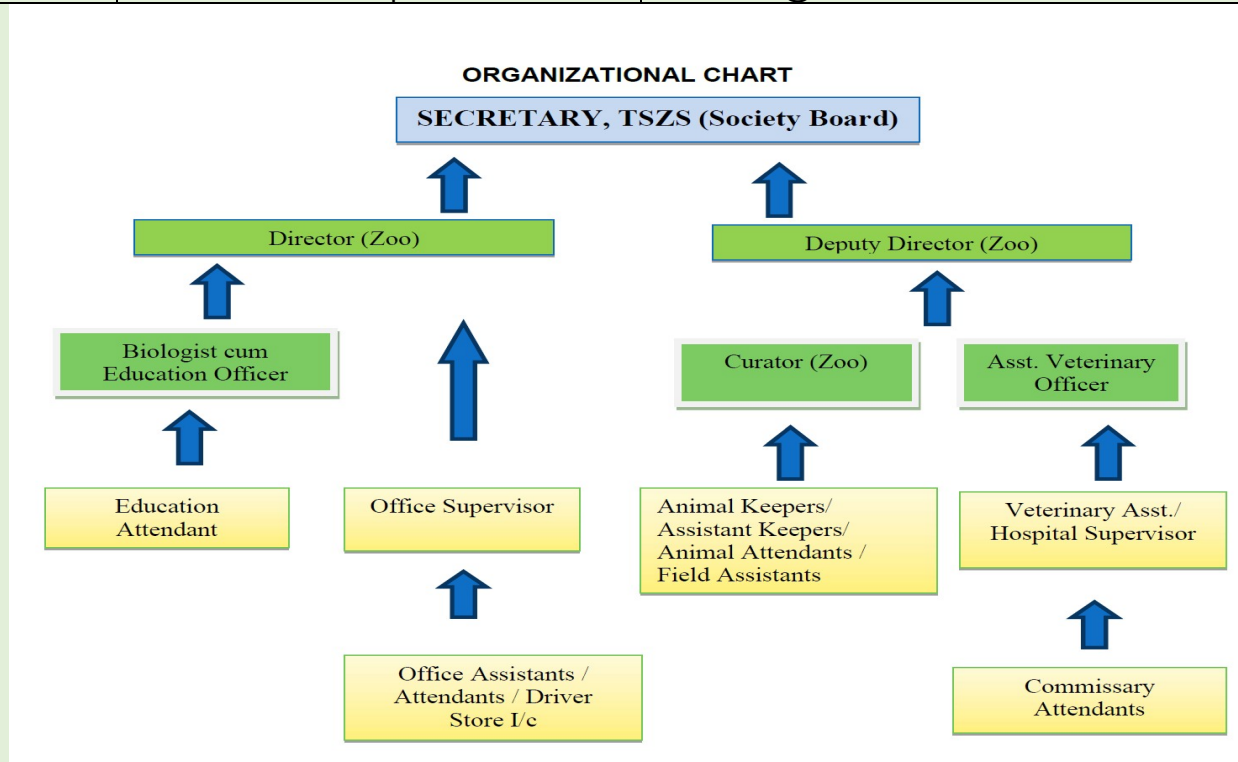
Curator (Zoo) looks after day to day management of captive wild animals, maintenance of their enclosures, enrichment, feeding, disinfection & transportation. Compiling of quarterly and annual animal inventory are also his duties. For smooth discharge of responsibilities, Curator is assisted by a battery of animal Keepers, Asst. keepers, field assistants and animal attendants. Curator reports to the Deputy Director of the Zoo for all purposes.

Biologist cum Education (BEO) officer looks after the Zoo Biology, Education awareness & Research activities. Major work being recording of animal behaviour, maintaining studbooks for endangered animals, organizing education awareness programmes, running of the Nature Education Centre & library. BEO is also responsible for drafting Zoo annual report & press notes. BEO is assisted by an office attendant and volunteers and reports to the Director (Zoo) for all purposes.

Office Supervisor looks after the office administration, accounting, contracts, procurement, stores, ticketing, meetings of the Society & Zoo security. Office Supervisor in discharge of his duties, is assisted by three office Assistants, Accountant and an attendant and reports to the Director for all purpose.

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, East Singhbhum
4	State	Jharkhand
5	Telephone Number	0657-6508011
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
13	Number of Visitors (Financial Year)	Adult :284010

S.No.	Particulars	Information
		Children :83469
		Total Indian: 367578
		Total Foreigners:--Nil
		Total Visitors: 367578
14	Visitors' Facilities Available in Zoo	Shelters, benches, drinking water kiosk, toilets, wheel chair, battery operated vehicle, food & refreshment stalls.
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 Deputy Director	Dr. Manik Palit
	Name of the Veterinary Officer (AVO)	Dr.Rohit Raj
	Name of the Curator	Dr. Sanjay Kumar Mahato
	Name of the Biologist & Education Officer	Dr. Seema Rani
	Name of the Office Supervisor	Mr. Mritunjay Kumar
Owner / Operator of the Zoo		
17	Name of the Operator	President, 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	Mr. Amitabh, Secretary, TSZS & Head, Skills Development, CSR, Tata Steel Limited, 3E Road, Northern Town, Jamshedpur-831001 Tel: 0657-6642438; Mb.8092084774
20	E-mail address of Operator	c.amitabh@tatasteel.com



HUMAN RESOURCE

Sl. No.	Designation	Sanctioned post/posts	Names of the Incumbent
ADMINISTRATION			
1.	Director	One	Mr. Bipul Chakrabarty
2.	Deputy Director	One	Dr.ManikPalit
3	Office Supervisor	One	Vacant
4	Accounts Assistant	One	Mr.Rakesh Munda
5	Sr. Office Assistant	One	Mr. Mritunjay Kumar
6	Office Assistant	Three	Mr. Shyam Ranjan Mahato, Mr. Sunil Kar &Smt.Monalisa Banerjee
7	Sr. Office Attendant	Two	Mr. Pratap Gill & Mr. Kartik Gorai
8	Senior driver	One	Mr. B. N. Mazumdar
CAPTIVE ANIMAL MANAGEMENT & CONSERVATION EDUCATION			
9	Curator	One	Dr. Sanjay Kumar Mahato
10	Biologist cum Education Officer	One	Dr. Seema Rani
11	Asst. Veterinary Officer	One	Dr. Rohit Raj
12	Veterinary Asst. / Field Supervisor	One	Mr. Sushen Chandra Mahato
13	Keeper (Animals)	Four	Mr. Dilip Dey, Mr. S. A. Ansari &Mr.Tarkeswar Ram
14	Asst. Keeper (Animals)	Fourteen	Mr. Sulendra Das; Mr. Bijoy Mukhi; Mr.Binod Sharma; Mr. Surendra Kumar Singh; Mr. Lalan Kumar; Mr. Dinesh Mahato& Mr. Linsa Harpal
15	Field assistant	Two	Mr. Ali Akhtar Khan & Mr. R. Srinivas
16	Animal attendants	Outsourced (Eight)	Smt.Malti Manjhi; Smt.Gyani Devi; Mr. Mazumdar Mahato; Mr. Rajkishor Harpal; Mr. Manoj Nag; Mr.Bharat Chandra Mahato; Mr. Vishal Singh & Mr.Sunny Mukhi

CAPACITY BUILDING

Name and designation of the zoo personnel	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
Dr. Sanjay Kumar Mahato, Curator	Exposure visit for learning best practices of captive animal management & welfare	4 th to 9 th March, 2020	Vadodara & Surat Zoo in Gujarat / Veermata Jijabai Udyan Zoo, Mumbai and Sanjay Gandhi National Park & Safari, Borivilli in Maharashtra

ZOO ADVISORY COMMITTEE

The Zoo Advisory committee was reconstituted on 03/10/2019. 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	Capt. Amitabh- Head, Skill development, CSR, 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, TSUISL	Member
7	Mr. Sanjay Kumar- Head, HR, Tata Steel	Member
8	Mr. Siddhartha Gupta-Sr.Mgr., Legal Services, Tata Steel	Member
9	Mr. Amresh Sinha- Sr.Mgr.Corp. Communication, Tata Steel	Member
10	Mr.Arun Kumar Singh, Sr. Manager, Societies, Tata Steel	Member
	Permanent Invitees from Zoological Park	
11	Mr. Bipul Chakrabarty	Director
12	Dr.ManikPalit	Deputy Director

The Zoo advisory committee met on 24/12/2019 for adoption of annual accounts of the Society & annual report. The committee also approved the revised master layout plan of the Zoo for its submission to Central Zoo Authority.

HEALTH ADVISORY COMMITTEE

Zoo Veterinary health advisory committee having following as members met on 23rd& 24th December, 2019.

1	Dr. M. Navin Kumar, Deputy Director (Retd), Nehru Zoological Park, Hyderabad, Telangana	Chairperson
2.	Dr. A.B. Shrivastav, Director (Retd), School of Wildlife Forensic and Health, Veterinary College Jabalpur, M.P	Member
3.	Prof. Niranjana Sahoo, Coordinator, Centre for Wild life Health, College of Veterinary Science and Animal husbandry, OUT, Bhubaneswar, Odisha	Member
4.	Dr.Manik Palit, Deputy Director and Veterinary Officer, Tata Steel Zoological Park, Jamshedpur, Jharkhand	Coordinator

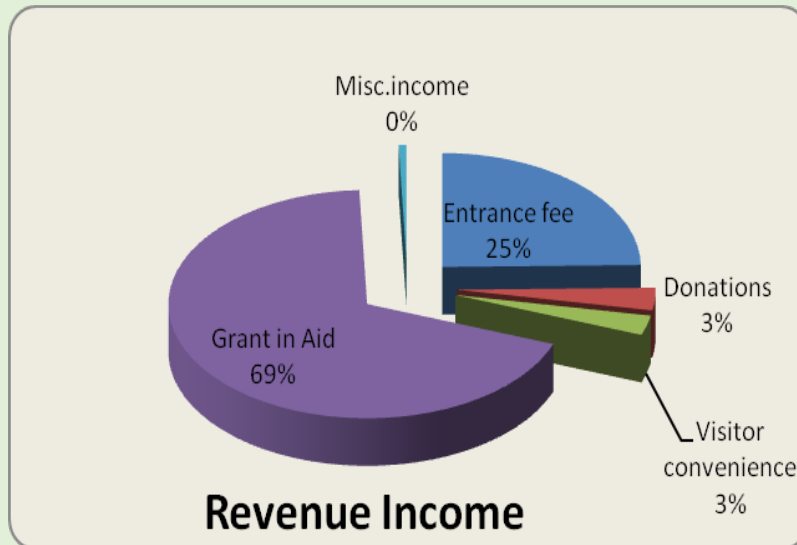
Following was the outcome of the meeting:

- Review of the general health condition of all captive animals in the zoo with officers & staff.
- Treatment of ailing tigress Dona.
- Suggestions on future course of treatment for Leopard Ved.
- Revision of meat quantity for zoo large cats with supplementation of Calcium and Vitamin Ad3 on regular basis.
- Food enrichment in Pheasants and ground birds with commercially available readymade poultry feed and dry fish.
- Veterinarian to make periodical visit to meat vendors place to ensure hygienic processing of meat at the abattoir.
- Planning & augmentation of proposed new Veterinary complex at JUSCO Parks and Garden administrative building site and sharing of the floor plan with the committee before next meeting.

FINANCIAL PERFORMANCE- Statement of Income & Expenditure

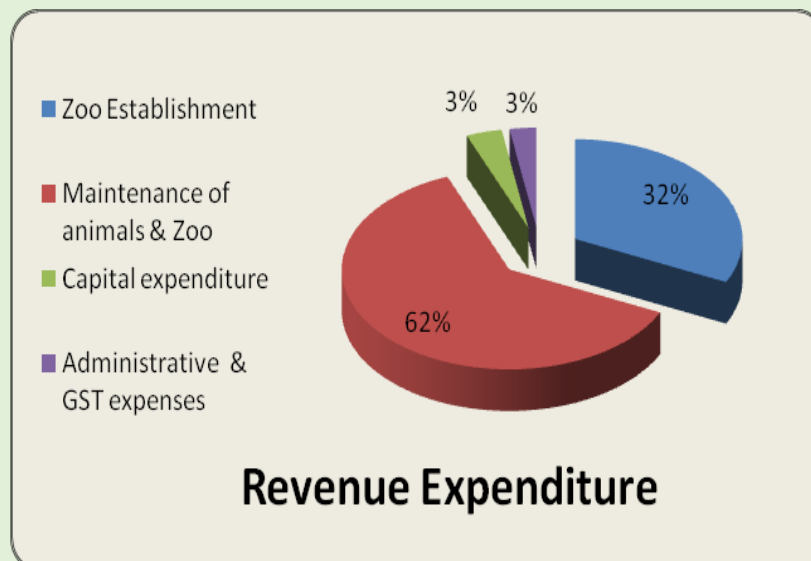
Revenue Income:

Tata Steel Limited during the financial year 2019-2020 provided Grant in Aid of ₹2.72 crores to Tata Steel Zoological Society for annual maintenance & operation of Zoo. The Society through the zoo generated revenue worth ₹1.24 crores. Major revenue earnings were through entry fee, contracts, donations etc.



Revenue Expenditure:

Total amount spent by Tata Steel Zoological Society for running the Zoological Park during 2019-2020 was ₹3.83 crores, major expenditure being on maintenance of captive animals, their enclosures & establishment.



DAILY FEED SCHEDULE OF ANIMALS

Captive Animals are provided with a balanced diet drawn up by Curator, Veterinarian and Biologist of the Zoo. Accordingly, food is prepared and distributed on daily basis by animal keepers. All large cats are put on a day's fast every Monday. Details of food provided are given below:

Sl	Name of Animal	Diet Prescribed for each animal	Quantity
BIRDS			
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	Budgerigar/ Finches	China dana with paddy 10%	10gms
		Green Veg. leaves per group/ cell	50 gms
		Bajra	5 gms
		Sunflower seeds/ Kusum seeds per group/ cell	30 gms
5	Love birds	China dana with Paddy 10%	30 gms
		Bajra	10 gms
		Sunflower seeds/ Kusum seeds	10 gms
		Banana / Papaya	10 gms
6	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
7	Ostrich	Mix Grain	2.5 kg
		Banana	2 ps
		Boiled eggs	1 ps
		Green Vegetable Leaves	250 gms
8	Emu	Mix Grain	1.5 kg
		Boiled Egg (Seasonal)	1 pc
		Banana	2 pc
		Green Vegetable Leaves	250 gms
		Green Grass	Ad Lib
9	Bar Headed Goose	Paddy	100 gms
		Polished Rice	100 gms
		Green Vegetable Leaves	150 gms
		Green Grass	Ad Lib
10	White Ibis	Fish (dead)	200 gms
11	Rosy Pelican	Fish (dead)	300-500 gms
12	Bengal eagle owl	Meat (Boiled)	100 gms

WORLD OF PARROTS				
1	Parakeets	Soaked Gram (Chana)	25 gms	
		Morning 9.00 a.m.	Groundnut	25 gms
	Forenoon 11.00a.m–12 noon		Sunflower, Kusum Seeds (Seasonal)	10 gms
			Germinated Green Gram (Moong)	10 gms
			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	Foxtail Millet (Cheena Dana) with 10% Paddy Whole	10 gms	
		Morning 9.00 a.m.	Sunflower, Kusum Seeds (Seasonal)	10 gms
			Germinated Green Gram (Moong)	10 gms
	Forenoon 11.00am –12 noon		Carrots / Beetroot	10 gms
			Seasonal Fruit / Peas	5 gms
			Banana	10 gms
			Soaked Gram (Chana)	25 gms
3	Cockatoo	Soaked Gram (Chana)	50 gms	
		Morning 9.00 a.m.	Groundnut	50 gms
			Sunflower, Kusum Seeds (Seasonal)	20 gms
			Germinated Green Gram (Moong)	10 gms
	Forenoon 11.00am – 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	Rainbow Lorikeet	Milk	30 ml	
		Honey	2.5 ml	
		Cerelac	10 gms	
		Banana/ Papaya/ Watermelon	20 gms	
REPTILES				
1	Indian 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 (Goat meat)- Alternate day	0.500gms-1Kg	
		Meat (Goat meat): Winter (Alternate day)	0.500 gms	
3	Gharial	Fish (dead) – Alternate day	500 gms	
		Fish (dead) –Winter (Alternate day)	250-500 gms	

MAMMALS			
1	Nilgai & Sambar	Concentrated Mixture	1.5 kg
		Chaff (Kutti)	200 gms
		Molasses (Seasonal)	100 gms
		Tree Leaves	Ad Lib
		Green Grass	Ad Lib
2	Spotted Deer, Blackbuck, Barking Deer, Hog Deer	Concentrated Mixture	750 gms
		Chaff (Kutti)	100 gms
		Molasses (Seasonal)	50 gms
		Tree Leaves	Ad Lib
		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
		Carrot	100 gms
		Honey / Molasses (Braising of tree branches)	50 gms
		Banana	200 gms
	Afternoon	Boiled rice	750 gms
		Milk	1 litre
		Boiled egg (Seasonal- Winter)	1pc /100 gms
	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
Pumpkin			100 gms
Green Vegetable Leaves			100 gms
6	Macaque (Bonnet / Rhesus):	Banana	100 gms(1 pc)
		9.00 am	Apple
	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
		Citrus fruits (Seasonal)	50 gms
	4.00 pm	Cooked Bread (Chapati)	100 gms
7	Hanuman Langur:	Green Leaves	Ad Lib
		Morning 9.00 am	Banana
	Forenoon 11.00 am	Apple	50 gms (1/2 pc)
		Banana	300 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
	Afternoon 3.00 pm	Tree Leaves	Ad Lib

	Afternoon 4.30 pm	Cooked Bread (Chapati)	100 gms
8	White Throated Capuchin Morning 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
	Forenoon 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
		Boiled Egg	50 gms
		Boiled Snail (2 days a week)	25 gms
Afternoon 4.00 pm	Cooked Bread (Chapati)	100 gms	
9	Mandrill Morning 9.00 am	Banana	100 gms (1 pc)
		Apple	100 gms (1 pc)
		Dog feed	10 gms
	Forenoon 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 (SimlaMirch)	100 gms
		Boiled Egg (once a week, in winter twice a week)	67 gms (1 pc)
Afternoon 2.00-3.00 pm	Cooked Mixed Grain Bread (Chapati)	50 gms	
Afternoon 4.00 pm	Cooked Rice / Kichri (rice, dal, turmeric powder, salt) on alternate day	400 gms	
	Groundnut (whole) / Sunflower seeds	50 gms	
10	African Lion Male	Goat meat (6 days in a week)	6-8 Kg
		Winter- Goat Meat (6 days in a week)	8-10 Kg
	Female	Goat meat (6 days in a week)	6-7 Kg
		Winter- Goat Meat (6 days in a week)	6-8 Kg
11	Bengal Tiger Male	Goat meat (6 days in a week)	6-8 Kg
		Winter- Goat Meat (6 days in a week)	8-10 Kg
	Female	Goat meat (6 days in a week)	6-7 Kg
		Winter- Goat Meat (6 days in a week)	6-8 Kg
12	Leopard Male	Goat meat (6 days in a week)	2 Kg
		Chicken (6 days in a week)	1.0 Kg
		Winter- Goat Meat (6 days in a week)	2-2.5 Kg
		Chicken (6 days in a week)	1.0 Kg
	Female	Goat meat (6 days in a week)	2 Kg
		Chicken (6 days in a week)	1.0 Kg
		Winter- Goat Meat (6 days in a week)	2-2.5 Kg
		Chicken (6 days in a week)	1.0 Kg
13	Striped Hyena Male	Goat Meat (6 days a week)	2 -2.5 kg
	Female	Goat Meat (6 days in a week)	1.5-2.0 Kg.

14	Grants Zebra		
		Concentrated Mix.	2.750 Kg
		Roughages	3.25 Kg
		Carrot, Sweet Potato/ beat room – 2.00 Kg	
		Grass hey-1.00 Kg	
		Paddy straw- 0.50 Kg	
		Molasses (Winter)-	0.60 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 provide Pork (de-skinned) and chicken to the carnivores as per the prescribed by Vet.

Schedule revised on 07.12.2019, Ref. to the Feed schedule of animals at TSZP dated 14.06.2014 and feed schedule changes by the Vet. Officer time to time is also incorporated.

Vaccination & De-worming Schedule

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

Vaccination Schedule followed for zoo animals are:

#	Species	Diseases covers		Name of the vaccine and	Dose and route	Periodicity	Last done
1	Tiger, Lion & Leopard	Feline Distemper	Calci virus, Herpes virus and Rabies infection	Biofel - PCHR	1.00 ml S/C or I/M	Annual	July 2019
2.	Cloven footed Herbivores	Foot & Mouth diseases	FMD virus	Clovax/ RakchaOvac	2.00 ml S/C or I/M	Every nine month	Only Nilgai Sept 19
3	Large cats	Haemo-protozoan infection	Trypanoso miasis	Triquine injection	2.00-- 3.00 ml for Body weight 100 kg - to 200 kg	Every nine month	16.12.19

De-worming Schedule

#	Species	Drug used	Month
1.	Felines: Tiger, Lion, Leopard, Hyena	1. Combination of Praziquantel, Pyrentel Pamoate and Febental 2. Fenbendazole and Praziquantel	May-19, June-19, July-19, Oct19, Nov19, Feb-2020
2.	Sloth bear	1. Albendazole 2. Fenbendazole	May-19, June-19, Nov-19 and Dec-19, March-2020
3.	Herbivores Hippopotamus, Deer, Antelope Zebra	1. Albendazole 2. Fenbendazole 3. Oxytoclozanide 4. Ivermectine oral	May-19, July-19, Aug-19, Oct19, Dec -19, Feb-2020
4	Primates: Mandrill, Macaques, Capuchin monkey, Langur	1. Albendazole 2. Fenbendazole	May-19, Aug-19, Sept19, Dec-19, Feb-2020
5.	Peafowl, Ostrich, Emu, Duck, Pelican, Goose, Jungle fowl, Pheasant, Parakeet, Guinea fowl and Small birds	1. Albendazole 2. Fenbendazole and Praziquantel	Aug-19, Sept-19, Oct-19, Feb-2020
6.	Mugger Crocodile, Gharial and Indian Star tortoise	1. Fenbendazole and Praziquantel 2. Albendazole	Sept-19, Feb-2020

Disinfection Schedule

Curator (Zoo) in consultation with the veterinarian draws up the annual schedule for disinfection of all animal enclosures. Nimyl solution (neem & eucalyptus oil-based disinfectant) is used for cleaning the feeding cells. In open exhibit area lime and turmeric powder are spread adlibitum. Details of the schedule are provided below:

Disinfection / Cleaning Schedule of Zoo Animal Enclosures

#	Species	Type of Enclosure	Disinfectant used and Methods	Frequency of Disinfection
1	Hippopotamus	Wet moat open enclosure	a) Change of water of wet moat	Weekly
			b) Removal of dung & silt, Lime spreading in moat & enclosure	Monthly
			c) Tall grass cutting in display area	As per requirement
2	Monkeys & Macaques	Wet moat open enclosure and Closed enclosure	a) Lime –bleach spreading in and around enclosure	Weekly
			b) Cleaning of night shelter & cell with lime-bleach	Fortnightly
			c) Sterilization of cells with blow lamp	Monthly
			d) Cleaning of wet moat of Capuchin enclosure	Alternate month
			e) De-silting of wet moat (Langur and Mandrill)	As per requirement
			f) Tall grass cutting and removal in display area (Langur)	As per requirement
3	A. Birds & Pheasants	Closed Aviaries	a) Lime spreading around cells (Out side enclosure)	Weekly
			b) Cleaning of cells with Kohrsolin	Monthly
			c) Turning of soil inside the cells	Monthly
	B. Aquatic birds	Closed enclosure- Chainlink Covered	a) Lime-bleach spreading in and around enclosure	Weekly
			b) Change of water	Monthly
			c) De-silting of pond	As per requirement
4	Deer & Antelope	Open enclosure with chainlink fence	a) Cleaning of enclosure and spreading of lime/bleach	Weekly
			b) Removal of dung from enclosure	Monthly
5	Bear	Dry moat open enclosure	a) Cleaning of cells with lime/Kohrsolin	Weekly
			b) Lime bleach spreading in and around enclosure	Weekly
			c) Sterilization of cells with blow lamp	Monthly
			d) Bush (tall grass) cutting in display area	As per requirement

#	Species	Type of Enclosure	Disinfectant used and Methods	Frequency of Disinfection
6	Lion, Tiger, Leopard & Hyena	Dry moat open enclosure, Wet moat open enclosure, Closed enclosure with chainlink covered, Dry moat open enclosure respectively.	a) Cleaning of cells with lime-bleaching/Kohrsolin	Weekly
			b) Lime –bleaching spreading in and around enclosure	Weekly
			c) Sterilization of cells with blow lamp	* Weekly
			d) Bush (tall grass) cutting of enclosures	As per requirement
			e) Cleaning of tiger moat	As per requirement
7	Zebra	Open enclosure with chainlink fence	a) Lime –bleach spreading in and around enclosure	Weekly
			b) Cleaning of night shelter & cell with lime-bleach	Fortnightly
			b) Removal of dung from enclosure	Monthly/as per requirement
			f) Tall grass cutting and their removal in display area	As per requirement
8	Mugger & Gharial	Open enclosure with wall and chainlink fence	a)Change of pond water	Monthly
			b) Lime powder spreading around enclosure	Weekly
			c) de-silting of pond	As per requirement
			d) Tall grass cutting/ bush cutting	As per requirement
9	Ostrich & Emu	Open enclosure with chainlink fence	a)Removal of dung	Monthly
			Lime /Bleach spreading in and around enclosure	Weekly
			Tall grass cutting	As per requirement
10	Deer safari	Open enclosure with concrete wall fence	a) Lime spreading around feeding pots & on dung	Fortnightly
			a) Cleaning of Drink water pool with lime-bleach	Monthly
			b) Tall grass/Bush cutting	As per requirement
11	Indian Star Tortoise	Closed enclosure with chain link and welded mesh fence	Lime spreading around (Outside) enclosure	Weekly
			Cleaning of encl. and Turning of Soil	Monthly
12	Butterfly Park	Closed enclosure with agronet covered	Lime spreading in & around the Centre.	As per requirement
13	Herbivores & carnivores	As mentioned above for respective animals	Turning of Soil of display area	Once in 5 years/ as per requirement
14	Large cats	As mentioned above for respective animals	Burning of display area	Yearly

Health check-up of Zoo Employees

All zoo employees including contractual staff are subjected an annual medical examination. During the year under report, medical examination of all zoo personnel including laboratory tests for their sputum, faeces, blood & X-Ray of chest (PA view) was carried out between 27th August to 9th December, 2019. Outcome of health examination is provided below.

HEALTH CHECK-UP OF EMPLOYEES FOR ZOO NOTIC DISEASES - 2019			
Date-09-12-2019			
#	Name	Designation	Findings of Health Check up
1	Mr. Bipul Chakrabarty	Director	No abnormal findings, free from zoonotic disease
2	Dr.M.Palit	Dy. Director	No abnormal findings, free from zoonotic disease
3	Dr. Sanjay Kumar Mahato	Curator	No abnormal findings, free from zoonotic disease
4	Dr. (Mrs.) Seema Rani	Biologist cum Education Officer	No abnormal findings, free from zoonotic disease
5	Mr. S.C.Mahato	Field Supervisor	No abnormal findings, free from zoonotic disease
6	Mr. M.Kumar	Office Supervisor	No abnormal findings, free from zoonotic disease
7	Mr. Sunil Kar	Office Asst.	No abnormal findings, free from zoonotic disease
8	Mr. R.Srinivasan	Field Asst.	No abnormal findings, free from zoonotic disease
9	Mr. Ali Akhtar Khan	Field Asst.	No abnormal findings, free from zoonotic disease
10	Mr. S.R. Mahato	Office Asst.	No abnormal findings, free from zoonotic disease
11	Mr. Dilip Dey	Keeper	No abnormal findings, free from zoonotic disease
12	Mr. T.Ram	Keeper	No abnormal findings, free from zoonotic disease
13	Mr. S.Ansari	Keeper	No abnormal findings, free from zoonotic disease
14	Mr. Linsa Harpal	Asst. Keeper	No abnormal findings, free from zoonotic disease
15	Mr. Binod Sharma	Asst. Keeper	No abnormal findings, free from zoonotic disease
16	Mr. Vijay Mukhi	Asst. Keeper	No abnormal findings, free from zoonotic disease
17	Mr. Lalan Kumar	Asst. Keeper	No abnormal findings, free from zoonotic disease
18	Mr. Dinesh Mahato	Asst. Keeper	No abnormal findings, free from zoonotic disease
19	Mr. Sulendra Das	Asst. Keeper	No abnormal findings, free from zoonotic disease
20	Mr. S.K.Singh	Asst. Keeper	No abnormal findings, free from zoonotic disease
21	Mr. Pratap SinghGill	Sr. Attendant	No abnormal findings, free from zoonotic disease
22	Mr. KarticGorai	Sr. Attendant	No abnormal findings, free from zoonotic disease
23	Mr. B.N.Mazumdar	Sr. Driver	No abnormal findings, free from zoonotic disease
24	Mrs. Monalisha Banerjee	Store I/C	No abnormal findings, free from zoonotic disease
25	Mr. Rajkishore Harpal	Animal Attendant	No abnormal findings, free from zoonotic disease
26	Mr. Gayani Devi	Animal Attendant	No abnormal findings, free from zoonotic disease
27	Mr. Mazumdar Mahato	Animal Attendant	No abnormal findings, free from zoonotic disease
28	Mr. Manoj Nag	Animal Attendant	No abnormal findings, free from zoonotic disease
29	Mrs. Malti Majhi	Animal Attendant	No abnormal findings, free from zoonotic disease
30	Mr. Rajesh Pal	Animal Attendant	No abnormal findings, free from zoonotic disease
31	Mr. Vishal Singh	Animal Attendant	No abnormal findings, free from zoonotic disease
32	Mr. Bharat Chandra Mahato	Animal Attendant	No abnormal findings, free from zoonotic disease
33	Mr. Sunni Mukhi	Animal Attendant	No abnormal findings, free from zoonotic disease

Sd/-

Dr.P.R.Prem
M.B.B.S (KU)
Reg.No.5631

Medical Officer ADMH, Jamshedpur

DEVELOPMENTAL ACTIVITIES

ANIMAL HABITATS AND UPKEEP

Zoos have traditionally always caught the public eye and hence 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 and inevitable.

During the year under report, the following activities were taken up as part of improving upon the welfare of captive animals:



- Throughout the year's schedule, cleaning and disinfection of animal enclosures like spreading of lime-bleach around enclosures especially the aviaries and Blow lamp lighting in cells (night shelter/ feeding cells) of Mandrills, sloth bear, primates large cats', enclosures were done.
- Three nos. old aviaries with a new concept (Double layered fence, predation proof) near World of Parrot and Pea fowl enclosure have been renovated. Aviary and Pea fowl enclosure was opened for the visitors after needful habitat enrichment. The zoo aquarium house was also renovated by recreating natural habitat for exotic fishes.
- Strengthening of chain link fence of Tiger enclosure, Hog deer, and Barking deer enclosures for the safety of animals was done.

To meet CZA compliance, Keeper entry gates of Zebra, Black buck, and barking deer enclosure was shifted away from the display area and the standoff barrier of barking deer enclosure was painted with olive green colour



- To provide zoo animal simulated conditions of their natural habitat various ecological enrichment activities were taken up in form of providing wooden logs, perches, potted plants, sowing of crops in the cells, etc. in Pheasantry, World of parrots, Primates & Sloth bear enclosure. The enrichment stimulated more egg being laid by Peacocks.

- This year, to aid in food supply for the captive butterfly more than 1000 new potted larval food plants including Ban Tulsii and Cinnamon, etc were grown in the nursery and provided to the larvae room and the exhibits of butterfly enclosure.
- To beautify the zoo campus around 5000 seasonal flowering plants were planted throughout the zoo premises.



AWARENESS AND EDUCATION-

It has been a constant effort on part of the Zoo to fulfil its primary objective and to meet AICHI TARGET-1 of its strategic plan for Biodiversity Conservation 2011-2020. Our main target group is youth, especially the students of school and colleges for spreading awareness about biodiversity conservation. This year we organised numerous educational programmes with the support of local NGO's and volunteers. Our outreach was more than 27000+ students. Major awareness activities undertaken during the year were: -

a. Earth Day (22nd April): On Earth Day 2019 Tata Zoo organized a workshop on **"Making of Eco-Friendly Nest"** in which more than 70 school children from UMS, Hathinada of Chandil Block participated avidly. The workshop was conducted with the help of Dr. S.K. Mahato, Curator, and Mr. Dilip Day, keeper. Apart from the above activity we also tried to motivate the people of Jamshedpur by urging them to say no to herbicides and pesticides and follow a plant-based diet by developing kitchen garden at a household level. To reduce the use of plastics and promote the recycling and reuse of materials deemed waste, activities like Making of Pots from waste plastic containers etc. were also organized.



b. Biodiversity Day (22nd May): To promote the conservation and sustainable use of biodiversity, our Zoo in association with Artist forum of Jamshedpur, celebrated the International Biodiversity day from 22nd May to 25th May 2019, by organizing 'Art in Nature' workshop cum exhibition on the theme **"Our Biodiversity, Our Food, Our Health"**. Mrs. Purbi Ghosh, Social worker inaugurated the



workshop, and Dr. (Mrs.) Seema Rani, Biologist cum Education officer spoke about the importance of biodiversity with the artists. During the Workshop, artists were able to capture the message which was the interdependency of human well-being and natural biodiversity, and the general public stood awestruck with their exemplary display of skill and mettle on the canvas. Thereafter, The Art and the creations were exhibited on the 25th May which was formally inaugurated by Mr. Amit Kumar Chakrabarti, visual artist, and Ms. Radhika Singh, Hon' Secretary, TSZS.



c. World Environment Day(5th June):

Zoo celebrated "World Environment Day" with a theme of "Air Pollution" on 4th – 5th June in association with NTTF Burmamines and JUSCO School Kadma respectively. To achieve this target, Zoo organized an "Environment Awareness Bicycle Rally" on 4th June which was flagged off by Mr. Amresh Sinha, Sr. Manager, Corporate Communication Tata Steel Ltd & Member, Tata Steel Zoological Society. During this, the students of NTTF, Zoo staff, and others covered 5 km distance with banners and masks spreading the message of our collective fight against air pollution. A total of 54 cyclists participated in the rally.



On the 5th of June, to promote the use of natural colours thereby minimising the environmental pollution due to harmful chemicals used in synthetic paints, an "Eco-friendly Painting Workshop" was organized on tribal art Petkar & Soharai in which a total of around 80 child artists participated.



d. Van Mahotsav(July) : Like every year, Tata Zoo celebrated Van Mahotsav from 1st July to 31st July this year too. During this period, members, local clubs, and NGOs took part in the plantation initiative.

e. International Tiger Day (29th July)

On the occasion of International Tiger Day a plantation programme was organized by Zoo for the children of "Children Correction Home" in association with local NGO 'Sanskriti' at district children home (a sensitive and high-security place), Ghaghidih. Dr. Seema Rani, Biologist cum Education Officer, shared with the participants information on "plantation technique" & Tigers. She said that, where the tigers thrive, it is a sign that the ecosystem is healthy" and explained the symbiotic relationship between plants and animals. A total of 20 plant saplings were planted. The whole activities were supervised by Dr. Chanchal Kumari, District



Child Protection Officer (DCPO).

Apart from above, an awareness rally led by teacher Mrs. Sangita Sarkar of NML, KPS was also organized on "Save Tiger, save yourself" inside Zoo premises at noon. A total of 35 school children and Zoo staff Mr. Pratap Singh Gill participated in the rally with placards and banner.

f. Friendship Day(4th August)

Zoo celebrated "Friendship Day". A total of 75 school children from NML Kerala Public School and underprivileged children from local NGO 'Sanskriti' participated.

The programme kicked off with a pledge by the children to conserve and protect Nature and sustain their friendship" with nature, explaining them the essentialism of this friendship. Further, children tied friendship bands to the trees as a symbolic gesture to save them. Thereafter, a "keeper talk on Mandrill" was organized where the animal keeper Mr. Dilip Day along with his team members briefed about the animal.



g. International Vulture Awareness Day(7th September)

Vulture Awareness Day was organised with the Zoo staff and officers participating in a lecture by Dr. Hishmi Jamil Husain, Head, Biodiversity, Tata Steel Ltd., where he described the current treat being faced by the species and various activities being carried by the different organizations at local and regional levels as well as across the world towards its conservation.



h. Wildlife Week Celebration (30th September onwards)

Wildlife week was commemorated from 30th September to 4th October at Zoo on the theme – "Biodiversity and Nature Conservation".

The celebration commenced with the Inter-School Quiz competition on the 30th of October. Formal inauguration was held on October 1st, at



the Zoo in presence of Dr. Abhishek Kumar, IFS (Divisional Forest Officer, Jamshedpur) and Shri Chandramouli Prasad Sinha, Deputy Conservator of Forest and Field Director, Project Elephant, Jamshedpur. The Celebration witnessed events like- Quiz, Best Eco Club Teacher Award, Essay Competition writing competition, Debate, Fancy

Dress Competition, On the spot painting competition and a total number of around 1600 students across 51 institutions participated in these competitions.

i. International Zoo Educators Day/Children's Day (14th November)

As a part of promoting sustainable living through conservation education programmes, on this occasion, we spent our day educating the visitors and children about our captive animals through the programme "Touch n learn" and empowering them on how they can make positive changes for wildlife and their habitats.



j. Animal Welfare Fortnight

Every year, Tata Zoological Park celebrates, Animal Welfare Fortnight from 16th to 30th January. The celebration was kicked off on 16th Jan 2019 with the "Painting competition" organized by Tata Zoo in association with INTACH and continued till 30th January. Around 275 participants participated from 12 different schools during the fortnight.

k. World Wildlife Day (3rd March)

On the occasion of World Wildlife day this year, Zoo in association with local NGO "Anwasha" organized, a group visit for sr. citizens from 'Ashirvad' Bhawan Old Age Home' under the programme "reaching out to unreachable ones". The theme of this year was "Sustaining all life on Earth". Dr. Seema Rani, Biologist cum Education Officer, Tata Zoo delivered a lecture on "Importance of conservation of wildlife for us with special reference to the captive animals". She also explained to them the relationship between plants, animals and human beings to understand the fact that "saving of one animal can save another." This was followed by "Keeper Talk on Tiger" near Tiger enclosure led by Dr. Sanjay Kumar Mahato Curator, Tata Zoo & the team.



I. Keeper Talk: The Zoo has initiated a 'Keeper talk' programme, which has been continuing successfully since its inception. Last year, a total of 9 keeper talks were organized in which 458 general public /visitors participated. During the talk, animal keepers shared their experiences on the animals they have interacted with.



VISITORS TO ZOOLOGICAL PARK- ONSITE & OFFSITE

During the year under report from 1stApril, 2019 to 31stMarch, 2020, the Zoo was physically visited by 3,67,578 visitors. The Zoo has a website of its own <http://www.tatazoo.com> and a Facebook profile <http://facebook.com/jamshedpurzoo>. These platforms are utilized by the Zoo to engage visitors and convey its mission among the people at large.

SEASONAL MANAGEMENT OF CAPTIVE ANIMALS

To manage the captive inmates as per the local seasonal and environmental changes, every year Zoo has implements three action plans viz; Monsoon Action Plan, Summer Action Plan and Winter Action Plan. The action plans are implemented by the Curator along with his team of staff.



RESEARCH WORK & PUBLICATIONS:

Ms. Shreya Pandey, B.Sc Zoology student from Cooperative college, Jamshedpur started observation on “food intake and behaviour observation of captive animals” since January, 2019.

Title	Where published
Report on Celebration of World Earth Day	Zoo's Print Magazine/Vol.34/No.5/June 2019 & Local NEWS paper
Report on Celebration of International Biodiversity day	Zoo's Print Magazine/Vol.34/No.6/June 2019 & Local NEWS paper
Report on Celebration of World Environment Day	Zoo's Print Magazine/Vol.34/No.7/June 2019 & Local NEWS paper
Report on Celebration of International Tiger Day	Zoo's Print Magazine/Vol.34/No.8/Aug 2019 & Local NEWS paper
Report on Celebration of Friendship Day	Zoo's Print Magazine/Vol.34/No.8/Aug 2019 & Local NEWS paper
Report on Wildlife Week Celebrations	Zoo's Print Magazine/Vol.34/No.11/Nov 2019 & Local NEWS paper

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

ANIMAL ACQUISITION / TRANSFER / EXCHANGE DURING THE YEAR

#	Animals arriving in the Zoo				
	H.NO.	Species	Number (M:F)	From which Zoo / Donor agency	Date of arrival in the zoo
1	N/A	Chital	1(1:0)	Donated by Seraikela Forest Division	07/06/2019
2	N/A	Large Indian parakeet	13(0:0:13)	Donated by Jamshedpur Forest Division, Mango	04/05/2019
3	N/A	Rose ringed parakeet	1(0:0:1)	Donated by Jamshedpur Forest Division, Mango	04/05/2019
4	N/A	Emu	2(1:1)	Donated by Flora Hort. Society, Jamshedpur	25/7/2019
5	N/A	Japanese quails	20(10:10)	Donated by Flora Hort. Society, Jamshedpur	25/7/2019
6	N/A	Java Sparrow	5(0:0:5)	Donated by local citizen in Jamshedpur	26/10/2019

RESCUE AND REHABILITATION OF WILD ANIMALS

The Zoo is situated within the largest Elephant landscape(Central-East) of the country which harbours quite a few reserve forests and wildlife sanctuaries notable among them being the Dalma Elephant Reserve. Thus, the zoo regularly cooperates with the Forest Department in rescue and rehabilitation of wild animals. 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 the Zoo Veterinary Hospital before being rehabilitated back to their wild habitat. List of rescues attended during 2019-20 is provided below:



List of wild/stray animal rescued and rehabilitated during the FY 2019-2020

	Date of rescue	Species with no.of animals rescued with their sex M:F:U	Received from	Date of submission of report to 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	5.04.2019	Pariah Kite 1 unsexed	Tata Steel plant area	Not reported	20.04.2019 released in Zoo campus	Admitted in the zoo hospital for treatment of with wing wound.
2	8.05.2019	Large Indian Parakeet, 1 unsexed	Citizen of Jamshedpur	Not reported	Not rehabilitated	Unable to see, dehydrated and in shock. Admitted for treatment and care at zoo hospital. finally cured but not able to fly and therefore kept in zoo off display.

3	7.06.2019	Chital, 1 male	Rescued from Gamharia block village by Seraikela Forest Division	7.6.2019	11.7.2019 Released in Zoo free ranging herbivore enclosure	Admitted and provided treatment and care, quarantined & finally released in zoo safari area
4	5.07.2019	Rhesus monkey baby , 1, Male	Rescued by Range Forest Office Mango, Jamshedpur Forest Division	Not reported	12/07/2019 After treatment of skin diseases taken back by RFO Mango	Provided treatment for skin diseases
5	9.10.2019	Hanuman Langoor , 1 , male	Stray animal Rescued from zoo as was causing problem to visitor and zoo resident Langoors	9.10.2019	20.10.2019 Released in Dalma area	Captured by chemical immobilization, treated for minor injuries
6	2.11.2019	Bengal owl , 1 male	Umesh Singh , Forest guard , rescued from nearby town area , having complete fracture of wing	2.11.2019	Not rehabilitated	Admitted, started treatment with oral medicine and rehydration along with feeding. The bird was died on the next day
7	15.12.2019	Hanuman Langur, adult , 1 male	DFO Jamshedpur handed over, rescued from nearby village, having complete multiple fracture of left leg(Road accident case)	CZA informed on 17/12/2019	Not rehabilitated	Started treatment in the form of POP casting of injured leg , regular dressing and providing balanced food , The pop plaster was re-plastered as animal removed after one month or so . Finally died on 10.02.2020 due to respiratory distress and pneumonia.

8	25.02.2020	Pariah kite, 1 unsexed	Through DFO, Jamshedpur office	4/3/2020	21.03.2020 released by DFO, Jamshedpur in the Dalma, WLS area	Was unable to fly, dull and dehydrated on the day of admission. Finally cured after treatment and care of 20 days
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ANNUAL INVENTORY:FY19-20 (1.04.2019 to 31.03. 2020)

SCHEDULE I & II																								
Sl. No	Name of species	Scientific Name	Opening Stock				PERIOD 01.04.19 to 31.03.20												STOCK AS ON					
			01.04.2019				BIRTHS			ACQUISITION			DISPOSALS			DEATHS			31.03.2020					
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T		
BIRDS																								
1	Pea Fowl (normal)	<i>Pavocristatus</i>	4	4	2	10	0	0	2	0	0	0	0	0	0	0	0	0	0	1	4	7	0	11
2	Hill myna	<i>Gracula religiosa</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	1	0	1
TOTAL BIRD			4	5	4	13	0	0	2	0	0	0	0	0	0	0	0	0	1	4	8	2	14	
MAMMALS																								
1	Sloth Bear	<i>Melursus ursinus</i>	0	2	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0	3	
2	Black Buck	<i>Antilope cervicapra</i>	20	36	7	63	0	0	37	0	0	0	0	0	0	4	6	14	34	35	7	76		
3	Indian Hog deer	<i>Axis porcinus</i>	4	11	4	19	0	0	12	0	0	0	0	0	0	2	5	5	17	2	24			
4	Northern plain Gray Langoor	<i>Semnopithecus entellus</i>	2	7	1	10	0	0	1	0	0	0	0	0	0	0	0	1	2	7	1	10		
5	Leopard	<i>Panthera pardus</i>	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3		
6	Bonnet Macaque	<i>Macaca radiata</i>	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5		
7	Rhesus Monkey	<i>Macacamulata</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	3	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	1	0	0	2	0	2		
9	Tiger Bengal (White)	<i>Panthera tigris tigris</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1		
TOTAL MAMMALS			32	66	12	110	0	0	50	1	0	0	0	0	0	4	9	20	48	70	10	128		
REPTILE																								
1	Gharial	<i>Gavialis gangeticus</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4		
2	Mugger	<i>Crocodylus palustris</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		
TOTAL REPTILE			1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	5		
TOTAL ANIMALS			37	75	16	128	0	0	52	1	0	0	0	0	0	4	9	21	53	82	12	147		
OTHER THAN SCHEDULE AND EXOTIC																								
Sl. No	Name of species	Scientific Name	Opening Stock				PERIOD 01.04.19 to 31.03.20												STOCK AS ON					
			01.04.2019				BIRTHS			ACQUISITION			DISPOSALS			DEATHS			31.03.2020					
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T		
BIRDS																								
1	Cockateil	<i>Nymphicus hollandicus</i>	0	0	29	29	0	0	4	0	0	0	0	0	0	0	0	8	0	0	25	25		
2	Bar Headed Goose	<i>Anser indicus</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
3	White Ibis	<i>Threskionis aethiopicus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2		
4	Rainbow Lory	<i>Tricoglossus haematodus</i>	1	1	0	2	0	0	2	0	0	0	0	0	1	0	2	0	1	0	1			
5	Larg. Ind. Parakeet	<i>Psittacula cupatrai</i>	3	3	0	6	0	0	0	0	13	0	0	0	1	1	0	13	3	1	17			
6	Rose Ring. Parakeet	<i>Psittacula krameri</i>	2	1	0	3	0	0	2	0	0	1	0	0	0	0	0	2	1	3	6			
7	Red Breasted parakeet	<i>Psittacula alexandri</i>	1	2	0	3	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	0	15	0	0	2	0	0	0	0	0	1	4	1	4	7	0	11			
9	Silver pheasant	<i>Lophuranythemera</i>	2	1	0	3	0	0	0	0	0	0	0	0	2	0	0	0	1	0	1			
10	Golden pheasant	<i>Chrysolophus pictus</i>	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0			
11	Reeves pheasant	<i>Symaticus reevesi</i>	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3		
12	Lady Amherst pheasant	<i>Chrysolophus amherstiae</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		

13	Ring nacked pheasant	<i>Phasianuscolchicus</i>	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
14	Emu	<i>Dromaiusnovaeholla ndiae</i>	4	7	0	11	0	0	3	1	1	0	0	0	0	3	5	0	2	3	3	8						
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>Cocatoegalarita</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						
18	Rosy Pelican	<i>PelecanusOnocrotalus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1						
19	Grey Lag Goose	<i>Anseranser</i>	1	0	0	1	0	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	0	0	1						
21	Zebra Finch	<i>Taeniopygiaguttata</i>	0	0	18	18	0	0	12	0	0	0	0	0	0	0	5	0	0	25	25							
22	Budgerigar	<i>Melopsittacusundulatus</i>	0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1							
23	JawaSprorow	<i>Lonchuraoryzivora</i>	0	0	0	0	0	0	0	0	5	0	0	0	0	0	3	0	0	2	2							
24	Love Bird	<i>Agapornis roseicollis</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0							
25	Guinea Fowl	<i>Numida meleagris</i>	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2							
26	Japanese quail	<i>Coturnix japonica</i>	0	0	0	0	0	0	0	0	20	0	0	0	0	0	14	0	0	6	6							
TOTAL BIRDS			27	35	57	119	0	0	25	1	1	39	0	0	0	10	11	38	29	27	71	12	7					
MAMMAL			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T						
1	Sambar Deer	<i>Cervus unicolor</i>	2	3	0	5	0	0	2	0	0	0	0	0	0	1	0	1	1	3	1	5						
2	Cheetal	<i>Axis axis</i>	23	51	14	88	0	0	39	1	1	0	0	0	0	8	5	4	33	51	28	11	2					
3	Barking Deer	<i>Muniacumuntjack</i>	4	8	1	13	0	0	3	0	0	0	0	0	2	1	1	3	7	2	12							
4	Nilgai	<i>Boselaphustrago camelus</i>	3	3	1	7	0	0	3	0	0	0	0	0	1	0	0	3	3	3	9							
5	Stripped Hyaena	<i>Hyaena hyaena</i>	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3							
6	Hippopotamus	<i>Hippopotamus amphibius</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1							
7	Capuchin Monkey	<i>Cibuscapocinus</i>	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0							
8	Mandrill Monkey	<i>Mandrillus sphinx</i>	5	13	0	18	0	0	0	0	0	0	0	0	1	0	0	4	13	0	17							
9	Porcupine	<i>Hystrixbegalensis</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2							
10	African Lion	<i>Panthera leokruger</i>	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5							
11	Grant's Zebra	<i>Equisbohemi</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2							
TOTAL MAMMALS			45	84	16	145	0	0	47	1	1	0	0	0	14	6	6	51	83	34	16	8						
REPTILE			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T						
1	Red-eared slider turtle	<i>Trachemys scripta elegans</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2							
2	Indian Star tortoise	<i>Goechelon elegans</i>	12	22	0	34	0	0	0	0	0	0	0	0	0	4	0	12	18	0	30							
TOTAL REPTILES			13	23	0	36	0	0	0	0	0	0	0	0	4	0	13	19	0	32								
TOTAL ANIMALS			85	142	73	300	0	0	72	2	2	39	0	0	0	24	21	44	93	129	105	327						

Annual Mortality (2019-20)

Details of Death of Animals from 1.04.2019 to 31.03.2020					
Sl.No	Name of animal	Scientific name	Sex	Died on	Reason of Death
	Mammal			Date	
1	Sambhar Deer	<i>Cervus unicolor</i>	male	6.04.19	Cardio-respiratory failure predisposed with senility
2	Cheetal fawn	<i>Axis axis</i>	Male	24.04.19	Predation in the safari area
3	Black buck fawn	<i>Antelope cervicapra</i>	Male	24.04.19	Predation in the safari area
4	Cheetal	<i>Axis axis</i>	Female	26.04.19	Putrefied carcass, cause of death not arrived
5	Mandrill monkey	<i>Mandrillus sphinx</i>	Male	28.04.19	Internal haemorrhage, trauma caused by dominant male
6	Hog deer Fawn	<i>Axis porcinus</i>	Female	14.05.19	Congenital defective birth, not survived
7	Black buck	<i>Antelope cervicapra</i>	Female	23.05.19	Internal haemorrhage due to in-fight injury
8	Black buck	<i>Antelope cervicapra</i>	Female	29.05.19	Hip joint dislocation during in-fight
9	Black buck fawn	<i>Antelope cervicapra</i>	Female	19.06.17	Died due to heat stroke
10	Black buck fawn	<i>Antelope cervicapra</i>	Female	7.06.19	Internal haemorrhage due to in-fight injury
11	Hog deer fawn	<i>Axis porcinus</i>	Female	11.06.19	Died due to heat stroke
12	Barking deer	<i>Muntiacus muntjack</i>	Male	3.07.19	Chest injury due to in-fight lead to internal haemorrhage
13	Barking deer	<i>Mutiacus muntjack</i>	Male	4.07.19	Was attacked by hog deer male lead to chest injury and shock
14	Hog deer fawn	<i>Axis porcinus</i>	Female	19.07.19	Predated by wild pythone
15	Barking deer	<i>Muntiacus muntjack</i>	Female	26.07.19	Inter haemorrhage due to in-fight injuries
16	Hanuman Langoor	<i>Cemnopethicus entelus</i>	Female	31.07.19	Congenital defective birth
17	Black buck fawn	<i>Antelope cervicapra</i>	Female	8.08.19	Maternal rejection
18	Black buck	<i>Antelope cervicapra</i>	Male	17.08.19	Piercing wound on chest during in-fight
19	Black buck (Fawn)	<i>Antelope cervicapra</i>	Female	20.08.19	Expose to continuous rain after birth
20	Cheetal	<i>Axis axis</i>	Male	23.08.19	Pericarditis and chest wound infection
21	Black buck fawn	<i>Antelope cervicapra</i>	Female	28.08.19	Traumatic injury of chest and abdomen during in-fight
22	Black buck fawn	<i>Antelope cervicapra</i>	Male	28.09.19	Urine retention after birth, Congenital defective birth
22A	Barking deer fawn	<i>Muntiacus muntjack</i>	Female	28.08.19	Predation in the safari area
23	Cheetal	<i>Axis axis</i>	Female	1.09.19	Piercing wound at abdomen caused during in-fight
24	Black buck	<i>Antelope cervicapra</i>	Female	13.09.19	Internal haemorrhage and shock
25	Hog deer	<i>Axis porcinus</i>	Female	22.08.19	Cardio-respiratory failure .
26	Cheetal	<i>Axis axis</i>	Female	25.10.19	Pleurisy and shock
27	Black buck	<i>Antelope cervicapra</i>	Female	28.10.19	Septicaemia and shock
28	Black buck fawn	<i>Antelope cervicapra</i>	Female	1.11.19	Cold exposure and debility
29	Black buck	<i>Antelope cervicapra</i>	Male	6.11.19	Internal haemorrhage may be during in-fight
30	Hog deer	<i>Axis porcinus</i>	Female	8.11.19	Punctured wound on abdomen

					lead to septicaemia and shock
31	Black buck	<i>Antilope cervicapra</i>	Male	8.11.19	Cold exposure and pneumonia
32	Cheetal	<i>Axis axis</i>	Female	11.11.19	Internal haemorrhage and chest injury may be due to in-fight
33	Black buck	<i>Antilope cervicapra</i>	Male	12.11.19	Neck injury and muscle necrosis may be due to in-fight
34	Capuchin monkey	<i>Cebus capuchinus</i>	Bisex	13.11.19	Died due to cold exposure
35	Cheetal	<i>Axis axis</i>	Male	25.11.19	Ascitis and cold exposure
36	Cheetal	<i>Axis axis</i>	Male	26.11.19	Internal haemorrhage
37	Black buck (fawn)	<i>Antelope cervicapra</i>	Female	29.11.19	Carcass putrefied not arrived conclusion
38	Cheetal	<i>Axis axis</i>	Male	10.12.19	Punctured wound on abdomen lead to septicaemia and shock
39	Black buck	<i>Antilope cervicapra</i>	Male	28.12.19	Cold exposure
40	Sambar deer Fawn	<i>Cervous unicolor</i>	Male	28.12.19	Urine retention after birth, Congenital defective birth
41	Bengal tiger	<i>Pantera tigris</i>	Female	28.12.19	Cardio pulmonary failure predisposed with nephritis and pneumonia
42	Nilgai	<i>Boselaphus tragocamelus</i>	Male	5.01.2020	Pneumonia and cold exposure
43	Cheetal fawn	<i>Axis axis</i>	Female	8.01.2020	Maternal rejection
44	Balack buck	<i>Antilope cervicapra</i>	Female	17.01.2020	Internal haemorrhage may be during in-fight
45	Cheetal	<i>Axis axis</i>	Male	23.01.2020	Cardio-pulmonary failure predisposed with cold exposure
46	Hog deer fawn	<i>Axis porcinus</i>	Male	7.02.2020	Maternal rejection
47	Hog deer fawn	<i>Axis porcinus</i>	Male	7.02.2020	Congenital defective birth
48	Black buck	<i>Antilope cervicapra</i>	Male	1.03.2020	Maternal rejection
49	Cheetal	<i>Axis axis</i>	Male	1.03.2020	Capture mayopathy
50	Black buck(Albino)	<i>Antilope cervicapra</i>	Male	3.03.2020	Ascitis and debility
51	Cheetal	<i>Axis axis</i>	Male	9.03.2020	Capture mayopathy
52	Black buck	<i>Antilope cervicapra</i>	Female	14.03.2020	Internal haemorrhage due ro in-fight
53	Balck buck fawn	<i>Antilope cervicapra</i>	Male	23.03.2020	Urine retention after birth, Congenital defective birth
54	Black buck fawn	<i>Antilope cervicapra</i>	Female	23.03.2020	Maternal rejection
55	Cheetal	<i>Axis axis</i>	Female	24.03.2020	Carcass putrified not conducted PM examination
56	Cheetal fawn	<i>Axis axis</i>	Male	29.03.2020	Unknown etiology
57	Cheetal	<i>axis axis</i>	Female	29.03.2020	Chest injury due to in-fight lead to internal haemorrhage
58	Cheetal	<i>Axis axis</i>	Female	30,.03.2020	Prolapse of Uterus and shock
59	Cheetal fawn	<i>axis axis</i>	Female	30.03.2020	Putrefied carcass not suitable for PME
	Birds				
1	Red jungle fowl-2	<i>Gallus gallus</i>	Femal	8.04.2019	Predated by wild cat/ civet/python
2	Pea fowl chick	<i>Pavocristatus</i>	Male	5.05.2019	Enteric infection
3	Siver pheasant	<i>Lophura nycthemera</i>	Male	18.05.2019	Hepatic tumour.
4	Cockatiel	<i>Nimphgicus hollandicus</i>	Female	10.06.19	Died due to starngulation of leg by plastick thread in the perch
4a	Alexandrine parakeet	<i>Psittacula alexandarine</i>	Female	13.06.2019	Enteric infection

5	Red jungle fowl	<i>Gallus gallus</i>	Male	15.06.19	Heat stroke
6	Java Spraw-3	<i>Lonchura oryzivora</i>	unsex	27.06.19	3 birds predated by wild cat/civet
7	Golden pheasant	<i>Crysolophus pictus</i>	Male	29.06.19	Tumour growth in the abdomen
8	Red Jungle fowl	<i>Gallus gallus</i>	Female	4.07.19	Predation
9	Ring neck pheasant	<i>Phasianus colchinus</i>	Female	15.08.19	Hepatic tumour of advanced stage
10	Zebra finch	<i>Taenio pygiaguttata</i>	Male	20.08.19	Enteric infection
11	Red jungle fowl	<i>Gallus gallus</i>	female	22.08.19	Predation
12	Silver pheasant	<i>Lophura nycthemera</i>	Male	24.08.19	Hepatic tumour
13	Guinea fowl	<i>Numida meleagris</i>	Female	9.09.19	Enteric infection
14	Cockatiel	<i>Nymphicus hollandicus</i>	Female	21.09.19	Died due to enteric infection
15	Japnese Quail	<i>Coturnix coturnix japonica</i>	Female	25.09.19	Enteric infection
16	Budgerigar	<i>Melopsitta cusundulatus</i>	unsex	13.10.19	Two nos died due to predation
17	Japnese quail	<i>Coturnix coturnix japonica</i>	Female	13.10.19	Enteric infection
18	Cockatiel	<i>Nymphicus hollandicus</i>	Male	13.10.19	Enteric infection
19	Japnese quail	<i>Coturnix coturnix japonica</i>	Female	15.10.19	Predation
20	Japnese quail	<i>Coturnix coturnix japonica</i>	Female	17.10.19	Cold exposure (coryza)
21	Japnese quail	<i>Coturnix coturnix japonica</i>	Male	6.11.19	Cold exposure (coryza)
22	Rainbow lorry chick	<i>Tricoglossus moluccanus</i>	unsex	28.11.19	Predation
23	Japnesequail-2	<i>Coturnix coturnix japonica</i>	Female	28.11.19	Cold exposure (coryza)
24	Japnesequail-2	<i>Coturnix coturnix japonica</i>	Female	29.11.19	Cold exposure (coryza)
25	Zebra finch-4	<i>Taenio pygiaguttata</i>	U	2.12.19	Cold exposure
26	Cockatiel	<i>Nymphicus hollandicus</i>	Male	22.12.19	Cold exposure
27	Pelican	<i>Pelicanus onocrotalus</i>	Male	28.12.19	Cold exposure
28	Cockatiel	<i>Nymphicus hollandicus</i>	Female	13.01.2020	Cold exposure
29	Japnesequail-2	<i>Coturnix coturnix japonica</i>	M/F	14.01.2020	Cold exposure
30	Red jungle fowl-	<i>Gallus gallus</i>	Femal	15.01.2020	Pneumonia and coryza
31	Cockatiel	<i>Nymphicus hollandicus</i>	Female	15.01.2020	Fracture of limb (traumatic injury)
32	Japnesequail-2	<i>Coturnix coturnix japonica</i>	Male	20.01.2020	Cold exposure r
33	Emu chick	<i>Dromaius novahollandae</i>	Male	29.01.2020	Enteric infection (early age mortality)
34	Emu	<i>Dromaius novahollandae</i>	Female	7.02.2020	Internal haemorrhage and rupture of eggs in the womb
35	Cockatiel	<i>Nymphicus hollandicus</i>	Male	9.02.2020	Pneumonia and coryza
36	Rainbow lorry chick	<i>Tricoglossus moluccanus</i>	unsex	9.02.2020	Predation
37	Emu	<i>Dromaius novahollandae</i>	Male	14.02.2020	Internal haemorrhage and shock, suggestive of in-fight
38	Emu	<i>Dromaius novahollandae</i>	Female	18.02.2020	Internal haemorrhage and rupture of eggs in the womb
39	Japnese quail	<i>Coturnix coturnix japonica</i>	Female	21.02.2020	Over grown beak lead to inconvenience to take feed
40	Emu	<i>Dromaius novahollandae</i>	Male	22.02.2020	Respiratory distress and septicaemia
41	Emu	<i>Dromaius novahollandae</i>	Male	9.03.2020	Gastroenritis
42	Cockatiel	<i>Nymphicus hollandicus</i>	unsexed	12.03.2020	Pneumonia and coryza
43	Emu	<i>Dromaius novahollandae</i>	Fem-2	18.03.2020	Internal haemorrhage

44	Emu	<i>Dromaius novahollandae</i>	Male	18.03.2020	Internal Haemorrhage
45	Cockatiel	<i>Nymphicus hollandicus</i>	Female	18.03.2020	Enteric infection
46	Rain bow lorry	<i>Tricoglossus moluccanus</i>	Male	21.03.2020	Internal Haemorrhage
47	Alexandrine Parakeet	<i>Psittacula alexandrine</i>	Male	27.03.2020	Internal haemorrhage
	Reptile				
1	Indian Star tortoise-1	<i>Goechelon elegans</i>	U-1	4.09.19	Only exoskeleton recovered after death, not conducted PME
2	Indian Star tortoise-1	<i>Goechelon elegans</i>	F-1	27.11.19	Carcass putrefied, not suitable for PM exam
3	Indian Star tortoise-1	<i>Goechelon elegans</i>	<u>F-1</u>	13.01.2020	Carcass putrefied, not suitable for PM exam
4	Indian Star tortoise-1	<i>Goechelon elegans</i>	F-1	24.02.2020	Unknown etiology, carcass putrefied when detected died



**DETAILS OF COMPLIANCE W.R.T CONDITIONS CONVEYED BY CENTRAL ZOO AUTHORITY
 VIDE LETTER NO. 19-47/92-CZA(52)(VOL.III) DATED:25/02/2010; LETTER NO 19-47/92-
 CZA(52)(VOL.IV)/1962 DATED: 01/01/2013 AND LETTER NO. 19-47/92-CZA(52)(VOL.V)/735/2017
 DATED:03/04/2017**

Sl. No.	Norm No. under RZR, 2009	Condition Stipulated	Time Period to Comply	Since when pending	Status with regard to compliance
A	Letter No. 19-47/92-CZA(52) dated:25/02/2010				
	1. General Requirement				
1	1(5)	The zoo should be encompassed by a uniform perimeter wall throughout of at least 2-meter-high from the ground level on both sides, including the stretch of boundary wall behind the zoo hospital till sloth bear.	6 months	February, 2010	100 mtrs. remaining behind Emu/Ostrich enclosures. Work stopped due to realignment proposal of zoo campus layout. Rest of the boundary wall as per CZA specification completed.
	4. Animal housing, display of animals and animal enclosures				
2	4(2)	The following enclosures should meet the biological requirement of animals:- i) Pheasant aviary should be provided adequate depth. ii) Small bird aviary near capuchin monkey enclosure should be provided viewing from one side only. iii) Gharial enclosure should have a proper ramp at the edge of water pool. The depth of pool should also be increased atleast 1.5 meters. For facilitating basking sand beds should be provided towards the farthest corner away from the visitor's area. iv) Mugger enclosure sand beds should be provided for facilitating basking v) Herbivore safari is only 3.4 hectares. Considering 60 number of animals, area should be increased. vi) An appropriate enclosure for Hippopotamus should be developed. vii) Rhesus macaque and bonnet macaque enclosure should be provided with individual feeding and retiring	3 months	- - - - February, 2010 February, 2010 February,	Completed. Demolished and removed. Completed. Completed. Master layout plan under revision to accommodate recommendation. Not done. As above Not done. As above. Design of new enclosures approved by CZA.

		cells as per the standards specified by CZA.		2010	
3	4(9)	The animal enclosures of rhesus macaque, nilgai, blackbuck, hog deer, barking deer, pheasant aviary, gharial & mugger and capuchin macaque should be provided with appropriately designed and effective stand-off barrier in a manner to keep the visitors at safe distance from the animals.	2 years	-	Completed.
4	4(10)	All the animal enclosures in the zoo should be provided with appropriate signages with relevant information of biology, behaviour and population status of the species in the wild.	WIE	-	Completed.
6.Veterinary Infrastructure					
5	6(3)	The zoo should have an isolation and quarantine wards for the newly arriving and sick animals.	6 months	February, 2010	Not completed. Master layout plan under revision for compliance.
7.Post-mortem & disposal of carcasses					
6	7(4)	The zoo should ensure that the carcasses of animals, after post-mortem has been conducted is disposed off by burning or burying in a manner that does not have adverse impact on hygiene and cleanliness of zoo.	WIE	-	Being followed.
9.Acquisition & breeding of animals					
7	9(4)	The zoo should acquire appropriate mate for single striped hyena, porcupine, white peacock and mugger housed at the zoo.	WIE	-	Hyena and Porcupine pairing completed. White Peacock has died. Mugger pairing not done. Exploration with other zoos for exchange / pairing is on.
8	9(9)	The zoo should immediately reduce the number of herbivore housed in safari immediately by adopting appropriate population control measures. At any point of time, the number of animals housed in safari should not go beyond the carrying capacity	WIE	-	Population control measures in place. 100 chital also transferred to NBWAP, Siliguri, West Bengal.

		of the area.			
B	Letter no 19-47/92-CZA(52)(VOL.IV)/1962 dated 01/01/2013				
		1.General Requirement			
9	1(1.3)	Currently the zoo has one single gate for visitor's entry as well as for vehicular entry. Separate gates should be provided for the same. A separate gate may be provided for services.	6 months	January, 2013	Not done. Being addressed through revision of Master Layout Plan.
10	1(1.4)	i) Perimeter wall around the periphery of zoo needs to be strengthened immediately and should be of 2 mt. high from ground. ii) The security system for the tiger enclosure like raising the height of the wall on the road side may be carried out on priority.	WIE WIE	February, 2010	100 mtrs. remaining behind Emu/Ostrich enclosures. Rest of the boundary wall as per CZA specification completed.
11	1(1.5)	i) The office of zoo/ society is located adjacent to mandrill enclosure. The same is against the guidelines of CZA and may be shifted outside the zoo campus to a location as indicated in the zoo masterplan approved by CZA. ii) Though the zoo has a parking place for vehicles the same is not being used by zoo commuters due to the fact that vehicular traffic is allowed unchecked till the zoo gate / nursery gate. This may cause revenue loss to the zoo from parking. Thus it is recommended that entire frontage of the zoo be developed in such a way that unwanted vehicular traffic is not allowed till the zoo main gate. We understand the zoo masterplan has taken care of the same and should be implemented as soon as possible.	1 year 1 year	January, 2013 January, 2013	Being addressed through revision of Master Layout Plan. Being addressed through revision of Master Layout Plan.
12	1(1.7)	The incinerator which is operated with firewood need maintenance	WIE	-	Completed.
13	1(1.9)	Domestic geese and pigeons should be removed from	WIE	-	Completed

		display area.			
3. Development & Planning					
14	3(3.3)	The water body inside the herbivore safari needs to be controlled since the same was found full of algae and unhygienic in manner.	WIE	-	Cleaned & controlled. Periodic cleaning every three-month interval.
4. Animal Housing, display of animals and animal enclosures					
15	4(4.2)	i) Aviary with limited number of species of birds needs renovation ii) Primate cages, rhesus and bonnet all old, to construct new cages. The dimension of animal enclosures of rhesus macaque, bonnet macaque does not meet. iii) Enclosures of herbivores are exhibited from all three sides with animal houses in close proximity to visitors. The service entry for keeper is from the front, which may be from the side. iv) The animal house of sloth bears to be redesigned with proper ventilation and a holding kraal may be made	6 months 1 year 3 months 6 months	- 2010 January, 2013 -	Completed Design approved by CZA. To be constructed after approval of the revised Master Layout Plan. Not completed. To be addressed after approval of layout plan. Completed.
16	4(4.3)	Animal enclosures attached to main road do not have the boundary wall as per prescribed limit of CZA. Recently an incidence of miscreant entering into tiger enclosure also happened	WIE	-	Completed.
17	4(4.5)	Exotic birds aviaries height to be reduced. Exhibit for bonnet & rhesus macaque, pheasants and other exotic birds to be improved.	6 months	-	Request to CZA made waiving of the recommendation vide letter No.TSZS/088(Vol.XI)/195 A/2015-16 dated 18/09/15 for aviary height. Exhibits for pheasant improved. Exhibit of Rhesus & bonnet macaque to be constructed after approval of layout plan.
18	4(4.9)	Standoff barrier should be provided at exotic birds and capuchin monkey enclosure.	WIE	-	Completed.
5. Upkeep & healthcare of animals					

19	5(5.1)	Feeding cells of langur may be suitably modified to meet welfare requirements of the animals	6 months	-	Completed.
20	5(5.2)	i) Water in wet moats could be recycled and reused. ii) Innovative barriers like power fence may also be used in wet moated enclosures to reduce dependency on water. iii) Beef room to be made fly proof iv) Feed provided to carnivores should be checked daily by veterinary officer before delivering to animals.	WIE 1 year WIE	January, 2013 January, 2013 -	Not completed. To be addressed after approval of layout plan. Completed Being done.
21	5(5.3)	Prophylactic charts should be displayed in each animal house of the zoo.	WIE	-	Displayed in all animal houses
7. Post-mortem & disposal of carcasses of animals					
22	7(7.1)	Post-mortem room requires glazed tiles all round, including the platform. Inside the PM room needs to be raised by 8" which will facilitate the veterinarian conducting PM. The height of roof should be increased appropriately / such an extent.	3 months	-	Completed.
23	7(7.2)	Formats of registers example PM register is not followed, to be as per prescribed by CZA.	WIE		Maintained
9. Acquisition & breeding of animals					
24	9(9.1)	The zoo does not have self viable population of following species: Barn owl, Bengal eagle owl, porcupine, hippo, kaleej, Edward, ring-necked & reeves pheasants, capuchin, mandarin duck, bar headed goose, eastern rosella, Ostrich, hill myna and mugger. Immediate efforts should be made either to pair the animals/ birds or may be sent to a recognized zoo on breeding loan.	3 months	January, 2013	Bengal Eagle Owl, Hippo, Ring-Necked Pheasant, Bar-Headed Goose, Ostrich and Mugger are unpaired. Barn owl, Kalij, Edward Pheasant, Capuchin, Mandarin Duck, Eastern Rosella have died. Porcupine, Reeves Pheasant and Hill Myna have been paired. Exploration with other zoos for exchange / pairing is also on.
25	9(9.8)	Animal history cards to be kept updated maintained on day to day basis.	WIE	-	Maintained
26	9(9.9)	Nilgai, chital and blackbuck	6 months	January,	Population control

		population should be controlled.		2013	measures with respect to Chital are ongoing through vasectomy.
27	9(9.10)	Zoo should implement disaster management plan by carrying out mock drill and training to staff.	-	-	Response team under Curator formed. Mock drill are being done on regular basis.
11.Education & Outreach activities					
28	11(11.11)	Signages in the zoo need to be improved upon. Directional signages should be provided. Signages should be made in such a way to attract the visitors, with less of text and more of picture, illustrations and line sketch.	3 months	January, 2013	Ongoing.
12.Visitor facilities					
29	12(12.1)	Toilets are old and require renovations. The inside space may also be increased. Modern equipment for water conservation may also be installed in washbasins and urinals to prevent wastage of water. Other modern technologies for water conservation especially rainwater harvesting could also be explored to reduce dependence on supply water. The zoo should ensure that kiosk provided next to the animal enclosures should not leave the leftover feeds and food and food should not be served in plastics and avoid selling mineral water in plastic bottles.	6 months WIE	-	New complexes created. Guidelines being followed and surprise checks organised by Zoo Security Team.
C	Letter no. 19-47/92-CZA(52)(VOL.V)/735/2017 dated 03/04/2017				
1.General Requirements					
30.	10.1(9)	The Guinea fowls housed next to Red jungle fowl aviary should be removed from the zoo.	WIE	April, 2017	CZA has been requested for review its decision to continue display of Guinea Fowls. Letter No.TSZS/088(Vol.XIII)/087/2017-18 dated 09/06/2017 & TSZS/088(Vol.XIV)/070/2019-20 dated 25/06/2019.
3.Development & Planning					
31		The Zoo has not adopted population control measures	6 months	January, 2013	Population control measures with respect to

		for the excess population of herbivores (Spotted deer & Blackbuck). Efforts should be made to control their population immediately.			Chital are ongoing.
4. Animal housing, display of animals and animal enclosures					
32	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.	6 months	February, 2010	Master layout plan under revision- proposal for composite display enclosure.
33	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.	1 year	2010	Design approved by CZA. To be constructed after approval of the revised Master Layout Plan.
34	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.	WIE	-	Completed.
9. Acquisition & breeding of animals					
35	10.9(3)	The Zoo should find appropriate mate for single Hippo & Muggler. They should either be paired or be sent to nearby recognized Zoos on breeding loan.	6 months	February, 2010	Not completed.
2. Administrative and staffing pattern					
36	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	WIE	April, 2017	Veterinarian appointed w.e.f 06/03/2020
3. Developing and Planning					
37	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.	WIE	-	Completed.
38	10.3(6)	The Rhesus macaque and	3 months	-	Completed for Common

		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 recognised Zoo after screening their health and following the protocols and prior approval from CZA.			Langur. For Rhesus Macaque, design approved by CZA. To be completed after approval of Layout Plan.
39	10.3(7)	The isolation and Quarantine wards should be improved with respect to space and hygiene.	2 months	February, 2010	Not completed. Master layout plan under revision for compliance.
4. Animal housing, display of animals and animal enclosures					
40	10.4(1)	Animal houses of Zebra and Blackbuck towards the visitor's pathway should be camouflaged by planting trees, bushes and climbers	3months	-	Ongoing.
41	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.	3months	-	Completed.
42	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.	3months	-	Completed.
43	10.4(1)	The Machan restaurant which is not in operation, it should be covered suitably to avoid unpleasant look to the visitors.	WIE	-	Completed.
44	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.	3months	-	Completed.
45	10.4(2)	Old abandoned aviary next to enclosure for Capuchin monkey should be demolished	3months	-	Completed.
46	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	6months	April, 2017	Not done. To be addressed at new site after approval of the layout plan by CZA.

		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.			
47	10.4(2)	Kraal in the enclosure for Sloth bear should have adequate sun light and aeration.	3months	-	Completed.
48	10.4(3)	Pots made of Plastic used in the Zoo to provide food & drinking water to the animals should be replaced	WIE	-	Completed.
49	10.4(3)	Gharial and Muger 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	3months	-	Completed.
50	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.	3months	-	Not done. Master Layout Plan under revision – New Herbivores Section proposed.
51	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.	WIE	-	Completed.
52	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.	WIE	-	Covered with jute ropes
53	10.4(6)	The new aviaries constructed at the Zoo to house exotic birds should be provided adequate enrichment artefacts	WIE	-	Completed.
5.Upkeep and healthcare of animals					
54	10.5(2)	The feed trough provided to the Ostrich is too high. The height of the same should be reduced		-	Completed.

CAMPUS WILD ANIMAL DIVERSITY LIST OF FREE-LIVING WILD ANIMALS



Bird Diversity

Red Vented Bulbul
Red whiskered bulbul
Grey Partridge
Stone Curlew
Purple Sunbird
Hoopoe
Golden Oriole
Coppersmith Barbet
Common Mynah
Asian pied starling
Brahmny Mynah
Small blue kingfisher
White Breasted Kingfisher
Common Crow
Crow Pheasant
Baya
Kite
Parakeets
Green Bee-Eater
Black Drongo

Magpie Robin
Spotted Dove
Ring Necked dove
Spotted munia
Rock Pigeon
Little Cormorant
Darter
White Breasted Water Hen
Lesser whistling teal
Common Coot
Bronze winged Jacana
Pond heron
Night heron
Cattle egret
Little Egret

Mammal Diversity

Jungle cat
Golden jackal
Indian Flying fox
Lesser bandicoot rat
Indian Grey Mongoose
Indian palm squirrel
Asian Koel

Reptile Diversity

Indian Rat Snake
Indian Rock Python
Checkered Keelback
Common trinket
Indian Cobra
Indian Soft shell turtle
Bengal Monitor lizard

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Picture Courtesy: Dr. Sanjay Kumar Mahato; Dr. Seema Rani; Dr. Manik Palit & Zoo library

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