



# Annual Report

## 2017-18



**INDRODA NATURE PARK ZOO**

Gandhinagar - 382007, Gujarat, INDIA

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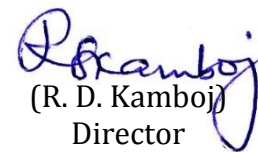
# 1. Report of the Director

Dear readers,

It is a moment of pleasure for us to publish the Annual Report of Indroda Nature Park Zoo for the financial year 2017-18. Indroda Nature Park (INP) at Gandhinagar is well known as “Green Jewel” of the capital city of Gujarat state. The journey towards unending progressive development continued for the said year is included in this report.

This year GEER Foundation received Grants for development of new enclosure for large carnivores viz. Asiatic Lion, Royal Bengal Tiger & Leopard and Herbivores in Indroda Nature Park Zoo. In this context, Indroda Nature Park prepared and submitted designs of enclosures and housing facility to the Central Zoo Authority (CZA). The same has been approved by the CZA. Old Snake house of the INP Zoo underwent refurbishment during this year. Zoo Officers and employees were sent to two different zoos of South Indian region (Mysuru and Chennai) for getting exposure to newer & innovative ideas of zoo management and care of captive wild animals. New section of interpretative gallery for climate change is under development in the INP. Major renovation works in Dinosaur and fossil section of the Indroda Nature Park were carried out during the year under report. Indroda Nature Park conducted 45 Nature Education camps of three days duration for school children and bird watching programme for awareness and education. Veterinary section of the Indroda Nature Park, apart from their routine functions, assisted Department of Forest for rescue operation in Man-Wild animal conflict cases. Bird rescue camp was organised under “Karuna Abhiyan” in Indroda Nature Park eastern section. Besides these, many different works have been carried out during the year which is included in this report. It is hoped that this report will provide a glance over different activities carried out during the period under report. We propose to continue this journey of development and add more feathers in the cap of Indroda Nature Park Zoo in future, too.

Thanking you.

  
(R. D. Kamboj)  
Director

## 2. History of the Zoo

### INDRODA NATURE PARK (INP)

In pursuance of its objectives, Indroda Nature Park (INP), Gandhinagar initiated INP development works with the ecological insight, planning and management skills. From Mid 1970s, the Gujarat Forest Department had initiated plantation works in degraded Sabarmati River Banks as ravine reclamation works. Today, such afforestation has attained the shape of a dense forest. INP is now inhabited by a good number of birds, trees, shrubs, herbs, reptiles and mammals. The undulating terrain, with a background of a low-lying river provides for great scenic beauty.

Development of INP is aimed at imparting nature education to spread awareness about environmental conservation, providing opportunities of experiencing wilderness and protecting the rare and endangered species of animals and birds.

A **“Deer Park** was established by the Gujarat Forest Department during the year 1978. Later a snake park, crocodile pits and tortoise pits were developed in 1980. After the establishment of the GEER Foundation and its Indroda Nature Park, it was decided that the INP will have initially a Small and subsequently a Medium category Zoo. Accordingly, various existing animal enclosures were grouped as the INP Zoo Section of Western Part of the Park. The INP Zoo was, recognized as a Medium Zoo, by the Central Zoo Authority on 20/02/97. During the Year 2006-07, it was decided to extent INP Zoo area to the East Bank by creating Safari Park.

## 3. Vision

*“Indroda Nature Park Zoo to be a part of overall Indroda Nature Park (West Bank & Aranya Udhyaan on East Bank) as a MEDIUM CATEGORY ZOO for the purposes of (i) Research, (ii) Captive conservation breeding and (iii) Education of general public for the subject of wild animals and their role in natural ecosystem”*

## 4. Mission

*“Participate in National Endeavour for conservation of threatened wild animals through captive conservation, captive breeding, research and education of general public”.*

## 5. Objectives

The main objective of the Indroda Nature Park (INP) Zoo, in accordance to the National Zoo Policy, 1998, is to complement and strengthen the National efforts in conservation of wild fauna.

Detailed objectives of the INP Zoo are as under:

**1. Conservation:**

*Ex-situ captive conservation of the protected wild animals to strengthen the national efforts in conservation of wild fauna.*

**2. Captive Conservation Breeding:**

*Captive conservation breeding of selected and prioritized wild ungulates for supporting in-situ conservation of these species and their associate fauna through participating in planned introduction, re-introduction and enrichment of wild ungulates in Protected Areas (PAs).*

**3. Research and studies:**

*Providing opportunities for scientific studies and research useful for conservation of wild animals in captivity.*

**4. Conservation Education and Awareness:**

*Providing opportunities to zoo visitors in order to (a) get inspiration for empathy towards wild animals, (b) learn, understand and be aware about the life cycle, habitat requirement and ecology of wild animals and (c) get inspired for holistic nature conservation.*

➤ **Strategy for achieving the objectives**

1. Indroda Nature Park will continue to provide natural environment including adequate natural environment sections in the INP Zoo Section of the Park in order to provide adequate opportunity to visitors to experience such natural environment.
2. INP Zoo will give priority to endangered species of wild animals in its Collection Plan and wild animals will be acquired and maintained as per the Collection Plan approved by the Central Zoo Authority (CZA).
3. INP Zoo will endeavour to modify old animal enclosures and construct new animal enclosures for providing better housing, upkeep, health care and any special requirements such as shelters, perches, withdrawal areas, wallow, drinking water etc. of wild animals. The INP Zoo will have two types of wild animal enclosures viz. (a) traditional modern enclosures where visitors can view wild animals from outside and (b) safari type [topsy-turvy zoo] Herbivores / Wild Ungulate Park in the Eastern Section of the INP Zoo wherein, visitors will be allowed in a highly regulated manner inside the Herbivores / Wild Ungulate Safari Park in appropriate Four-Wheel silent / less noisy vehicles.

4. The wild animals will be provided adequate space for their natural behaviour including their social & breeding requirements and protect them from adverse climate and visitor disturbance influences.
5. The INP Zoo will endeavour to provide for adequate nutrition in the form of proper diet and a veterinary health care. Overall hygiene and sanitation shall be maintained as measures for better health of animals and disease prevention.
6. The INP Zoo will endeavour to procure and maintain adequate breeding stock of wild ungulates including (a) Spotted Deer; (b) Sambar; (c) Black Buck; (d) Barking Deer, (e) Chinkara / Chhinkara and (f) Chausingha for supporting captive conservation breeding at INP Zoo as well as at identified PAs.
7. The INP Zoo is a part of overall organization set up of the Gujarat Ecological Education and Research (GEER) Foundation, Gandhinagar. The primary / main objectives of the GEER Foundation are (a) Ecological Research and (b) Ecological Education. The GEER Foundation, as part of pursuing its primary / main objectives, shall endeavour to promote research in the INP Zoo with a focus on ecology and conservation of endangered species.
8. The GEER Foundation, as part of pursuing its primary / main objective of ecological education, shall endeavour to promote studies and education on the subjects of ecology and conservation of endangered species.
9. The INP Zoo will endeavour to modernize its signages to make it (a) appropriately informative and (b) compatible to the natural surroundings of the INP.
10. The INP Zoo will endeavour to provide adequate and suitable visitor amenities including (a) proper entry and walking foot paths in display areas; (b) drinking water and other services; (c) proper resting places; (d) directional signages; (e) passive interpretation service through an orientation centre / reception centre and (f) active interpretation service through recognized guides / nature educators.
11. The GEER Foundation will endeavour to maintain high standards of security and safety of the INP including INP Zoo as well as of the visitors visiting the INP and INP Zoo.

The overall strategy of INP Zoo Management will be to properly integrate it with the overall INP management, which has ongoing plans for development of other sections, in specially designated different areas, including Botanical Garden, Earth Exhibits, Fossil Exhibits, Dinosaur Park, Nature Education Camp Sites, etc.

## 6. About Us

### 6.1 Basic and administrative information

S. No.	Particulars	Information
<b>Basic Information about the Zoo</b>		
1	Name of the Zoo	<b>Indroda Nature Park Zoo</b>
2	Year of Establishment	<b>1978</b>
3	Address of the Zoo	<b>Indroda Nature Park, P.O. Sector-7, 'J' Road, Gandhinagar- 382007, Gujarat, India</b>
4	State	<b>Gujarat</b>
5	Telephone Number	<b>+91-7923977300, 23977311</b>
6	Fax Number	<b>+91-79-23977313</b>
7	E-mail address	<a href="mailto:dir-geer@gujarat.gov.in">dir-geer@gujarat.gov.in</a> <a href="mailto:geer.info@gmail.com">geer.info@gmail.com</a> <a href="mailto:dydir-geer@gujarat.gov.in">dydir-geer@gujarat.gov.in</a>
8	Website	<a href="http://www.geerfoundation.gujarat.gov.in">www.geerfoundation.gujarat.gov.in</a>
9	Distance from nearest	Airport: <b>Ahmedabad</b> - 17 kms Railway Station: <b>Gandhinagar (W.R.)</b> - about 10 km; <b>Ahmedabad (W.R.)</b> - 30 kms Bus Stand: <b>Gandhinagar (Gujarat State Road Transport Corporation)</b> - about 4 km
10	Recognition Valid upto (Date)	<b>08/06/2019</b>
11	Category of zoo	<b>Medium Zoo</b>
12	Area (in Hectares)	<b>428 Hactares (157 ha- Western bank and 271 ha. - Eastern bank of river Sabarmati)</b>

S. No.	Particulars	Information				
13	<p>Number of Visitors (2017-18):</p> <p>Indroda Nature Park attracts visitors from Gandhinagar and Ahmedabad city. Visitation of Indroda Nature Park is increasing day by day. The annual footfall of Indroda Nature Park zoo in the year 2017-18 remained 5.73 lakh visitors. Annual visitation shows increase of almost 9.1% than previous year. The detailed information about visitation is given in table below.</p>					
Sr. No.	Month	Adults	Children	Students	Complimentary to the Divyangs and others	Total
1	April-2017	26622	2645	1232	151	30650
2	May- 2017	34352	5406	508	122	40388
3	June-2017	31907	2639	1631	108	36285
4	July-2017	27511	1973	1044	141	30669
5	August-2017	38346	3296	1513	130	43285
6	September-2017	26131	1355	3443	679	31608
7	October-2017	57946	8828	1603	154	68531
8	November-2017	34533	3615	5291	1309	44748
9	December-2017	46293	4699	20466	1458	72916
10	January-2018	39347	2926	34052	1338	77663
11	February-2018	33212	2172	16851	1708	53943
12	March-2018	35211	2573	4319	596	42699
<b>Total</b>	<b>2017-18</b>	<b>431411</b>	<b>42127</b>	<b>91953</b>	<b>7894</b>	<b>573385</b>

<b>S. No.</b>	<b>Particulars</b>	<b>Information</b>
14	Visitors' Facilities Available in Zoo	1) Drinking water kiosks at 3 different places 2) Toilet blocks at 3 different places 3) Resting areas, gardens and benches 4) First aid kit 5) Fruit kiosk
15	Weekly Closure Day of the Zoo	The Zoo remains closed for visitors on Monday every week.
<b>Management Personnel of the zoo</b>		
16	Name with designation of the Officer in-charge	<b>1) Shri R. D. Kamboj, Director, GEER Foundation</b> <b>2) Shri I.K. Barad, Dy. Director (R &amp;D), GEER Foundation</b>
	Name of the Assistant Director	<b>Ms. Vibhaben Goswami</b>
	Name of the Veterinary Officer	<b>Dr. Aniket B. Patel</b>
	Name of the Curator	<b>Shri A.D. Chaudhary, Park Warden (R.F.O.)</b>
	Name of the Biologist	<b>Shri Sandeep Munjapara (i/c)</b>
	Name of the Education Officer	<b>Shri Alap Pandit (i/c)</b>
	Name of the Compounder/ Lab Assistant	<b>Shri Hitesh S. Desai</b>
<b>Owner / Operator of the Zoo</b>		
17	*Name of the Operator	<b>Shri I. K. Barad</b>
18	Address of the Operator	<b>Dy. Director (R &amp; D), GEER Foundation, Indroda Nature Park, P.O.-Sector-7, 'J' Road, Gandhinagar- 382007, Gujarat, India.</b>
19	Contact details/Phone number of Operator	<b>Phone: +91-79-23977302, +91-79-23977300</b>
20	E-mail address of Operator	<b><a href="mailto:dydir-geer@gujarat.gov.in">dydir-geer@gujarat.gov.in</a> <a href="mailto:geer.info@gmail.com">geer.info@gmail.com</a></b>

<b>S. No.</b>	<b>Particulars</b>	<b>Information</b>	
21	Other Information <b>Entry Fees</b>          <b>Zoo Timings</b>		
		<b>Category</b>	<b>Ticket Rates (INR)</b>
		Child below 5 years of age	Free entry
		Child between 5-12 years of age	15.00
		Person above 12 years of age	30.00
		School and college students (on educational tour)	08.00
		Physically challenged (Divyangs)	Free entry
		Institutional/ general/ life members of GEER Foundation	Free entry
		Two wheeler parking	15.00
		Four wheeler parking	30.00
		Heavy motor vehicles- bus, truck etc. (on educational tour)	90.00
		Heavy motor vehicles- bus, truck etc.	120.00
		Filming (up to four hours)	6000.00
		Filming (for more than four hours in a day)	12000.00
08.00 am to 05.30 pm			

## **6.2 Information pertaining to different sections of the INP:**

### **6.2.1 INP Forest**

The entire land of the park on the western bank of river Sabarmati supports over 1.33 lakhs indigenous trees, interspersed with several ornamental exotic trees. Over 136 species of trees have been recorded in the wilderness park.

### **6.2.2 Earth Section**

In this section, exhibits of genesis of solar system and earth, geological evolution of earth and its continents, biogeography of the world, India and Gujarat are presented.

### 6.2.3 Dinosaur and Fossil Section

Gujarat boasts of having one among the most abundant of dinosaur hatcheries in the world at Rahioli in Kheda district. This unique natural history of occurrence of dinosaur eggs, bones, skin impressions etc. suggest a widespread presence of dinosaurs in ancient geological time. A Dinosaur & Fossil Section has been established at INP.

### 6.2.4 Botanical Garden

The Botanical Garden at INP has been developed to increase public awareness about plant science and medicinal plants. It aims at collecting, compiling, translating and publishing popular science works. At present, the Botanical Garden has a collection of about 800 plant species. It also provides a wonderful out-of-classroom experience for learning about plants to school students. It comprises of following 4 sections.

**Arboretum** is a collection of tree species, in the form of plantation with proper display of botanical details of the plant. There are 327 tree species identified in Gujarat state. The arboretum plot in the botanical garden is spread over an area of 2.5 ha. So far 250 tree species have been planted in this plot.

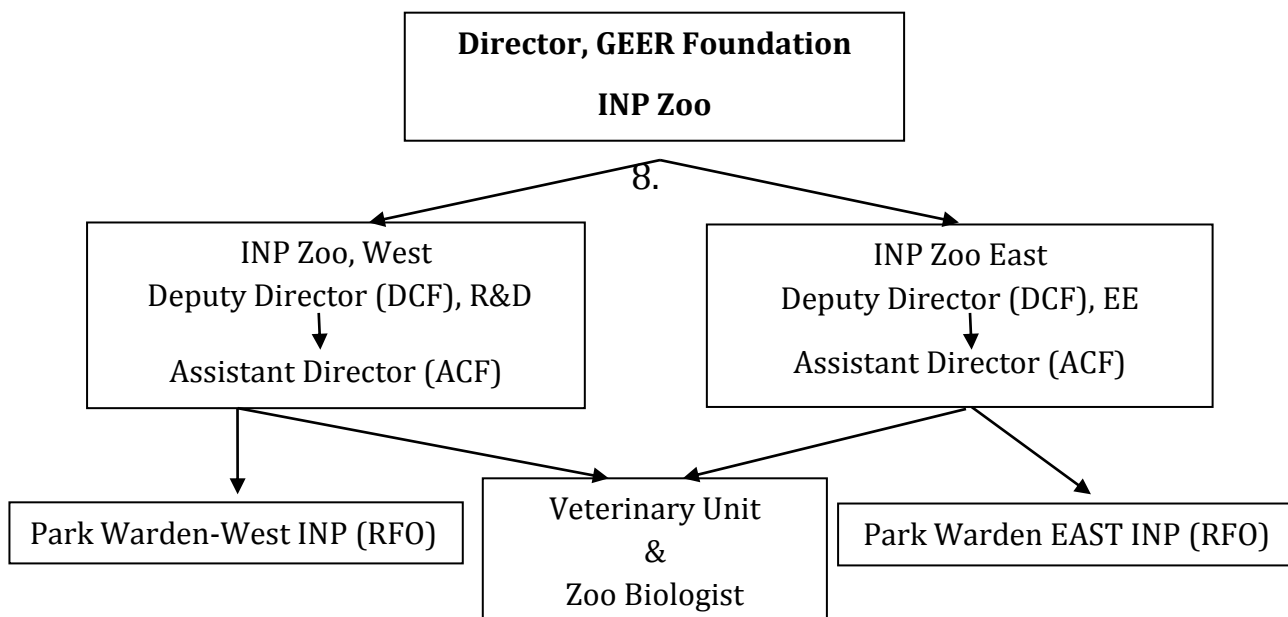
**Cactus house** contains more than 80 species of these succulent plants. The information about species, habitat, etc. is displayed for the knowledge of the visitors. The beautiful flowery plants are one of the major attractions.

**Bamboo collection** has all six species of bamboo found in Gujarat. It is being developed to raise all the species occurring in Western India and a few other species.

**Medicinal plant and grass section** has about 250 species of plant species having medicinal and / or livelihood values.

## 7. Organizational chart

The INP Zoo is part of overall Organization of the Gujarat Ecological Education and Research (GEER) Foundation. The GEER Foundation Administrative Office is the Office of the Director, GEER Foundation and is located near to the Main Entrance and Ticket Window in a separate sub campus of administrative and other research and education facilities. At present there are two Deputy Directors, viz. (i) Deputy Director, Research and Development (R&D) and (ii) Deputy Director, Ecological Education (EE). They, besides their other duties, are in charge of development and management of INP Zoo sections West and East, respectively. For the purpose of the INP Zoo administration as part of overall GEER Foundation Administration, following administrative organization is established:



## 8. Human Resource

INP Zoo is, and it will continue to be the part of the INP under the administrative control of the GEER Foundation. The GEER Foundation will continue its endeavour to manage and develop the INP Zoo towards (a) its overall mandate of ecological education and ecological research, (b) its mission to contribute to conservation, restoration and enrichment of ecosystem and natural heritage and (c) to the national vision for conservation of threatened wild animals through captive conservation, captive conservation breeding, research and education.

The GEER Foundation is an autonomous society and public trust constituted and currently under the administration of the Forests & Environment Department, Government of Gujarat. For the purpose of administrative linkages with the Government of Gujarat, the GEER Foundation is partially under the administrative control of the Wildlife Wing of the Gujarat Forest Department. The Foundation receives Operations & Management as well as Development grant as a Grant-in-Aid from the Government of Gujarat through the Forests & Environment Department and the Gujarat Forest Department. Accordingly, one of the units of the GEER Foundation, INP Zoo is also under the administration of the Government of Gujarat as a part of an autonomous Foundation.

At present, GEER Foundation has following human resources for effective administration of Indroda Nature Park.

**Table-8.1:** Details of the posts of officer cadre

<b>Sr. No.</b>	<b>Designation</b>	<b>Number of Sanctioned Posts</b>	<b>Names of the incumbent</b>
1	Director and Addl. Principal Chief Conservator of Forests	1	Shri R.D. Kamboj
2	Dy. Director (R & D) and Dy. Conservator of Forests	1	Shri I.K. Barad
3	Dy. Director (EE) and Dy. Conservator of Forests	1	Shri D.C.Mehta
4	Assistant. Director and ACF	2	Ms. Vibhaben Goswami
5	Veterinary Officer	1	Dr. Aniket B. Patel
6	Park Warden cum Range Forest Officers	2	Shri A.D.Chaudhary Shri Raghav Joshi

**Table-8.2:** Details of the posts of employee cadre

<b>Sr. No.</b>	<b>Name of Cadre</b>	<b>No. of Post Sanctioned</b>	<b>Names of the Incumbent</b>
<b>INP Zoo Eastern part</b>			
1	Forester	1	Shri P. S. Chaudhary
2	Snake Cum Wildlife Park Keeper	1	Shri R. J. Patel
3	Asstt. Snake Cum Wildlife Park Keeper	1	Shri N. A. Theba
4	Veterinary Assistant	1	Shri Hitesh S. Desai
5	Head Animal Keeper	1	Vacant
6	Forest Guard	1	Ms. Twinkal Parmar Addl. Proposed post-1
7	Sweeper cum keeper	1	Shri Baldevbhai Vaghela
8	Accountant	1	Vacant Shri Baldevbhai B. Parmar (i/c)
9	Bird Breeder	1	Vacant Shri Irshad N.Theba (i/c)

<b>Sr. No.</b>	<b>Name of Cadre</b>	<b>No. of Post Sanctioned</b>	<b>Names of the Incumbent</b>
10	Driver	1	Shri Kanubhai K. Prajapati Addl. Proposed posts-2
11	Zoo Education Guide	0	Proposed posts-3
12	Ticket Window Clerk	0	Proposed posts- 2
13	Ticket Checker	0	Proposed posts-2
14	Store clerk	0	Proposed posts-1
15	Plumber Cum Pump Operator	1	Vacant
16	Watchman	1	Vacant Addl. Proposed posts-3
17	Watchman Cum Mali	1	Post to be accounted for different section of INP other than zoo
18	Welder Cum Attendant	1	Post to be accounted for different section of INP other than zoo
19	Watchman Cum Camp Attendant	1	Post to be accounted for different section of INP other than zoo
20	Nature Education Assistant	1	Post to be accounted for different section of INP other than zoo
21	Artist	1	Post to be accounted for different section of INP other than zoo
22	Kitchen Manager Cum Supervisor	1	Post to be accounted for different section of INP other than zoo
23	Library Attendant	1	Post to be accounted for different section of INP other than zoo
24	Animal keepers	Permanent/ fix labours	Shri Sardarji Gandaji Thakor Shri Ranjitji Ataji Makawana

<b>Sr. No.</b>	<b>Name of Cadre</b>	<b>No. of Post Sanctioned</b>	<b>Names of the Incumbent</b>
			Shri Gabhabhai Jagabhai Raval Shri Narsinhji Udaji Thakor Shri Bharatji Amaraji Thakor Shri Maheshkumar B. Thakor Shri Kanubhai Bhalabhai Raval Shri Govaji Masangji Thakor Shri Bhagvanji R. Makawana Shri Sureshkumar G. Thakor Shri Alkeshkumar R. Kori Shri Punabhai Vahjibhai Raval Shri Dashrathji R. Thakor Shri Amrutbhai I. Prajapati Shri Manojkumar P. Thakor Shri Pravinji Viraji Makawana Shri Somabhai Dahyabhai Raval
25	Night Watchmen and reliver	Permanent/ fix labours	Shri Kirankumar Bhalaji Thakor Shri Rameshji Maganji Thakor Shri Lalaji Bhalaji Thakor Shri Ramdhiraj Rambadal Kori Shri Jugaji Bakaji Thakor Shri Karmanbhai R. Desai Shri Shantilal Mangaruram Kori
<b>INP Zoo Eastern part</b>			
2	Accountant	1	Vacant Shri Jagdishbhai Chauhan (i/c)
3	Forester	1	Shri P.S. Chaudhary (i/c)
4	Forest Guard	1	Shri R.R.Makwana
5	Zoo Education Guide	0	Proposed posts- 2
6	Sweeper Cum Keeper	0	Proposed posts- 2
7	Driver	0	Proposed posts -1
8	Watchman	0	Proposed posts -2

## 9. Capacity Building of zoo personnel

Sr. No.	Name and designation of the zoo personnel	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
1	Dr. Aniket Patel, Veterinary Officer	<b>Batch- 1</b> Zoo Exposure Visit (including regional Protected wildlife facilities)	23 <sup>rd</sup> to 26 <sup>th</sup> January, 2018	Arignar Anna Zoological Park, Lion Safari Park and Herbivore Safari Park, Madras Crocodile Bank and Irula Snake Venom Collection Centre, Vedanthangal Bird sanctuary, Chennai Snake Park
2	Shri R. J. Patel, Snake cum Wildlife Park Keeper			
3	Shri Irshad Theba, T.A. (B.B.)			
4	Shri Sardaraji Thakor, Animal Keeper			
5	Shri Dashrathji Thakor, Animal Keeper			
6	Shri Gabhabhai Raval, Animal Keeper			
7	Shri Bharatbhai Thakor, Animal Keeper			
8	Shri Ranjitji Thakor, Animal Keeper			
9	Shri A.D. Chaudhary, Park Warden cum Range Forest Officer	<b>Batch- 2</b> Zoo Exposure Visit (including regional Protected wildlife facilities)	6 <sup>th</sup> - 8 <sup>th</sup> February, 2018	Sri Chamarajendra Zoological Gardens, Kurugahalli rescue centre, Karanji Lake Nature Park, Bandipur Tiger Reserve
10	Shri P.S. Chaudhary, Forester			
11	Shri N.A. Theba, Asst. Snake cum Wildlife Park Keeper			
12	Shri Hitesh Desai, Veterinary Assistant			
13	Shri Amratbhai Prajapati, Animal Keeper			
14	Shri Kumansinh Vaghela, Guide			
15	Shri Punabhai Raval, Animal Keeper			
16	Shri Rajibhai Rathod, Guide			
17	Shri Mahesh Barsangji Thakor, Animal Keeper	Animal keepers training - CZA Sponsered	19 <sup>th</sup> to 25 <sup>th</sup> February, 2018	Sakkarbaug Zoo, Junagadh
18	Shri Dashrathji Thakor, Animal Keeper			

## 10. Zoo Advisory Committee –

- A. Date of constitution: An expert adviser on zoo animal veterinary care is appointed vide this office letter no. B/T.6/WLP/INP Zoo/HAC-6302-05, 15/11/2014
- B. Members: Dr. D.B.Patil, Professor and Head, Department of Surgery, Veterinary College, Anand. Currently he is holding the post of Director of Research, Kamdhenu University.
- C. Dates on which Meetings held during the year: During the financial year 2017-18, no meeting was held.

## 11. Health Advisory Committee-

- A. Date of constitution: year 2012
- B. Members:
- Mr. B.L.Shukla, C.F. Wildlife circle (Chairman of committee)
- Dr. R.G.Jani, Co-ordinator, Veterinary College, Anand.
- Dr. D.V. Shukla, I/C Deputy Director of AH, EPI, Gandhinagar.
- C. Dates on which Meetings held during the year: committee needs to be reconstituted; therefore, no meeting was held during the financial year.

## 12. Statement of income and expenditure of the Zoo

Sr. No.	Budget head	Allocated budget from GoG (Amount in Lakhs) INR	Utilization of allocated budget (Amount in Lakhs) INR	Utilization of budget in percentage
1	Provision for wild animal feed and nutrition related requirements of INP Zoo	74.25	54.29	73.12%
2	Provision for Prophylactic measures to be taken for prevention and control of diseases and disorders in captive wild animals of INP Zoo	8.50	10.28	120.94%

Sr. No.	Budget head	Allocated budget from GoG (Amount in Lakhs) INR	Utilization of allocated budget (Amount in Lakhs) INR	Utilization of budget in percentage
3	Provisions for capacity building of Officers and employees of INP Zoo, First aid training, health check up camps etc..	2.00	1.44	72.00%
4	Provision for awareness of nature conservation to visitors	1.5	00	00%
5	Provision for procurement of medicines and feed supplements, veterinary equipments, rescue instruments etc.. for veterinary hospital	7.75	3.89	49.81%
6	Provision for Salary of the employees working in the zoo	50.00	37.09	74.18%
7	Maintenance of Gardens of INP	31.50	26.26	83.36%
8	Protection works and Fencing maintenance	40.50	41.42	102.27%
9	Water Supply and electricity bills	27.50	24.01	87.30%
10	General maintenance	15.00	9.06	60.4%
11	Vehicle maintenance and vehicle on rent	1.25	1.08	86.4%
12	Office expense	10.00	6.13	61.3%
<b>Note:</b> Govt. of Gujarat allotted grants of total rs. 281.00 lakhs to GEER Foundation for development of new enclosures of Asiatic Lions, Royal Bengal Tiger, Leopard and various herbivores under main head of New Item (non recurring) in the budget of financial year 2017-18.				
<b>Income received from sale of tickets and other sources</b>				
Sr. No.	Particulars	Amount in lakhs (INR)		
1	Entry Fees, Indroda Nature Park, Gandhinagar	162.72		
2	Rent for Aahar Kendra	4500		
3	Sale of Publication Park	14700		
4	Tender Form Fees	1200		

## 13. Daily feed Schedule of animals

### Mammals:

#### (A) Carnivore animals

Sr. No	Animal	Feed	Quantity/animal/day (Kg)	
			Winter	Summer
1	Royal Bengal Tiger ( <i>Panthera tigris tigris</i> )	Buffalo meat	8	6-7
1	Asiatic Lion ( <i>Panthera leo persica</i> )	-----do-----	8	6-7
2	Leopard ( <i>Panthera pardus</i> )	-----do-----	3.0	2-2.5
3	Indian Grey Wolf ( <i>Canis lupes pallipes</i> )	-----do-----	2.0	1.5
3	Jackal ( <i>Canis aureus</i> )	Poultry meat	0.5	0.5
4	The Indian Fox ( <i>Vulpes bengalensis</i> )	-----do-----	0.3	0.3
5	Striped Hyaena ( <i>Hyaena hyaena</i> )	-----do-----	1.0	1.0

Note: Animals mentioned above are kept on fast for one day in a week on Monday.

#### (B) Herbivore Animals

Sr. No.	Animal	Quantity of Feed/Animal/day (Kg)			
		Green Grass	Dry roughage	Chick pea	Concentrate mixture
1	Sambar ( <i>Cervus unicolor</i> )	10	1	0.2	0.7
2	Spotted Deer ( <i>Axis axis</i> )	5	0.8	0.2	0.3
3	Black Buck ( <i>Antelope cervicapra</i> )	4	0.7	0.1	0.2
4	White Black Buck ( <i>Antelope cervicapra</i> )	4	0.7	0.1	0.2
5	Chinkara ( <i>Gazella gazella bennetti</i> )	3	0.5	0.1	0.2
6	Chousingha / Four-horned Antelope ( <i>Tetraceros quadricornis</i> )	3	0.5	0.1	0.2
7	Barking Deer ( <i>Muntiacus muntjak</i> )	4	0.7	0.1	0.2
		<b>Feed/Animal/day (Kg)</b>			
<b>Rodentia</b>		<b>Chick pea</b>		<b>Fruits and Vegetables</b>	
6	Indian porcupine ( <i>Hystrix indica</i> )	0.5		1	

Note: The feed to above mentioned animals is offered all days in a week without fasting.

**Aves:**

Sr. No.	Bird	Quantity of Feed/Bird/day (Kg)			
		Grains/legume seeds	Vegetable / Fruit	Meat	Fish
1	Crane Common ( <i>Grus grus</i> )	0.40			
2	Crane Sarus ( <i>grus antigone</i> )	0.30			
3	Duck Pintail ( <i>Anas acuta</i> )	0.15			
4	Goose Bar-Headed ( <i>Anser indicus</i> )	0.15			
5	Parakeet Alexandrine ( <i>Psittacula eupatria</i> )	0.01	0.15		
6	Teal Lesser Whistling ( <i>Dendrecygnabicolor</i> )	0.15			
7	Dove little Brown ( <i>spilopeliasenegalensis</i> )	0.05			
8	Duck Comb ( <i>Sarkidiornismelanotos</i> )	0.20			
9	Cocketil ( <i>Nymphicuspalustris</i> )	0.03			
10	White Peafowl ( <i>Pavo cristatus</i> )	0.20	0.20		
11	Silver pheasant( <i>Lophuranycthemera</i> )	0.10	0.20		
12	Heron Night ( <i>Nycticoraxnycticorax</i> )				0.34
13	White Ibis ( <i>Threskiornisacthiopica</i> )				0.34
14	Owl Indian Greater horned( <i>Bubovirginianus</i> )			0.25	
15	Rosy Pelican / White ( <i>Pelecanusonocrotalus</i> )				1.00
16	Painted Stork ( <i>Mycteria leucocephala</i> )				0.50
17	Steppe Eagle( <i>Aquila nipalensis</i> )			0.50	
18	Cormorant little ( <i>phalacrocoraxniger</i> )				0.30
19	Brahminy Kite - ( <i>Tadorna ferruginea</i> )			0.25	
20	Barn Owl ( <i>Tato alba</i> )			0.25	
21	White Spoonbill ( <i>Platalealeucorodia</i> )				0.30
23	White Stork ( <i>Ciconia ciconia</i> )				0.50

Note: carnivore birds are kept on fast once in a week on Monday

**Reptiles:**

Sr. No.	Animal	Quantity of feed /Animal		
		Dressed Meat (kg/week)	Vegetables (kg/ Day)	Other feed grams/Week
1	Indian Cobra ( <i>Naja naja</i> )			200
2	Marsh Crocodile (Mugger) ( <i>Crocodylus palustris</i> )	0.700		
3	Indian Rock Python ( <i>Python molurus molurus</i> )			1000
4	Indian Rat Snake /Dhaman ( <i>Pryasmucosus</i> )			200
5	Russel's Viper ( <i>Vipera russellii</i> )			200
6	Common Indian Krait ( <i>Bungarus caeruleus</i> )			100
7	Common Sand Boa ( <i>Eryx johini</i> )			150
8	Red Sand Boa ( <i>Eryx conicus</i> )			150
9	Indian Star Tortoise ( <i>Geochelone elegans</i> )		0.150	
10	Ganges Soft-shell Turtle ( <i>Aspiderates gangeticus</i> )	0.500		

Note: The feeding regimen for above said animals is adjusted according to the seasonal physiological needs.

In addition to above mentioned food, essential macro & micro- minerals viz. calcium, phosphorus manganese, sulphur, copper, zinc, sodium, molybdenum, iron, chloride, Vitamins viz. Vitamin-A, Colecalciferol, Thiamine, Riboflavin, Pyridoxine, Cyanocobalamin, Nicotinamide, Ascorbic acid, Biotin, Carbohydrate, Salt is offered to animals by mixing it into daily concentrate feed for herbivores and into meat for carnivores. Hepato-protectant is also added to the diet of herbivore animals in form of powder to enhance the functional capacity of the liver.

## 14. Vaccination Schedule of animals

Sr. No.	Species	Disease vaccinated for	Name of the Vaccine and dosage/ quantity used	Periodicity
1	Felines	Feline Rhino tracheitis, Feline panleucopenia, Feline calicy virus	Fel-O-Vac PCT	Cubs of two month of age and booster dose every year
2	Canines	(a) Anti Rabies (b) Parvo Virus (c) Leptospira (d) Canine distemper (e) Herpes virus (f) Parainfluenza	Vanguard 5L4	Pups at 45 days of age and booster dose every year
3	Aves	New Castle Disease	-	If need arises in case of epidemics.

## 15. De-worming Schedule of animals

Sr. No.	Species	Drug used	Month
1	Carnivores except canines	Ivermectin and Fenbendazole (alternative)	December, March, June, September
2	Canines	Praziquantel, Pyrantel Pamoate, Fenbendazole	December, March, June, September
2	Herbivores	Ivermectin and Fenbendazole (alternative)	December, March, June, September

## 16. Disinfection and Hygiene Protocol of INP Zoo

Sr. No.	Species	Type of enclosure	Activities	Disinfectants used	Frequency
1	Carnivore (Feline, Canine, Reptiles, Aves)	Night shelter/ Cubicle	Removal of the animal excreta and leftover feed followed by cleaning with clean water. Change of	-	Daily
			Disinfection of the floors	Glutaraldehyde	Daily
2	Carnivore (Feline, Canine, Reptiles, Aves)	Loafing ground/ Kraal	Disinfection of the enclosure/Loafing Ground by spraying safe disinfectant	Glutaraldehyde	Every Monday
3	Carnivore (Feline, Canine, Reptiles, Aves)	Night shelter/ Cubicle	Ecto-parasites such as ticks, mites, etc. crevices in civil construction should be burnt with the flame stove.	-	Quarterly
4	Herbivores	Loafing ground and shed	Disinfection of the enclosure/Loafing Ground by spraying safe disinfectant	Glutaraldehyde	Every Monday
5	Reptiles and aves	Ponds	Cleaning and sanitation of pond and addition of water sanitizer (safe for aqua culture)	Sokrena	<ul style="list-style-type: none"> <li>• Small ponds- fortnightly,</li> <li>• Medium ponds- monthly,</li> <li>• Large ponds- quarterly.</li> </ul>
6	All animals	All enclosures	Proper disposal of both liquid and solid wastes generated in the zoo, far away from the animal enclosure.	-	Daily

Sr. No.	Species	Type of enclosure	Activities	Disinfectants used	Frequency
7	All animals	All enclosures	Dry organic garbage burning, far away from animal enclosure		Once in a week
8	All animals	All enclosures	All leftover food items, animal excreta and garbage removal from every enclosure and safe disposal in to garbage pit		Daily
9	All animals	All enclosures	Disposal of dead animal carcass by Burning/burial method with utmost care to prevent the spread of disease to other animal		When need arises
10	Herbivores	Open enclosures	Cleaning of water troughs of enclosure		Every alternate day

## 17. Health check-up of officers and employees of INP.

Sr. No.	Name	Designation	Date of Health Check up	Findings of Health Check up
1	Shri R.D. Kamboj	Director	20/05/2017 & 17/02/2018	Individual health check up of all staff members revealed following results: no any major abnormalities or contagious disease detected in
2	Shri A.K.Patel	Dy. Director (R & D)- Then	20/05/2017	
3	Shri H.P. Suthar	Dy. Director (R & D)- Then	17/02/2018	
4	Shri D.C.Mehta	Dy. Director (EE)	20/05/2017 & 17/02/2018	
5	Shri A.D. Chaudhary	Park Warden-RFO		
6	Dr. Aniket Patel	Veterinary Officer		

7	Shri P. S. Chaudhary	Forester	any of the staff member in said two health screenings
8	Shri R. J. Patel	S.W.P.K.	
9	Shri N.A.Theba	A.S.W.P.K.	
10	Shri Hitesh S. Desai	Veterinary Asst.	
11	Shri Baldevbhai Vaghela	Sweeper cum keeper	
12	Shri Baldevbhai Parmar	Accountant (i/c)	
13	Shri Irshad N.Theba	Bird breeder (i/c)	
14	Shri Sardarji Gandaji Thakor	Animal Keeper	
15	Shri Ranjitji Ataji Makawana	Animal Keeper	
16	Shri Gabhabhai J. Raval	Animal Keeper	
17	Shri Narsinhji Udaji Thakor	Animal Keeper	
18	Shri Bharatji A. Thakor	Animal Keeper	
19	Shri Maheshkumar B. Thakor	Animal Keeper	
20	Shri Kanubhai B.Raval	Animal Keeper	
21	Shri Govaji Masangji Thakor	Animal Keeper	
22	Shri Bhagvanji R. Makawana	Animal Keeper	
23	Shri Sureshkumar G. Thakor	Animal Keeper	
24	Shri Alkeshkumar R. Kori	Animal Keeper	
25	Shri Punabhai V. Raval	Animal Keeper	
26	Shri Dashrathji R. Thakor	Animal Keeper	
27	Shri Amrutbhai I. Prajapati	Animal Keeper	
28	Shri Manojkumar P. Thakor	Animal Keeper	
29	Shri Pravinji V. Makawana	Animal Keeper	
30	Shri Somabhai D. Raval	Animal Keeper	
31	Shri Kirankumar B. Thakor	Watchman	
32	Shri Rameshji M.Thakor	Watchman	
33	Shri Lalaji B. Thakor	Watchman	
34	Shri Ramdhiraj R. Kori	Watchman	
35	Shri Jugaji Bakaji Thakor	Watchman	
36	Shri Karmanbhai R. Desai	Watchman	
37	Shri Shantilal M. Kori	Watchman	



*Medical health check up camp organized for staff members of Indroda Nature Park*

## 18. Developmental works carried out in the Indroda Nature Park during the year 2017-18.

**18.1 Snake House Refurbishment:** Snake house of Indroda Nature Park was built many years ago hence depreciation affected the infrastructure badly. A need was felt to refurbish the whole snake house for the betterment of captive animals and to upgrade the visitors' facility. Number of renovation and repairing works done in the existing structure which are as follows:

Refurbishment of Snake House		
Sr.	Status before renovation	Status after renovation
1	Old visitor path made of burnt clay bricks settled down over a period of time and the surface became undulating	The brick path was restored with new concrete paver blocks
2	Old chambers had limited enrichment stuff	<ul style="list-style-type: none"> <li>- Walls of snake cubicles are painted with natural scenic landscape according to the habitat of respective species.</li> <li>- Enrichment of internal environment done in the cubicle using Earthen pots, river stones, dry tree branches and twigs, clay, sand etc.</li> </ul>
3	Some glasses developed minute cracks which was obstructing the vision	All such glasses and mosquito wire mesh above the glasses were replaced with newer ones.
4	Old informative signage needed replacement	Informative photographic signages with latest information about the snakes were prepared and installed on ceramic tiles for long durability and attractive look.
5	Old standoff barrier needed replacement	High strength standoff barrier made of galvanium pipe installed to prevent vandalism.
6	Visitors were unable to see snakes inside the cubicle due to their own reflection on glass	Additional L.E.D. lights are installed inside the cubicle

**18.2** Approval of Central Zoo Authority obtained for enclosure designs of Asiatic Lions, Royal Bengal Tiger and Leopard.



- 18.3** Dinosaur and fossil section of Indroda Nature Park was created before the year 2001. In these connections, the statue models of dinosaurs and fossils depreciated over a period of time. Major renovation including infrastructural repairing, repainting & coating work on dinosaur models, improvisation in signages etc works have been carried out in the F.Y. 2017-18.
- 18.4** Climate Change is a global burning issue these days. An awareness centre is planned to create in Indroda Nature Park to spread awareness about sources, types & forms of energy, effects of climate change etc.
- 18.5** Allotment of work to construct 860 meters of R.C.C. protection wall on the southern and western boundary of Indroda Nature Park through e- tendering procedures.

## **19. Education and Awareness programmes during the year**

### **19.1 Education activity:**

(a) **Nature Education Camps:** Indroda Nature Park invites school and college students for nature education camp of three days from different regions of Gujarat state. A batch of around 45-50 school students along with their faculty members are provided accommodation and food at the cost of GEER Foundation. The students are taught and given exposure about ecosystem, ecology, importance of nature and natural resources, wildlife etc. during nature trails, zoo visit, birding exercise, expert interactions in these three days span. The Indroda Nature Park has skilled staff i.e. nature educators to conduct these Nature Education Camps. The details of Nature Education Camps organised and conducted in Indroda Nature Park in the financial year 2017-18 are as follows:

Sr. No.	Section	No. of camps	Participants			Total
			students	Faculty members	others	
1	Indroda Nature Park (west part)	25	1147	79	76	1302
2	Indroda Nature Park (East part)	20	825	126	84	1035
<b>Total</b>		<b>45</b>	<b>1972</b>	<b>205</b>	<b>160</b>	<b>2337</b>

**(b) One day programme for organised tours of trainees or college students:**

On request of any educational or training institute/ academy, Indroda Nature Park under the supervision of GEER Foundation conducts special one day exposure programme for the Forest officer trainees, subordinate forest staff trainees and college students. This programmes focus on visit of various sections of INP and interactions with the field officers i.e. R.F.O., Veterinary Officer and managerial officers i.e. Dy. Director and Director. The details of organised one day programme conducted in the financial year 2017-18 are given in following table.

<b>Sr. no.</b>	<b>Date</b>	<b>Participants detail</b>
<b>State or central academy for forest officers' training</b>		
1	15/08/2017	R.F.O. Trainees of T.S. Forest Academy, Dulapally, Hyderabad.
2	10/11/2017	R.F.O trainees of Karnataka Forests Academy.
3	18/02/2018	R.F.O trainees of Uttarakhand Forests Academy.
4	11/03/2018	IFS Probationer Officers' Batch- west India Tour programme
5	18/03/2018	IFS Probationer Officers' Batch- west India Tour programme
6	24/03/2018	Forest guard batch- Kakrapar and Dungarda Academy
<b>Organised college or educational institute programmes</b>		
6	11/04/2017	Students of Vacation Training programme from Science City, Ahmedabad.
7	02/06/2017	Students from veterinary Polytechnic, Junagadh Agricultural University
8	09/09/2017	Study tour of Aranyak Paryavaran Sanskriti Kendra Navsari
9	16/02/2018	Students from veterinary Polytechnic, Junagadh Agricultural University
10	17/02/2018	Study tour of Horticulture and forestry students of Navsari.

### **(c) Bird Watching Programme:**

Indroda Nature Park organises a birding programme namely “Appreciation training programme on bird ecology and conservation” popularly known as “Bird watching programme”. This programme is of 4 days generally held in winter season in Indroda Nature park premises. This programme is of special kind wherein, any person of more than 6 years of age can participate. The terrestrial bird watching is done in woodlands of Indroda Nature Park and wetland bird watching is done in the Thol bird sanctuary. The bird watching is followed by presentations of ornithologists and field experts. The bird watching is pursued by trained, skilled and experienced staff of Indroda Nature Park. The participants are charged nominal fees for the formal registration process and in return, the participants are provided hard copy of study materials, soft copy of study materials in CD-Rom. Light breakfast is provided to the participants on all four days. In the year 2017-2018, total three batches of December, January and February were conducted. Total 111 participants benefited for birding exposure in the said programme.

## **19.2 Awareness activities:**

### **a. Wildlife Week 2017**

Every year during October 2 to 8, Governments, environmentalists, activists, educators organize different activities to accelerate the awareness of wildlife conservation among people. India, being a mega-storehouse of various species, is also able to manage several conferences, awareness programs, and public meetings among the nature lovers. Schools and educational institutions organize events such as wildlife related movie screening, painting competition/essay writing/ debate competition for young children with wild life as the theme.

Indroda Nature Park under guidance and supervision of GEER Foundation organizes various activities during the Wildlife Week every year. For the Wildlife Week 2017 too, Indroda Nature Park organized following activities:

- I. Free entry to all visitors in Indroda Nature Park and Aranya Udhyaan, Gandhinagar during wildlife week to promote awareness about wildlife.
- II. Wildlife Photo Gallery and Digital Interactive Kiosks were installed in Indroda Nature Park to spread information about wildlife of Gujarat and India to visitors.
- III. Wildlife awareness documentary film show was continuously shown and kept open for all visitors in Indroda Nature Park.



*Nature Education activities at INP through School camps and Birding Programme*



*Organized institutional tours facilitated at Indroda Nature Park*



Donation of sapling to Hon. Chief Minister of Gujarat state Shri Vijay Rupani by the Director of GEER Foundation on World Environment day-2017

Plantation of sapling by Hon. Chief Minister of Gujarat state Shri Vijay Rupani in Indroda Nature Park on World Environment day-2017



Wild Life Photo Gallery at Indroda Nature Park during Wild Life Week-2017 Celebration visited by PCCF (HoFF) and PCCF(WL)& Chief Wildlife Warden

- IV. Plantation programme was organised in the premises of Indroda Nature Park in support of local school students and faculty members.
- V. One day seminar was organised on conservation of Sarus Cranes in GEER Foundation during the wildlife week.

**b. World Environment Day:**

5<sup>th</sup> June every year is celebrated as environment day all throughout the world. In the current year, celebration of environment day became very special for Indroda Nature Park, as the Hon. Chief Minister of Gujarat state Shri Vijay Rupani came to celebrate the event in the Indroda Nature Park. He started his day with offering feed to free ranging peafowl in the park. He also offered green grass to sambar deer. A Kadamb sapling was planted by him followed by a brief speech to the public and media regarding conservation of environment and ongoing plantation strategies of state government.

**Smart Goal Achievement:** The staff members of Indroda Nature Park was given a task to prepare and choose a goal to complete before 5<sup>th</sup> June which was named as Smart Goal. The smart goal mission worked in positive manner to improve the work efficiency in staff members. The achieved targets were assessed on the world environment day.

**Plantation:** Plantation in the Indroda Nature Park was carried out on the day.

**Wild animals' population estimation:** Forested parts of Indroda Nature Park cater many free living wild animals and birds. Population estimation of selected species was carried out on 4<sup>th</sup> day of June, 2017 as a part of celebration of world environment day. The said exercise was carried out for Bluebills, Hanuman Langur and Indian Peafowl

## 20. Important Events and happenings

➤ **Animal care and veterinary section:**

Veterinary hospital is established to take care of captive wild animals of Indroda Nature Park with following facilities. (1) Operation theatre, (2) Medicine and equipment store room (3) Veterinary Officer's chamber. The unit has a post operative quarantine ward, a yard, a bird ward and cages of various sizes to keep birds and small animals getting treatment at the hospital. The unit is well

cordoned with compound wall to secure the sick animals and birds. The unit is taken care of by full time Veterinary Officer, Veterinary Assistant and Hospital/field assistant. Veterinary hospital is equipped with following equipments and instruments:

<b>Sr. No.</b>	<b>Instrument/ Equipment</b>	<b>No. of units</b>
01	Hydraulic operation table	01
02	Syringe projector	01
03	Dart gun	01
04	Blow pipe	01
05	Portable stretcher on wheel	01
06	Multi-parameter monitor	01
07	Electro cautery	01
08	Suction apparatus	01
09	Operation theatre halogen light apparatus	01
10	Compound light microscope	01
11	Fumigator	01
12	Small animal surgery kit	01
13	Large animal surgery kit	01
14	Nursing trolley	01
15	Medicine storage and instrument cupboards	02
16	Reference books store cupboards	01
17	Refrigerator	01
18	Instrument sterilizer	01
19	Formalin chamber	01
20	Autoclave	01
21	Weighing scale (Digital) (500kg capacity)	01

Apart from above said instruments and equipments, veterinary hospital keeps sufficient stock of various drugs, medicines and feed supplements to maintain health of the captive wild animals of the zoo in good condition. For specialised veterinary interventions, Veterinary Officer of the zoo obtains help of Department of Animal Husbandry (Govt. of Gujarat), Kamdhenu University (Veterinary Division) and Veterinary College (Anand Agricultural University).

Throughout the year 2017-18, the veterinary hospital did important interventions which are mentioned here as follows:

1. Surgical removal of tumorous tissue from caudal aspect of thigh region and post operative care of Jackal. The animal was subsequently diagnosed with metastasis therefore special care was taken for betterment of its health.
2. Bird rescue and rehabilitation camp for injured birds during kite flying festival.
3. Treatment of common langur for chronic epileptic seizures.

4. Surgical removal of deep seated maggots from steppe eagle.
5. Assistance to Department of Forests, GoG in translocation of a Bluebull through chemical restraint procedure.
6. Assistance to Department of Forests, GoG for the rescue operations of leopards and wild pig at various places.
7. Assistance to the Department of Forests, GoG in Rathyatra-2017 (a religious procession) in Ahmedabad to control the herd of elephants.
8. Assistance to the Department of Forests, GoG in Veterolegal case of bluebull killing by poachers.
9. Veterinary Officer was also deputed to assist department of forests in a post-mortem examination of blue bulls died of gunshot by poachers.
10. Ring vaccination of Domestic animals i.e. cow and buffaloes against Foot and Mouth Disease in surrounding villages of Indroda Nature Park to prevent disease occurrence and spread. The said activity in carried out by the Veterinary Officer and Veterinary Assistant of Indroda Nature Park in coordination with department of Animal Husbandry. Total 844 animals were vaccinated during 10<sup>th</sup> -13<sup>th</sup> October,2017.

Apart from these activities, the prophylactic measures to prevent various diseases and disorders were taken by means of deworming at every three months interval and annual vaccination. Routine hygiene measures i.e. cleaning of enclosures, debris and leftover removal & disposal, disinfection and sanitary measures were supervised by the veterinary hospital. Aquatic ponds in the enclosures were emptied, cleaned and refilled with clean potable water at regular interval to prevent water borne infections in animals and birds.

The kite flying festival in Gujarat is celebrated on 14<sup>th</sup> and 15<sup>th</sup> day of January every year. During these days large number of birds gets injured due to sharp strings/threads of kites while flying. In January-2018, bird rescue and rehabilitation camp was organised under Karuna Abhiyan to operate and rehabilitate the injured birds. In this event, a temporary unit of treatment and rehabilitation was established in the eastern part of Indroda Nature Park during 10<sup>th</sup>-20<sup>th</sup> January,2018. Total 54 injured birds were received at the centre and subjected to minor or major surgical interventions as per the requirement. 50 birds out of 54 birds survived, rehabilitated and reintroduced in the nature over a period of time.

Veterinary team was also deputed as emergency response team in a full day religious procession called Rathyatra in Ahmedabad city on date 25/06/2017. A herd of 18

elephants was leading the procession. The team remained along with the herd to act in case of emergency for whole day.

➤ **Events organised for staff members.**

- i. **Yoga week:** yoga week for all staff members of Indroda Nature Park and GEER Foundation was organised during 06/06/2017 to 25/06/2017. The staff was divided in total three batches for compulsory Yoga programme. The staff members enthusiastically participated in the Yoga programme.
- ii. **Yoga Day:** 21<sup>st</sup> June is celebrated as International Yoga Day worldwide. Staff members of Indroda Nature Park participated in citywide yoga day celebration on 21<sup>st</sup> June, 2017.
- iii. **Nature and self-motivation programme:** a full day motivational programme for all staff members of Indroda Nature Park was organised to improve the work efficiency through self-motivation. Renowned motivational speakers were invited to deliver their thoughts to the audience. Staff members were divided in two batches for the said programme. The said programmes were done on 26/01/2018 and 17/02/2018.
- iv. **Certificate awarding to the best performer employee:** new initiative has been taken by GEER Foundation to award certificates to the employee who performs extraordinary duty in his/her section for purpose of motivation. The certificates were distributed to keepers of the respective sections on the Independence Day and the Republic Day.

## **21. Seasonal special arrangements for upkeep of animals**

Indroda Nature Park Zoo provides enough care to the captive wild animals against seasonal extremisms. These are as follows:

- Winter:
  - During winter season quantity of feed is increased in general to the all wild animals.
  - Gunny bag curtains are hanged on the doors and windows of night shelters from outside to prevent hypothermia though cold breezes.
  - Stacking of dry straws of crop residues is done inside the night shelter of animals.
  - Nylon net curtains are applied over enclosure fences of aviaries.



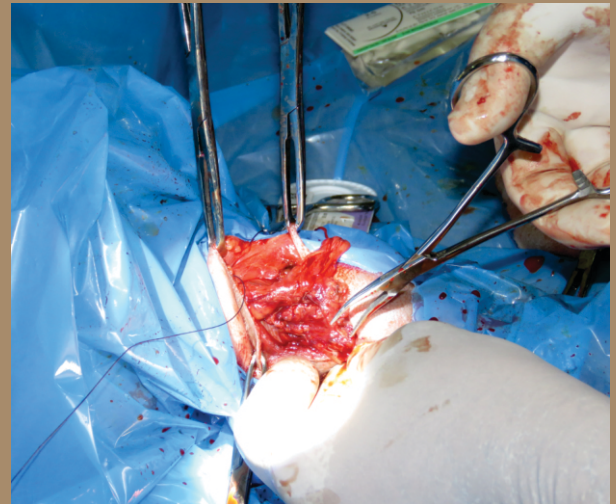
Preoperative care in male JACKAL



Preparation of for Operation in JACKAL



Ultra sonography of tumor in JACKAL



Surgical Intervention for removal of tumor in JACKAL



Rathyatra-2017



Emergency Response team in Rathyatra-2017

## Bird Rescue camp 2018 Plate-1



Surgical intervention



Affected bird during kite flying festival



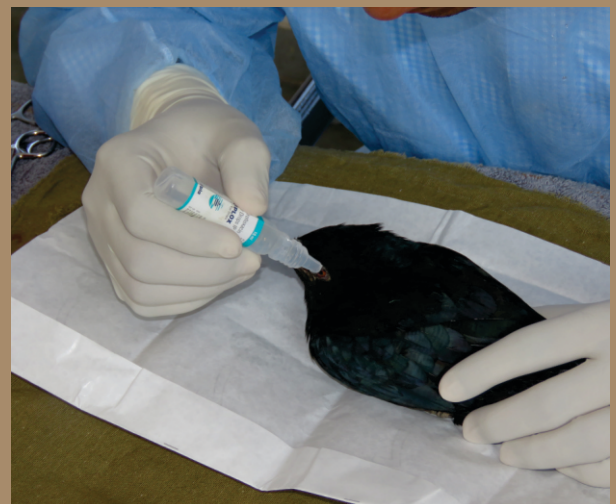
Examination of injury in limb of Barn Owl



Treatment of injured Barn Owl



Ophthalmic injury to Asian Koel



Treatment of Asian Koel

## Bird Rescue camp 2018 Plate-2



Surgical intervention on Blue Rock Pigeon



Surgical intervention on Spotted Owlet



Post-operative Rehabilitation of Black Kite



Release of Peafowl after rehabilitation



Release of Blue Rock Pigeon after treatment and rehabilitation



Rescue Operation of juvenile leopard from open well



Rescue operation of adult male leopard at Ghodasar village of Mahemdavad Taluka

- Summer:
  - Foggers are installed in the enclosures of carnivore animals for periodical spraying of mist over the animal to cool down the ambient temperature.
  - Water based air coolers are used for carnivore animals during extreme hot hours of the day.
  - Khus curtains are hanged on the enclosure fences and periodical spraying of water over the curtains keeps the ambient temperature down.
  - Rehydrating additives are incorporated in drinking water of animals.
  - Sprinklers are used in some enclosure to provide natural coolness to the captive wild animal to get relief from extreme heat.
- Monsoon:
  - Feeding cubicle/ night shelters are tried to keep clean and dry. Animals are prevented to become continuously wet through rain by keeping them inside the cubicle during heavy rain.
  - Quick lime powder is sprayed during monsoon season to mitigate the risk of disease occurrence.

## 22. Research Work carried out and publications

During the year 2017-18, no any particular research or publication work has been carried out related to INP Zoo.

## 23. Conservation Breeding Programme of the Zoo

During the year 2017-18, no any particular conservation breeding programme has been pursued in INP Zoo.

## 24. Animal acquisition / transfer / exchange during the year

A.	Animals arriving in the Zoo				
	H.NO.	Species	Number (M:F)	From which Zoo	Date of arrival in the zoo
	Nil				
B.	Animals going from the zoo				
	H.NO.	Species	Number (M:F)	Going to which Zoo	Date of deposition from the zoo
	Nil				

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

Rescue operations carried out in the year 2017-18				
Sr. No.	Date	Species, (M:F:U), Number of animals	Place	Details of operations
1	18/11/2017	Leopard (U), 01	Badol kampa Village, Ta. Idar, Dist.: Sabarkantha	The juvenile leopard fell down in an open well, which was safely taken out by means of lowering down the trap cage through hydraulic crane.
2	15/12/2017 & 16/12/2017	Leopard (U), 01	Sultanpur Village, Ta. Vadnagar, Dist.: Mehsana	Leopard was seen in revenue area and mob of local residents became uncontrollable. The conditions got worsen up to strict police actions as two policemen were severely injured in agitation by local villagers. By the time the leopard was returned to its original habitat.
3	23/12/2017	Leopard (M), 01	Bhavangadh Village, Ta. Bhiloda, Dist.: Aravalli	The male leopard was caught in an animal trap in an area between Bhavangadh village and Farmlands. The animal was immobilised chemically and crated for further care.
4	24/12/2017 & 25/12/2017	Pig (suspected to be of wild in origin) (U), 01	Godhana Village, Ta. Sami, Dist.: Patan	The pig attacked and killed a farm labour. Team reached and overnight searched for pig. The pig found dead on the next day during search.
5	07/01/2017	Leopard (M), 01	Ghodasar Village, Ta. Mahemdavad, Dist.: Kheda	The leopard was chemically immobilised and crated for further care.
6	12/01/2017	Leopard, (M), 01	Saiyadpura Village, Ta. Umreth, Dist.: Anand	Captured with nylon nets and crated for further care

## 26. Annual Inventory of animals of INP Zoo for the Year 2017-18

Endangered Species																					
Sr. No.	Animal Name / Scientific Name	Opening stock				Birth			Acquisition			Disposal			Death			Closing stock			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
<b>BIRDS</b>																					
1	Peafowl (White) ( <i>Pavo cristatus</i> )	3	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	2
2	Spoonbill White ( <i>Platalea leucorodia</i> )	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
3	Steppe Eagle ( <i>Aquila Nipalensis</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
	<b>Total Birds</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>6</b>
<b>MAMMALS</b>																					
1	Black Buck ( <i>Antilope cervicapra</i> )	86	79	15	180	0	0	10	0	0	0	0	0	0	10	7	2	83	78	10	171
2	White Black Buck ( <i>Antilope cervicapra</i> )	11	19	9	39	0	0	12	0	0	0	0	0	0	0	1	0	13	25	12	50
3	Chinkara - Indian Gazelle( <i>Gazella bennetti</i> )	3	2	1	6	0	0	0	0	0	0	0	0	0	1	0	0	3	2	0	5
4	Jackal ( <i>canis aureus</i> )	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
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	Porcupine Bengal ( <i>Altherurus meccourous assamensis</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
7	Tiger ( <i>Panthera tigris tigris</i> )	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Mammals...</b>	<b>103</b>	<b>102</b>	<b>27</b>	<b>232</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>8</b>	<b>2</b>	<b>101</b>	<b>107</b>	<b>24</b>	<b>232</b>

**Endangered Species**

Sr. No.	Animal Name / Scientific Name	Opening stock				Birth			Acquisition			Disposal			Death			Closing stock			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
<b>REPTILES</b>																					
1	Cobra Indian ( <i>Naja naja</i> )	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
2	Crocodile Marsh (Mugger) ( <i>Crocodylus Palustris</i> )	1	1	31	33	0	0	0	0	0	0	0	0	0	0	1	1	1	0	30	31
3	Python Indian - Rock ( <i>Python molurus molurus</i> )	2	0	11	13	0	0	0	0	0	0	0	0	0	0	0	0	2	0	11	13
4	Snake Rat / Dhaman ( <i>Pryas mucosus</i> )	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
5	Viper Russel's ( <i>Vipera ruselli</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
	<b>Total Reptiles...</b>	<b>6</b>	<b>1</b>	<b>47</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>46</b>	<b>52</b>	
	<b>Total ANIMALS (Birds + Mammals + Reptiles)...</b>	<b>113</b>	<b>104</b>	<b>76</b>	<b>293</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>9</b>	<b>3</b>	<b>110</b>	<b>108</b>	<b>72</b>	<b>290</b>	

**Other than Endangered Species**

Sr. No.	Animal Name / Scientific Name	Opening stock				Birth			Acquisition			Disposal			Death			Closing stock				
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
<b>BIRDS</b>																						
1	Cormorant little ( <i>Phalacrocorax niger</i> )	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
2	Crane Common ( <i>Grus grus</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
3	Crane Sarus ( <i>Grus antigone</i> )	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
4	Duck Comb ( <i>Sarkidiornis melanotos</i> )	3	2	16	21	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	16	21
5	Duck Pin Tail ( <i>Anas acuta</i> )	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
6	Egret Little ( <i>Egretta garretta</i> )	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
7	Goose Bar Headed ( <i>Anser indicus</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
8	Heron Night ( <i>Nycticorax nycticorax</i> )	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20
9	Ibis White ( <i>Threskiornis aethiopica</i> )	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
10	Owl Barn ( <i>Tyto alba</i> )	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11	Eurasian Eagle Owl ( <i>Bubo bubo</i> )	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Pelican Rosy / White ( <i>Pelecanus onocrotalus</i> )	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
13	Parakeet Alexandrine ( <i>Psittacula eupatria</i> )	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4
14	Stork Painted ( <i>Mycteria leucocephala</i> )	2	2	5	9	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	5	9
15	Kite brahminy ( <i>Tandorna ferruginea</i> )	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16	Gray Leg Goose ( <i>Anser anser</i> )	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
17	Large Whistling Tael ( <i>Dendrocygna bicolor</i> )	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2

Other than Endangered Species																						
Sr. No.	Animal Name / Scientific Name	Opening stock				Birth			Acquisition			Disposal			Death			Closing stock				
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
18	TawneyEagle ( <i>Aquila rapax</i> )	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	<b>Total Birds</b>	<b>15</b>	<b>11</b>	<b>58</b>	<b>84</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>11</b>	<b>58</b>	<b>84</b>
<b>MAMMALS</b>																						
1	Deer Sambhar ( <i>Cervus unicolor</i> )	11	22	6	39	0	0	6	0	0	0	0	0	0	0	1	0	15	23	6	44	
2	Deer Spotted ( <i>Axis axis</i> )	37	62	0	99	0	0	8	0	0	0	0	0	0	7	4	0	30	58	8	96	
	<b>Total Mammals...</b>	<b>48</b>	<b>84</b>	<b>6</b>	<b>138</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>45</b>	<b>81</b>	<b>14</b>	<b>140</b>	
<b>REPTILES</b>																						
1	Krait – Common Indian ( <i>Bungarus caeruleus</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
2	Sand Boa ( <i>Eryx johini</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
3	Sand Boa – red ( <i>Eryx conicus</i> )	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
4	Tortoise Indian Star ( <i>Geochelone elegans</i> )	3	4	23	30	0	0	0	0	0	0	0	0	0	0	0	0	3	4	23	30	
5	Gangetic Soft Shell Turtle	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
	<b>Total Reptiles...</b>	<b>4</b>	<b>4</b>	<b>29</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>29</b>	<b>37</b>	
	<b>Total Animals (birds + mammals +reptiles)...</b>	<b>67</b>	<b>99</b>	<b>93</b>	<b>259</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>64</b>	<b>96</b>	<b>101</b>	<b>261</b>	

## 27. Mortality of animals

### INDRODA NATURE PARK, GANDHINAGAR, GUJARAT.

Period: 1<sup>st</sup> April-2017 to 31<sup>st</sup> March-2018

Sr.	Species	Date	Sex	Cause of death as diagnosed through P.M.
<b>BIRDS</b>				
1	Peacock (White)	03/01/2018	M	Senile complications
<b>MAMMALS</b>				
1	Black buck	17/04/2017	M	Respiratory Tract Infection
2	Blackbuck	26/04/2017	F	Respiratory Tract Infection
3	Blackbuck	27/04/2017	M	Infighting sequelae
4	Spotted deer	26/05/2017	M	Infighting sequelae
5	Blackbuck	10/07/2017	F	Respiratory tract infection
6	Blackbuck	13/07/2017	M	Infighting sequelae
7	Blackbuck	24/07/2017	M	Respiratory tract infection
8	Blackbuck	25/07/2017	F	Respiratory tract infection
9	Blackbuck	26/07/2017	M	Acute pneumonia
10	Blackbuck (juvenile)	26/07/2017	U (F)	Acute pneumonia
11	Blackbuck (juvenile)	27/07/2017	U (F)	Acute pneumonia
12	Spotted deer	06/08/2017	M	Senile complications
13	Blackbuck	07/08/2017	M	Infighting sequelae
14	Chinkara	19/08/2017	M	Infighting sequelae
15	Spotted deer	25/08/2017	F	Senile complications
16	Blackbuck	03/09/2017	F	Respiratory tract infection
17	Spotted deer	15/09/2017	M	Infighting sequelae
18	Sambar deer	17/09/2017	F	Intussusceptions of intestine
19	Blackbuck	05/10/2017	F	Senile complications
20	Spotted deer	19/10/2017	F	Infighting sequelae
21	Blackbuck	20/10/2017	F	Pregnancy toxemia
22	White Blackbuck	04/11/2017	F	Senile complications
23	Spotted deer	14/12/2017	M	Infighting sequelae
24	Spotted deer	21/12/2017	M	Infighting sequelae
25	Spotted deer	28/12/2017	F	Respiratory tract infection
26	Blackbuck	05/01/2018	F	Infighting sequelae
27	Blackbuck	20/01/2018	M	Infighting sequelae
28	Spotted deer	21/01/2018	F	Respiratory tract infection
29	Spotted deer	15/02/2018	M	Respiratory tract infection
30	Blackbuck	23/02/2018	M	Respiratory tract infection
31	Blackbuck	06/03/2018	M	Infighting sequelae
32	Jackal	08/03/2018	M	Generalized metastasis
33	Blackbuck	15/03/2018	M	Respiratory tract infection
34	Spotted deer	22/03/2018	M	Infighting sequelae
<b>REPTILES</b>				
1	Marsh crocodile	17/04/2017	F	Thermal (heat) stroke and anorexia
2	Marsh crocodile	30/06/2017	U (F)	Internal hemorrhage due to infightings

**28. Status of compliance of conditions stipulated by Central Zoo Authority vide letter F. No.19-33/92-cza(72)(vol.v) (ns) /883/2016 dated 08-06-2016**

S. No.	Norm No.	Condition Stipulated	Status
<b>1. General Requirements</b>			
1.	1.9	Zoo should remove domestic Geese from the display area.	Completed
<b>2. Administrative and Staffing pattern</b>			
2.	2.1	Zoo should have an officer of appropriate rank as Full time in charge of the zoo with powers to take decision and ensure that adequate financial resources and infrastructural support is made available to such officer for proper housing, upkeep and health care of the zoo animals and managing the zoo in a planned manner.	The Dy. Director (R&D) who is an officer of the rank of Dy. Conservator of Forests is looking after the management of the zoo at present and he is vested with adequate financial resources and infrastructural support is made available to him for proper housing, upkeep and health care of the zoo animals and managing the zoo in a planned manner.
<b>3. Development and planning</b>			
3.	3.1	Zoo should get approval of Master (layout) Plan & Master Plan from the Central Zoo Authority.	Completed
<b>4. Animal Housing, display of animals and animal enclosures</b>			
5.	4.2	Proper enclosure for the rescued Jackal should be provided. The design should be got approved from Central Zoo Authority.	In process
6.	4.6	Zoo should enrich the environment of the enclosures to meet the species specific requirements of the animals in accordance with the standards specified by the Central Zoo Authority.	This year it has been done in snake house

<b>S. No.</b>	<b>Norm No.</b>	<b>Condition Stipulated</b>	<b>Status</b>
7.	4.7	Zoo should arrange screening between adjacent enclosures to safeguard against the animals getting unduly excited or stressed due to visibility of animals housed in these enclosures.	The new enclosures shall be designed accordingly and the approval of the same shall be taken from CZA.
8.	4.9	Zoo should provide proper standoff barrier in front of spotted deer enclosure.	Completed.
9.	4.10	<ul style="list-style-type: none"> <li>i. Zoo should provide directional signs and warning signs for visitors.</li> <li>ii. Sign board placed inside the black buck enclosures should be fixed outside the fence area for viewing by visitors.</li> </ul>	<p>Completed.</p> <p>Renovated, painted and height raised accordingly.</p>
<b>5.Upkeep &amp; health care of animals</b>			
10.	5.3(4)	The zoo should have written schedule of vaccination and de-worming of different species of the zoo animals and displayed at the enclosure site.	Completed.
<b>7.Postmortem and disposal of carcasses of animals</b>			
11.	7.1	<ul style="list-style-type: none"> <li>i. Zoo should construct a post mortem room with full fledged equipment.</li> <li>ii. Zoo should install incinerator for disposal of carcasses.</li> </ul>	Tendered contract has been allocated to the contractor to construct P.M.Room, Incinerator and wood store room.

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

### Free Living Species Occurring INP Zoo and surrounding area of Indroda Nature Park- Fauna

Sr. No.	Common Name	Scientific Name
<b>Mammals</b>		
1	Hanuman Langur	<i>Presbytis entellus</i>
2	Indian Hare	<i>Lepus nigricollis</i>
3	Jackal	<i>Canis aureus</i>
4	Indian Porcupine	<i>Hystrix indica</i>
5	Grey Mongoose (Common Mongoose)	<i>Herpestes edwardsii</i>
6	Pale Hedgehog	<i>Hemiechinus micropus</i>
7	Blue bull	<i>Boselaphus tragocamelus</i>
8	Rusty-Spotted cat	<i>Prionailurus rubiginosus</i>
9	Five-striped Palm squirrel	<i>Funambulus palmarum</i>
10	Small Indian civet	<i>Viverricula indica</i>
<b>Birds</b>		
1	Alexandrine Parakeet	<i>Psittacula eupatria</i>
2	Alpine Swift	<i>Tachymarptis melba</i>
3	Ashy Drongo	<i>Dicrurus leucophaeus</i>
4	Ashy Prinia	<i>Prinia socialis</i>
5	Ashy-crowned Sparrow-Lark	<i>Eremopterix grisea</i>
6	Asian Koel	<i>Eudynamys scolopacea</i>
7	Asian Openbill	<i>Anastomus oscitans</i>
8	Asian Palm Swift	<i>Cypsiurus balasiensis</i>
9	Asian Paradise Flycatcher	<i>Terpsiphone paradisi</i>
10	Bank Myna	<i>Acridotheres ginginianus</i>
11	Barn-owl	<i>Tyto alba</i>
12	Baya Weaver	<i>Ploceus philippinus philippinus</i>
13	Bay-backed Shrike	<i>Lanius vittatus</i>
14	Black Drongo	<i>Dicrurus macrocercus</i>

<b>Sr. No.</b>	<b>Common Name</b>	<b>Scientific Name</b>
15	Black Ibis	<i>Pseudibis papillosa</i>
16	Black Kite	<i>Milvus migrans</i>
17	Black Redstart	<i>Tringa tetanus</i>
18	Black-crowned Night-heron	<i>Nycticorax nycticorax</i>
19	Black-headed Cuckooshrike	<i>Coracina melanoptera</i>
20	Black-shouldered Kite	<i>Elanus caeruleus</i>
21	Black-winged Stilt	<i>Himantopus himantopus</i>
22	Blue Rock Thrush	<i>Monticola rufiventris</i>
23	Blue-cheeked Bee-eater	<i>Merops persicus</i>
24	Blue-tailed Bee-eater	<i>Merops philippinus</i>
25	Bluethroat	<i>Luscinia svecica</i>
26	Booted Warbler	<i>Hippolais caligata</i>
27	Brahminy Duck	<i>Tadorna ferruginea</i>
28	Brahminy Starling	<i>Sturnus pagodarum</i>
29	Brown Rock Pipit	<i>Anthus similis</i>
30	Cattle Egret	<i>Bubulcus ibis</i>
31	Changeable Hawk-Eagle	<i>Spizaetus cirrhatus</i>
32	Chestnut-shouldered Petronia	<i>Petronia xanthocollis</i>
33	Citrine Wagtail	<i>Motacilla citreola</i>
34	Clamorous Reed Warbler	<i>Acrocephalus stentoreus</i>
35	Collared Scops-Owl	<i>Otus bakkamoena</i>
36	Comb Duck	<i>Sarkidiornis melanotos</i>
37	Common Babbler	<i>Turdoides caudatus</i>
38	Common Chiffchaff	<i>Phylloscopus collybita</i>
39	Common Coot	<i>Fulica atra</i>
40	Common Crane	<i>Grus grus</i>
41	Common Greenshank	<i>Tringa nebularia</i>
42	Common Hawk-cuckoo	<i>Hierococcyx varius</i>
43	Common Hoopoe	<i>Upupa epops</i>
44	Common Iora	<i>Aegithina tiphia</i>

<b>Sr. No.</b>	<b>Common Name</b>	<b>Scientific Name</b>
45	Common Kestrel	<i>Falco tinnunculus</i>
46	Common Kingfisher	<i>Alcedo atthis</i>
47	Common Lesser Whitethroat	<i>Sylvia curruca</i>
48	Common moorhen	<i>Gallinula chloropus</i>
49	Common Myna	<i>Acridotheres tristis</i>
50	Common Pochard	<i>Aythya ferina</i>
51	Common Quail	<i>Cotumix cotumix</i>
52	Common Redshank	<i>Tringa totanus</i>
53	Common Sandpiper	<i>Actitis hypoleucos</i>
54	Common Snipe	<i>Gallinago gallinago</i>
55	Common Stone Chat	<i>Saxicola torquata</i>
56	Common Swallow	<i>Hirundo rustica</i>
57	Common Tailorbird	<i>Orthotomus sutorius</i>
58	Common Teal	<i>Anas crecca</i>
59	Common Woodshrike	<i>Tephrodornis pondicerianus</i>
60	Coppersmith Barbet	<i>Megalaima haemacephala</i>
61	Crested Bunting	<i>Melophis lathami</i>
62	Crested Lark	<i>Galerida cristata</i>
63	Crested Serpent-Eagle	<i>Spilornis cheela</i>
64	Darter	<i>Anhinga melanogaster</i>
65	Desert Wheatear	<i>Oenanthe deserti</i>
66	Dusky Crag-martin	<i>Hirundo concolor</i>
67	Eurasian Collared-dove	<i>Streptopelia decaocto</i>
68	Eurasian Curlew	<i>Numenius arquata</i>
69	Eurasian Eagle-owl	<i>Bubo bubo</i>
70	Eurasian Golden Oriole	<i>Oriolus oriolus</i>
71	Eurasian Sparrowhawk	<i>Accipiter nisus</i>
72	Eurasian Spoonbill	<i>Platalea leucorodia</i>
73	Eurasian Thick-knee	<i>Burhinus oedicnemus</i>
74	Eurasian Wryneck	<i>Jynx torquilla</i>

<b>Sr. No.</b>	<b>Common Name</b>	<b>Scientific Name</b>
75	Forest Wagtail	<i>Dendronanthus indicus</i>
76	Glossy Ibis	<i>Plegadis falcinellus</i>
77	Great Cormorant	<i>Phalacrocorax carbo</i>
78	Great White Pelican	<i>Pelecanus onocratalus</i>
79	Greater Coucal	<i>Centropus sinensis</i>
80	Green Bee-eater	<i>Merops orientalis</i>
81	Green Sandpiper	<i>Tringa ochropus</i>
82	Greenish Leaf Warbler	<i>Phylloscopus trochiloides</i>
83	Grey Francolin	<i>Francolinus pondicerianus</i>
84	Grey Heron	<i>Ardea cinerea</i>
85	Grey Wagtail	<i>Motocilla cinerea</i>
86	Grey-breasted Prinia	<i>Prinia hodgsonii</i>
87	Grey-headed Flycatcher	<i>Culicicapa ceylonensis</i>
88	Hair-crested Drongo	<i>Dicrurus hottentotus</i>
89	House Crow	<i>Corvus splendens</i>
90	House Sparrow	<i>Passer domesticus</i>
91	House Swift	<i>Apus affinis</i>
92	Indian Bushlark	<i>Mirafra erythroptera</i>
93	Indian Cuckoo	<i>Cuculus micropterus</i>
94	Indian Grey Hornbill	<i>Ocyceror Birostris</i>
95	Indian Nightjar	<i>Caprimulgus asiaticus</i>
96	Indian Peafowl	<i>Pavo cristatus</i>
97	Indian Pitta	<i>Pitta brachyura</i>
98	Indian Pond-heron	<i>Ardeola grayii</i>
99	Indian Robin	<i>Saxicoloides fulicata</i>
100	Indian Roller	<i>Coracias benghalensis</i>
101	Indian Silverbill	<i>Lonchura malabarica</i>
102	Intermediate Egret	<i>Mesophoyx intermedia</i>
103	Jungle Babbler	<i>Turdoides striatus</i>
104	Jungle Bush-quail	<i>Perdica asiatica</i>

<b>Sr. No.</b>	<b>Common Name</b>	<b>Scientific Name</b>
105	Jungle Crow	<i>Corvus macrorhynchos</i>
106	Jungle Owlet	<i>Glaucochlamys radiatum</i>
107	Jungle Prinia	<i>Prinia sylvatica</i>
108	Large Cuckoo-Shrike	<i>Coracina macei</i>
109	Large Egret	<i>Casmerodius albus</i>
110	Large Grey Babbler	<i>Turdoides malcolmi</i>
111	Large Woodshrike	<i>Tephrodornis gularis</i>
112	Laughing Dove	<i>Streptopelia senegalensis</i>
113	Lesser Golden-backed Woodpecker	<i>Dinopium benghalense</i>
114	Lesser Whistling-duck	<i>Dendrocygna javanica</i>
115	Little Cormorant	<i>Phalacrocorax niger</i>
116	Little Egret	<i>Egretta garzetta</i>
117	Little Grebe	<i>Tachybaptus ruficollis</i>
118	Little Ringed Plover	<i>Charadrius dubius</i>
119	Long-tailed Shrike	<i>Lanius schach erythronotus</i>
120	Marshall's Iora	<i>Aegithina nigrolutea</i>
121	Mottled Wood Owl	<i>Strix ocellata</i>
122	Northern Pintail	<i>Anas acuta</i>
123	Northern Shoveler	<i>Anas clypeata</i>
124	Oriental Honey-buzzard	<i>Pernis ptilorhynchus</i>
125	Oriental Magpie-Robin	<i>Copsychus saularis</i>
126	Oriental Tree Pipit	<i>Anthus trivialis</i>
127	Oriental White Ibis	<i>Threskiornis melanocephalus</i>
128	Oriental White-eye	<i>Zosterops palpebrosus</i>
129	Orphean Warbler	<i>Sylvia hortensis</i>
130	Painted Stork	<i>Mycteria leucocephala</i>
131	Pallid Harrier	<i>Circus macrourus</i>
132	Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>
133	Pied Avocet	<i>Recurvirostra avosetta</i>
134	Pied Bush Chat	<i>Saxicola caprata</i>

<b>Sr. No.</b>	<b>Common Name</b>	<b>Scientific Name</b>
135	Pied Crested Cuckoo	<i>Clamator jacobinus</i>
136	Pied Kingfisher	<i>Ceryle rudis</i>
137	Plain Prinia	<i>Prinia inornata</i>
138	Plume-headed Parakeet	<i>Psittacula cyanocephala</i>
139	Purple Heron	<i>Ardea purpurea</i>
140	Purple Moorhen	<i>Porphyrio porphyrio</i>
141	Purple Sunbird	<i>Nectarinia asiatica</i>
142	Purple-rumped Sunbird	<i>Nectarinia zeylonia</i>
143	Red Collared-dove	<i>Streptopelia tranquebarica</i>
144	Red-breasted Flycatcher	<i>Ficedula parva</i>
145	Red-headed Falcon	<i>Falco chicquera</i>
146	Red-rumped Swallow	<i>Hirundo daurica</i>
147	Red-vented Bulbul	<i>Pycnonotus cafer</i>
148	Red-wattled Lapwing	<i>Vanellus indicus</i>
149	River Tern	<i>Sterna aurantia</i>
150	Rock Pigeon	<i>Columba livia</i>
151	Rose-ringed Parakeet	<i>Psittacula krameri</i>
152	Rosy Starling	<i>Sturnus roseus</i>
153	Rufous Fronted Prinia	<i>Prinia buchanani</i>
154	Rufous tailed Lark	<i>Ammomanes phoenicura</i>
155	Rufous Treepie	<i>Dendrocitta vagabunda</i>
156	Rufous-tailed Finch-Lark	<i>Ammomanes phoenicurus</i>
157	Savanna Nightjar	<i>Caprimulgus affinis</i>
158	Scaly-breasted Munia	<i>Lonchura punctulata</i>
159	Shikra	<i>Accipiter badius cenchroides</i>
160	Short-toed Snake-Eagle	<i>Circaetus gallicus</i>
161	Short-toed sanke Eagle	<i>Ciraetus gallicus</i>
162	Siberian Rubythroat	<i>Luscinia calliope</i>
163	Singing Bushlark	<i>Mirafra cantillans</i>
164	Sirkeer Malkoha	<i>Phaenicophaeus leschenaultii</i>

<b>Sr. No.</b>	<b>Common Name</b>	<b>Scientific Name</b>
165	Small Minivet	<i>Pericrocotus cinnamomeus</i>
166	Southern Grey Shrike	<i>Lanius meridionalis</i>
167	Spot-billed Duck	<i>Anas poecilorhyncha</i>
168	Spotted Dove	<i>Streptopelia chinensis</i>
169	Spotted Flycatcher	<i>Muscicapa striata</i>
170	Spotted Owlet	<i>Athene brama</i>
171	Streaked Weaver Bird	<i>Ploceus manyar</i>
172	Streaked Wren-Warbler	<i>Prinia gracilis</i>
173	Sulphur-bellied Warbler	<i>Phylloscopus griseolus</i>
174	Sykes's Lark	<i>Galerida deva</i>
175	Tawny-bellied Babbler	<i>Dumetia hyperythra</i>
176	Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i>
177	Tickell's Fowerpecker	<i>Dicaeum agile</i>
178	Ultramarine Flycatcher	<i>Muscicapa superciliaris</i>
179	Variable Wheater	<i>Oenanthe picata</i>
180	Verditer Flycatcher	<i>Eumyias thalassina</i>
181	Western Marsh Harrier	<i>Circus aeruginosus</i>
182	White Eyed Buzzard	<i>Butastur teesa</i>
183	White Stork	<i>Ciconia ciconia</i>
184	White Wagtail	<i>Motacilla alba</i>
185	White-bellied Drongo	<i>Dicrurus caerulescens</i>
186	White-bellied Minivet	<i>Pericrocotus erythropygius</i>
187	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>
188	White-browed Bulbul	<i>Pycnonotus luteolus</i>
189	White-browed Fantail Flycatcher	<i>Rhipidura aureola</i>
190	White-eared bulbul	<i>Pycnonotus leucotis</i>
191	White-eyed Buzzard	<i>Butaster teesa</i>
192	White-necked Stork	<i>Ciconia episcopus</i>
193	White-throated Fantail Flycatcher	<i>Rhipidura albicollis</i>
194	White-throated Kingfisher	<i>Halcyon smyrnensis</i>

Sr. No.	Common Name	Scientific Name
195	Wire-tailed Swallow	<i>Hirundo smithii</i>
196	Wood Sandpiper	<i>Tringa glareola</i>
197	Yellow fronted pied Woodpecker	<i>Dendrocopos mahrattensis</i>
198	Yellow Wagtail	<i>Motacilla flava</i>
199	Yellow-eyed Babbler	<i>Chrysomma sinense</i>
200	Yellow-legged Green Pigeon	<i>Treron phoenicoptera</i>
201	Yellow-wattled Lapwing	<i>Vanellus malarbaricus</i>
<b>Reptiles</b>		
1	Indian Cobra	<i>Naja naja</i>
2	Common Krait	<i>Bungarus caeruleus</i>
3	Common San boa	<i>Gongylophis conicus</i>
4	Red San-Boa	<i>Eryx johnii</i>
5	Indian Rock Python	<i>Python molurus</i>
6	Common Cat Snake	<i>Boiga trigonata</i>
7	Small-banded Kukri Snake	<i>Oligodon fasciolatus</i>
8	Common Worm Snake	<i>Typhlina bramina</i>
9	Bronze back tree snake	<i>Dendrelaphis gorei</i>
10	Russel's Viper	<i>Daboia russelii</i>
11	Saw-scaled viper	<i>Echis carinata</i>
12	Trinket Snake	<i>Elaphe helena</i>
13	Indian Wolf Snake	<i>Lycodon capucinus</i>
14	Barred Wolf Snake	<i>Lycodon striatus</i>
15	Checkered keel-back	<i>Xenochrophis piscator</i>
16	Common Garden Lizard	<i>Calotes versicolor</i> (Daudin)
17	Common Indian Monitor	<i>Varanus Bengalensis</i>
18	Fan-Throated Lizard	<i>Sitana ponticeriana</i>
19	Brahminy Skink	<i>Mabuya carinata</i>
20	Indian Flapshell	<i>Lissemys punctata</i>



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