

TATA STEEL ZOOLOGICAL PARK

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



Annual Report

2015-16

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TATA STEEL ZOOLOGICAL PARK

Tata Steel Zoological Park (Tata Zoo) is nestled in the Jubilee Park and has two wetlands on either side, the Subamarekha River to its north and Jayanti Sarovar to its south. Both these wetlands are famous for attracting winter migratory birds. The Zoo is spread over an area of 30 hectares with beautifully landscaped gardens interspersed with small forest patches with an abundance of free ranging birds, mammals, reptiles and amphibians. Tata Zoo was provided conditional recognition as a small category zoo by Central Zoo Authority u/s 38H of the Wild Life (Protection) Act, 1972 in January, 2013. The recognition to the zoo will expire by 31/12/2016.

Tata Zoo is operated by Tata Steel Zoological Society. The Society was created by Tata Steel Limited as an autonomous body for overseeing the day to day operations. The Society is registered under Societies Registration Act of Govt. of Jharkhand. Zoological Park activities have been recognized as corporate social responsibility by Tata Steel Limited and accordingly financial support is being made available to the Society for taking care of day to day Zoo operation.

ZOO ACTIVITIES AT A GLANCE [FOR PERIOD APRIL 2015- MARCH 2016]

ANIMAL HABITATS AND UPKEEP

Zoos are dynamic institutions and being public places are always under visitor scrutiny with respect to the facilities provided both for the animals and people. Thus changes are imminent to happen. The Central Zoo Authority has approved a long-term master plan for redevelopment of the zoo and the same is to be executed in next 20 years.

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:

1. Diet for Indian Star Tortoise standardized.
2. Feeding enrichment of parrots leading to egg-laying among large parrots, Cockatiel and Jandeya Conure.
3. Ecological Enrichment of captive animals like providing Wooden logs in Kraal and display areas for carnivores and Grey Langur; providing nest boxes for the parrots and pheasants; building of Machan (Elevated platform) for Indian Peacock and other mammals like Tiger, sloth bear etc. was done to meet the welfare requirement of animals.
4. Feeding schedules were revised keeping in view of the change in weather conditions and for lactating mothers and sick animals.
5. Two Hanuman Langurs which had strayed into the zoo campus were captured and released back in Dalma forest area.
6. New keeper rotation among beats was put into action from 7th April, 2015.



ANIMAL HEALTH CARE



- All the large cats were vaccinated against Feline Pan Leucopenia, Calicivirus, Herpes Virus and Rabies infection including the newly born tiger cubs using Biofel PCHR vaccine under annual vaccination Schedule. The cloven footed animals were vaccinated against FMD every nine months.

- Captive animals and birds were dewormed on regular basis for reduction of Endo & Ecto parasites.

- A Zoo veterinary team through their regular intervention kept check of the injuries and surgical repair, if any, caused to animals due to infighting or otherwise.

- Feeding schedules were revised keeping in view of the change in weather conditions and for lactating mothers and sick animals (Herbivores, Primates and Carnivores).
- Disease causing vectors were kept under check through regular tall grass cutting, keeping the hedges trimmed, spreading of lime bleach and fumigation.
- Births of important mammalian species like 2 Bengal Tiger and 4 Mandrill monkey took place.

During the year under report, an amount of Rs.105.29 lakhs was incurred by Tata Steel Zoological Society to meet expenditure on animal care and their upkeep.

ACQUISITIONS, BIRTH, DEATH AND DISPOSAL OF ENDANGERED & IMPORTANT EXOTIC ANIMALS

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

No.	Name of Species	Sex				Remarks
		M	F	U	T	
ACQUISITION						
1.	Grant Zebra	2	2	0	4	Imported from Zoological Centre, Ramat Gan, Tel Aviv, Israel
BIRTH						
1.	Pea fowl	0	0	1	1	
2.	Black buck	2	1	2	5	
3.	Indian Hog deer	0	0	2	2	
4.	Northern plain grey Langur	0	0	1	1	
5.	Sambar Deer	0	0	1	1	
6.	Mandrill monkey	0	0	2	2	
DEATH						
		M	F	U	T	Cause of death
Mammals						
1.	Bengal Tiger	1	0	0	1	Cardio-pulmonary failure due to nephritis
2.	Black buck	1	2	0	3	Old age and in-fight injuries.
3.	Indian Hog deer	2	0	0	2	In-fight injuries
4.	Bonnet Monkey	1	0	0	1	
5.	Barking deer	2	1	0	3	Predation and in-fight injuries
6.	Spotted deer	4	3	0	7	
7.	Nilgai	2	1	0	3	Old age and in-fight injuries
8.	Indian Porcupine	2	0	0	2	Myocarditis and Hepatic tumor
Birds						
1.	Indian Peafowl	0	1	0	1	Unknown etiology
2.	Kalij pheasant	1	0	0	1	Hepatic tumour
3.	Emu	1	0	0	1	Traumatic injury of neck
4.	Sun conure	0	1	0	1	Unknown etiology
5.	Emerald Dove	0	1	0	1	Predation
6.	Lady Amherst pheasant	0	1	0	1	Enteric infection
7.	Golden pheasant	0	1	0	1	Tumour growth in the intestine
8.	Eastern rosella	0	0	1	1	Cold exposure
Reptiles						
1.	Indian star tortoise	3	8	6	17	Multi factor causes like cold exposure, enteric infection and sand deposit in the gut and unknown etiology.

RESCUE AND REHABILITATION OF WILD ANIMALS

The Zoo is nestled in close proximity to 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 2015-16 are provided below:

Sl.no.	Name of Species	No. of Specimen	Date	Cause of rescue	Action Taken/ Outcome
1.	Rhesus monkey	One	May	A call received from the Conservator of Forests and Divisional Forest Officer, regarding incidence of visitors to Sai Temple at CH area being bitten by a rhesus monkey.	Rescued monkey handed over to the Forest Department for releasing it in nearby forest area.
2.	Langurs	Two	May	Caught within the zoo premises as it was a threat to the resident Langurs and visitors.	Released in vicinity of Dalma Wild Life Sanctuary
3.	Monitor Lizard	One	June	Rescued from the Town area.	Was released in Zoo Safari
4.	Barn Owl	One	November	Rescued from Tata Steel General Office	Was released in zoo premises

HUMAN RESOURCE & CAPACITY BUILDING

1. The Director(Zoo) and Biologist cum Education Officer attended a short duration training programme on 22.5.2015 at TSL corporate centre on 'Legatrix- a software for managing legal compliances of TSZS &TSZP.
2. 15 Indian Forest Services (IFS) probationers from Indira Gandhi National Forest Academy, Dehradun visited Tata Steel Zoological Park on the 18.02.2016 for an exposure to managing captive wild animals.

Details of substantive posts and their incumbency are provided below:

Sl.	Designation	Sanctioned post/posts	Incumbency
1.	Director	One	One
2.	Deputy Director	One	One
3.	Curator	One	One
4.	Biologist cum Education Officer	One	One
5.	Asst. Veterinary Officer	One	Vacant
6.	Office Supervisor	One	One
7.	Veterinary Assistant	One	Vacant
8.	Field supervisor	One	One
9.	Animal Keeper	Four	Four
10.	Asst. Animal Keeper	Eleven	Eight
11.	Field assistant	Two	Two
12.	Sr. Office Assistant	One	One
13.	Office Assistant	Two	Two
14.	Senior attendant	Two	Two
15.	Senior driver	One	One
	Total	Thirty one	Twenty Six

AWARENESS AND EDUCATION- MEETING THE AICHI BIODIVERSITY TARGET

A Zoo education masterplan has been prepared to address systematic awareness and education programme of the Zoological Park. One of the driving forces behind the education plan is the AICHI TARGET-1 of the Strategic Plan for Biodiversity Conservation 2011-2020 of the Convention on Biological Diversity. Various education activities were organized throughout the year with support of local NGO's, and sponsors. More than 3000 students were made aware of biodiversity and wildlife of this country. More than 100 tree saplings were also planted during this period inside the Zoo campus. The awareness activities undertaken during the year have been summarized below.

Earth Day 2015: Conservation is the practice of caring for natural resources in order to live sustainably. In order to inculcate such conservative practices among the young minds, Tata Zoo, on the 22nd of April organized a programme "Compost making at your home" on the occasion of Earth Day with the theme "its Our Tum to Lead." More than 50 school children from K.P.S. Burma Mines and JUSCO School South Park participated in the workshop which was sponsored by Inner Wheel Club of Jamshedpur ZEST.



World Environment Day: On this occasion, to ensure that visitors do not litter the pristine zoo environment with empty bottles, wrappers and other non-bio-degradable waste, a weeklong awareness program to ban entry of plastic and polythene inside the zoo from June 1st to June 7th was carried out and later converted into a permanent campaign.

Van Mahotsav: 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. The motto of the *Van Mahotsav* celebrations this year is *Ek Prani Ek Pedh* – where the zoo staff took an oath to plant one tree for every animal that resides in the Zoo. Commemorative planting of fruit bearing saplings by Mr. Rishad Chinoy, Secretary, Tata Steel Zoological Society, was followed by tree plantation in different areas of the Zoo by the zoo staff.



Wildlife Week: The highly anticipated Wildlife Conservation Awareness Week 2015 was celebrated from 10th to 15th November 2015 where a number of events were organized including Best Eco Club Award, Inter School Essay Competition, Inter School Debate Competition, Fancy Dress Competition and On The Spot Painting Competition. A total number of 365 students from 31 institutions across the city participated in these events.

Animal Welfare Fortnight In order to understand animal laws that contain details governing the use and treatment of domestic and wild animals and help to create awareness amongst people of Jamshedpur, Tata Steel Zoological Park organized Animal Welfare Fortnight 2016 from 16th to 30th January 2016. It saw participation of 500 students from 15 different schools of the city.





Prabhat Pheri: In order to sensitize the masses and to raise awareness amongst them on biodiversity issues, the Zoo has intermittently organized *Prabhat Pheri* in conjunction with many zoo events. *Prabhat Pheri* involved students from schools and colleges from Jamshedpur, local NGOs etc.

Reaching out to the unreachable: To spread the message of wildlife conservation amongst the rural masses, this year Tata Steel Zoological Park commemorated the World Forestry Day and Water day on 21st March 2016 at Kuiani village in Bodam Block, East Singhbhum. More than 100 village youth and women were oriented on the need and importance of forest and water conservation.



ZOO BIOLOGY:

To ensure the better upkeep and their conservation through best practices of management for animals housed in zoo, various biological activities were under taken during 2015-16 including:..

1. Reptile and Amphibians survey at Tata Steel Zoological Park continue since December 2014 - Survey being conducted to ascertain the diversity of free ranging reptiles & amphibians found within Tata Steel Zoological Park.
2. Behavioral observation of mother- cubs' interaction in Royal Bengal Tiger (*Panthera tigris tigris*) from October 2014 to March 2015. – The observation was carried out to examine the patterns of welfare issues of the young tiger cubs in respect to the enclosure type, ethological study, acceptance of ecological enrichment and dietary requirements, by observing behavioral, physiological, and biological measures of good well-being.
3. Feeding behavior of Indian Star Tortoise (*Geochelone elegans*). - The observation was carried out for the standardization of feed schedule of Indian Star Tortoise to reduce mortality rates. The observation was mainly focused in three different conditions: Pre, during and Post feeding behavior of Indian Star Tortoise.

4. Apart from above, following short term projects were carried out by zoo interns for the better upkeep of animals:

- Diurnal behavioral observation of Striped Hyena (*Hyaena hyaena*).
- Leftover measurement of meat of Bengal Tiger *Shanti* and her two cubs to study the actual consumption.
- Leftover measurement of meat of Bengal Tiger *Kailash*
- Food and feeding habits of Hog Deer, Sambar Deer, Spotted Deer, Black Buck and Barking Deer.

VOLUNTEER PROGRAM: Tata Zoo engages volunteers who wish to utilize their interest, energy, skills and time for Zoo education and research activities. They undertake various activities in order to increase awareness of the common people towards wildlife issues and concerns. In addition to being involved in research activity of animals in the Zoo we also have volunteers also contribute towards education and awareness activities throughout the year. Details of volunteer activities in 2015-16 are as follows:

Name of Volunteer	Duration	Nature of Work
<i>Sandeep Raj Singh</i>	Continuing since 16 th March 2014	Assisting in Educational activities and conducting a field survey of free ranging Reptiles & Amphibians within the Zoo Premises.
<i>Jayashree Ram Mohan</i>	Continuing since 28 th Oct. 2014	Mother cub interaction of Royal Bengal Tiger (<i>Panthera tigris tigris</i>) and assisting in Educational activities.
<i>Roma Samanta</i>	Continuing since 18 th February 2015	Observation of feeding behavior of Indian Star Tortoise (<i>Geochelone elegans</i>) and assisting in Educational activities.

ZOO VISITATION

During the year under report from 1st April, 2015 to 31st March, 2016, the Zoo was physically visited by 469232 visitors.

The Zoo has a website of its own <http://www.tatazoo.com> and a Face book profile <http://facebook.com/jamshedpurzoo>. The Zoo has 1126 friends on Face book. These platforms are utilized by the Zoo to engage visitors and convey its ideology and mission among the people at large.

ZOO ADMINISTRATION AND FINANCIAL PERFORMANCE

ADMINISTRATION:

Overall administrative control of the Zoo lies with the Director. Other than day to day zoo administration, key functional areas being overseen by the Director are Planning & Development, and Security of the zoo.

Deputy Director in association with the Curator(Zoo) looks after the welfare of animals and their management. The team handles health care of animals, maintenance of animal enclosures, feeding of the animals, disinfection of enclosures, ecological enrichment of animal's enclosure and general hygiene in zoo campus and deployment of animal keepers. The team of Deputy Director & Curator are assisted by a Field Supervisor, a Sr. Zoo Assistant, two field assistants and twelve animal keepers.

Biologist cum Education officer takes care of recording of animal behavior, maintenance of daily reports, inventory of animals, studbooks, organizing awareness / educational programmes including running of the zoo information centre cum library and Zoo Garden activities including plantations. The Biologist is assisted by a team of Zoo interns and office attendants.

FINANCIAL PERFORMANCE

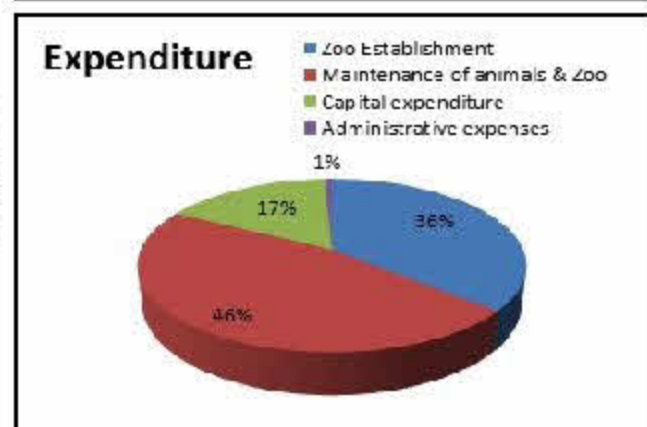
Revenue:

Tata Steel Limited during the financial year 2015-16 provided Grant in Aid of Rs.200 lakhs to Tata Steel Zoological Society for annual maintenance & operation of Tata Zoo. The Society through the zoo generated revenue worth Rs.131.98 lakhs. Major revenue earnings were through entry fee, contracts and donations.



Expenditure:

Total amount spent by Tata Steel Zoological Society during 2015-16 for operating zoo was Rs.327.16 lakhs, major expenditure being on establishment and maintenance of animals and their enclosures. There was no deficit in the revenue and expenditure.



**STATUS OF COMPLIANCE w.r.t CONDITIONS CONVEYED BY CENTRAL ZOO AUTHORITY
VIDE THEIR LETTER NO.19-47/92-CZA(52)(VOL.IV) DATED 31.12.2012 (01/01/2013)**

Sl.	Relevant Schedule	Condition	Status of compliance (As on 15.06.2016)
1.	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.	An additional land is proposed to be handed over to TSZS on western side of the zoo. The entrance gate has been proposed to be created there.
2.	1(1.4)	i) Perimeter wall around the periphery of zoo needs to be strengthened immediately and should be of 2 m high from ground.	Money has been sanctioned for strengthening the perimeter wall. Tender process is over and awaiting work allocation by Tata Steel.
3		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.	Completed
4	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.	Proposed to be done after handing over additional land area to zoo by Tata Steel.
5	1(1.5)	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.	Proposed to be done after handing over additional land area to zoo by Tata Steel.
6	1(1.7)	The incinerator which is operated with fire wood need maintenance.	Compiled
7.	1(1.9)	Domestic geese and pigeons should be removed from display area.	Out of 80 geese's 63 have been removed in exchange of pheasants. 17 yet to be removed.
8.	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.	Continuing
9.	4(4.2)	i) Aviary with limited number of species of birds needs renovation	Money has been sanctioned. Awaiting tender process through Tata Steel.
10		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.	The primates are proposed to be relocated to the additional land to be provided to Zoo for expansion.
11		iii) Enclosures of herbivores are	Screening from two sides provided

12	4(4.2)	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.	by providing agro net & planting of climbers & hedges. Work is continuing
13	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.	Boundary wall near the lion and tiger enclosure has been raised and strengthened to meet CZA guidelines.
14	4(4.5)	Exotic birds aviaries height to be reduced. Exhibit for bonnet & rhesus macaque, pheasants and other exotic birds to be improved.	CZA has been requested to rebok on the recommendation keeping in view of the welfare of birds. Money has been sanctioned for pheasant aviary, Macaque enclosures. Tender process and work to be carried out by Tata Steel.
15	4(4.9)	Standoff barrier should be provided at exotic birds and capuchin monkey enclosure.	Completed
16	5(5.1)	Feeding cells of Langur may be suitably modified to meet welfare requirements of the animals,	Money has been sanctioned. Tender process and work to be carried out by Tata Steel.
17	5(5.2)	i) Water in wet moats could be recycled and reused.	Not explored
18		ii) Innovative barriers like power fence may also be used in wet moated enclosures to reduce dependency on water.	Proposal to provide power fence prepared for implementation in Langur enclosure. Proposed to be taken up in FY16-17
19		iii) Beef room to be made fly proof	Done
		iv) Feed provided to carnivores should be checked daily by veterinary officer before delivering to animals.	Done and continuing
20	5(5.3)	Prophylactic charts should be displayed in each animal house of the zoo.	Done and continuing
21	7(7.1)	Postmortem 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.	Complied
22	7(7.2)	Formats of registers example PM register is not followed, to be as per prescribed by CZA.	Complied
23	9(9.1)	The zoo does not have self-viable population of following species: Bam 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	Bam owl, kaleej, eastern rosella, Edward and ring necked pheasant have died. Porcupine & hill myna paired Talks with other zoos and facilities are in process for pairing the single

		to a recognized zoo on breeding loan.	animals like hippo, Ostrich, capuchin and mugger.
24	9(9.8)	Animal history cards to be kept updated maintained on day to day basis.	Complied
25	9(9.9)	Nilgai, chital and blackbuck population should be controlled.	Vasectomy operations in chital and black buck have been taken up.
26	9(9.10)	Zoo should implement disaster management plan by carrying out mock drill and training to staff.	Complied. Mock drill is being carried out on regular basis.
27	11(11.1)	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.	Work for improving signage's initiated by engaging Tata Eksi. Prototypes ready for tendering. To be implemented in phased manner.
28	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.	Four new toilet units have been constructed for visitors use.
		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.	Done and continuing

TATA STEEL ZOOLOGICAL PARK, JAMSHEDPUR
(AT A GLANCE)

Total Zoo area	: 43.25 Hectares
Developed area	: 28.63 Hectares
Zoo Timing	: 9.00 am to 5.00 pm.
Close Day	: Monday
No. of Species	: Mammals-20, Birds-25 and Reptiles-4
No of Animals	: 410
No. of Visitors (2015-16)	: 4.78 lakhs
Fees & Rates levied from public	

PARTICULARS OF FEES		AMOUNT	
		(In rupees)	
A	Entry fee to zoo		
	Adult (per person)	30.00	
	Child (per child between age 3 to 12 years)	20.00	
	Group visit More than 10 persons	Rs.5/- off per person	
	Family ticket - (group of four with min. one adult and one child in the group)	Rs.2.50/- off per person	
B	Bird watching (between 5 AM to 8 AM)		
	Monthly fee per person	300.00	Annual fees is Rs.3600/- per person
	Senior citizens& students (per month)	150.00	Annual fees is Rs.1800/- per person
C	Boating (for 30 minutes)		
	Two Seater	20.00	With life jackets
	Four Seater	40.00	With life jackets
D	Safari ride (Bus)		
	Per seat charge	10.00	
	Minimum hiring charges for full bus (oneround)	100.00	Minimum occupancy should be 10 persons for the ride.
E	Educational seminars & Workshop in Zoo Nature Education Centre (Full day during Zoo hours)	5000.00	Service tax extra

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