

SANJAY GANDHI BIOLOGICAL PARK, PATNA

Annual Report for the year
2020-21



Sanjay Gandhi Biological Park, Patna

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1. Report of the Officer-in-charge

Sanjay Gandhi Biological Park is the only Biological Park in the State of Bihar where animals of about 94 species are housed including Indian one horned Rhinoceros, Tiger, Leopard, Clouded Leopard, Hippopotamus, Crocodile, Elephant, Himalayan black bear, Jackal, Black bucks, Spotted deer, Peafowl, Hill myna, Gharial, Python, Indian Rhinoceros, Chimpanzee, Giraffe, Zebra, Emu, and White peacock.

The Park is currently having more than 300 species of trees, herbs and shrubs. Plant exhibits including a nursery for medicinal plants, an orchid house, a fern house, a glass house, and a rose garden. The Park also includes an Aquarium where about 35 species of fishes are housed. A Nocturnal House has been constructed for the nocturnal animals.

The Central Zoo Authority has approved the Master Plan of the Zoo for future development which will be executed in phased manner. A Rhino Conservation & Breeding Centre is being constructed with the prior approval and funding from the Central Zoo Authority.

A Zoo Education Centre has been construction for awareness, education among the people especially children about wildlife. The zoo is very sensitive about the facilities for visitors, public conveniences and other amenities also.

2. History of the Zoo

The Park was first established as a Botanical garden in 1969. The then Hon'ble Governor of Bihar, Sri Nityanand Kanoongo, provided almost 34 acres of land from the Governor House campus for the garden. In 1972, 58.2 acres of land of Public Works Department and 60.75 acres land of Revenue Department was transferred to the Forest Department to expand the park. Since 1973, this park is being developed as a Biological park, combining a botanical garden with a zoo. The land acquired from the Public Works Department and the Revenue Department has been declared as Protected Forest by the State Government on 8 March 1983. In the year 1980, it was named as 'Sanjay Gandhi Biological Park'.

This is the only Biological Park in the State of Bihar where animals of about 110 species are housed including Tiger, Lion, Leopard, Hippopotamus, Crocodile, Elephant, Himalayan black bear, Jackal, Black bucks, Spotted deer, Peafowl, Hill myna, Gharial, Python, Indian Rhinoceros, Chimpanzee, Giraffe, Zebra, Emu, and White peacock.

The Park is currently having more than 300 species of trees, herbs and shrubs. Plant exhibits including a nursery for medicinal plants, an orchid house, a fern house, a cactus house, and a rose garden. The Park also includes an Aquarium where about 35 species of fishes are housed.

3. Vision

The vision of the Park is to educate and generate awareness about the fauna & flora among the people especially children who are the future of the country.

4. Mission

To save and protect wildlife through conservation, research, education as well as to provide better facility to the rescued animals. Breeding of animals especially endangered species and to release them in their natural habitat for maintaining the ecological balance.

5. Objective

The main objective of the zoos shall be to complement and strengthen the national efforts in conservation of the rich biodiversity of the country, particularly the wild fauna. This objective can be achieved through the following protocol:-

- a. Conservation of endangered species.
- b. To inspire amongst zoo visitors empathy for wild animals, and understanding and awareness about the need for conservation of natural resources and for maintaining the ecological balance.
- c. Providing opportunities for scientific studies useful for conservation.
- d. Besides the aforesaid objectives, the zoos shall continue to function as rescue center's for orphaned wild animals.

6. About us

S.No.	Particulars	Information
Basic Information about the Zoo		
1	Name of the Zoo	Sanjay Gandhi Biological Park, Patna
2	Year of Establishment	1972
3	Address of the Zoo	Sanjay Gandhi Biological Park, P.O. G.P.O. Patna- 800 001
4	State	Bihar
5	Telephone Number	0612-2217455
6	Fax Number	-

S.No.	Particulars	Information
7	E-mail address	patnazoo@yahoo.com
8	Website	www.zoopatna.com
9	Distance from nearest	Airport: 2 Kms.
		Railway Station: 6 Kms.
		Bus Stand: 8 Kms.
10	Recognition Valid upto (Date)	28-09-2021
11	Category of zoo	'A'
12	Area (in Hectares)	153.00 Acres
13	Number of Visitors 2020-21 (Financial Year)	Adult : 741002
		Adult Group: 5987
		Children : 94445
		Child Group: 644
		Total Indian : 842078
		Total Foreigners : -
		Total Visitors: 8,42,078
14	Visitors' Facilities Available in Zoo	<ol style="list-style-type: none"> 1. 3D Theatre 2. Drinking water fountain 3. Purified water 4. Wheel chair to disabled person 5. Pram for small child. 6. Toilet 7. Cloak room 8. Restaurant 9. Battery Operated Vehicle 10. Battery Operated Trackless toy train 11. Souvenir Shop 12. Fully Wi-Fi Campus 13. Signage's QR Code 14. Visitor's shed 15. First Aid 16. Children's Park

S.No.	Particulars	Information
		17. Fully air-conditioned Library 18. Patna Zoo is covered entire zoo with CCTV 19. Guide Map
15	Weekly Closure Day of the Zoo	Monday
Management Personnel of the zoo		
16	Name with designation of the Officer in-charge	Shri Satyajeet Kumar, <i>IFS</i> Director, Sanjay Gandhi Biological Park, Patna
	Name of the Veterinary Officer	1. Dr. Ram Kumar Pandey 2. Dr. Samrendra Bahadur Singh
	Name of the Curator	-
	Name of the Biologist	-
	Name of the Education Officer	-
	Name of the Compounder/ Lab Assistant	Shri Maksudul Hassan, Compounder (Retd.)
Owner / Operator of the Zoo		
17	*Name of the Operator	Principal Secretary, Deptt. of Environment, Forest & Climate change, Govt. of Bihar
18	Address of the Operator	Sinchai Bhawan, Patna.
19	Contact details/Phone number of Operator	0612-2217455/ Mob. 8986153174
20	E-mail address of Operator	patnazoobihar@gmail.com

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

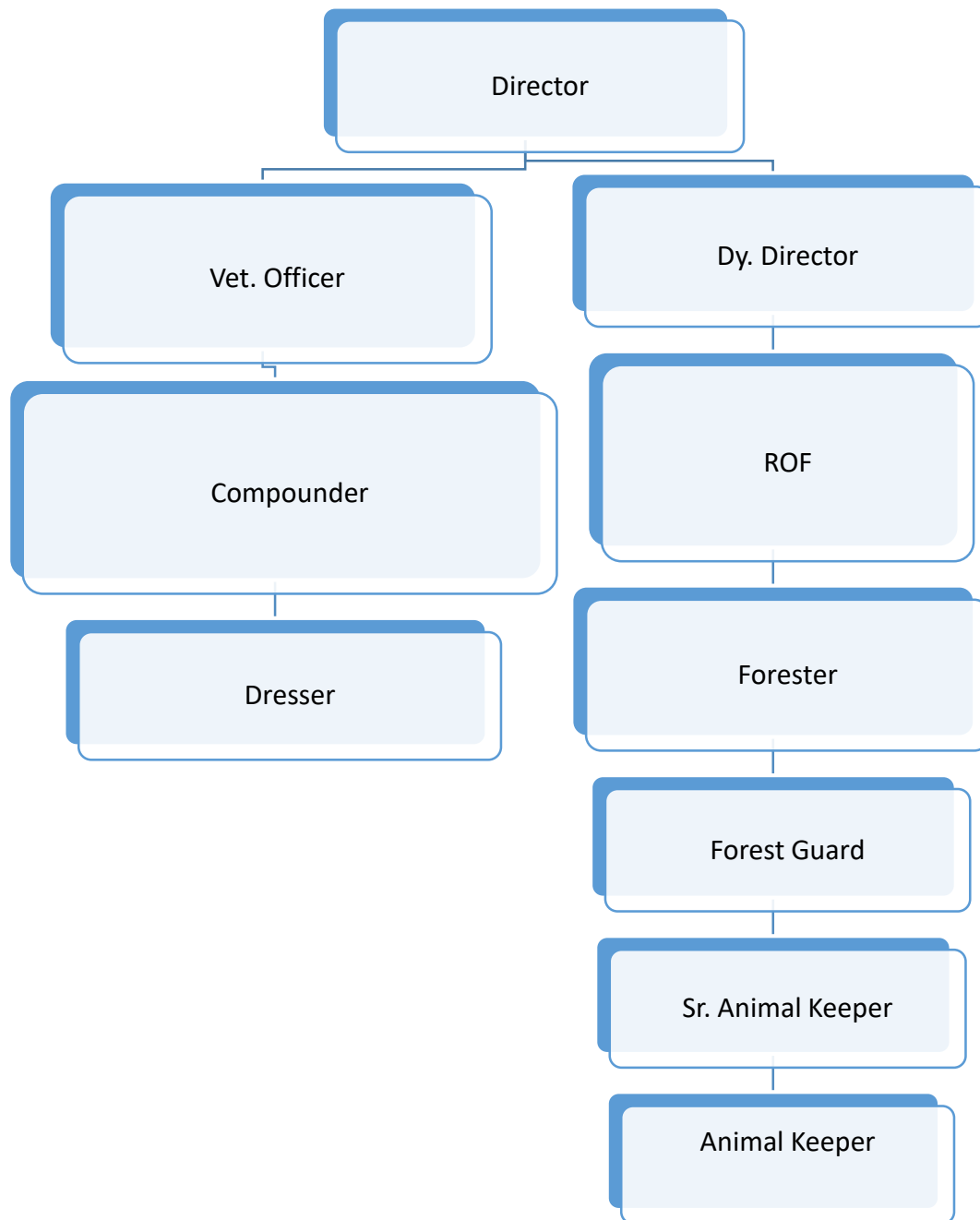
“Zoo Operator” means the person who has ultimate control over the affairs of the zoos provided that_____

I. in the case of a firm or other association of individuals, any one of the individual partners or members thereof; or

II. in the case of a company, any director, manager, secretary or other officer, who is in-charge of and responsible to the company for the affairs of the zoo; or

III. In case of zoo owned or controlled by the Central Government or any State Government or Union Territory Administration or any Trust or Society funded by the Central Government or a State Government or a Union Territory Administration, the Secretary of the concerned Department of that Government, or as the case may be the Union Territory Administration, shall be deemed to be the Zoo Operator.

7. Organizational Chart



8. Human Resources

Manpower of the Zoo*

Sl.No.	Designation	No. of sanctioned Post	No. of Post held	No. of Vacancy
1	Director	1	1	0
2	Dy. Director	1	1	0
3	Vet. Officer	2	2	0
4	ROF	2	2	0
5	Biologist	1	0	1
6	Zoo Education Officer	1	0	1
7	Asst. Nature Education Officer	1	0	1
8	Head Clerk	1	0	1
9	Stenographer	1	0	1
10	Clerk	7	6	1
11	Forester	5	3	2
12	Vet. Compounder	2	0	2
13	Driver	5	2	3
14	Forest Guard	16	16	0
15	Senior Animal Keeper	3	0	3
16	Animal Keeper	64	36	28
17	Mali	15	5	10
18	Pump Operator	2	1	1
19	Plumber	1	1	0
20	Museum Keeper	1	0	1
21	Electrician	1	0	1
22	Mahawat	3	2	1
23	Chowkidar	3	2	1
24	Peon	4	3	1
25	Sweeper	7	2	5
26	Baira	2	2	0
27	Cook	3	1	2
28	Thela Chalak	1	1	0
29	Sapera	1	1	0
30	Dresser	1	1	0
31	Aquarium Attendant	3	2	1
32	Carpenter-cum- Welder	1	0	1
33	3D Theatre Technician	3	0	3
34	Technician	1	0	1
35	Exhibition Assistant	1	0	1
36	Pashudhan Sahayak	2	0	2
37	Amin	1	0	1
Total		170	93	77

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

9. Capacity Building of zoo personnel

Sl.No.	Name and designation of the zoo personnel	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
1	Shri Satyajeet Kumar, Zoo Director	Wildlife Health Management training Module	28-03-2021 to 03-04-2021	Sarska by WII, Dehradun

10. Zoo Advisory Committee – ----

- a. Date of constitution**
- b. Members**
- c. Dates on which Meetings held during the year**

11. Health Advisory Committee–

- a. Date of constitution : - 07- 01-2005**
- b. Date of Re-constitution : - 31-07-2020**

c. Members :-

- (i) Dr. Ali Ahmad Khan, President, Animal Health Advisory Committee, Sanjay Gandhi Biological Park, Patna.
- (ii) Dean, Bihar Veterinary College, Patna.
- (iii) Director, Institute of Animal Health & Production, Bihar, Patna.
- (iv) Dr. K.P. Mallik, Retd. Sr. Scientist, I.V.R.I., Izzatnagar, Raebareilly.
- (v) Dr. Anup Rai, Retd. Animal Husbandary Officer, Patna.
- (vi) Dr. Alka Sharan, Retd. Director, Institute of Animal Health & Production, Bihar, Patna.
- (vii) Dr. Ajeet Kumar, Retd. Veterinary Officer, Sanjay Gandhi Biological Park, Patna.
- (viii) Dr. Ramesh Tiwary, Assistant Professor, Surgery & Radiology Department, Bihar Veterinary College, Patna.
- (ix) Dr. Gyandeo Singh, Assistant Professor, Surgery & Radiology Department, Bihar Veterinary College, Patna.
- (x) Dr. Pallav Shekhar, Assistant Professor, Medicine Department, Bihar Veterinary College, Patna.
- (xi) Dr. Manoj Kumar, Assistant Professor, Microbiology Department, Bihar Veterinary College, Patna.
- (xii) Dr. Kaushal Kumar, Assistant Professor, Pathology Department, Bihar Veterinary College, Patna
- (xiii) Dr. Farid Ahmad Khan, (Homeopathic)
- (xiv) Veterinary Officer, Sanjay Gandhi Biological Park, Patna

Dates on which Meetings held during the year

- 1) 09-11-2020

12. Statement of income and expenditure of the Zoo

Year	Total Revenue	Total Expenditure
2020-21	345.10 (in lakh)	1453.97 (in lakh)

13. Daily feed Schedule of animals

Animal Feed Chart (in kg/gm/piece per animal)

Species	Feed Item	Remarks	
Royal Bengal Tiger	Beef with bone - 8 kg (Male)	1. Supplementation 3000 IU of Vitamin A and 150 IU of Vitamin E per Kg meat offered or 2 ml multi-vitamin PO. 2. In Carnivore animals Beef/Chicken may be increased 20% as per requirement in variation of season.	
	Beef with bone- 6 kg (Female)		
Lion Indian	Beef with bone - 6.750 kg (Male)		
	Beef with bone - 5 kg (Female)		
Indian Fox	Dressed chicken - 250 gm		
Cat Leopard	Dressed chicken - 250 gm		
Indian Palm Civet	Dressed Chicken -100 gm, Banana - 200 gm		
Otter smooth Indian	Fresh fish- 1-1.25 kg		5 ml Vitamin B complex
Cat Fishing	Dressed Chicken - 300 gm,		Supplementation 3000 IU of Vitamin A and 150 IU of Vitamin E per Kg meat offered or 2 ml multi-vitamin PO.
	Fish - 250 gm		
Hyena-Stripped	Beef with bone - 2 -2.5 kg (Male)		
	Beef with bone- 2 kg (Female)		
Wolf Indian	Beef with bone - 2 -2.5 kg (Male)		
	Beef with bone - 2 kg (Female)		
Indian Jackal	Beef with bone - 1 kg (Male)		
	Beef with bone - 750 gm (Female)		
Cat Jungle	Dressed chicken - 250 gm		
Leopard	Beef with bone - 2.5 kg (Male)		
	Beef with bone - 2 kg (Female)		
Deer Swamp	Deer Mash - 750 gm-1.25 kg , Green Fodder - 8-12 kg, Wheat bhusa - 1-2 kg If green fodder is not available use Deer mash - 1.5 kg and Wheat bhusa - 2-3 kg.	Salt lick provided in sufficient amount in all enclosures.	
Manipur Deer (Sangai)	Deer Mash - 1.5 kg, Green Fodder - 4-5 kg, Soaked gram - 300 gm, Soaked moong - 300 gm, Jaggery - 75 gm, Banana - 300 gm, Carrot - 250 gm, Leaves & twigs		

	- <i>Ad liv.</i>	
Deer Sāmbhar	Deer Mash - 1-1.75 kg, Green Fodder - 11-23 kg, Wheat bhusa - 2 kg If green fodder is not available use Deer mash - 2 kg and Wheat bhusa - 6 kg.	
Deer Spotted	Concentrate mixture - 500 gm & Cereal fodder (Maize/Sudan/ Oats/ Sorghum) - 2 kg, Wheat bhusa - 500 gm Leguminous fodder (Berseem/ Lobia) - 2 kg If green fodder is not available use Deer mash - 500 gm and Wheat bhusa - 500 gm	
Deer Hog/Deer Barking	Deer Mash 200-350 gm, Green fodder - 2.75-4.75 kg, Wheat bhusa - 250 gm, Soaked gram - 100 gm, Soaked wheat - 50 gm If green fodder is not available use Deer mash - 300 gm, Wheat bhusa - 1 kg, Choker - 250 gm	
Black Buck	Deer Mash- 125-250 gm, Green fodder - 1.5-3.25 kg, Wheat bhusa - 300 gm If green fodder is not available use Deer mash - 300 gm and Wheat bhusa - 750 gm, Tree leaves - <i>Ad lib.</i>	
Blue Bull (Nilgai)	Deer Mash - 1.25 kg, Green fodder - 10 kg, Wheat bhusa- 2 kg If green fodder is not available use Deer mash - 2kg and Wheat bhusa - 6 kg	
One-horned Rhinoceros	Male - 3.5 kg concentrate & 60-70 kg roughages, Wheat bhusa - 10 kg, Soaked gram - 1.25 kg, Soaked wheat - 1.25 kg, Soaked moong - 250 gm, Jeggary - 750 gm, Banana - 1.5 kg Female - 2.5 kg concentrate & 60-70 kg roughages, Wheat bhusa - 8 kg, Soaked gram - 1.25 kg, Soaked wheat - 1.25 kg, Soaked moong - 250 gm, Jeggary - 750 gm, Banana - 1.5 kg	Salt lick provided in sufficient amount in all enclosures.
Hippopotamus	Deer Mash - 4.5 kg, Pumpkin/brinjal/potato- 2.5 kg (alternately), Banana - 2.5 kg, Wheat husk - 5 kg, Green fodder - 60-70 kg If green grass not available use Choker - 3 kg	
Gaur Indian	Groundnut cake - 500 gm, Wheat bran - 3 kg, Horse gram - 1 kg, Green fodder - 15 kg, Leguminous fodder - 2 kg, Common salt - 20 gm	
Elephant Indian	Female - 5 kg concentrate & Green Fodder - 40-50 kg, Soaked paddy - 3 kg, Atta Roti - 2 kg, Paddy straw - 15 kg, Cucumber - 3 kg, Banana - 6 kg, Leaves & twigs - 15-20 kg, Banana stem (in summer) - <i>Ad lib</i> ,	
Zebra Grant	Deer mash - 2.5 kg, Green fodder - 6 kg, Soaked gram -	

	750 gm, Soaked wheat - 750 gm, Jeggary - 100 gm, Mineral mixture - 50 gm, If green grass not available use Wheat bhusa - 6 kg, Deer mash - 2.5 kg	
Giraffe	Deer mash - 1 kg, Wheat bran - 3.5 kg, Bengal gram - 750 gm, Soaked wheat - 600 gm, Soaked moong - 1 kg, Crushed maize - 500 gm, Cut branches (assuming that only 1/3 is leaves, barks and buds, rest in inedible lignified materials) - 45 kg, Banana - 2.5 kg, Apple - 350 gm, Sweet Lime - 200 gm, Carrot - 1.5 kg, Onion - 1 kg, Cabbage - 1 kg, Sweet Potato -250 gm, Cucumber - 2.5 kg, Jaggery - 50 gm and common salt - 50 gm	
Chimpanzee	Rice & Curd – 125 gm & 400 gm or , Kheer - 200 rice in 1.5 kg milk, Jaggery – 125 gm in rice & curd, Banana – 1.5 kg, Apple – 300 gm, Pomegranate – 1 kg, Onion – 100 gm, Water Melon (in summer) – 1 kg, Soaked gram – 50 gm, French Bean – 250 gm, Daav – 1 piece (Mar to Sep), Grapes – 500 gm, Egg (in winter) - 2 piece, Mango - 500 gm	Multi-Vitamin feed supplement provided regularly.
Lion-tailed macaque	Soaked gram - 200 gm, Banana - 1 kg, Apple - 1.5 kg, Cucumber - 200 gm, Groundnut - 100 gm, Atta roti - 250 gm	
Langur-Common/ Rhesus Macaque	Roti- 150 gm, Sweet potato- 200 gm, Apple - 150 gm, Cucumber - 50 gm, Carrot - 100 gm, French bean - 200 gm, Guava - 200 gm, Banana - 250 gm	
Sloth Bear/ Himalayn Black Bear	Roti - 400-500 gm, Pulses - 200 gm, Green Vegetable (Spinach, beans, cabbage, and small amount of seasonal fruits) - 1.250 kg, Groundnut - 50 gm, Kheer - 300 gm rice in 1-1.25 gm milk, Jaggery - 100 gm, Honey - 15-20 gm & Mineral mixture - 30 gm	
Porcupine Indian	Banana- 150 gm, Spinach/leafy vegetables - 300 gm, Bengal gram - 50 gm, Carrot - 200 gm, Tapioca (Sweet Potato) - 300 gm Note :- Porcupine should be fed at least twice daily to maintain gut health. Usually hindgut fermentation is reduced after 12 hours of feeding.	
Cobra Indian	Guinea pig - 1 piece & Chicks - 2 piece Once in a week in Summer	
Monitor Water Lizard	Fish - 100 gm Twice a week in Summer	
Python-Indian Rock	Chicken weighing – 1.25-1.5 kg Once in 2 week	
Snake Rat-Dhaman	Chicks - 4 piece Once in a week in Summer	
Sand Boa	Chicks - 2-3 piece Once in a week in Summer	

Snake Water	Fish - 100 gm Once in a week in Summer	
Viper Russell's	Guinea pig - 1 piece/ Chicks - 2 piece Once a week in Summer	
Crocodile-Long snouted-Ghariyal	Fish - 2.5 - 3 kg twice a week in summer. Fasting in mid-winter & 1 kg once a week in rest of winter season.	If compelled to feed frozen fish, then add 25-30 mg thiamin and 1000 IU of vitamin E to each kg of feed.
Crocodile-Marsh-Mugger	Beef – 2.5 – 3 kg twice a week in summer. Fasting in mid-winter & 1 kg once a week in rest of winter season.	
Hornbill-Common Grey	Banana- 50 gm, Seasonal fruits (apple, pear, plum, etc.) - 100 gm, rice or roti - 20 gm, sattu/besan (grounded Bengal gram flour) - 20 gm	Multi-Vitamin & Liver Tonic/ Vitamin- A, D3, E & B12 added regularly in drinking water.
Hornbill-Indian pied	Banana - 50 gm, Apple/ Pear/ Plum/ Seasonal fruit - 100 gm, Rice or Roti - 20 gm, Sattu/Besan - 20 gm, CaCO3 - 0.5 gm	
Silver Pheasant, Golden Pheasant, Red Jungle Fowl, Pheasant Grey Peacock & Pheasant Lady Amherst	Maize Crushed – 20-25 gm, Millet – 10 gm, Paddy seed – 25 gm, Kauni – 5 gm, Wheat – 40 gm, Poultry feed – 25 gm, Bird Mash – 25 gm, Onion – 20 gm, Garlic – 5 gm, Spinach – 50 gm	
Pigeon Common Green	ChanaSattu - 50 gm, Banana - 75 gm	
Duck-Brahmini, Goose-Bar Headed, Duck Mallard, Emerald Dove, Duck Mandarin & Moorhen	Atta Roti – 25 gm, Paddy Seed – 25 gm, Wheat – 30 gm, Bird Mash – 25 gm, Maize Crushed – 5 gm, Poultry feed-25 gm, Millet – 10 gm, Kauni – 10 gm, Spinach – 15 gm	
Scarlet Macaw, Macaw Red & Green	Sugarcane – 200 gm, Soaked Gram – 30 gm, Apple – 150 gm, Cucumber – 20 gm, Papaya – 100 gm, Mango - 100 gm (as per availability), Water Melon – 200 gm, Groundnut – 100 gm, Green Chili – 2 piece	
Budgeriger	Kauni 7 gm, Cheena – 7 gm	
Cockatiel, Love Bird, Parakeet Blossom headed,	Cereal grains - 10 gm, Pulses seed - 5 gm, fruits like banana - 30 gm, other fruits & vegetables - 30 gm	
Finch Zebra	Cheena- 10 gm	
Crane Sarus	Maize Crush – 10 gm, Poultry feed – 20 gm, Fish – 500 gm, Wheat – 10 gm, Paddy seed – 10 gm, Onion – 10 gm, Spinach – 250 gm, Millet – 100 gm	

Crane-Common & Stork Adjutant (lesser)	Fish – 500 gm	
Heron-Night & Ibis-Black	Fish – 100 gm	
Kite-Black Winged Buzzard	Chicks – 2 piece	
Kite-Pariah/Black Kite	Beef (Keema) – 100gm	
Owl Eagle Forest Buzzard	Chicks – 4 piece Chicks – 1 piece, Chicken (Keema) – 50gm	
Myna-Hill	ChanaSattu – 25 gm, Banana – 150 gm	
Peafowl	Green leafy vegetables - 100 gm, Coloured vegetables (carrot/ capsicum/ tomato) - 50 gm, Garlic - 5 gm, Onion - 50 gm, Boiled egg/insects - 25 gm, Bird Mash - 100 gm, Grain (Jowar-bajra) - 100 gm mixture	
Vulture Himalayan Grffon	Dressed Chicken – 1 kg Alternate day	
Emu	Soaked gram – 200 gm, Soaked Moong – 70 gm, Banana – 2.700 kg, Onion – 60 gm, Garlic – 20 gm, Spinach – 300 gm On Monday - Banana - 500 gm only	
Cassowary	Banana – 3 kg, ChanaSattu – 200 gm Spinach – 500 gm	
Ostrich	Banana – 1.750 kg, Soaked Wheat – 150 gm, Millet – 75 gm, Soaked Gram – 250 gm, Soaked Moong – 150 gm, Soaked Maize – 250 gm, Atta Roti – 200 gm, Poultry feed – 375 gm, Onion – 150 gm, Garlic – 25 gm, Spinach – 500 gm, Tomato – 125 gm, Papaya – 125 gm	
Pelican-Rosy /White	Fish - 750 gm @ 5 kg body weight Fish- 1-1.5 kg @ 10 kg body weight. Note :- Fresh fish has bright red gill, clear eyes and firm pliable body. If by any reason frozen fish is to be used, please ensure that it is thawed before feeding.	

14. Vaccination Schedule of animals

Sl.No.	Species	Disease vaccinated for	Drug	Periodicity	Quantity & Variation
01	Feline (Big Cat)	Feline rhinotracheitis virus, Feline calici virus, Panleucopenia virus	Feligen CRP	Annually	1 does per adult
		Trypanosoma (Surra)	2. Antitryps = Triquin		0.25 ml per 10 kg body wt.

02	Elephant	Tetnus	1. Tet-vac	Annually	2 ml per adult
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15. De-worming Schedule of animals

Sl.No.	Species	Drug used	Periodicity	Quantity & Variation
01	Lion (adult)	Panacur bolus 1.5 gm (Fenbendazole) Or, Kiwof Plus XL (Praziquantel - 175 mg, Pyrantel Pamoate - 104 mg and Febantel - 525 mg)	Quarterly	Fenbendazole - 1.5 gm x 1 for three days Or, Kiwof Plus XL- 1 tab. for 35 kg body wt.
02	Tiger (adult)	Panacur bolus 1.5 gm (Fenbendazole) Or, Kiwof Plus XL (Praziquantel - 175 mg, Pyrantel Pamoate - 104 mg and Febantel - 525 mg)	Quarterly	Fenbendazole - 1.5 gm x 1 for three days Or, Kiwof Plus XL- 1 tab. for 35 kg body wt.
03	Leopard (adult)	Panacur bolus 1.5 gm (Fenbendazole) Or, Kiwof Plus XL (Praziquantel - 175 mg, Pyrantel Pamoate - 104 mg and Febantel - 525 mg)	Quarterly	Fenbendazole - 1.5 gm x 1 for three days Or, Kiwof Plus XL- 1 tab. for 35 kg body wt.
04	Birds (Companion birds)	Worm out Gel (praziquantel - 20 gm/L oxfendazole - 20 gm/L) Or, Albomar Suspension (Albendazole)	Quarterly	Wormout gel - 2 ml in 160 ml drinking water (5 mg per kg body weight) Or. Albomar Suspension - 1 ml in 100 ml drinking water
05	Ungulates	Fenbendazole/Ivermectin	Quarterly	Fenbendazole -5 mg/kg body wt. Ivermectin - 1 mg / 5 kg body wt.
06	Rhinoceros	Fenbendazole/Ivermectin	Quarterly	Fenbendazole - 9 gm per adult Ivermectin - 320 - 400 mg per adult
07	Elephant	Fenbendazole	Quarterly	12 gm per adult
08	Bison (adult)	Fenbendazole/Ivermectin / Albendazole	Quarterly	Fenbendazole - 3 gm Ivermectin. - 100 mg Albendazole - 3 gm
09	Giraffe (adult)	Fenbendazole/Ivermectin	Quarterly	Fenbendazole -2.5-3 gm Ivermectin - 120-160 mg
10	Hippo (adult)	Fenbendazole/Albendazole	Quarterly	7.5-9 gm
11	Jungle Cat	Fantas Plus (Fenbendazole - 150 mg Praziquantel - 50 mg)	Quarterly	Fentas Plus - 1/2 tab. for 3 days Or, Kiwof Plus tab. - 1 tab.

		Or, Kiwof Plus tab. (Praziquantel - 50 mg, Pyrantel Pamoate - 144 mg and Febantel - 150 mg)		(for 10 kg body wt.)
12	Sahil	Mebex Mebendazole - 100 mg	Quarterly	1/2 tab. per adult
13.	Fishing Cat	Fantas Plus (Fenbendazole - 150 mg Praziquantel - 50 mg) Or, Kiwof Plus tab. (Praziquantel - 50 mg, Pyrantel Pamoate - 144 mg and Febantel - 150 mg)	Quarterly	Fentas Plus - 1/2 tab. for 3 days Or, Kiwof Plus tab. - 1 tab. (for 10 kg body wt.)
14.	Indian Fox	Fantas Plus (Fenbendazole - 150 mg Praziquantel - 50 mg) Or, Kiwof Plus tab. (Praziquantel - 50 mg, Pyrantel Pamoate - 144 mg and Febantel - 150 mg)	Quarterly	Fentas Plus - 1/2 tab. for 3 days Or, Kiwof Plus tab. - 1 tab. (for 10 kg body wt.)
15	Zebra	Fenbendazole/Ivermectin	Quarterly	Fenbedazole - 1.5 gm Ivermectin - 80 mg
16	Cassowary	Mebex Mebendazole - 100 mg	Quarterly	150 mg
17	Emu	Mebex Mebendazole - 100 mg	Quarterly	150 mg
18	Ostrich	Mebex Mebendazole - 100 mg	Quarterly	200 mg per adult
19	Rosy Pelican	Mebex Mebendazole - 100 mg	Quarterly	100 mg per bird
20	Sloth bear	Fenbendazole/Ivermectin	Quarterly	Fenbendazole - 1.5 gm per adult Or, Ivermectin - 40 mg per adult
21	Himalayan Bear	Fenbendazole/Ivermectin	Quarterly	Fenbendazole - 1.5 gm per adult Or, Ivermectin - 40 mg per adult
22	Chimpanzee	Albendazole	Quarterly	400 mg for per adult
23	Lion tailed macaque	Albendazole	Quarterly	200 mg for per adult
24	Hyena	Fantas Plus (Fenbendazole - 150 mg Praziquantel - 50 mg) Or, Kiwof Plus tab. (Praziquantel - 50 mg, Pyrantel Pamoate - 144 mg)	Quarterly	Fentas Plus - 1/2 tab. for 3 days Or, Kiwof Plus tab. - 1 tab. (for 10 kg body wt.)

		and Febantel - 150 mg)		
25	Wolf	Fantas Plus (Fenbendazole - 150 mg Praziquantel - 50 mg) Or, Kiwof Plus tab. (Praziquantel - 50 mg, Pyrantel Pamoate - 144 mg and Febantel - 150 mg)	Quarterly	Fentas Plus - 1/2 tab. for 3 days Or, Kiwof Plus tab. - 1 tab. (for 10 kg body wt.)
26	Jackle	Fantas Plus (Fenbendazole - 150 mg Praziquantel - 50 mg) Or, Kiwof Plus tab. (Praziquantel - 50 mg, Pyrantel Pamoate - 144 mg and Febantel - 150 mg)	Quarterly	Fantas Plus - 2 tab. for 3 days Or, Kiwof Plus tab. - 1 tab. (for 10 kg body wt.)
27	Monkey & Langoor	Albendazole	Quarterly	5-7 mg per kg body wt.
28	Peafowl & Pheasant	Albendazole	Quarterly	5 mg per kg body wt.

Note :- Faecal sample for examination on 2nd week of March, June, September , December and subsequent deworming done on 3rd week of the month. After deworming adjunct medication is followed.

16. Disinfection Schedule

Sl.No.	Species	Drug	Periodicity	Quantity & Variation
01	Ungulates	Turning of soil and lime treatment	Quarterly	As needed
		Moat cleaning	Every Monday	
02	Birds	Kohrsolin-TH Or, Virkon-S	Weekly/Fortnightly	Kohrsolin- TH - 100 ml per 10 litre of water as spray for regular disinfection or, Virkon-S - 3-4 gm per litre
		Turning of soil and lime treatment	Quarterly	As needed
03	Feline , Canidae	Nighthouse disinfection by blow gun firing followed by turmeric powder spray.	Weekly	As needed
		Outdoor enclouser- soil and lime treatment	Quarterly	As needed

Note :- As per requirement disinfection is performed before the schedule time.

17. Health Check-up of employees for zoonotic diseases

Sl.No.	Name	Designation	Date of Health Check up	Findings of Health Check up
Nil				

18. Development Works carried out in the zoo during the year (2020-21)

S.N.	Work done
1.	Renovation of toilets & Septic tank
2.	Shed construction in Zebra, Ghariyal & Nilgai
3	Shed construction in Chittal cage
4	Shed construction in Beer cage
5	Water supply facility in Hog deer, Giraffe
6	Cave construction near new ghariyal enclosure
7	Mote construction in Lion tailed macaque
8	Construction of viewer shed in tiger cage
9	Construction of fencing around snake house
10	Construction of fencing around hyena cage
11	Construction of fencing around chimpanzee cage
12	Viewer shed in zebra cage
13	Viewer shed in tiger cage
14	Construction of iron gate in bison cage
15	Construction of brick wall and fabrication work in front of chimpanzee cage
16	Construction of gate at snake house
17	Repairing of garage in food go-down campus
18	Construction of viewer shed in magar cage
19	Construction of platform to stay aeroplane
20	Construction of urinal near gate no. 2
21	Construction of urinal near thandi sadak
22	Enrichment for hatching old ghariyal cage
23	Enrichment for hatching ghariyal cage
24	Construction of night house in chimpanzee cage
25	Repairing of Aquarium
26	Repairing of Tiger cage- Ram & Sita
27	Repairing of Tiger enclosure- Bhima and Swarna
28	Animal enclosure signage's (40 nos.)
29	Multiple directional signage's (15 nos.)
30	Map of the Zoo (4 nos.)

19. Education and Awareness programmes during the year

A Zoo Education Centre has been established in the Park where wildlife awareness activities are being carried out, especially among the school children by film show related to wildlife three days in a week. Apart from this following programmes were conducted time-to-time.

S.N	Programmes
1.	Cage/animal species wise episodes were filmed and uploaded to youtube for the purpose of virtual tour of the zoo during Corona pandemic.
2.	Training programmes on wildlife health for 10 veterinarians/ veterinary officers working with Bihar Forest Department.
3.	Awareness programme on snake rescue and handling techniques

20. Important Events and happenings in the zoo

Following events were organised during the year:-

(i) World Environment Day (05 June 2020)



(ii) Tiger Day (29 July 2020)

International Tiger Day was not celebrated in 2020 due to Covid-19

(iii) Various enclosures were inaugurated by Hon'ble Chief Minister and Deputy Chief Minister on 23-08-2020



Ghariyal Enclosure



Double Horn Rhino Enclosure



Rhino Conservation & Breeding Centre



Hyena Enclosure

(iv) World Rhino Day (22 September 2020)

World Rhino Day was not celebrated in 2020 due to Covid-19

(v) Wildlife Week (02-08 Oct. 2020)

Wildlife Week was not celebrated in 2020 due to Covid-19

(vi) World Sparrow Day (20 March 2021)





21. Seasonal special arrangements for upkeep of animals

Diet control (addition and deletion of food items as per seasonal requirement) together with husbandry practices (Introduction of coolers, fans and room heaters, covering of windows and open spaces, trimming of large trees for proper sunbath are some activities done as per seasonal requirements) are under practice as seasonal special arrangements for upkeep of animals.

22. Research Work carried out and publications

Patna Zoo is in process to sign a memorandum of understanding with Patna Veterinary College to carry out research work on the wild animals kept at Zoo. Apart from this various students from different Colleges/Universities taken their M.Sc/Ph.D research work focused on zoo animals & management.

Sl. No.	Research Work	Status
1	A Ph.D. research work on "Studies on Faecal Steroid Hormones to Monitor Health Status of Captive Large Herbivores in Patna Zoo" by Bibha Choubey, Department of Zoology, Patna University, Patna.	In progress

23. Conservation Breeding Programme of the Zoo

Captive breeding of Greater one-horned rhinoceros in Sanjay Gandhi Biological Park has helped it to acquire global recognition. First pair of the pachyderm was brought to the park in

1979 and its breeding started in 1988. The park houses the highest number of individuals of the species in captivity after San Diego Zoo, California, U.S.A.

Breeding of endangered and rare animals is prime focus of the park. The park is one of the best breeding centres of the Greater One-horned Rhinoceros in the world. Breeding of the species started way back in 1988. The park witnessed the birth of two calves in 2011 and three calves in 2013. At present the zoo houses 13 rhinoceros (7 males and 6 females) of four different bloodlines. The following table Breeding Successfully enlists the species bred successfully in the park.

Breeding Successfully (Births in the last 5 years till 31.03.2021)							
SL.NO.	NAME OF ANIMALS	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
1	Peafowl	0	0	0	2	3	5
2	Bear- Sloth	0	2	2	2	0	6
3	Black Buck	5	5	2	1	2	15
4	Cat Jungle	5	2	0	2	0	9
5	Cat Leopard	0	0	0	0	0	0
6	Deer Swamp (Barasingha)	1	4	4	4	4	17
7	Rhinoceros-Indian one horned	0	3	0	0	2	5
8	Tiger-Royal Bengal	1	0	0	0	0	1
9	Tiger-white	4	0	0	0	0	4
10	Crocodile-Long snouted-Ghariyal	0	5	0	0	0	5
11	Budgerigar	0	0	5	0	2	7
12	Duck Mallard	0	1	0	12	6	19
13	Deer-Barking	1	4	2	3	6	16
14	Deer-Hog	2	5	6	2	4	19
15	Deer-Sambar	3	1	4	3	5	16
16	Deer-Spotted	4	3	3	7	2	19
17	Hippopotamus	0	0	1	0	0	1
18	Hyena-Stripped	0	2	0	4	3	9
19	Nilgai- Blue Bull	0	2	2	0	0	4
20	Giraffe	1	2	0	2	1	6
21	Emu	0	0	0	3	2	5
22	Indian Wolf	0	0	0	4	6	10
23	Gaur Indian	0	0	0	0	1	1
24	Cockatoo	0	0	0	0	1	1
25	Porcupine Indian	0	0	0	0	1	1
26	Red Jungle Fowl	0	0	0	0	4	4

24. Animal acquisition / transfer / exchange during the year 2020-21

A.	Animals going from the Zoo				
	H.No.	Species	Number (M:F:U)	Disposal to	Date of desposition from the Zoo
		Deer Sambar	1:3:0	Rajgir Zoo Safari, Nalanda	18.01.2021
		Deer Hog	1:3:0	Rajgir Zoo Safari, Nalanda	31.01.2021

	Deer Sambar	1:2:0	Rajgir Zoo Safari, Nalanda	01.02.2021
	Deer Hog	1:3:0	Rajgir Zoo Safari, Nalanda	04.02.2021
	Deer Sambar	0:1:0	Rajgir Zoo Safari, Nalanda	04.02.2021
	Deer Barking	2:6:0	Rajgir Zoo Safari, Nalanda	08.02.2021
	Tiger	1:0:0	Rajgir Zoo Safari, Nalanda	09.03.2021
	Tiger	0:1:0	Rajgir Zoo Safari, Nalanda	15.03.2021
	Lion	1:0:0	Rajgir Zoo Safari, Nalanda	22.03.2021

25. Rescue and Rehabilitation of wild animals carried out by the Zoo during 2020-21

Sl. No.	Name of Animals	No. of Rescue
1	Snake	87
2	Monkey	05
3	Turtle	03
4	Tiger	02
5	Elephant	01
6	Monitor Lizard	01
7	Haril Bird	01
8	Cat	01
9	Kite	01
Total		102

	(Sangai)																					
18	Deer Swamp (Barasingha)	<i>Rucervus duvaucelii</i>	4	9	0	13	0	0	4	0	0	0	0	0	0	0	1	0	4	8	4	16
19	Gaur Indian	<i>Bos frontalis gaurus</i>	1	1	0	2	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	2
20	Elephant-Indian	<i>Elephas maximus</i>	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
21	Jackal	<i>Canis aureus</i>	2	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	6
22	Langur-Common	<i>Presbytis entellus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
23	Leopard / Panther	<i>Panthera pardus</i>	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5
Sl. No.	Animal Name	Scientific Name	Stock as on 01.04.2020				During the Year												Stock as on 31.03.2021			
							Births			Acquisitions			Disposals			Deaths						
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
24	Lion-Hybrid	<i>Panthera leo</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
25	Lion Indian	<i>Panthera leo persica</i>	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1
26	Macaque-Assamese	<i>Macaca assamensis</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
27	Macaque-Lion tailed	<i>Macaca silenus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
28	Macaque-Rhesus	<i>Macaca mulatta</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4
29	Otter smooth Indian	<i>Lutra perspicillata</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
30	Rhinoceros-Indian one horned	<i>Rhinoceros unicornis</i>	6	5	0	11	1	1	0	0	0	0	0	0	0	0	0	0	7	6	0	13
31	Tiger-Royal Bengal	<i>Panthera tigris tigris</i>	2	2	0	4	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	3
32	Tiger-white	<i>Panthera tigris tigris</i>	0	3	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	2
33	Wolf Indian	<i>Canis lupus</i>	2	2	0	4	3	3	0	0	0	0	0	0	1	0	0	4	5	0	9	
34	Indian Fox	<i>Vulpes bengalensis</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
35	Fishing Cat	<i>Prionailurus viverrinus</i>	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
TOTAL MAMMALS			61	71	3	135	6	5	4	0	0	0	2	1	0	11	14	0	54	61	7	122
REPTILES																						
36	Cobra-Indian	<i>Naja naja</i>	4	6	4	14	0	0	0	0	0	0	0	0	0	0	0	0	4	6	4	14
37	Crocodile-Long snouted-Ghariyal	<i>Gavialis gangeticus</i>	2	13	41	56	0	0	0	0	0	0	0	0	0	1	3	2	12	38	52	
38	Crocodile-Marsh-Muggar	<i>Crocodylus palustris</i>	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
39	Monitor Water Lizard	<i>Varanus salvator</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2

40	Python-Indian Rock	<i>Python molurus</i>	3	1	12	16	0	0	0	0	0	0	0	0	0	0	0	0	3	1	12	16
41	Reticulated Python	<i>Python reticulatus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
42	Snake Rat-Dhaman	<i>Ptyas mucosus</i>	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
43	Turtle- Indian soft-shelled	<i>Lissemys punctata</i>	35	25	250	310	0	0	0	0	0	0	0	0	0	0	0	35	25	250	310	
44	Turtle- Ganges soft-shelled	<i>Aspideretes gangeticus</i>	5	8	8	21	0	0	0	0	0	0	0	0	0	0	0	5	8	8	21	
45	Turtle- Three striped roof	<i>Batagur dhongoka</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	
TOTAL REPTILES			52	59	322	433	0	0	0	0	0	0	0	0	0	1	3	52	58	319	429	
TOTAL ANIMALS			128	151	329	608	8	9	5	0	0	0	2	1	0	11	16	3	123	143	331	597
Sl. No.	Animal Name	Scientific Name	Stock as on				During the Year												Stock as on			
			01.04.2020				Births			Acquisitions			Disposals			Deaths			31.03.2021			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
Other species																						
BIRDS																						
01	Budgerigar	<i>Melopsittacus undulatus</i>	7	26	43	76	0	0	2	0	0	0	0	0	0	0	0	7	26	45	78	
02	Cassowary	<i>Casuarus casuarus</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
03	Cockatiel	<i>Nymphicus hollandicus</i>	0	3	15	18	0	0	0	0	0	0	0	0	0	0	3	0	3	12	15	
04	Crane-Common	<i>Grus grus</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
05	Crane-Sarus	<i>Grus antigone</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
06	Duck-Brahmini	<i>Tadorna ferruginea</i>	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0	4	2	0	6	
07	Emerald Dove	<i>Chakophaps indica</i>	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
08	Emu	<i>Dromaius novaehollandiae</i>	1	2	4	7	0	0	2	0	0	0	0	0	0	0	0	1	2	6	9	
09	Goose-Bar Headed	<i>Anser indicus</i>	4	3	2	9	0	0	0	0	0	0	0	0	1	0	2	3	3	0	6	
10	Heron-Night	<i>Nycticorax nycticorax</i>	2	0	2	4	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4	
11	Ibis-black	<i>Pseudibis papillosa</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
12	Stork Adjutant (lesser)	<i>Leptoptilos javanicus</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
13	Painted Stork	<i>Mycteria leucocephala</i>	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	
14	Love Birds	<i>Agapornis</i>	2	4	16	22	0	0	0	0	0	0	0	0	1	0	3	1	4	13	18	
15	Duck Mallard	<i>Anas platyrhynchos</i>	2	4	13	19	0	0	6	0	0	0	0	0	0	1	0	2	3	19	24	
16	Moorhen	<i>Gallinula chloropus</i>	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
17	Owl-Indian Great Horn	<i>Bubo bubo</i>	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	

18	Owl Barn	<i>Tyto alba</i>	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
19	Parakeet-Blossom Headed	<i>Psittacula cyanocephala</i>	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18
20	Pelican-Rosy/white	<i>Pelecanus onocrotalus</i>	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
21	Pheasant-Golden	<i>Chrysolophus pictus</i>	7	5	0	12	0	0	0	0	0	0	0	0	0	1	0	7	4	0	11	11
22	Yellow-legged green Pigeon	<i>Treron phoenicoptera</i>	4	2	2	8	0	0	0	0	0	0	0	0	0	0	0	4	2	2	8	8
23	Pheasant-Silver	<i>Lophura nycthemera</i>	9	8	4	21	0	0	0	0	0	0	0	0	3	2	0	6	6	4	16	16
24	Pheasant-Lady Amherst	<i>Chrysolophus amherstiae</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
25	Pigeon-Common Green	<i>Treron phoenicoptera</i>	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4
26	Black Swan	<i>Cygnus atratus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
27	Ostrich	<i>Struthio</i>	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
28	Lesser Whistling Duck	<i>Dendrocygna javanica</i>	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
29	Medium sulpher crested Cockatoo	<i>Cacatua galerita eleonora</i>	2	2	1	5	0	0	0	0	0	0	0	0	0	0	0	2	2	1	5	5
30	Greater sulpher crested Cockatoo	<i>Cacatua galerita galerita</i>	1	1	0	2	0	0	1	0	0	0	0	0	0	0	1	1	1	0	2	2
31	Illiger's Macaw	<i>Primolium maracana</i>	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9
32	Scarlet Macaw	<i>Aro macao</i>	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4
Sl. No.	Animal Name	Scientific Name	Stock as on 01.04.2020				During the Year												Stock as on 31.03.2021			
							Births			Acquisitions			Disposals			Deaths						
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
33	Macaw Red & Green	<i>Spix's macaw</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
34	Finch Zebra	<i>Taeniopygia guttata</i>	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	16
TOTAL BIRDS			57	69	176	302	0	0	11	0	0	0	0	0	0	5	4	10	52	65	177	294
MAMMALS																						
35	Deer-Barking	<i>Muntiacus muntjak</i>	8	15	0	23	1	1	4	0	0	0	2	6	0	2	0	0	5	10	4	19
36	Deer-Hog	<i>Axis porcinus</i>	8	18	0	26	2	0	2	0	0	0	2	6	0	0	1	0	8	11	2	21
37	Deer-Sambar	<i>Cervus unicolor</i>	13	34	0	47	1	3	1	0	0	0	2	6	0	1	1	0	11	30	1	42
38	Deer-Spotted	<i>Axis axis</i>	22	45	5	72	0	0	2	0	0	0	0	0	0	2	2	0	20	43	7	70
39	Hippopotamus	<i>Hippopotamus amphibius</i>	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
40	Hyena-Stripped	<i>Hyaena hyaena</i>	3	4	0	7	1	2	0	0	0	0	0	0	0	2	1	0	2	5	0	7
41	Nilgai- Blue Bull	<i>Boselaphus tragocamelus</i>	2	9	0	11	0	0	0	0	0	0	0	0	0	1	2	0	1	7	0	8
42	Porcupine-Indian	<i>Hystrix indica</i>	3	4	7	14	0	0	1	0	0	0	0	0	0	0	1	0	3	3	8	14

43	Zebra Grant	<i>Equus quagga boehmi</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
44	Giraffe	<i>Giraffa camelopardalis</i>	1	5	0	6	0	1	0	0	0	0	0	0	0	0	2	0	1	4	0	5
45	Chimpanzee	<i>Pan troglodytes</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
	TOTAL MAMMALS		64	138	12	214	5	7	10	0	0	0	6	18	0	8	10	0	55	117	22	194
	REPTILES																					
46	Sand Boa	<i>Eryx johini</i>	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13
47	Snake Water	<i>Enhydris enhydris</i>	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
48	Viper Russel's	<i>Daboia russelii</i>	0	1	5	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	5
	TOTAL REPTILES		0	1	23	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	23	23

TOTAL BIRDS	72	90	180	342	2	4	12	0	0	0	0	0	0	5	5	10	69	89	182	340
TOTAL MAMMALS	125	209	15	349	11	12	14	0	0	0	8	19	0	19	24	0	109	178	29	316
TOTAL REPTILES	52	60	345	457	0	0	0	0	0	0	0	0	0	2	3	52	58	342	452	
GRAND TOTAL	249	359	540	1148	13	16	26	0	0	0	8	19	0	24	31	13	230	325	553	1108

27. Mortality of animals

SANJAY GANDHI BIOLOGICAL PARK, PATNA
Details of death during 2020-21 (from 1st April, 2020 to 31st 2021)

Sl. No.	Species	Scientific Name	Date	Sex	No.	Cause of death
01	Love Bird	<i>Agapornis</i>	08.04.2020	U	01	Old age
02	Golden Pheasant	<i>Chrysolophus pictus</i>	10.04.2020	F	01	Gravious injury due infighting
03	Cockatiel	<i>Nymphicus hollandicus</i>	23.04.2020	U	01	Old age associated with enteritis
04	Deer Sambar	<i>Cervus unicolor</i>	26.04.2020	F	01	Gravious injury and old age
05	Goose-Bar headed	<i>Anser indicus</i>	01.05.2020	M	01	Old age
06	Black Buck	<i>Antilope cervicapra</i>	08.05.2020	M	01	Mother rejection
07	Gaur Indian	<i>Bos frontalis gaurus</i>	10.05.2020	M	01	Still birth
08	Black Buck	<i>Antilope cervicapra</i>	11.05.2020	M	01	Old Age
09	Bear Sloth	<i>Melursus ursinus</i>	12.05.2020	M	01	Cardiac respiratory failure
10	Deer Barking	<i>Muntiacus muntjak</i>	20.05.2020	M	01	Gravious injury
11	Pheasant Silver	<i>Lophura nycthemera</i>	22.05.2020	M	01	Hunted by Predator
12	Finch Zebra (Bird)	<i>Taeniopygia guttata</i>	06.06.2020	U	01	Old Age
13	Goose-Bar Headed	<i>Anser indicus</i>	07.06.2020	U	01	Hunted & eaten by predator
14	Love Bird	<i>Agapornis</i>	12.06.2020	M	01	Old Age
15	Hyena Stripped	<i>Hyaena hyaena</i>	17.06.2020	F	01	Asphyxia
16	Macaque-Assamese	<i>Macaca assamensis</i>	24.06.2020	F	01	Old Age
17	Black Buck	<i>Antilope cervicapra</i>	30.06.2020	F	01	Gravious injury
18	Love Bird	<i>Agapornis</i>	11.07.2020	U	01	Old age
19	Wolf Indian	<i>Canis lupus</i>	12.07.2020	M	01	Mother rejection
20	Giraffe	<i>Giraffa camelopardalis</i>	17.07.2020	F	01	Pulmonary tuberculosis
21	Cockatiel	<i>Nymphicus hollandicus</i>	20.07.2020	U	01	Old age
22	Otter smooth Indian	<i>Lutra perspicillata</i>	21.07.2020	F	01	Old age
23	Deer Hog	<i>Axis porcinus</i>	25.07.2020	F	01	Gravious injury
24	Deer Spotted	<i>Axis axis</i>	26.07.2020	F	01	Hypovolemic shock in infighting
25	Black Buck	<i>Antilope cervicapra</i>	28.07.2020	F	01	Old age
26	Deer Spotted	<i>Axis axis</i>	13.08.2020	M	01	Cardiac arrest
27	Love bird	<i>Agapornis</i>	16.08.2020	U	01	Old age
28	Black buck	<i>Antilope cervicapra</i>	25.08.2020	F	01	Old age
29	Goose-Bar Headed	<i>Anser indicus</i>	01.09.2020	U	01	Hunted & eaten by predator
30	Black Buck	<i>Antilope cervicapra</i>	29.09.2020	F	01	Old age
31	Russel Viper	<i>Daboia russelii</i>	10.10.2020	F	01	Pneumonia in old age
32	Hyena Stripped	<i>Hyaena hyaena</i>	17.10.2020	M	01	Septicemic shock in old age
33	Cockatoo	<i>Cacatua galerita eleonora</i>	22.10.2020	U	01	Liver cirrhosis
34	Black Buck	<i>Antilope cervicapra</i>	11.11.2020	F	01	Gravious injury
35	Duck Mallard	<i>Anas platyrhynchos</i>	15.11.2020	F	01	Hunted by predator
36	Asiatic Lion	<i>Panthera leo persica</i>	23.11.2020	M	01	Myocardiopathy (right side) leading to passive venous congestion, hypoxia and parenchymatous degeneration

37	Crocodile-Long snouted-Ghariyal	<i>Gavialis gangeticus</i>	29.11.2020	U	01	Asphyxia
38	White Peafowl	<i>Pavo cristatus</i>	03.12.2020	F	01	Pneumonia
39	Black Buck	<i>Antelope cervicapra</i>	03.12.2020	M	01	Old age
40	Crocodile-Long snouted-Ghariyal	<i>Gavialis gangeticus</i>	04.12.2020	F	01	Anaemia
41	Deer Barking	<i>Muntiacus muntjak</i>	06.12.2020	M	01	Gravious injury
42	Cockatiel	<i>Nymphicus hollandicus</i>	19.12.2020	U	01	Old age
43	Hyena Stripped	<i>Hyaena hyaena</i>	20.12.2020	M	01	Cold stroke
44	Deer Sambar	<i>Cervus unicolor</i>	27.12.2020	M	01	Gravious injury
45	Deer Swamp	<i>Rucervus duvaucelii</i>	28.12.2020	F	01	Cardiac arrest
46	Crocodile-Long snouted-Ghariyal	<i>Gavialis gangeticus</i>	31.12.2020	U	01	Hypothermia
47	Black Buck	<i>Antelope cervicapra</i>	07.01.2021	M	01	Anaemia
48	Black Buck	<i>Antelope cervicapra</i>	07.01.2021	F	01	Mother rejection
49	Black Buck	<i>Antelope cervicapra</i>	07.01.2021	F	01	Anaemia
50	Lion Hybrid	<i>Panthera leo</i>	08.01.2021	F	01	Old age
51	Crocodile-Long snouted-Ghariyal	<i>Gavialis gangeticus</i>	10.01.2021	U	01	Asphyxia
52	Black Buck	<i>Antelope cervicapra</i>	17.01.2021	F	01	Anaemia
53	Black Buck	<i>Antelope cervicapra</i>	18.01.2021	F	01	Mother rejection
54	Black Buck	<i>Antelope cervicapra</i>	22.01.2021	M	01	Old age
55	Porcupine-Indian	<i>Hystrix indica</i>	22.01.2021	F	01	Cold stroke in old age
56	Bear Sloth	<i>Melursus ursinus</i>	30.01.2021	M	01	Pulmonary tuberculosis
57	Black Buck	<i>Antelope cervicapra</i>	31.01.2021	F	01	Cardio-respiratory failure & anaemia
58	Black Buck	<i>Antelope cervicapra</i>	02.02.2021	M	01	Old age
59	Blue Bull (Nilgai)	<i>Boselaphus tragocamelus</i>	10.02.2021	M	01	Infighting injury
60	Pheasant Silver	<i>Lophura nycthemera</i>	12.02.2021	F	01	Old age
61	Deer Spotted	<i>Axis axis</i>	17.02.2021	M	01	Cardiac respiratory failure
62	Blue Bull (Nilgai)	<i>Boselaphus tragocamelus</i>	20.02.2021	F	01	Septicemic shock
63	Pheasant Silver	<i>Lophura nycthemera</i>	22.02.2021	M	01	Old age
64	Deer Spotted	<i>Axis axis</i>	09.03.2021	F	01	Old age
65	Giraffe	<i>Giraffa camelopardalis</i>	12.03.2021	F	01	Mother rejection
66	Pheasant Silver	<i>Lophura nycthemera</i>	21.03.2021	M	01	Old age
67	Blue Bull (Nilgai)	<i>Boselaphus tragocamelus</i>	24.03.2021	F	01	Old age
68	Pheasant Silver	<i>Lophura nycthemera</i>	30.03.2021	F	01	Old age

28 Compliance with conditions stipulated by the Central Zoo Authority

Sl.no.	Norm No. under RZR, 2009	Condition stipulated	Time period to comply	Since when pending	Status with regard to compliance of the conditions
Details enclosed as "Annexure – A"					

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

(1) Free Range Birds of Sanjay Gandhi Biological Park, Patna.

Sl. No.	Common Name	Sch-IV	Status	IUCN/WPA Status
1	Little Cormorant	<i>Phalacrocorax niger</i>	R*2	Sch-IV
2	Indian Pond Heron	<i>Ardeola grayi</i>	R*1	Sch-IV
3	Cattle Egret	<i>Bulbulcus ibis</i>	RA1	Sch-IV
4	Little Egret	<i>Egretta garzetta</i>	R*2	Sch-IV
5	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	RM3	Sch-IV
6	Black (Paharia) Kite	<i>Milvus migrans</i>	RM1	Sch.- I
7	Shikra	<i>Accipiter badius</i>	RM2	Sch.-I
8	Bronze-winged Jacana	<i>Metopidius indicus</i>	R*2	Sch.-IV
9	Red-wattled Lapwing	<i>Vanellus indicus</i>	R*A1	Sch-IV
10	Yellow-footed Green Pigion	<i>Treron phoenicoptera</i>	R*2	Sch-IV
11	Eurasian Collared Dove	<i>Streptopelia decaocto</i>	R*A1	Sch-IV
12	Spotted Dove	<i>Streptopelia chinensis</i>	R*A1	Sch-IV
13	Alexandrine Parakeet	<i>Psittacula eupatria</i>	R*3	Sch-IV
14	Rose ringed Parakeet	<i>Psittacula krameri</i>	R1	Sch-IV
15	Common Hawk Cuckoo	<i>Hierococyx (Cuculus) varius</i>	R*2	Sch-IV
16	Asian Koel (Koel)	<i>Eudynamis scolopacea</i>	R*1	Sch-IV
17	Greater Coucal	<i>Centropus sinensis</i>	R1	Sch-IV
18	Barn Owl	<i>Tyto alba</i>	R3-4	Sch-IV
19	Spotted Owlet	<i>Athene brama</i>	R1	Sch-IV
20	Asian Palm Swift	<i>Cypsiurus (parvus) batasiensis</i>	R2	Sch-IV
21	Common Kingfisher	<i>Alcedo atthis</i>	RM1	Sch-IV
22	Stork-billed Kingfisher	<i>Halcyon (Pelargopsis) capensis</i>	R3	Sch-IV
23	White-throated Kingfisher	<i>Halcyon symrnensis</i>	R*1	Sch-IV
24	Green Bee-eater	<i>Merops orientalis</i>	R*M1	Sch-IV
25	Common Hoopoe	<i>Upupa epops</i>	RBW2	Sch-IV
26	Blue-throated Barbet	<i>Megalaima asiatica</i>	R2	Sch-IV
27	Black-rumped Flameback	<i>Dinopium benghalense</i>	N1	Sch-IV
28	Brown Shrike	<i>Lanius cristatus</i>	W2	Sch-IV
29	Eurasian Golden oriole	<i>Oriolus oriolus</i>	RMP2	Sch-IV
30	Black-hooked Oriole	<i>Oriolus xanthornus</i>	R*2	Sch-IV
31	Black Drongo (King-Crow)	<i>Dicrurus (adsimillis) macrocercus</i>	R*A1	Sch-IV
32	Asian Pied Starling	<i>Sturnus contra</i>	R*2	Sch-IV

33	Common Myna	<i>Acridotheres tristis</i>	R1	Sch-IV
34	Rufous (Indian) Treepie	<i>Dendrocitta vagabunda</i>	R2	Sch-IV
35	House Crow	<i>Corvus splendens</i>	RA**1	Sch.-V
36	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	R1	Sch-IV
37	Red-vended Bulbul	<i>Pycnonotuse cafer</i>	R1	Sch-IV
38	Jungle Babbler	<i>Turdoides striatus</i>	E1	Sch-IV
39	Red-throated Flycatcher	<i>Ficedula (Muscicapa) parva</i>	WP1	Sch-IV
40	Common Tailorbird	<i>Orthotomus sutorius</i>	R1	Sch-IV
41	Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>	WP(B**?)1	Sch-IV
42	Oriental Magpie Robin	<i>Copsychus saularis</i>	RM1	Sch-IV
43	Olive-backed (Indian Tree) Pipit	<i>Anthus hodgisi</i>	MAW2	Sch-IV
44	White (Pied) Wagtail	<i>Motacilla alba</i>	S,W	Sch-IV
45	White-browed Wagtail	<i>Motacilla maderaspatensis</i>	E2	Sch-IV
46	Pale-billed Flowerpecker	<i>Dicaeum erythrorhynchos</i>	NA2	Sch-IV
47	Purple-rumped Sunbird	<i>Nectarinia zeylonica</i>	R2	Sch-IV
48	Purple Sunbird	<i>Nectarinia aslatica</i>	R*AM1	Sch-IV
49	House Sparrow	<i>Paser domesticus</i>	M1	Sch-IV

Symbols

- E Endemic to the Indian subcontinent (resident unless otherwise indicated)
 N Near endemic (resident unless otherwise indicated)
 R Resident
 B Breeder
 S Summer visitor
 A Altitudinal migrant
 M Migrants within the subcontinent (e.g. breeds in the Himalays & winters in
 P Passage migrant
 W Winter visitor
 * Subject to some (local) seasonal movement or nomadism
 ** Localised or patchily distributed (eg. B**= breeds locally)
 ? Status uncertain
- 1 Abundant or very common
 2 Common
 3 Fairly common
 4 Uncommon

(2) Free Range Mammals of Sanjay Gandhi Biological Park, Patna

Sl. No.	Name of species	Scientific Name
1	Jackal	<i>Canis aureus</i>
2	Ruddy Mongoose	<i>Herpestus smithii</i>
3	Civet – Common Palm	<i>Paradoxurus hermaphroditus</i>
4	Stripped Squirrel	<i>Funambulus palmarum</i>
5	Jungle Cat	<i>Felis chaus</i>
6	Indian Flying Fox	<i>Pteropus giganteus</i>

(3) Free Range Reptiles of Sanjay Gandhi Biological Park, Patna

Sl. No.	Name of species	Scientific Name
1	Cobra	<i>Naja naja</i>
2	Goh- common	<i>Varanus sylvestris</i>
3	Bongarus Karait	<i>Bungarus caeruleus</i>
4	Rate snake	<i>Ptyas mucosus</i>
5	Water snake	<i>Enhydris enhydris</i>

**Compliance Report of the CZA observations arises vide F.No. 19-51/92-CZA(37)(Vol.VIII)(NS)/4738/2018 dated
05.11.2018 for renewal of recognition of Patna Zoo**

Sl. No.	Relevant Schedule No.	Conditions	Action taken
1. General requirements			
1	10.1(6)	Proper drainage should be provided in all of the animal enclosures for liquid waste and storm water.	Proper drainage has been provided in maximum number of animal enclosures for liquid waste and storm water. Action is being taken for providing drainage system in rest of the enclosures.
2. Administrative and Staffing Pattern			
2	10.2(2)	Appropriately qualified persons should be put in place to carry out the functions of Biologist.	One post of Biologist has been sanctioned. Action is being taken to deploy the suitable person.
3	10.2(2)	Appropriately qualified persons should be put in place to carry out the functions of Education Officer.	One post of Zoo Education Officer has been sanctioned. Action is being taken to deploy the suitable person.
4	10.2(2)	The zoo should post an official with a Master's degree in Wildlife Science/Zoology as a full time Curator, solely responsible for looking after the upkeep of animals and maintenance of animal enclosures.	Mr. Anand Kumar, M.Sc. (Zoology) who is posted as Range Officer of Forests, Zoological Range in this zoo, is solely responsible for looking after the upkeep of animals and maintenance of animal enclosures.
5	10.2(3)	In case of the scientific and technical posts to be filled up by direct recruitment, the Recruitment Rule for such posts should provide for their career progression including the benefit of flexible complementing scheme for their promotions.	At the time of deployment of suitable person, recruitment Rules will be followed.

3. Development and Planning			
6	10.3(1)	The toy train track which is operating inside the Park should be suitably aligned and modified with provision of electric/battery operated locomotive and adequate interpreting facilities.	Steps are being taken to follow the guidelines. Presently it is non-operative.
7	10.3(1)	The water bodies inside the zoo should be properly maintained to attract free living water birds.	The water bodies inside the zoo are being maintained to attract free living water birds.
8	10.3(3)	The existing post-mortem room, located very near to the hospital, should be dismantled, and constructed away from the hospital and display area.	New postmortem room will be constructed soon.
9	10.3(6)	The zoo should prepare a Collection Plan of animals to be housed and displayed.	Complied.
10	10.3(6)	The zoo should make sincere efforts to execute the Collection Plan approved by the Central Zoo Authority particularly acquire mates for single animals.	Efforts are being taken to execute the Collection Plan approved by the Central Zoo Authority particularly to acquire mates for single animals. Recently mates for Gaur, Zebra & Tiger has been arranged from different zoos.
11	10.3(6)	The zoo should get a small Rescue Centre and small Isolation and Quarantine Wards for animals of different species that are received as rescued animals.	It is in process.
12	10.3(6)	If the rescued animal pertains to an endangered species, a report should be sent to the Central Zoo Authority.	Reports are being submitted to Chief Wildlife Warden, Bihar
4. Animal housing, display of animals and animal enclosures			
13	10.4(1)	The zoo should make concerned efforts to nature immersing animal viewing facilities at exhibits of all species at the zoo.	Nature immersing animal viewing facilities has been provided at exhibits of the important species.
14	10.4(2)	Appropriately designed open, natural enclosures should be constructed for monkeys (Assamese, Stump tailed and Rhesus)	Construction of natural enclosures for monkeys (Assamese, Stump tailed and Rhesus) is in process.
15	10.4(2) & 10.4(8)	The zoo should construct a moated open-air enclosure for Jackals. Prior approval of the design should be taken before construction.	Complied.

16	10.4(2)	Barking deer enclosure which is covered from top looks quite dingy chain-link at the top of the exhibit to be removed.	Complied.
17	10.4(6)	The artificial artifacts like concrete structure should be replaced.	As per guidelines of the CZA, it will be done in near future.
18	10.4(9)	Viewing area of the visitors to the animal enclosures should be confined to one side only.	In most of the animal enclosures, viewing area of the visitors has been confined to one side only.
19	10.4(10)	The Zoo Operator should ensure that every enclosure in the zoo should bear a signboard displaying scientific information regarding the animals exhibited in it.	New signages has been installed in various enclosures.
5. Upkeep and Healthcare of animal			
20	10.5(1)	There should be provision of footbath of adequate size with proper disinfectant at entry and exist points of all animal houses.	Complied.
21	10.5(1)	The zoo should have a sufficient size functional freezer in the meat processing facility for storage of meat products and to keep cold until it is fed.	Complied.
22	10.5(1)	The partition wall in Hyena enclosure should be removed and the animals should be kept in viable social groups.	Complied.
23	10.5(1)	The zoo has single/single sex animals. Mates for single sex animals should be procured on priority basis.	Mates for single sex animals e.g. Zebra, Gaur etc have been procured. We are in touch with other zoos for getting mates for other single sex animals.
24	10.5(2)	Properly designed meat processing room should be constructed at a reasonable distance from the food store with proper drainage facilities.	Complied.
25	10.5(4)	The feeding cells of the ungulate enclosures are located at prominent locations within the paddock. These should be demolished and appropriately designed feeding cells and kraals should be constructed at the end of the paddock away from the animal viewing area. All kraals should be covered on top by chain-link.	Complied.
26	10.5(8)	The zoo should have formal linkages through an MoU on healthcare, preventive, health management, surgical interventions, clinical tests, disease diagnosis and consultation in treatment and management during the period of convalescence.	Complied. MoU with the Bihar Veterinary College, Patna has been signed.

6. Veterinary and infrastructure facilities			
27	10.6(3)	The zoo should have basic dental instruments.	In process
28	10.6(3)	The zoo should construct a quarantine/isolation ward, away from the hospital/post-mortem room and display area.	In process
29	10.6(5)	The zoo should post one qualified Lab. Assistant to assist the Sr. Veterinary Officer/Veterinary Officer.	The post of Technician has been sanctioned which will be filled up soon with appropriate qualified person.
30	10.6(6)	The zoo should have formal MoU with the local veterinary college at the earliest for healthcare of zoo animals with following objectives a) Assistance in scientific diagnosis of diseases of serious nature and advice on the effective remedial treatment. b) Training and upgrading technical skills of animal health staff. c) Development of protocols for preventive medicines and vaccination.	Complied.
7. Post-mortem and disposal of carcasses of animals			
31	10.7(1)	The zoo should have a modern post mortem room, equipped with sufficient light and post mortem equipment.	Estimate will be submitted soon for modern post mortem room.
32	10.7(2)	The zoo veterinarian should have specialized knowledge and skills in wildlife pathology. He should be deputed for such skill development.	The Veterinarians posted in this zoo are being sent for skill development training from time to time.

9. Acquisition and Breeding of Animals			
33	10.9(1)	<p>The zoo shall keep in collection only such numbers and species for which appropriate housing facility exists. The Zoo Operator shall be responsible for ensuring that the number of animals of any species does not go beyond the carrying capacity of the enclosures available in the zoo and housing standards are not compromised for keeping the excessive numbers.</p> <p>The animals like Rhesus macaque, Sambar, Spotted deer and Blackbuck are over populated. Necessary efforts should be initiated for the decongestion.</p>	Observation made by the CZA is being followed. Excess of animals will be shifted to the newly constructed safari.
34	10.9(4)	The zoo should acquire mates for single and unpaired animals on priority basis and in the event of the zoo failing to find a mate for single and unpaired animal within a period of six months, the unpaired or single animal should be transferred or exchanged or given on breeding loan to any other zoo in accordance with the norms specified by the Central Zoo Authority in this regard.	Mates for single sex animals e.g. Zebra, Gaur etc. have been procured. We are in touch with other zoos for getting mates for other single sex animals.
35	10.9(4)	The zoo should provide mates for the Gaur, Zebra, Leopard Cat, Fishing Cat, Cassowary, Manipur Deer, Otter, Lion (Asiatic) etc.	Mates for single sex animals e.g. Zebra, Gaur etc. have been procured. We are in touch with other zoos for getting mates for other single sex animals. Manipur deer has been procured from Assam Zoo.
36	10.9(6)	The zoo should construct the Conservation Breeding Facility in off display area of the zoo for the Indian Rhino.	Complied.
37	10.9(6)	The zoo should prepare a detailed conservation breeding plan for Indian Rhino with the help of a population biologist. All the Rhinos at the zoo should be marked with transponders. The zoo should ensure regular exchange of animals with the participating zoos to safeguard against the inbreeding depression setting in the zoo populations.	The construction of Rhino Conservation and Breeding Centre has been completed. Proper care is being taken to avoid inbreeding.

10. Research Activities			
38	10.10(1)	The zoo should prepare a detailed zoo research plan for the zoo and execute it with the help of the Research Officer, Research Scholars and Biological Assistants. MoU should be signed in this regard with eminent Biological Research Institutions.	MoU has been signed with the Bihar Veterinary College, Patna.