



GOVT. OF BIHAR DEPARTMENT OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

# **RAJGIR ZOO SAFARI**

N A L A N D A



**A N N U A L** 2 0 2 3 - 2 4





LI, Asiatic Lion and L5 Asiatic Lioness





## **TRANSFORMING VISION INTO REALITY:** THE STORY OF RAJGIR ZOO SAFARI



**Dr. Gopal Singh, IFS** OSD to Chief Minister, Bihar Regional Chief Conservator of Forest, Patna, Cum-Chairman, Project Monitoring Committee, Rajgir Zoo Safari, Nalanda

# **Brief Introduction:**

t is a matter of great pleasure that Rajgir Zoo Safari, Bihar's first and only Zoo Safari, has been receiving an enormous response from visitors. Since its inauguration in February 2022, more than 8 Lakh visitors have visited this zoo safari, making it the main place of attraction for visitors across Pan India. The continued high visitor flow attests to the ongoing success of Rajgir Zoo Safari even after two years of operation. Additionally, this eco-tourism facility is running in revenue surplus mode wherein the annual revenue collected is much more than the annual maintenance and operational costs. The animals are healthy and in good vigor due to the facilities developed for them in natural habitat. We are able to provide livelihood to more than 500 families directly and many more indirectly. The quality of the forest has also improved in recent years. All these signify that the design strategy with which Rajgir Zoo Safari. has been developed has been successful in letter and spirit.

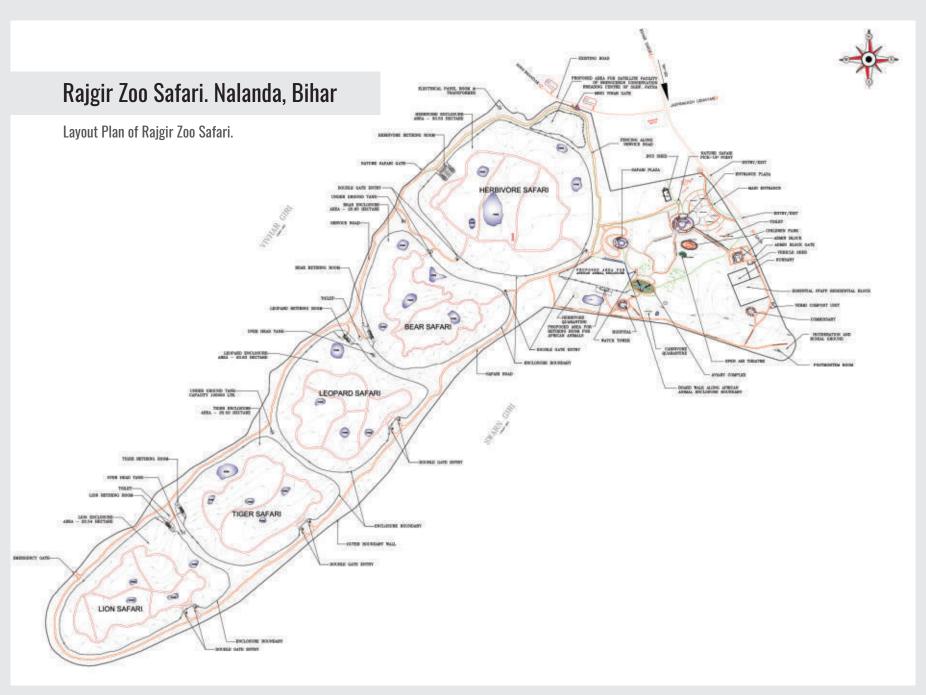
It gives great satisfaction to see that the project has come up very nicely as per the vision and design strategy against all odds and difficulties. Obviously, the execution of such a big project was the first of its kind and a new experience for the department. The primary vision behind the project was to create an internationally recognized wildlife ex-situ conservation facility. The beauty of this project is its location which is a near-natural habitat of native wild animals.



The main design strategy which we adopted is to use the best quality material which will make it a maintenance-free facility.

Rajgir Zoo Safari, which spreads over 191.12 hectares of scenic natural forest, surrounded by picturesque hills from two sides, is located near the historically and religiously important city of Rajgir in Bihar's Nalanda district. It is based on a unique idea where wild animals roam freely in a restricted forest area, and visitors can see them from a closed, secure vehicle.

The idea of developing a world-class eco-tourism facility in Rajgir started in 2008 when Shri Nitish Kumar, Hon'ble Chief Minister of Bihar, visited the erstwhile Mrig Vihar located in Rajgir during one of his frequent visits to Rajgir. Being an ardent supporter of the concept of forest and wildlife conservation, the Hon'ble Chief Minister had a vision of developing a state-of-the-art wildlife-based eco-tourism facility to spread awareness among the people of Bihar about nature and wildlife conservation. Being posted in the Chief Minister office for



considerably long time and also being in State Forest Department at different positions, as Conservator of Forest, Patna Circle and Regional Chief Conservator of Forest, Patna, I could connect with the vision that Hon'ble Chief Minister was having for this safari. Thus, I was fortunate to be involved in all stages of the development of Rajgir Zoo Safari, starting from its concept to its reality and currently in its successful operation.

Initially, it was planned to develop a zoo in Rajgir which would supplement Sanjay Gandhi Biological Park, Patna, in Southern Bihar and would also work as a rescue center for rescued wild animals, especially Sloth Bear and Leopard, etc. But, since a new concept of Safari was emerging at that time, it was decided to develop Bihar's first Wildlife Safari with international level facilities for wildlife and for visitors.

The initial designs provided by the consultant were very ordinary and were not tourist and management-friendly. Nor were the designs as per the expectations of the



Selfie point, which is very famous among tourists.

state Govt, which desired a safari of international standards. During my first field visit as in-charge, after the responsibility of project execution was given to Patna region, it was noted that the area provided was not sufficient to cater number of tourists visiting Rajgir. The visitor zone was proposed to be constructed in low-lying water inundated area. There was no separate visitor reception area. Crowd management and tourist circulation was not considered in thoroughly. Contour were not considered while preparation of designs. Proposed area for parking facilities was not sufficient. Even for animal enclosures, the concept given by the consultant was to build this zoo safari in a rudimentary normal way, by constructing enclosures using normal MS chain link. There were practical issues related to the implementation of some of the ideas suggested by the consultant

Thus, it was decided that since this is a prestigious and dream project of the Bihar Government, the best resources need to be utilized in this project. We took a number of policy decisions at this point like,

1. The location and complete design of visitor zone was changed and it was decided to shift the visitor zone to area near main road. Now, the new design was prepared to cater to a minimum of 5,000 visitors a day and 1,000 tourists at a time by giving sufficient space at the entrance and by spreading the facilities at a sufficient distance, for effective crowd management. The design and facilities provided in the visitor zone were finalized to give the best visitor experience with modern facilities. The infrastructures at the reception zone were designed in an oval shape so that it will use minimum space to fit in maximum facilities. This will also ensure hassle-free movement of visitors, which visitors expect during such visits. It was decided to develop a stone wall with the use of local stones to give the parking of visitor's vehicles and local transportation vehicles.

2. It was decided to use the best quality material to make this facility maintenance-free. Hence, use of Stainless Steel solid bars for animal cells and GI chain link and poles for the enclosure boundary instead of rudimentary use of MS was proposed. This guaranteed a minimum of 20 years of maintenance-free enclosures.

3. A comprehensive project plan was prepared including all components of zoo management and got fresh approval for the project from competent authority. Thus, now the project budget was increased to around 176 Cr. instead of earlier approved 59.64 Cr.

4. Citing visitor safety, it was decided to develop all-weather roads instead of the impractical solution given by the consultant to make roads with lime stabilization technique.

5. It was decided to use specially modified safari vehicles with enhanced window space to give maximum possible visibility to tourists.

6. During this period, some decisions were taken like the posting of the best human resource of State Forest Department for implementation of the project on-site. Thus, an energetic officer like Dr. K Nesamani, IFS was appointed as Divisional Forest Officer, Nalanda Forest Division. Dr. D. N. Singh, Retd IFS, and former Member Secretary, CZA were appointed as a wildlife expert for the project for necessary expert guidance in zoo designing. Later, finding that there is a need for a separate Director for Rajgir Zoo Safari to carry out its project implementation as per design, a young and dedicated IFS officer Hemant Patil was posted as Director, Rajgir Zoo Safari and as site incharge. He was fully dedicated to the work, focused on outcomes, and was always oriented towards effective solutions. His brilliant analytical and newly acquired technical knowledge enabled him to carry out assigned tasks with high efficiency.

The development of Rajgir Zoo Safari had to face a number of critical issues during its implementation phase. The issues were mitigated with the number of field visits and series of discussions. Some of the main issues that were faced during the implementation of the project were:

1. **Undulating Topography of the area:** The area proposed for Development of Rajgir Zoo Safari is highly undulating in nature with close contours. This undulating terrain created gaps in proposed drawings and actual work site conditions. Thus, on-site decision in making was necessary at each difficult site, after inspection of the site every time. This stretched the project implementation timeline.

2. Diversity of Work: Development of Zoo Safari was highly specialized

work which varied from the Wildlife health and nutrition management to the provision of international level facilities to the tourist for better operation and management of the safari. Thus, at one time, all these works were going on, which required manpower of that extent.

3. Lack of experience for Construction agency to carry out wildlife-related work led to constant orientation and sensitization of the construction agency and field workers, to make them understand that life of tourists, animal keepers and animal depends upon the strength and standard of work. Thus, carrying out constant field visits was necessary to ensure that the work is of high standards as per required specifications.

4. **Covid-19** hampered the speed of the development work with the upsurge of Covid-19 since March 2020. It was difficult to get sufficient manpower and ensure a smooth supply of necessary construction material for the work during the first and second waves of Covid.

### Rajgir Zoo Safari: Design Strategy & An Overview

Rajgir Zoo Safari, which spreads over around 191 Ha offorest land, is divided into three zones namely, Safari Zone, Reception & Orientation Zone, and Management Zone.

### **Design Strategy**

The Rajgir Zoo Safari has been designed with the vision of the Hon'ble Chief Minister, Bihar, to provide better facilities to the wildlife and for better wildlife management. In this light, efforts have been made to create maintenance-free facilities with a major emphasis on the health and hygiene of animals housed in Rajgir Zoo Safari. Also, safety and security of the animals as well as animal keepers have been given paramount importance with consideration of very minute details in addition to the norms and guidelines established by the Central Zoo Authority. The effort has been made to retain the natural forest landscape and to give maximum possible space to the wild animals, which makes this safari unique. It also provides near-natural habitat to the wild animals housed here

### **Reception and Orientation Zone:**

Different factors like possible visitor count at one point, crowd management techniques, cultural and religious importance of the area, natural landscape available, orientation of visitors, single-directional visitor circulation, and future scope of expansion were considered during the development of this zone. Each and every facility is constructed after giving detailed thought about present and future requirements. The facilities were decided to be constructed merging the natural landscape. With the thought of interpreting the visitors especially

children at the entry point itself, life-size bronze statues of the animals to be shown inside are depicted in the reception area. Sufficient landscaping area is provided for crowd distribution. Sufficient parking facility has been created to cater the parking demand in the next 20 to 25 years.

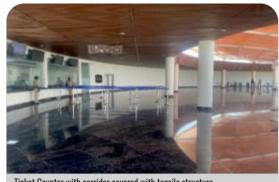
The decision of keeping two different plazas was taken for effective distribution of visitors and to avoid overcrowding at any one particular area. Sufficient signages are placed at different locations to help and guide visitors. A sufficient number of washrooms are available for the visitors. Government guidelines for making facilities differently-abled friendly have been followed with letter and spirit while developing these facilities. Other facilities like children's park, open theatre and aviary have been widely spaced. The finishing material like ceiling, flooring, etc. used in creating these facilities are used as per surrounding forest landscape. Each and every aspect of tourist management is being considered while the construction of this visitor zone.

Entrance plaza is kept bigger with maximum facilities. Facilities like Ticket Counter, Interpretation Centre, 180 Degree theatre and washrooms are available in Entrance Plaza. Sufficient use of technology is ensured keeping in view the children and their liking towards audio-visual means of learning. Facilities like Animal information videos, Digital butterfly zone, Shapatha Stambha, Rotoscope, 180-degree theatre and online ticket booking were included as a part of IT facilities that are made available to the visitors.

For effective tourist management, the state-of-the-art control room has been developed for better control and coordination among staff as well as for better tourist and wildlife management. The complete area is under CCTV surveillance to ensure effective crowd management. Multiple communication methods in the form of intercom, Wireless base stations are created to coordinate with this control room. Facility of Zonal Public announcement for different Zones is provided for dedicated announcements and public address.



Aerial view of Reception and Orientation Zone



Ticket Counter with corridor covered with tensile structure



**Reception Area** 



**Digital Butterfly Zone** 

The entertainment of the tourists has also been taken care of by developing a 180 Degree theatre, which is itself a unique feature of Rajgir Zoo Safari. Facilities like Children park and open theatre are also provided in the reception area for kids.

The interpretation center not only gives information about the animals housed in the safari, but it also gives information about other concepts related to the evolution of the earth, the evolution of human beings, as well as the theory of ecological succession in addition to the animal information. The poster series on the wall gives information about the Forest, Wildlife, Forest and Human coexistence, Hazards like habitat fragmentation, forest fires, oil spills and its effect on wildlife, Effect of climate change and Role of Forest department in mitigation and conservation role. Safari plaza is planned in such a way that all the tourists are oriented before boarding the safari buses. Thus, an orientation room is developed, where basic information about the animals housed in the safari and facilities being provided as communicated along with dos and don'ts to be followed during the safari. There is one-way circulation of safari bus with different pickup and drop points.

The safari vehicles used in Rajgir Zoo Safari are specially modified vehicles. These are AC vehicles with enlarged viewing glass in sides, which help tourists sitting on aisle seats sufficient visibility. Tourist safety has been kept at the highest preference while modifying the vehicles. CCTVs have been installed in each vehicle for constant vigil on tourists. TV screens along with PA systems have been provided to give information to tourists. Specially trained guides are available in each bus to give information about the animals and to answer queries of visitors.



**Control Room** 



Interpritation Center



**Orientation Hall** 







Interpretation Center



The Safari Vehicles

### Safari Zone:

Rajgir Zoo Safari has five different safaris namely Herbivore, Bear, Leopard, Tiger, and Lion Safari. Enclosures of all the animals including their retiring rooms have been constructed as per CZA norms and guidelines and have been widely appreciated by CZA officials as well as other wildlife experts working in in-situ and ex-situ conservation of wild animals.



This safari has a natural forest which has the advantage of providing near-natural habitat to wild animals and hence can be seen in good health and vigor. Thus, to capitalize on this resource, strict efforts have been made to make minimum intervention in alteration of the natural vegetation and terrain while carrying out the construction work.

The animal displayed in Herbivore Safari includes Sambhar, Chital, Hog Deer, Barking Deer and Blackbucks. There are sufficient numbers of Sloth Bear, Leopards as well as Tigers and Lions for better sighting of these wild animals.



Sufficient number of windows for ventilation in Retiring room.



Interior of Retiring Room- SS Cells, CCTV Cameras for monitoring, Use of Kota in Keeper's Gallery, Gear-Box based drop gate lifting mechanism and Post Box feeding window.

Considering the extreme climatic conditions of Rajgir and for better wildlife management, a sufficient number of windows and ventilators have been ensured for proper ventilation and sunlight in the retiring rooms. UPVC Glass windows have been used for proper sunlight. It has been made eco-friendly with the use of Solar rooftops and solar water pumps to negate the dependency on the regular power supply.

Use of 304-grade mat-finished stainless steel to fabricate cells, use of rough-surfaced Kota stone on flooring for easy cleaning, U-shaped open drainage for water-free drain, specialized post-box style feed windows with sliders, specialized gear box-based drop gate lifting mechanism with the facility of break system, Stainless steel transportation cages, portable squeeze cages, preinstalled weighing bridges in each retiring room, separate Keeper room with CCTV monitoring facility, store room etc are some of the best practices adopted while developing the retiring rooms for animal well-being as well as to ensure the safety of animal keepers.

Sufficient numbers of Kraal have been provided as per CZA guidelines with evergreen trees for shade, bigger ponds and Wooden Machans. The area of the Kraals has been kept sufficiently larger for animals to stroll and to adjust the big trees that were already present in the area. Wastewater treatment facility is installed in each retiring room to reuse the water for plantation.

The specially developed Tata GI chain link and GI poles have been used in enclosure boundary to make it maintenance-free and to avoid the problem of breach of enclosure due to rusting etc. The roads are kept sufficiently wide so that any emergency situation like rescue or fire emergency can be easily handled. Most of

the roads are murram roads to maintain the feel of natural wildlife safari.

The double gates are designed with sufficient length, width and height. The gates are motor operated. The operator room has glass window on three sides for better visibility. CCTV monitoring is carried out to keep constant watch on animal movement near double gates. Additional emergency gate is provided in each enclosure.

Habitat enrichment work of enclosures as per the special need of the particular wild animal has been carried out. Works like plantation of mixed species and fruit-bearing species, removal of weeds, creation of new grasslands and maintenance of old grasslands are being carried out in the herbivore enclosure. The widening and enrichment of water bodies has been ensured along with soil and moisture conservation work to reduce the speed of water and to retain maximum rainwater in natural ponds.



Larger Kraals for animals



Kraal with shade, Machan and pond.



Outer Boundary along with Enclosure Boundary and Roads



Herbivore Double Gate with theme of "Nalanda Ruins".



Natural Pond in Herbivore Safari with check dam

### Wildlife Healthcare and Nutrition Facilities

Generally, in zoos, the management zone of the zoo is a neglected part being out of visitor's reach. While construction of Management Zone of Rajgir Zoo Safari, equal importance is given in deliberation and thought process as is given for Safari and visitor zone. The healthcare facilities developed here namely Wildlife Hospital, Commissary, Quarantine facility and Post Mortem Hall, were designed based on its effective utilization and keeping in mind its impact on the health of wildlife. The locations of these facilities are such that they are neither too far nor too close to each other. Factors like sunlight, ventilation, ease of operation, and maintenance are considered while developing management zone facilities.



Aerial view of Hospital Building

### **Hospital:**

Rajgir Zoo Safari has a state-of-the-art hospital spread in around 785 sq. mtrs. with modern machineries for diagnostic, treatment and necessary facilities to carry out any major operation.

The hospital building is divided into two parts with both parts facing each other. One part is of the animal treatment section comprising the Operation theatre, X Room, Observation room, Ultra sound room, Nursery for Hand rearing, Cells and Kraals to be used to house inpatient animals. These rooms are interconnected to each other for easy movement of wild animals for diagnostic and treatment. The other part of the hospital is concerned with the administrative part of the hospital with facilities like Lab, Pharmacy, Staff Rooms, and Store Rooms. These facing wings of the hospital will help in easy monitoring of the animals under treatment in the hospital as well as hand-rearing in the Nursery. CCTVs have been installed in all rooms especially inpatient ward cells and Kraals to keep 24x7 watch on animals being treated thus avoiding unnecessary human interaction with them while monitoring of animal under treatment.

Sufficient greenery is ensured in and around the hospital. The orientation of the Hospital building is kept in such a way that sufficient natural sunlight is provided to the animals kept in the kraal. Also, better aeration in the building has been ensured.

The medical equipment and facilities available in Wildlife Hospitals are of international standards and have been seen very helpful in the treatment of animals especially old aged and rescued injured animals.



Kraal facility (East facing) in Hospital Building



### **Commissary:**

Commissary building of the Rajgir Zoo Safari has separate Veg and Non-veg sections and they have been separated from each other within the same building with sufficient distance between the two.

The Non-veg section has a facility of cold storage of feed, along with beef preparation room and fish and chicken preparation room. Also, veg section store has sufficient space to store minimum 15 days of ration in case of any emergency situation. The veg section of the



commissary has separate mash store, fruit, vegetable and dry ration store, Kitchen along with staff room and office.

There is a separate weighing bridge for weighing of the feed brought by heavy vehicles. Also, grass storage shade has also been constructed at a distance from commissary to avoid rat menace. The facility of entry of heavy vehicles is also provided in the central courtyard of the commissary. Also, a closed delivery vehicle is used for supply of non-vegetarian food material.

### **Quarantines and Postmortem:**

The separate quarantine facilities for Herbivores and Carnivores have been created inside management zone to cater transferred as well post-treatment recovery of the animals during their prescribed quarantine period.

A separate postmortem facility with sufficiently large postmortem room as well as sample collection room has been constructed along with a glass wall facing the sunlight. A sufficient number of windows have been provided to ensure proper aeration of the room to keep the postmortem room dry.





### Administrative Block and Emergency response measures:

The administrative block with conference hall and a separate building for research and monitoring work has been strategically located so that officials can reach reception zone and other facilities of management zones like hospital, commissary as well as safari zone in minimum time for their routine management work as well as in case of any emergency. Dedicate fire tenders, high rise emergency vehicle and ambulance along with rescue vehicle are procured by safari management to reduce response time in case of emergency and to reduce the impact of any sort of emergency.

Other facilities like emergency response equipment, electrical and solar systems are in place according to need. Waste disposal systems in form of Vermi compost units, waste water treatment plants are operational and bio-medical waste is being disposed of through the authorized agency for incineration of these waste.



### **Present and Future:**

It is satisfying to see that we are able to operate and maintain this safari not only as per our expectations but it is also being appreciated by local as well as international tourists visiting Rajgir Zoo Safari.

Rajgir Zoo Safari is providing employment to more than 500 families directly and much more indirectly. New hotels and restaurants are coming up after the start of Zoo Safari. The greenery of the area is increasing and positive changes have been seen in the ecology of the area, which is evident from the fact that Sal regeneration can be seen on the foothills and is increasing uphill eventually.

The main challenge for any high standard facility, once created, is its effective maintenance and operation. The response of the visitors to Rajgir Zoo Safari has been tremendous and the responsibility now shifts to keeping these facilities neat, clean and operational. More than two thousand visitors along with school children visit Zoo Safari premises every day. Thus, the team of Rajgir Zoo Safari is working constantly to live up to the expectations of visitors. The development of facilities like Souvenir shop etc. is under process. Such facilities need constant up-gradation to come true to the expectations of visitors.

Apart from visitor management, Rajgir Zoo Safari is in nascent stage considering wildlife management part. Future plan involves active Lion and Tiger breeding efforts to supplement insitu conservation initiatives of Bihar Government. Creating satellite facility of One Horned Rhinoceros and Ghariyal Breeding Conservation Centre of Sanjay Gandhi Biological Park, Patna is in pipeline. Efforts are needed for carrying out research and outreach activities to convert itself into center of excellence in Wildlife Research.

The Government of Bihar is committed and working for the conservation and protection of the natural resources of the State with active participation of the people. The Rajgir Zoo Safari is yet another step of the Government of Bihar for awareness and education of the masses to conserve, protect, preserve and live in harmony with nature.

#### Dr. Gopal Singh, IFS

Regional Chief Conservator of Forest, Patna -cum-Chairman, Project Monitoring Committee, Rajgir Zoo Safari.





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# **1 REPORT OF THE OFFICER-IN-CHARGE:**



Hemant Patil, IFS Director, Rajgir Zoo Safari, Nalanda

t is a matter of great satisfaction that Rajgir Zoo Safari is coming up as a center of excellence in ex-situ wildlife conservation and is trying to make invaluable contributions to the conservation of native endangered species. This zoo safari is being widely recognized as a scientifically designed zoo safari with an attempt to achieve the ethos of National Zoo Policy for conservation of native endangered species along with sensitizing the visitors about biodiversity conservation. By providing a safe and nurturing environment, coupled with cutting-edge veterinary care, Rajgir Zoo Safari is planning to come up as a successful conservation breeding center with a vision to reintroduced several endangered species back into their natural habitats, thus bolstering national efforts towards species recovery and biodiversity conservation through scientific studies and research.

It is seen that there has been remarkable improvement in the natural landscape of Rajgir wildlife Sanctuary since the inception of this Safari. Due to protection measures taken before and after inauguration of Zoo Safari, the Sal regeneration has been seen in new areas, especially on the barren slope of the surrounding hills. There has been increase in the green cover in and around Safari area. It has also assisted the protection to free living wildlife of Rajgir Wildlife Sanctuary.

Year 2023-24 has been a year of some good achievements and learnings for Rajgir Zoo Safari in terms of wildlife health management and safari management. Rajgir Zoo Safari is blessed with vast floral, faunal, avifaunal and butterfly biodiversity with picturesque hills from all sides. Thus, the concept of seeing the wild animals in their near natural habitat has got tremendously good response from the nature and wildlife appreciators. After its inauguration by Hon'ble Chief Minister, Bihar on 16th February, 2022, the year 2023-24 has been Rajgir Zoo Safari's second year of operation. Since the response of tourists in the inaugural year was tremendous, it was a challenge to continue the same service to the tourist along with taking care of health of all the animals throughout the year, which we handled effectively and to the satisfaction. Around 3.7 lakh tourists visited Rajgir Zoo Safari during this year, which include 12,060 students from 212 schools from Bihar and from nearby states. Many dignitaries visited Rajgir Zoo Safari throughout the year. Malmas Mela was organized this year in Rajgir, which comes once in every four year and when lakhs of pilgrims visit Rajgir every day. Thus, visitor management was a challenge which was managed successfully by the staff by carrying out effective crowd management on 24\*7 basis for complete 2 months with the help of our state-of-the-art control room.

With every year, the staff of Rajgir Zoo Safari is learning new facets of wildlife healthcare management and are improving themselves to handle emergency learning situations. We had a good learning in hand rearing of Tiger and Lion cubs. At the same time, we have learned of caring of newborn leopard cubs and of ailing old age Tiger and Sloth Bear. Special care had to be taken of wildlife during this year, in the healthcare management especially during summers due to less rainfall. Because of the facilities available in its wildlife Hospital, the wild animals rescued from different parts of Bihar and in need of urgent treatment, are now sent to the Rajgir Zoo Safari for their better treatment and health. It also was a matter of pride for the State Forest Department that representatives from different Zoos and protected areas of the country, trainees of different Forestry Training Academies are visiting to this Zoo Safari to know about the practices being adopted and facilities provided.

It is a matter of great satisfaction that Rajgir Zoo Safari has provided livelihood opportunities to more than 200 families directly, by engaging the local youth in its operation and management. Also, the growth in hospitality business of Rajgir town, after inauguration of Zoo Safari and Nature Safari, has increased employment opportunities to locals, indirectly. Due to this employment generation, the improvement in the standard of living of the families residing nearby town and villages has indirectly aided in protection of the green cover and conservation of wildlife in the Rajgir Wildlife Sanctuary.

We express our heartfelt gratitude to Sh. Nitish Kumar, Hon'ble Chief Minister, Bihar whose unwavering support, visionary leadership and steadfast has helped, Rajgir Zoo Safari to evolve into a beacon of sustainable eco-tourism and has emerged as flagship destination. We express our deepest regards to Dr. Prem Kumar, Hon'ble Minister, Department of Environment, Forest and Climate Change, Bihar for his constant support and guidance.

We would also express our sincerest regards to Sh. Arvind Kumar Choudhary, IAS and Smt. Bandana Preyashi, IAS, Secretary, Department of Environment, Forest and Climate Change, Bihar; Shri Ashutosh IFS, Principal Chief Conservator of Forest (HoFF), Bihar; Shri P K Gupta IFS, Principal Chief Conservator of Forest (Wildlife)-cum-Chief Wildlife Warden, Bihar, all officials of Bihar Forest Department and Sanjay Gandhi Biological Park, Patna for their constant and continuous support and guidance. We would also like to express our deepest regards to Dr. Rameshwar Singh, Vice Chancellor, Bihar Animal Sciences University, Patna; Dr. J K Prasad, Dean, Bihar Veterinary College, Patna and all the staff and faculty of Bihar Veterinary College, Patna for their continuous technical assistance and cooperation.

Our heartfelt thanks to Dr. D. N. Singh, retd. IFS who has been a constant source of inspiration. His undisputed knowledge and experience in the field of designing and management of Zoo and his words of wisdom has played key role in development and scientific management of this Safari.

All this would not be possible without the continuous and unconditional support, guidance and motivation of Dr Gopal Singh, IFS, Regional Chief Conservator of Forests, Patna. His insights on way-ahead has been a major driving force behind all the work done in Rajgir Zoo Safari and in creating this safari of international standards. We express our heartfelt gratitude to Sir.

We sincerely express our gratitude to Central Zoo Authority, the MoEF&CC for their kind support and cooperation.

We thank all our esteemed zoo visitors for their continued love to Rajgir Zoo Safari. Their feedback helps us make ourselves better.

Zoo management is a team work. I express my deepest gratitude towards my team for their outstanding dedication, hard work and unwavering commitment towards wildlife management and I hope, this will continue in future to achieve our vision.

#### **Hemant Patil**

Director, Rajgir Zoo Safari, Nalanda



# 2 HISTORY OF THE ZOO

The Rajgir Zoo Safari is first Zoo Safari in the state of Bihar. It has been established in Rajgir Wildlife Sanctuary area by extending the earlier Mrig Vihar. After getting necessary approvals for its establishment from National Board of Wildlife in March 2015, it got its inprincipal approval from Central Zoo Authority in May 2017. On 16th December 2020, Rajgir Zoo Safari got recognized as a Zoo by Central Zoo Authority and has been opened for public since 20th February 2022 after its inauguration by Hon'ble Chief Minister, Bihar on 16th February, 2022.

Spread in 191.12 hectare of area and blessed with vast floral and faunal biodiversity, currently there are five different safaris in Rajgir Zoo Safari namely, Herbivores Safari, Bear Safari, Leopard Safari, Tiger Safari and Lion Safari. Rajgir Zoo Safari houses 10 species of wild animals namely Asiatic Lion, Royal Bengal Tiger, Leopard, Sloth Bear, Sambar, Spotted Deer, Hog Deer, Barking deer, Blackbuck and Nilgai.



VISION

The Rajgir Zoo Safari has been set up by the Government of Bihar as a scientific institution for

Ex-situ Conservation Breeding and Propagation of the endangered endemic wild animal species of the region to complement and supplement in-situ conservation efforts;

> Education of masses for conservation of natural resources and to connect them with nature and wildlife; and

Preservation and maintenance of the gene pool of the endangered endemic wild animal species of the region;

Research & Study Centre for ex-situ conservation of wild animal species and to address the management issues in in-situ conservation of the wild animal species.



management of wild animal;

empathy and caring attitude towards the wild animal species and encourage and motivate them to work for and support the cause

**MISSION** 

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# 5 OBJECTIVES

The main objective of the Rajgir Zoo Safari is to complement, supplement and strengthen the national efforts in conservation of the rich biological diversity of the country, by conservation and preservation of the national and regional endangered species of the wild animals with active support, participation and involvement of the masses in the conservation actions, activities and programmes.

The aforesaid objective of the Rajgir Zoo Safari would be achieved through implementation of the following measures:

#### WILD ANIMAL HOUSING & DISPLAY:

- To display and house captive wild animals in a safe, secure, proper and appropriate species–specific natural habitat or near natural environment.
- for housing and upkeep of the captive wild animals.
- To provide the captive wild animal species appropriate and proper species-specific housing, with special care and emphasis on their adequate and sufficient feed and nutrition, proper health care, hygienic & clean environment, adequate space to display their various natural behaviors, appropriate enrichment to fill up the gaps in their natural activities and behavior compared to their natural habitat, their natural social groupings & opportunities for reproduction etc.

Give utmost importance to the animal welfare measures.

# CONSERVATION BREEDING OF ENDANGERED SPECIES:

- Ex-situ captive breeding of endangered wild animal species under a planned conservation breeding programme with special focus and emphasis on the endemic species of the region and their future requirements in the wild.
- Captive breeding programme for endangered species to be carried out in accordance with the protocol for rehabilitation of this species in the wild, if required, to supplement the wild population.
- Captive breeding, housing and upkeep of the endangered wild animal species to be carried out in a manner with least human imprints on them to ensure their adaptation and safety in the wild habitat, as and when released in the wild.
- Ensure and maintain scientifically laid down genetic diversity in the captive population of the wild animal species housed.

# CONSERVATION EDUCATION AND AWARENESS:

- Conservation education, awareness and interpretation programme should aim to target the general public from different strata and sections of the society, covering all age groups and belonging to diverse backgrounds and groups.
- Conservation education, awareness and interpretation programme should aim to enhance the knowledge of visitors and make them aware about necessity and importance of conservation, preservation and sustainable use of natural resources, including floral and faunal diversity and importance of maintaining the ecological balance.
- Conservation education, awareness and interpretation programme should aim to develop compassion and empathy for wild animals among the visitors to inspire them to actively participate and join the programmes and efforts for conservation of the natural resources.
- Provide visitors all necessary and basic facilities to ensure comfortable, hassle-free and satisfying visit.

#### **RESEARCH & SCIENTIFIC STUDY:**

- Establish and maintain a modern, sophisticated and wellequipped facility for scientific research and studies on the wild animal species in ex situ conditions to enhance the scientific knowledge about ecology, biology, physiology, behavior, housing, feed & nutrition, enrichment, veterinary health care of wild animal species to aid in scientific management and conservation of wildlife.
- Carry out applied research and studies in collaboration with the insitu managers to address their field problems and issues to assist them in the scientific management of the wild animal species.

#### **RESCUE AND REHABILITATION:**

- For rescue of the wild animal species, provide species-specific appropriate and proper equipment & accessories for their capture, restrain and transportation with minimum stress and injury to them and they should be safe and secure for the human beings.
- Provide appropriate, adequate and proper species-specific housing, upkeep and veterinary care facility for their care in captivity and rehabilitation in the wild.
- Arrange enough resources, space and facility to cover all rescued wild animal species that may be old, infirm, sick, injured, orphaned, seized, stray out of their natural habitat or problematic that cause human-wild animal conflict.

# 6 ABOUT US

### **BASIC INFORMATION ABOUT THE ZOO**

Name of the Zoo	Rajgir Zoo Safari, Nalanda			
Year of Establishment				
Address of the Zoo	Coo Rajgir Zoo Safari, Rajgir, Dist: Nalanda, Bihar. Pin code – 803 116			
State	State Bihar			
Telephone Number	9430891299			
Fax Number	-		DEONNEL	
E-mail address	rajgirzoosafari@gmail.com	MANAGEMENT PE	RSUNNEL	
Website	https://rajgirzoosafari.bihar.gov.in	OF THE 200		
Distance from nearest	Airport: Patna-102 Km, Gaya-67 Km	Name with	Shri Hemant Patil, IFS	
	Railway Station: 4.4 Kms.	designation	Director,	
	Bus Stand: 3.4 Kms.	of the Officer	Rajgir Zoo Safari,	
Recognition Valid upto (Date)	06.12.2022	in-charge	Nalanda.	
Category of Zoo	-			
Area (in Hectares)	191.12 hectares			
Number of Visitors 2023-24 (Financial Year)	Total Visitors: 3,77,036	OWNER / OPERAT	OR OF THE ZOO	
Visitors' Facilities Available in Zoo	Online Ticket Booking	*Name of the Operator	Principal Secretary to Govt of Bihar,	
	Interpretation Centre with audio visuals			
	■ Orientation Hall	Dept. of Environment, Forest & Climate chan		
	■ Specially modified Safari Vehicles with larger view and Guide in every bus.			
	■ 180 degree theatre with 180 seating capacity		Govt. of Bihar	
	■ Selfie point	Address of	Dent of Environment	
	■ Parking	the Operator	Dept. of Environment, Forest & Climate change,	
	Purified Drinking Water Facility		Sinchai Bhawan, Patna.	
	■ Wheel chairs and ramps at entry/exit			
	■Washroom Facility	Contact details/	0612-2217713	
	■ Battery Operated Vehicles	Phone number of Operator		
	■ Signages			
	■ Visitor sheds	E-mail address	efd-bih@nic.in	
	■ Benches	of Operator		
	■ Ambulance			
	■ First Aid Kit			
	■ Children's Park			
	■ Shapath Stambh for adopting eco-friendly lifestyle- Touch Screen based			
Weekly Closure Day of the Zoo	Monday			

Admin

Section

Head Clerk

UDC

LDC

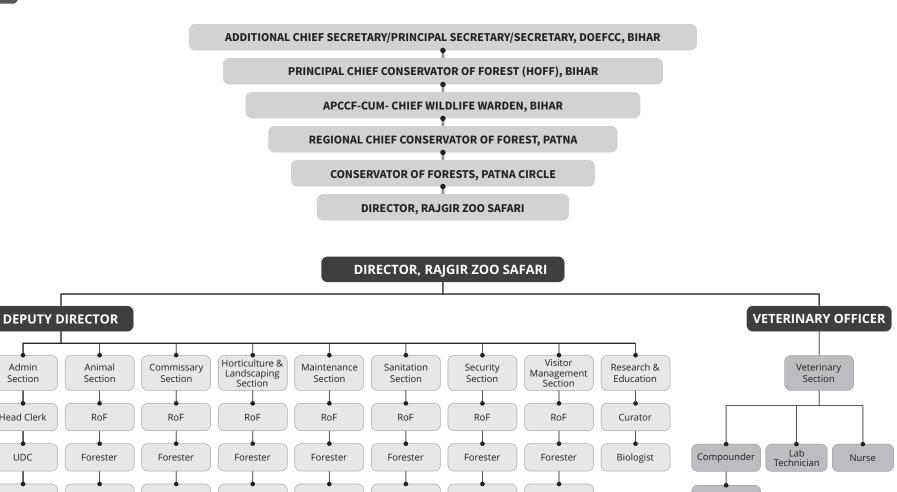
Computer

Operator

Mutli-Tasking Staff

Driver

# **ORGANIZATIONAL CHART**



Forest Guard

Driver

Forest Guard

Computer

Operator

Driver

Forest Guard

Animal Keeper

Forest Guard

Cook

Driver

Forest Guard

Forest Guard

Forest Guard

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# 8 HUMAN RESOURCES

### 8.1 OFFICERS/OFFICIALS WORKING IN RAJGIR ZOO SAFARI, NALANDA DURING THE YEAR 2023-24

Sl. No.	Designation	No. of Sanctioned Post	Names of the incumbent
1.	Director	1	Mr Hemant Patil, IFS
2.	Deputy Director	1	—
3.	Veterinary Officer	2	Dr Dalip Kumar Baitha, Dr. Bikram Kumar
4.	Range Officer of Forest	3	Mr Arvind Kumar, Mr Rakesh Kumar

### 8.2 PERMANENT STAFF OF RAJGIR ZOO SAFARI DURING THE YEAR 2023-24

Sl. No.	Designation	No. of Sanctioned Post	Names of the incumbent
			Administrative Staff
1.	Head Clerk	1	—
2.	Upper Division Clerk	1	Ms Sunaina Devi, Mr Vinay Kumar Singh
3.	Lower Division Clerk	2	Mr Uday Kumar
			Safari Zone
1.	Range Officer of Forests	1	Mr Rakesh Kumar
2.	Forester	4	Mr Dharmendra Kumar
3.	Forest Guard	18	Mr Sunil Kumar Suman, Mr Anus Mansuri, Mr Rajkumar Mandal, Mr Ajay Kumar Varma, Mr Amarnath Rai, Mr Rohit Kumar, Mr Sajid Ansari, Mr Amit Kumar-02, Mr Suryadev Kumar.
4.	Animal Keepers	30	Being Managed by Daily Wage Labours
			Management Zone
1.	Range Officer of Forests	1	Mr Arvind Kumar
2.	Curator	1	_
3.	Biologist	1	_
4.	Forester	2	Mr Niranjan Kumar
5.	Forest Guard	4	Mr Pappu Manjhi, Ms Pooja Kumari, Mr Surya Prakash Mr Saurabh Kumar.
6.	Compounder	4	Being Managed by Daily Wage Labours
7.	Nurse	1	—
8.	Lab Technician	1	Being Managed by Daily Wage Labours

			Tourist Zone
1.	Range Officer of Forests	1	Mr Arvind Kumar (In-charge)
2.	Forester	4	Mr Niranjan Kumar
3.	Forest Guard	13	Mr Amit Kumar, Mr Bawan Kumar, Mr Bipin Kumar, Mr Dipak Kumar, Ms Ragini Kumari, Ms Priyanka Kumari, Mr Prashant Kumar, Mr Durga Kumar, Mr Munnu Kumar, Mr Vedvyas Kumar, Mr Vivek Kumar, Ms Ritika Rani, Mr Anil Kumar, Mr Mithilesh Kumar, Mr Manoj Kumar, Mr Niranjan Kumar.

\*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	Designation	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
1.	Dr. Dalip Kumar Baitha	Veterinary Officer	Workshop on Approaches and Advancements in "Ex-Situ" Management of Wild Animals	16th October 2023 to 18th October, 2023	Van Vihar National Park and Zoo, Bhopal, MP
			Attended 32nd National Congress of Veterinary Parasitology and National Symposium on "Sustainable Control of Parasitic Diseases for improved Productivity of Livestock in Current Scenario"	29th November 2023 to 1st December, 2023	Bihar Veterinary College, Patna
			Attended National Conference on "Enhancing Farmers income by livestock, Poultry and aqua farming through sustainable and Eco-Friendly smart technologies and practices"	28th February 2024 to 29th February, 2024	Bihar Veterinary College, Patna
2.	Permanent Frontline Staff	Forest Guards	6 Month Foundation training for newly recruited Forest Guards. (Total 8 Forest Guards)	1st July 2023 to 31st December 2023	Indira Gandhi Van Prashikshan Shala Panchmadhi, M.P
3.	Rajkumar Mandal	Forest Guard	Capacity Building Program for Zoo Keeper	05th March 2024 to 07th March 2024	Nandan Kanan Zoological Park, Bhubaneswar, Odisha
4.	Niranjan Kumar	Forester	6 Month Foundation Training for newly recruited Foresters	01st June 2023 to 30th November 2023	Vaniki Prashikshan Sansthan, Kanpur





#### प्रव्यम पविल में बैठे हुये बांधे से बायें

सर्व भी आश्रतोष भीवे,पीठटीठआईठ, युठसीठ भट्ट, बोठवठअठ/सत्र निवेशक, जेठकंठ गुप्ता, आईठपीठ यादय, आश्ठबीठ सिंह, एठकेठ वर्षा, प्रभारी उप निदेशक, आरठकेठ दीक्षित, भी सुनील कुमार दुवे, निदेशक, एफठटीठआईठ, भीमती भद्धा वादव, उप वन संसाक, एफठटीठआईठ, जीमती प्रज्ञा द्वियेदी, होठवठअठ, एमठपीठ गुप्ता, आरवएलठ सैनी, होठवठअठ, जीठके निभ, होठवठअठ, अरविन्द बुामार, उप होठवठअठ, राजेन्द्र विश्वकर्मा, बनविध्

हितीय पवित में बांधे वो दांधे खड़े हुये- ममता कुमारी, मिनी कुमारी, कुमारी प्रतिमा भारती, कुo अर्थना कुमारी, श्वेता कुमारी, शिवा कुमारी, शुरूवी कुमारी, बीदनी कुमारी, वेष्णवी, कुमारी ज्योति, सारिका कुमारी, पुनीता कुमारी, पूनम कुमारी, वर्षा कुमारी, तमता कुमारी, समेका वहमारी

वतीय पनित बांवे से दांने खड़े हुये- जय प्रकाश, काजल कुमारी, सोनाली कुमारी, सलोनी कुमारी, काजल कुमारी, नेहा भारती, बतेता मिश्रा, विनिता कमारी, स्वाति भारती, माधूरी जुमारी, सुरेखा कुमारी, सोनी जुमारी, पद्सवी कुमारी, शिवानी कुमारी, मनीष कुमार, संतोष कुमार मतुर्व पंतित बांवे से दांवे खड़े हुये- सोनू कुमार, अीकांत कुमार, उदित शर्मा, विकाश कुमार, गौतम कुमार, सुधाशु रजन, निरंजन कुमार, राजीव वर्मार, अविलाश कुमार, पंकज राज, सुमित कुमार, जिसेन्द्र, दिलीप कुमार, सोनु कुमार, शविन्द्र कुमार, कुजलाल कुमार बेठा।





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#### FOREST GUARD TRAINING IN RAJGIR ZOO SAFARI





#### FOREST GUARD TRAINING FOR NURSERY MANAGEMENT





#### FIRE SAFETY TRAINING AND MOCK DRILL OF ZOO SAFARI STAFF









# **10 ZOO ADVISORY COMMITTEE**

It is yet to be constituted.

# HEALTH ADVISORY COMMITTEE

#### a. Date of constitution: - 31.07.2020

#### b. Member:-

- (i) Dr. A A Khan, Former Professor of Surgery; Retd. Director for Research, Birsa Agriculture University; Retd. Dean and Principal, Ranchi Veterinary College, Harun Nagar, Patna *(President)*
- (ii) Dean, Bihar Veterinary College, Patna.
- (iii) Director, Institute of Animal Health & Production, Bihar, Patna.
- (iv) Dr. Anup Rai, Retd. District Animal Husbandry Officer, Patna.
- (v) Dr. K.P. Mallik, Retd. Sr. Scientist, I.V.R.I., Izzatnagar, Bareilly.
- (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. Kaushal Kumar, Assistant Professor, Pathology Department, Bihar Veterinary College, Patna
- (xii) Dr. Manoj Kumar, Assistant Professor, Microbiology Department, Bihar Veterinary College, Patna.
- (xiii) Dr. Farid Ahmad Khan, Homeopathic Doctor, Patna.
- (xiv) Veterinary Officer, Rajgir Zoo Safari, Nalanda, *(Member Secretary)*

#### c. Dates on which Meetings held during the year :

First Meeting	25.04.2023	
Second Meeting	14.08.2023	
Third Meeting	02.12.2023	









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# **12 STATEMENT OF INCOME AND EXPENDITURE OF THE ZOO**



Total No of Tourists

— Total Revenue

# **13** DAILY FEED SCHEDULE OF ANIMALS

SI.	Species	Feed Item	Quantity	Day of	
No.	Species	reed item	Winter	Summer	Fasting
1	Asiatic Lion	Beef with bone (Male)	10-11	9-10	Monday
1.		Beef with bone (Female)	8-9	7-8	
2.	Royal Bengal Tiger	Beef with bone (Male)	10-12	9-10	Monday
۷.		Beef with bone (Female)	10-11	8-9	
3.	Leopard	Boneless Beef (Male)	2.5-3.5	2-3	Monday
0.	Leopara	Boneless Beef (Female)		2-2.5	honday
		Roti (Wheat flour)	0.4-0.5	0.4-0.5	
		Pulses (Pigeon pea, Moong, Masur Dal in form of cooked Dal)	0.2	0.2	
		Seasonal Fruits & Green Vegetables (Spinach, Beans, Cabbage)	1.250	1.250	
4.	Sloth Bear	Groundnut (Including enrichment in enclosure)	0.600	0.600	Monday
		Kheer (Made of Rice, Milk and Jaggery/Sugar)	Rice- 0.300 Kg Milk-1.5– 2 Litre Jaggery- 0.100 kg	Rice- 0.300 Kg Milk-1.5– 2 Litre Jaggery- 0.100kg	
		Honey	0.015-0.020	0.015-0.020	
		Mineral mixture	0.030	0.030	
	Sambar	Deer Mash	1.125	1.125	No Fasting
5.		Green Fodder	10	10	
		Wheat Bhusa	2	2	
	Spotted Deer	Deer Mash	0.5	0.5	
6.		Green Fodder	2	2	No Fasting
		Wheat Bhusa	0.5	0.5	lasting
	Hog Deer	Deer Mash	0.250	0.250	No Fasting
7.		Green fodder	3	3	
		Wheat Bhusa	0.250	0.250	
		Deer Mash	0.250	0.250	
8.	Barking Deer	Green Tree Leaves/ Green fodder	2-2.5	2-2.5	No Fasting
		Wheat Bhusa	0.150	0.150	lusting

SI.	Species	Feed Item	Quantity	Day of		
No.			Winter	Summer	Fasting	
	Black Buck	Deer Mash	0.250	0.250	No Fasting	
9.		Green fodder	2.5-3	2.5-3		
		Wheat bhusa	0.3	0.3		
10	Blue Bull (Nilgai/	Blue Bull	Deer Mash	1.25	1.25	
10.		Green fodder	10	10	No Fasting	
	Ghodparas)	Wheat bhusa	2	2		

\* The feed per animal varies as per age, sex, physical and medical condition of the animal. Special diet is provided for ageing animals, sub-adults and young ones. During Summer, special feed is provided for bear and herbivores like provision of Watermelon etc. If green fodder is not available, it is replaced with increased quantity of Wheat Bhusa, choker and Deer mash.

## COMMISSARY BUILDING AND FACILITIES FOR FOOD PREPARATION AND DELIVERY





# **14 VACCINATION SCHEDULE OF ANIMALS:**

	Vaccination Schedule of Animals							
S. No.	Species	Disease Vaccinated for	Name of the Vaccine	Dosage	Quantity	Periodicity	Remarks	Month
1.	Lion	Feline Pan-Leukopenia & Rhinotracheitis	Felocell	1 ml	1	Annually		_
		Trypanosomiasis	Triquin	As per body weight of animal	1	Biannually		
		Cannine Distemper	Purevax	1 ml	1	Annually		Month of
2.	Tiger	Feline Pan-Leukopenia & Rhinotracheitis	Felocell	1 ml	1	Annually		vaccination is different
		Trypanosomiasis	Triquin	As per body weight of animal	1	Biannually		for different animals.
3.	Leopard	Feline Pan-Leukopenia & Rhinotracheitis	Felocell	1 ml	1	Annually		anniais.
		Trypanosomiasis	Triquin	As per body weight of animal	1	Biannually		



# **15 DE-WORMING SCHEDULE OF ANIMALS:**

	De-worming Schedule of Animals					
S. No.	Species	Drug Used	Periodicity	Month		
1.	Herbivores	1. Albendazole 2. Fenbendazole 3. Ivermectin	3 Month	Month of		
2.	Bear	1. Albendazole 2. Fenbendazole 3. Ivermectin	3 Month	deworming is different for different		
3.	Carnivores (Lion, Tiger and Leopard)	1. Albendazole 2. Fenbendazole 3. Ivermectin 4. Combination of Praziquantel, Pyrantel Pamoate, Febantel	3 Month	animals and as per need.		

# 16 DISINFECTION SCHEDULE:

	Disinfection Schedule						
SI. No.	Species	Type of Enclosure	Disinfectant used	Method/Area Free Dis			
1.			At each entry and exit point including tyre wash at enclosure gates	Daily			
	Bears	7Sloth Bear	Detergents	Floor of animal cells & retiring room	Daily		
			Sodium Hypochlorite	Around retiring room & enclosure	Once in 3 months		
			Khorsolin-TH/ Vircon S	Retiring room cells and surrounding area	Once in 3 months		
			Fire Blow Sterilization	Retiring room cells, floor, walls, cell grill, Kraal	Once a Week		
Turmeric Powder Retiring room cells		Retiring room cells	Twice a Week				
			Bleaching Powder	Kraal & enclosure ponds, Water tank, Drainage	Daily		
2.	. Herbivores Herbivores KMnO4 At each entry and exit point including tyrewash at enclosure gates		Daily				
			Detergents	Floor of animal cells & retiring room	Daily		
			Sodium Hypochlorite	Around retiring room & enclosure	Once in 3 months		
			Khorsolin-TH/ Vircon S	Retiring room cells and surrounding area	Once in 3 months		
			Fire Blow Sterilization	Retiring room cells, floor, walls, cell grill, Kraal	Once a Week		

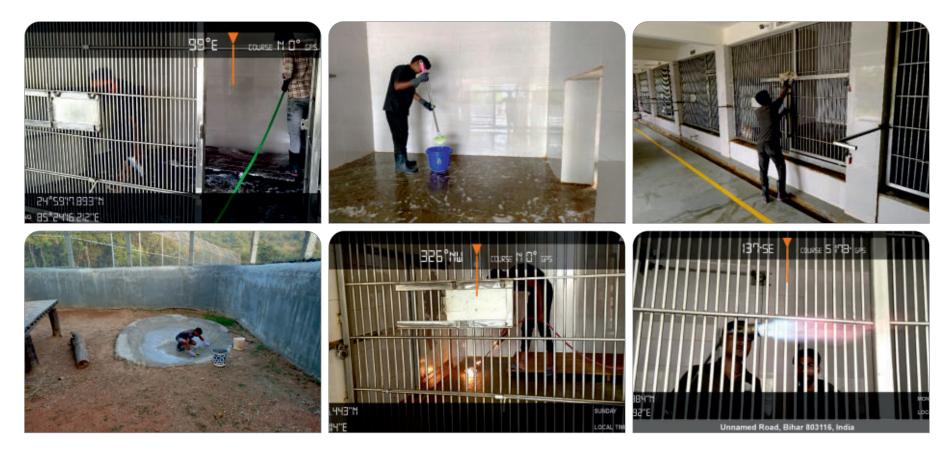
\* This disinfection schedule is maintained in Hospital, Post Mortem Hall, Quarantine facilities as well as commissary. In case of special and emergency requirements, the frequency and method of disinfection can be changed. Also, zoo personnel use PPE Kits, Hand-gloves and disinfectants etc post Covid-19 as precautionary measure.





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# 17 HEALTH CHECK-UP OF EMPLOYEES FOR ZOONOTIC DISEASES

S. No.	Name	Date of Health Check up	Findings of Health Check up
1.	Health Checkup of Staff working in Wildlife management by Medanta Hospital Medical Team.	11th March 2024	No Adverse Finding
2.	Zoo personnel's T.B. test was conducted	18th March 2024	No Adverse Finding





















# **18 DEVELOPMENT WORKS CARRIED OUT IN THE ZOO DURING THE YEAR**

#### No. Work don

1. Development of Exotic Bird Aviary Completed during this year.

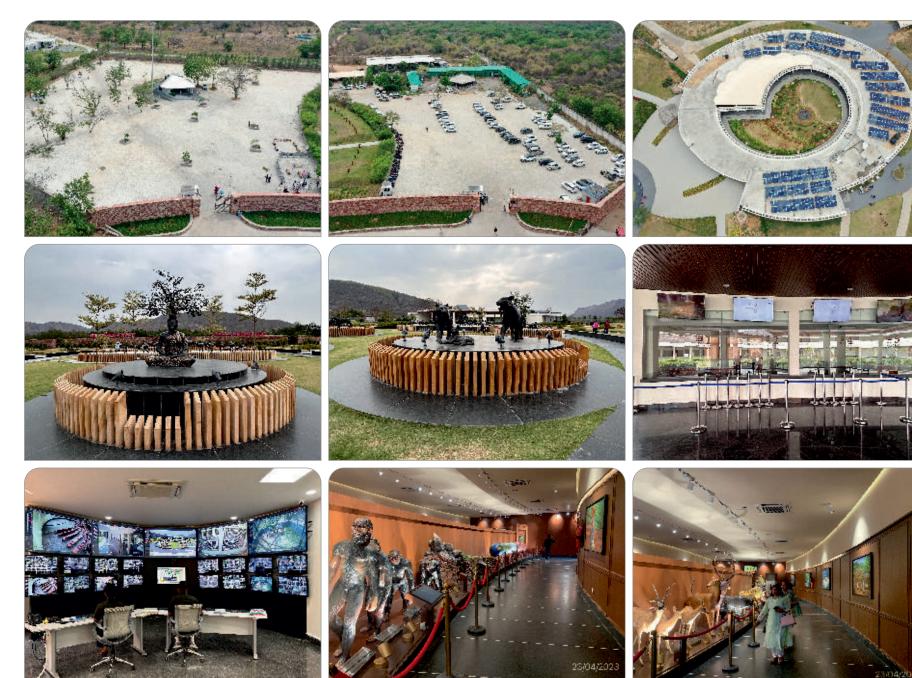


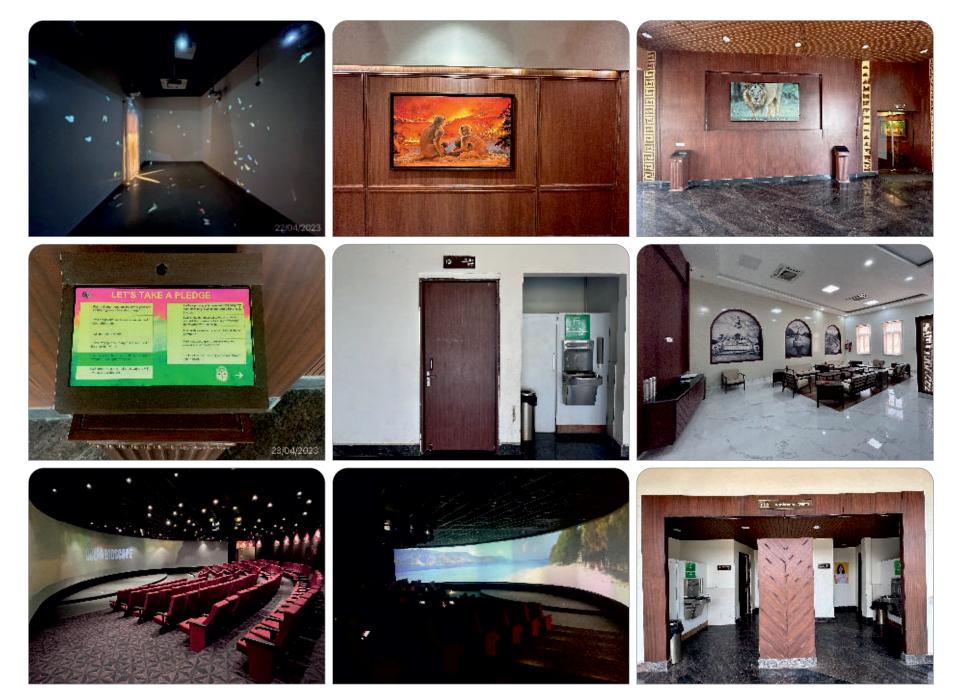
#### **FACILITIES AVAILABLE IN RAJGIR ZOO SAFARI**

#### **VISITOR RECEPTION ZONE OF RAJGIR ZOO SAFARI**

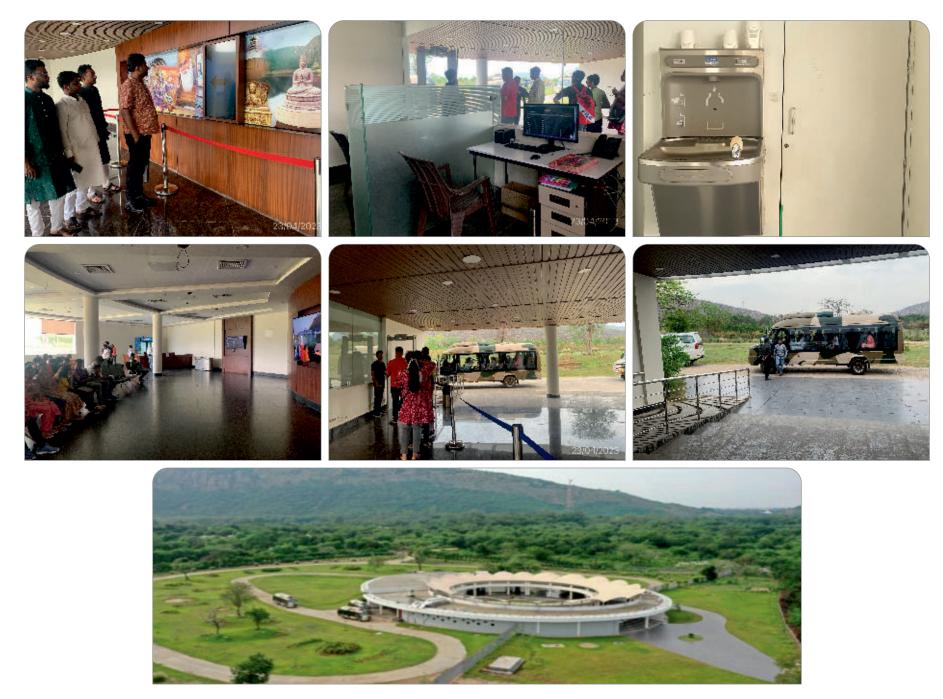






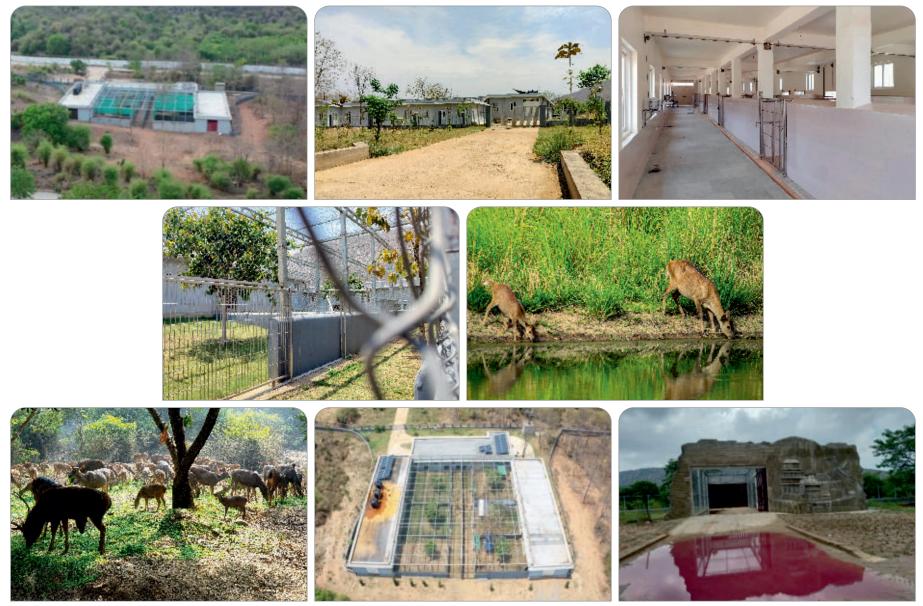






#### ENCLOSURES AND OTHER FACILITIES DEVELOPED IN SAFARI ZONE OF RAJGIR ZOO SAFARI

## HERBIVORE ENCLOSURE



#### **BEAR ENCLOSURE**



















#### LEOPARD ENCLOSURE



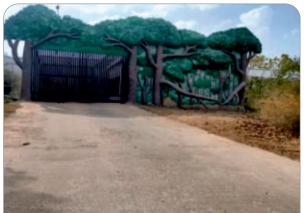












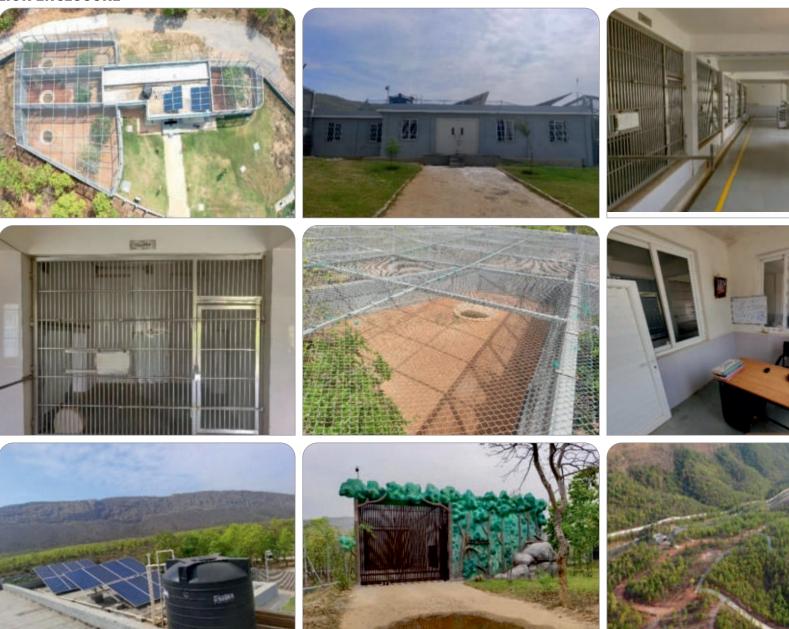




#### **TIGER ENCLOSURE**



#### LION ENCLOSURE



#### FACILITIES DEVELOPED IN MANAGEMENT ZONE OF RAJGIR ZOO SAFARI

### **VETERINARY HOSPITAL**

























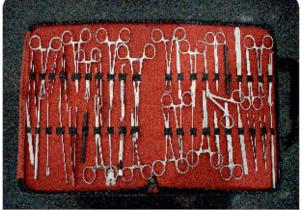




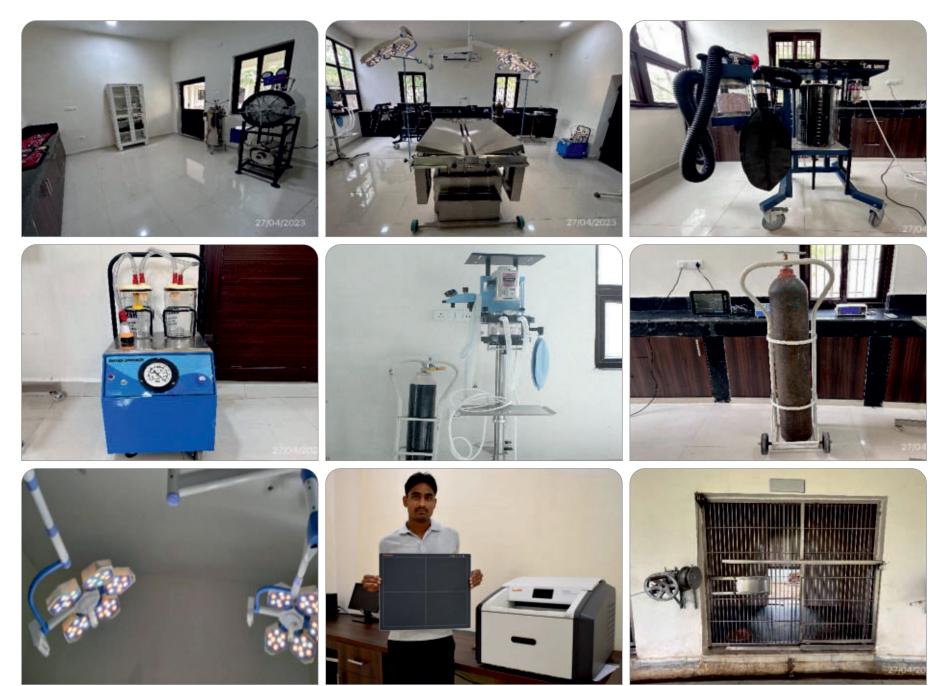


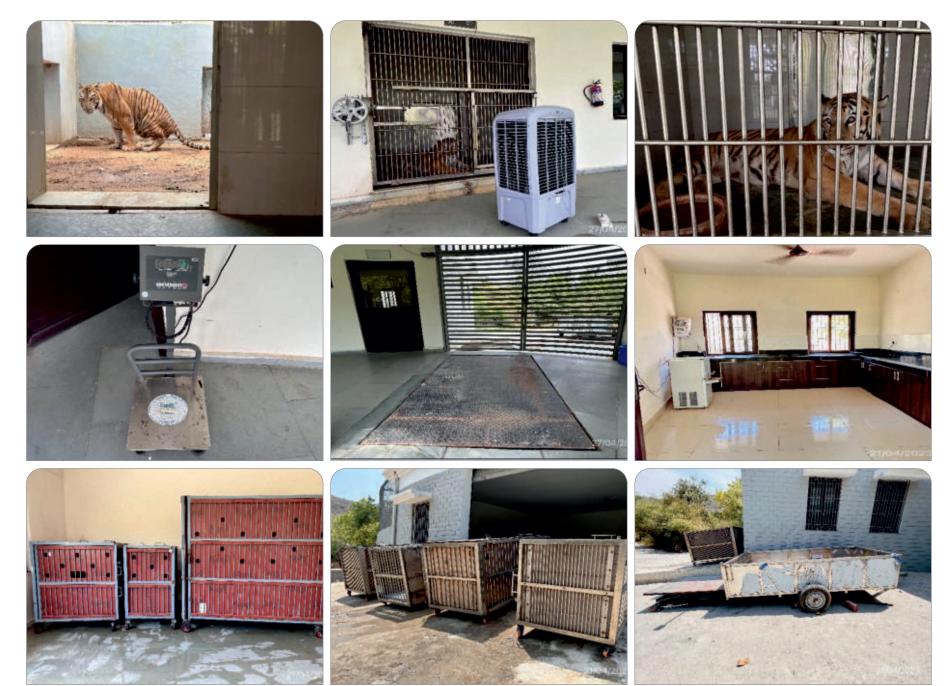


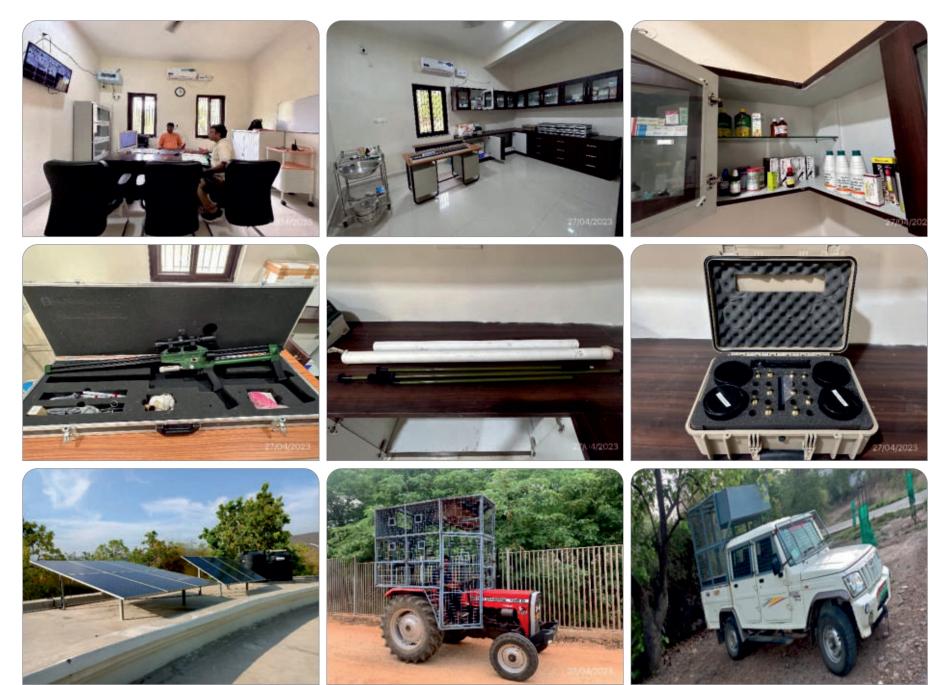














# HERBIVORE AND CARNIVORE QUARANTINE FACILITY





Keeper Room



Carnivore Quarantine Keeper's Gallery





Herbivore Quarantine Keeper's Gallery



Cells of Herbivore Quarantines

### **POST MORTEM ROOM**





Postmortem Building

Postmortem Hall





Sample Collection Room





Waste Water Treatment Unit

Vermi Compost Unit





#### COMMISSARY



Commissary



Front View



Non-Veg Preparation Room



Utensils and Furnishing of Kitchen



Food Distribution Utensils





Non-Veg Section Distribution Counter



Cold Storage Room

Non-Veg Preparation Room







Feed Storage Room



Flour mill

Weighing Bridge





### **ADMINISTRATIVE BLOCK**



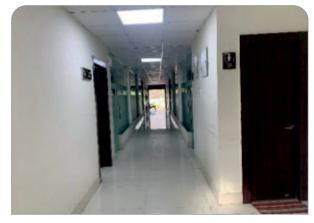






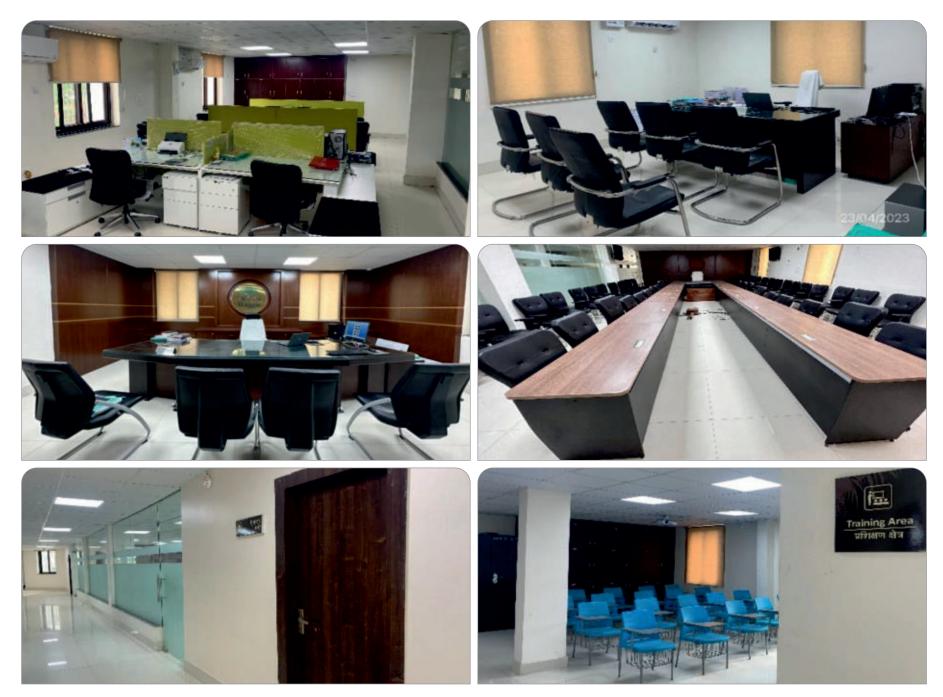






























# OTHER FACILITIES AND MACHINERIES AVAILABLE IN MANAGEMENT ZONE



Zoo Safari Bus shed



Zoo Safari Buses



Ambulance



Ambulance facilities



Fire Vehicle



Fire Vehicle Interior



Sky lift Vehicle



Sky lift Vehicle Operation

Waste Tipper



Veterinary Doctor Vehicle



Electric Golf Carts





Electric Cycles for Internal Movement of Staff



Electric Bikes





# **19 EDUCATION AND AWARENESS PROGRAMMES DURING THE YEAR**

S. No.	Programmes
1.	World Environment Day (05 June 2023)
2.	Elephant Rescue Workshop Program (06 June 2023)
3.	Van Mahotsav (10 July 2023)
4.	Tiger Day (29 July 2023)
5.	Bihar Prithvi Diwas (09 August 2023)
6.	Vriksha Suraksha Diwas (30 August 2023)
7.	Wildlife Week (02-08 October 2023)
8.	Vishva Gauraiya Diwas (20 March 2024)

## WORLD ENVIRONMENT DAY



### **TIGER DAY**



# WILDLIFE WEEK



### **VAN MAHOTSAV**









### SWACHTA PAKHWADA PROGRAM



## **INTERNATIONAL GAURAIYA DIWAS**





#### **ELEPHANT RESCUE WORKSHOP PROGRAM FOR FRONTLINE STAFF**



### **20 IMPORTANT EVENTS AND HAPPENINGS IN THE ZOO**

S. No.	Programmes
1.	Visit of Important Dignitaries to Rajgir Zoo Safari
2.	Visit of Evaluation Team from Central Zoo Authority
3.	Visit of Trainees from Different Institutes to learn about Ex-situ Conservation efforts
4.	Delegates from other States to see the Development of Rajgir Zoo Safari
5.	Celebration of Independence day and Republic Day

#### VISIT OF HON'BLE GOVERNOR OF BIHAR





# VISIT OF HON'BLE MEMBERS OF VIRAASAT COMMITTEE, BIHAR VIDHAN SABHA



VISIT OF HON'BLE MEMBERS OF MINORITY COMMISSION, BIHAR



**VISIT OF HIGH COURT JUDGES** 



#### VISIT OF HON'BLE DEPUTY CHAIRPERSON, BIHAR VIDHAN PARISHAD



#### **VISIT OF EX CM GOA**



# VISIT OF DIRECTOR GENERAL OF FOREST, MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, GOI AND MEMBER SECRETARY, CENTRAL ZOO AUTHORITY, NEW DELHI











#### VISIT OF EVALUATION TEAM OF CENTRAL ZOO AUTHORITY, NEW DELHI







#### **EXPOSURE VISIT OF BIOLOGIST OF DIFFERENT ZOOS**



# VISIT OF P R SINHA, IFS RETD. FORMER DIRECTOR, WILDLIFE INSTITUTE OF INDIA AND FORMER MEMBER SECRETARY, CENTRAL ZOO AUTHORITY, NEW DELHI



VISIT OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS (HoFF), BIHAR, CHIEF WILDLIFE WARDEN, BIHAR; REGIONAL CHIEF CONSERVATOR OF FORESTS, PATNA & CHIEF CONSERVATOR OF FOREST (IT), DEPARTMENT OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, BIHAR



#### **VISIT OF TEAM OF BHUTAN FOREST DEPARTMENT**



VISIT OF CHIEF WILD LIFE WARDEN, WEST BENGAL





#### VISIT OF RANGE OFFICER FROM TAMIL NADU FOREST ACADEMY, COIMBATURE



#### **VISIT OF IAS PROBATIONERS**



VISIT OF FACULTY AND TRAINEES OF CASFOS, DEHRADUN





VISIT OF FACULTY AND TRAINEES OF CASFOS, BURNIHAT, ASSAM



**VISIT OF INTERNATIONAL BIRD WORKSHOP ATTENDEES** 



VISIT OF HON'BLE AMBASSADORS OF ARGENTINA, EGYPT AND CHILI ALONG WITH OFFICIALS OF INDIAN COUNCIL FOR CULTURAL RELATIONS, NEW DELHI





HEAD OF DEPARTMENT (WILDLIFE), MADRAS VETERINARY COLLEGE AND DR N SARAVANA KUMAR, IAS, SECRETARY, AGRICULTURE, GOB





#### VISIT OF VICE CHANCELLOR, BIHAR ANIMAL SCIENCE UNIVERSITY



# VISIT OF GROUP OF VICE CHANCELLORS OF VARIOUS VETERINARY SCIENCES UNIVERSITIES



#### VISIT OF SCIENTIST FROM DIFFERENT VETERINARY SCIENCES UNIVERSITIES





#### **VISIT OF SENIOR RETIRED FOREST OFFICERS FROM ALL OVER INDIA**



VISIT OF EX-CHIEF SECRETARY, BIHAR G S KANK SIR IAS, RETD.





#### VISIT OF EX CHIEF SECRETORY, JHARKHAND



#### VISIT OF CHIEF ELECTORAL OFFICER, BIHAR





#### **VISIT OF OTHER DIGNITARIES AND OFFICIALS**



#### **VISIT OF PATNA ZOO AMBASSADOR**









#### **VISIT OF FOREIGN TOURISTS**





**VISIT OF INDIAN SOLDIERS** 





#### **VISIT OF DIFFERENT SCHOOL STUDENTS AND FACULTY MEMBER**







#### INDEPENDENCE DAY AND REPUBLIC DAY CELEBRATION



**NEWS IN PRINT MEDIA** 

#### जीवविज्ञानियों ने राजगीर की जू सफारी का किया भ्रमण पहली बार प्रबंधन प्रभावशीलता मूल्यांकन के तहत हो रहा चिड़ियाघरों का निरीक्षण जू-सफारी का केंद्रीय टीम ने किय निरीक्षण, कहा-इंतजाम बेहतर जातीर केंद्रेव चिडियाधर प्रधिकरण नह दिल्ली द्वरा आयोजित एक्सकोवर विजिट के रूप में पूरे भारत के चिडियावरों से 35 जीव विज्ञानियों ने वाईल्ड लाईफ जू सफारी राजगीर का दौरा किया, उनके झम सफारी में जानवरों के 147 विदियापर हें देश में, 10 वहिला अने के लिए बनावा जा रहा मास्टर प्राज बाही, हिन् राजगीर, कार्यालय संवाददाता दुनिया में पहली बार देश के मान्यता प्राप्त चिडियायरों का प्रबंधन देनिक जामरण पटना, 27 दिसंबर, 2023 प्रभावशीलता मूल्यांकन (एमईर्ड-जू) का निरीक्षण किसा जा रहा है। इसके \* डेलिगेटर > + खिली हुई धूप का आनंद लेने जू-सफारी में झाड़ियों से बाहर निकल रहे हैं भालू 🔳 जू संचालन की मान्यता जगार तहत केन्द्रीय चिहियाचर प्राधिकरण की टीम ने राजनीर जू-सफारों का मुख्यांकन व बारीकी निरीक्षण किया। रों का किया दीदार सम देश के सभी चिडियाचरों का विकास 'किजन 2021-31' की शतों के अनुरूप होगा। इससे दीगर कोई गतिथिधि अपनाने वाले युक्रवार को राजगीर जू-- अक्सी में वन्त्रजीवों के रखरखाव का निरीक्षण करते टीम के सदस्य I + Bन्द्रलाग चिडियाचरों की मान्यता रह कर ची लक्ष्यों को प्राप्त करने की प्रक्रिया है प्रबंधन प्रभाव गएगी। चिहियाचरी को विजनस्तरीय हने के उद्देश्य से पहले चरण में देश प्रबंधन प्रभावशीलता मृत्यांकन (एमईई) ३ जी एक प्रक्रिया है, जो कोई कार्यकर देश से चिड़ियाघरों के 35 विज्ञानियों ने किया वाईल्ड लाइफ जू सफारी का दौर स्वार देव पात हो पात हो तथा क्रेंचल अपना पुल्ला का को अपना देवने क्रुवे की कहा ही पिहेल्ला में पात्र हे पहले किहने हैं। इस देवा में प्रावसिंग्य पाल्का किस के under som som i die februre i teleure b mit unt : tot में दुबके रहते थे। लेकिन अब विराजने प्रतिहास केला के अपना प्रेयम प्राप्त अवस्थित प्रा अधिक करियमा विद्यालया आतों के प्रयुद्ध उन प्रयेत हा माग प्रांत्यता मां दिनले द्वा खिली हुई थुप में विखरण करते नजर आ रहे हैं। ठंड के भीसम में of a galaxy miner of the दिन्ता वे स्थल पुल्टित सीवा स्टार्ट परं वे स्टा कि व रूप प्रेतिक विद्वार से सीवा संस्था संस्था साम राजगीर | ठंड कम होते ही राजगीर मा दे हो साह के ल के के बाद के के बाद के कि जिस्मत जिन्हा के कि का के बारो संस् विवा 1 का बाद के का का की स्थित जिन्हा सफारी में रहने वारो साल कि जो के 1 व से का का जानवर झाड़ियों से बाहर निकल and it is thereafted it खासकर भालुओं को देखना जानवर झाड़ियों से बाहर निकलकर ल लाग यू समारे राज्ये क त से व है कि का का का से का का का की जानवर इसड़ियों से बाहर निकलकर का का सेवल जेवल है की रिखली हुई भूप में अटखोलियां करते है सी रेड की का का की का की नजीर आ रहे है। जानवरों को भूप में मुश्किल होता था। ये झाड़ियों में बरिश्रमण - जू की खतरथा को देखा और यन्य प्राणियों की देखरेख के बारे में ली जानकारी fordt unit i 1000 सन्दर्भ के पहुं देखतीन कर वीयाण ग्रा के प्रशिक्षु रेंजर व फॉरेस्टर टीम sound answer of stars रेर का माज म ना देशीज मस्ती करते देखकर पर्यटक wood after and affertand we क सबाद धरेला लिखा तरं मु अबर सहीन में से प्रा करे की दिया 10 सामन सेवानिवृत्त वन अधिकारियों ने नेचर और वन्यप्राणी सफारी का किया दीदार संवाददाताः राजगीर

देश भर से रिटायर्ड वन अधिकारी व पदाधिकारियों की टीम ने, वाईल्ड लाईफ जू सफारी और नेचर सफारी का भ्रमण किया, जिसमें देश के विभिन्न राज्यों के सेवानिवृत्तं वन संरक्षक सहित जिला वन पदाधिकारी 74 की संख्या में शामिल थे. अपने दो दिवसीय भ्रमण के दौरान इस टीम ने, पहले दिन रविवार को बाइल्ड लाईफ जू सफारी व नेचर सफारी के अलावे रोप वे से हवा की सैर का आनंद उठाया और विश्व शांति स्तूप के दर्शन किये. जबकि दूसरे दिन सोमवार को घोड़ा कटोरा पहाड़ी झील यात्रा, रोप वे सहित उन्होंने नालन्दा स्थित प्राचीन



भव्य स्वरूप में देखकर काफी हर्ष

महसुस कर रहा ह इसी प्रकार से टीम में शामिल सभी सेवानिवृत्त चन अधिकारी व पदाधिकारियों ने राजगीर की वादियों की

आनंद कमार सिंह, कर्नाटक के पलैया झारखंड के आरके रॉय सहित अन्य न कहा कि राजगीर पर्यटन को बढावा देने के लिए राष्ट्रीय स्तर पर प्रचार प्रसार की आवश्यकता है, उन्होंने कहा कि इंटरनेशनल टूरिस्ट स्पॉट के सभी मानकों पर खरा उतरता राजगीर के



নগ্রা উপতাননা কার্যেয়া সা হাজা। জনকি কি এমনীসান বা লগামান জনলায় এবং দুর্ব পেনিতেন মটলো আহ কান জনাবা কা জনাবা দি বার্বা যুব্ জন প্রধানবা কা জনাবা বা হয়ে বাবেলা যুব কি কিন্তু নির্বাহন কিন্দা প্রায় কার্য কিবেন্দা জনাবা বি যুব্ নালাতে যুব কিবেন্দা জনাবার্য বি তামানা বার্বা মন্দ্র কাল আল্পিকার্য ব তামানা বার্বা মন্দ্র কাল আল্পিকার্য বি তামানা প্রায় মন্দ্র কাল আল্পিকার্য কার্যায় প্রায় বার্বা সিকার সমালকার্য বি বার্বা নালা বার্বা সিকার সমালকার বার্বা বার্বা বার্বা বার্বা সিকার সমালকার বার্বা বার্বা বার্বা বার্বা বার্বা সিকার সমালকার বার্বা বার্বা বার্বা বার্বা সিকার সমালকার বার্বা বার্বা বার্বা বার্বা বার্বা সিকার সমালকার বার্বা বার্বা বার্বা বার্বা বার্বা বার্বা বির্বাহন সমালকার বার্বা বার্বারা বার্বার্বা বার্বা বার্বা বির্বাহন সমালকার বার্বা বার্বারা বার্বারা বার্বা UNCOME DOCTOR 

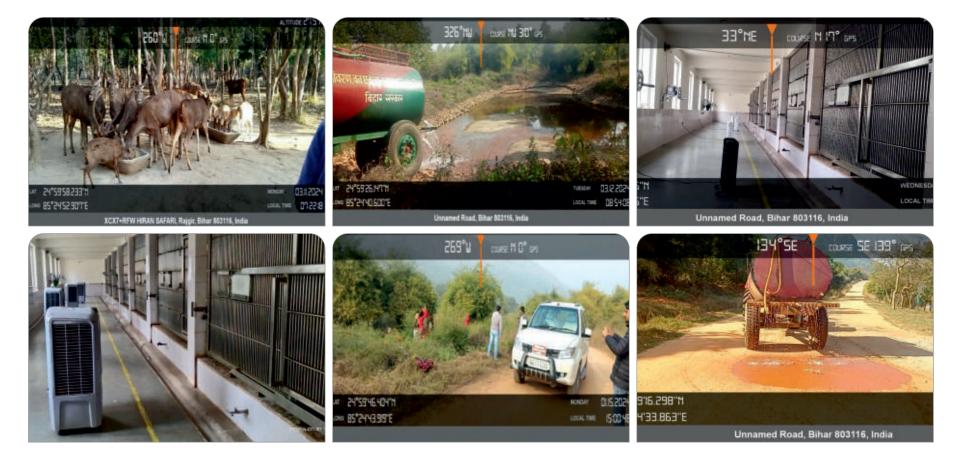
भुमण

खूब सराहना की. जिसमें पंच पहाड़ी वादियों में बहते स्वच्छ व शुद्ध प्राणवाय

RAJGIR ZOO SAFARI, NALANDA 70 **<** 

### 21 SEASONAL SPECIAL ARRANGEMENTS FOR UPKEEP OF ANIMALS

- Diet control: Addition and deletion of food items as per seasonal requirement.
- Husbandry practices: Use of Coolers, Fans and Room Oil-Heaters, covering of windows, providing wooden pegs in animals Retiring Rooms and Cells, Post-monsoon Refilling of Murom in Kraal, Filling of Water bodies during Summer and Water sprinkling on roads and surrounding vegetation during summer.
- Trimming of large trees and bushes for proper sunbath.
- Post monsoon work including Grassland maintenance and trimming of bamboo thickets for grazing and browsing respectively along with removal of weeds.
- Cutting of Firelines before summer season and View strips maintenance post monsoon.







#### ANIMAL WELFARE AND VETERINARY CARE ACTIVITY IMPORTANT ACHIEVEMENTS OF THE YEAR

#### **OLECRANON BURSECTOMY OF A TIGER AT RAJGIR ZOO SAFARI**

This case was focused on treatment of a rescued tiger suffering with swelling and oedema near lateral side of right elbow joint. On 14-12-2023, it was reported that a rescued tiger named Baghira is having swelling at lateral side of right elbow joint. After taking the history from the animal keeper the tiger was taken inside the squeeze cage and physically examined. On examination it was found that there is an accumulation of straw-coloured clear fluid below the skin. The fluid was aspirated with syringe and the animal was treated with antibiotic and anti-inflammatory. The recurrence of accumulation of fluid is seen at the same location after few days. Once again, the animal is captured inside the squeeze cage and fluid is removed by making a small nick over the swelling. After removing all the fluids, the animal was observed daily. Once again recurrence of accumulation of fluid is seen after 7 days. After that it is decided to diagnose the type and source from where fluid is oozing out with the help of USG. Ultrasonography helped us to diagnose the type and extent of lesion, and also, we could see the olecranon bursa along with extra bursal fluid pockets.

After careful study of USG, it was decided to perform olecranon bursectomy in order to remove the entire mass of bursa along with capsule. USG also helped us in planning the plane of dissection. The animal was subjected to immediate intervention under 2% lignocaine hydrochloride with manual restraining inside the squeeze cage. The entire mass of extra bursa with capsule was taken out by making a small incision. The wound is cleaned with metronidazole liquid and antiseptic. The surgical wound is left open to allow the continuous drainage of fluid. The animal was given long-acting antibiotics along with anti-inflammatory. The surgical wound was cleaned and dressed daily with antiseptic for one week regularly. The animal was recovered uneventfully.





### **RESEARCH WORK CARRIED OUT AND PUBLICATIONS**

Rajgir Zoo Safari is in process of signing a memorandum of understanding with Bihar Veterinary College, Patna to carry out research work on the wild animals kept at Rajgir Zoo Safari.



### **CONSERVATION BREEDING PROGRAMME OF THE ZOO**

None

### 24

### ANIMAL ACQUISITION / TRANSFER / EXCHANGE DURING THE YEAR 2023-24

	A. Animals Arriving in the Zoo										
H.No.SpeciesNumber (M:F:U)From Which ZooDate of arrival in the Zoo											
1.	Tiger	0:1:0	Sanjay Gandhi Biological Park, Patna	01.05.2023							
			B. Animal going from Zoo								
H.No.	H.No. Species Number (M:F:U) Going to Which Zoo Date of deposition from the Zoo										
_	—	—	-	—							

#### **RESCUE AND REHABILITATION OF WILD ANIMALS CARRIED OUT BY THE ZOO** 25

SI.	Date of	Species with number	Received	Date of submission of	Action Taken					
No.	Rescue	of animals rescued with their sex	From	report to the CWLW/CZA	Date and Place of rehabilitation in their habitat	Reason for housing in the zoo, if not released in their habitat				
1.	21.05.2023	Tiger 1:0:0	Valmiki Tiger Reserve-1	Letter No 526 Dated 24.11.2023	—					
2.	14.09.2023	Sloth Bear 1:0:0	Saharsa	Letter No 526 Dated 24.11.2023	—	For better				
3.	13.01.2024	Sloth Bear 1:1:0	Bhagalpur	Letter No 526 Dated 12.05.2024	_	treatment and health care.				
4.	06.03.2024	Sloth Bear 3:1:0	Banka	Letter No 525 Dated 12.05.2024	—					















### **26 ANNUAL INVENTORY OF ANIMALS**

### Form – II [See Rule 11(1)] Part – A Inventory Report for the Year : 2023-24

**RAJGIR ZOO SAFARI, NALANDA** 

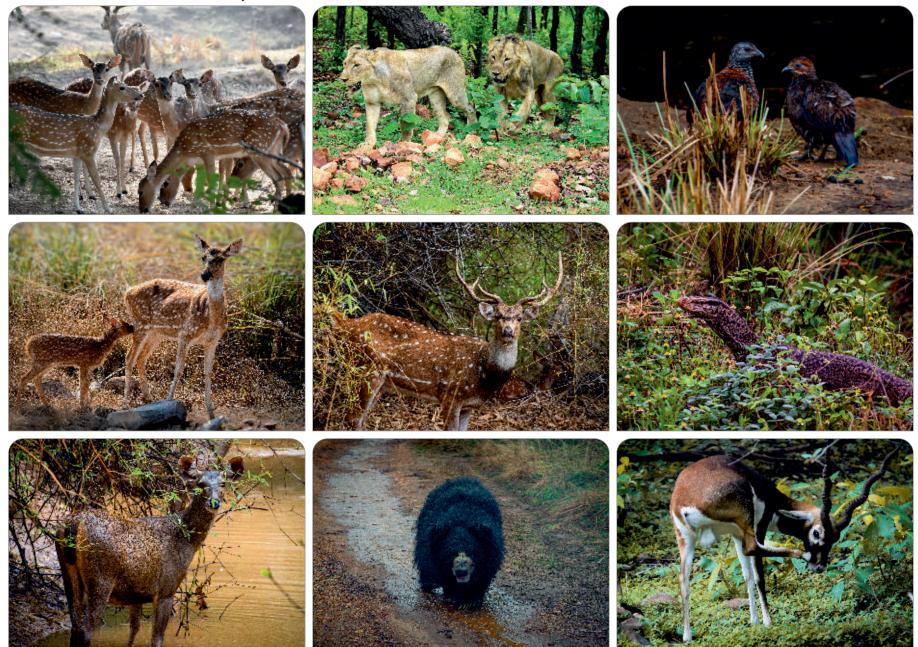
Animals listed under Schedule-I & Schedule-II of Wildlife (Protection) Act, 1972 Endangered species.

			Stock as on 01.04.2023			During the Year										Stock as on						
SI. No.	Animal Name	Scientific Name					Births		Acquisitions		Disposals		ls	Deaths			31.03.2024					
			М	F	U	Т	М	F	U	М	F	U	М	F	U	Μ	F	U	М	F	U	Т
	MAMMALS																					
1.	Black Buck	Antilope cervicapra	1	1	2	4	1	1	0	0	0	0	0	0	0	0	0	0	2	2	2	6
2.	Deer-Hog	Axis porcinus	3	6	2	11	0	0	0	0	0	0	0	0	0	0	0	0	3	6	2	11
3.	Bear- Sloth	Melursus ursinus	1	2	0	3	0	0	0	5	2	0	0	0	0	0	1	0	6	3	0	9
4.	Asiatic Lion	Panthera leo persica	3	3	0	6	0	4	0	0	0	0	0	0	0	0	4	0	3	3	0	6
5.	Leopard / Panther	Panthera pardus	3	1	0	4	0	0	2	0	0	0	0	0	0	0	0	0	3	1	2	6
6.	Tiger-Royal Bengal	Panthera tigris tigris	2	1	0	3	1	2	1	1	1	0	0	0	0	2	2	1	2	2	0	4
	TOTAL MAMMALS		13	14	4	31	2	7	3	6	3	0	0	0	0	2	7	1	19	17	6	42
	TOTAL ANIMALS		13	14	4	31	2	7	3	6	3	0	0	0	0	2	7	1	19	17	6	42

### Part - B (Other than Endangered Species\*)

			Stock as on			During the Year											Stock as on					
SI. No.	Animal Name	Scientific Name	01.04.2023				Births		Acquisitions		Disposals			Deaths			31.03.2024					
110.	ituite		М	F	U	т	м	F	U	М	F	U	М	F	U	М	F	U	М	F	U	Т
	MAMMALS																					
7.	Spotted Deer	Axis axis	25	75	4	104	0	0	32	0	0	0	0	0	0	7	4	0	18	71	36	125
8.	Nilgai- Blue Bull	Boselaphus tragocamelus	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4
9.	Barking Deer	Muntiacus muntjak	1	2	0	3	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1
10.	Sambar Deer	Rusa unicolor	4	7	8	19	1	0	2	0	0	0	0	0	0	1	0	0	4	7	10	21
	TOTAL MAMMALS		31	87	12	130	1	0	34	0	0	0	0	0	0	9	5	0	23	82	46	151
	GRAND TOTAL		44	101	16	161	3	7	37	6	3	0	0	0	0	11	12	1	42	99	52	193

#### WILDLIFE OF RAJGIR ZOO SAFARI, NALANDA





## 27 MORTALITY OF ANIMALS

	Details of death report during 2023-24 (from 1st April, 2023 to 31st March, 2024)													
SI. No.	Species	Scientific Name	Date	Sex	No.	Cause of death								
1	Chital	Axis axis	21.04.2023	М	01	Old age and heat Stroke								
2	Sambar	Rusa unicolor	06.05.2023	М	01	Asphyxia and Shock, due to droning in water								
3	Sloth Bear	Melursus ursinus	07.06.2023	F	01	Died due to old age.								
4	Tiger	Panthera tigris	11.06.2023	М	01	Still birth (New born Cub)								
5	Tiger	Panthera tigris	11.06.2023	F	01	Still birth (New born Cub)								
6	Lion	Panthera leo	12.06.2023	F	01	Still birth (New born Cub)								
7	Barking Deer	Muntiacus muntjack	13.06.2023	М	01	Old age								
8	Tiger	Panthera tigris	15.06.2023	М	01	Cardiac arrest and respiratory failure associated with old age.								
9	Lion	Panthera leo	17.06.2023	F	01	Tympanites associated with respiratory failure (New born Cub)								
10	Tiger	Panthera tigris	20.06.2023	F	01	Navel ill (New born Cub)								
11	Lion	Panthera leo	23.08.2023	F	01	Dead fetus born after full term of pregnancy.								
12	Lion	Panthera leo	24.08.2023	F	01	Dead fetus born after full term of pregnancy.								
13	Chital	Axis axis	23.09.2023	F	01	Old age.								
14	Barking Deer	Muntiacus muntjack	28.09.2023	F	01	Old age.								
15	Chital	Axis axis	19.11.2023	F	01	Tympanites and respiratory failure.								
16	Chital	Axis axis	30.11.2023	М	01	Old age.								
17	Chital	Axis axis	15.12.2023	М	01	Inanition and Old age.								
18	Chital	Axis axis	12.01.2024	М	01	Internal Hemorrhage and shock associated with old age.								
19	Chital	Axis axis	24.01.2024	F	01	Cold Shock associated with old age.								
20	Chital	Axis axis	13.02.2024	М	01	Pneumonia and Shock								
21	Chital	Axis axis	20.02.2024	М	01	Respiratory failure associated with old age.								
22	Chital	Axis axis	20.03.2024	F	01	Died due to shock because of Heavy Hailstorm								
23	Chital	Axis axis	20.03.2024	М	01	Died due to Inanition and old age associated with Hemorrhagic Enteritis								

"\*The postmortem of one tiger cub could not be performed due to mother cannibalism."

### 28 COMPLIANCE WITH CONDITIONS STIPULATED BY THE CENTRAL ZOO AUTHORITY

SI. No.

Norm No. under RZR, 2009

Condition Stipulated Time Peri

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:-

#### Free Range Birds of Rajgir Zoo Safari, Nalanda.

SI. No.	Common Name	Scientific Name	Status	IUCN/WPA Status
1	Little Cormorant	Phalacrocorax niger	R*2	Sch-IV
2	Indian Pond Heron	Ardeola grayi	R*1	Sch-IV
3	Cattle Egret	Bulbulcus ibis	RA1	Sch-IV
4	Little Egret	Egretta garzetta	R*2	Sch-IV
5	Black-crowned Night Heron	Nycticorax nycticorax	RM3	Sch-IV
6	Black (Paharia) Kite	Milvus migrans	RM1	SchI
7	Shikra	Accipiter badius	RM2	SchI
8	Bronze-winged Jacana	Metopidius indicus	R*2	SchIV
9	Red-wattled Lapwing	Vanellus indicus	R*A1	Sch-IV
10	Yellow-footed Green Pigion	Treron phoenicoptera	R*2	Sch-IV
11	Eurasian Collared Dove	Streptopelia decaocto	R*A1	Sch-IV
12	Spotted Dove	Streptopelia chinensis	R*A1	Sch-IV
13	Alexandrine Parakeet	Psittacula eupatria	R*3	Sch-IV
14	Rose ringed Parakeet	Psittacula Krameri	R1	Sch-IV
15	Common Hawk Cuckoo	Hierococcyx (Cuculus) varius	R*2	Sch-IV
16	Asian Koel (Koel)	Eudynamys scolopacea	R*1	Sch-IV
17	Greater Coucal	Centropus sinensis	R1	Sch-IV
18	Barn Owl	Tyto alba	R3-4	Sch-IV
19	Spotted Owlet	Athene brama	R1	Sch-IV
20	Asian Palm Swift	Cypsiurus (parvus )batasiensis	R2	Sch-IV
21	Common Kingfisher	Alcedo atthis	RM1	Sch-IV
22	Stork-billed Kingfisher	Halcyon (Pelargopsis) capensis	R3	Sch-IV
23	White-throated Kingfisher	Halcyon symmensis	R*1	Sch-IV
24	Green Bee-eater	Merops orientalis	R*M1	Sch-IV
25	Common Hoopoe	Upupa epops	RBW2	Sch-IV
26	Blue-throated Barbet	Megalaima asiatica	R2	Sch-IV
27	Black-rumped Flameback	Dinopium benghalense	N1	Sch-IV
28	Brown Shrike	Lanius cristatus	W2	Sch-IV
29	Eurasian Golden oriole	Oriolus oriolus	RMP2	Sch-IV
30	Black-hooked Oriole	Oriolus xanthornus	R*2	Sch-IV
31	Black Drongo (King-Crow)	Dicrurus (adsimillis) macrocercus	R*A1	Sch-IV
32	Asian Pied Starling	Sturnus contra	R*2	Sch-IV
33	Common Myna	Acridotheres tristis	R1	Sch-IV
34	Rufous (Indian) Treepie	Dendrocitta vagabunda	R2	Sch-IV
35	House Crow	Corvus splendens	RA**1	SchV
36	Red-whiskered Bulbul	Pycnonotus jocosus	R1	Sch-IV
37	Red-vended Bulbul	Pycnonotuse cafer	R1	Sch-IV
38	Jungle Babbler	Turdoides striatus	E1	Sch-IV

	Free Range Birds of Rajgir Zoo Safari, Nalanda.											
Sl. No.	Common Name	Scientific Name	Status	IUCN/WPA Status								
39	Red-throated Flycatcher	Ficedula (Muscicapa) parva	WP1	Sch-IV								
40	Common Tailorbird	Orthotomus sutorius	R1	Sch-IV								
41	Blyth's Reed Warbler	Acrocephalus dumetorum	WP(B**?)1	Sch-IV								
42	Oriental Magpie Robin	Copsychus saularis	RM1	Sch-IV								
43	Olive-backed (Indian Tree) Pipit	Anthus hodgisni	MAW2	Sch-IV								
44	White (Pied) Wagtail	Motacilla alba	S,W	Sch-IV								
45	White-browed Wagtail	Motacilla maderaspatensis	E2	Sch-IV								
46	Pale-billed Flowerpecker	Dicaeum erythrorhynchos	NA2	Sch-IV								
47	Purple-rumped Sunbird	Nectarinia zeylonica	R2	Sch-IV								
48	Purple Sunbird	Nectarinia aslatica	R*AM1	Sch-IV								
49	House Sparrow	Paser domesticus	M1	Sch-IV								

#### Symbols

- **E** Endemic to the Indian subcontinent (resident unless otherwise indicated)
- 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 & winders in
- P Pasage migrant
- **W** Winter visitor
- \* Subject to some (local) seasonal movement or nomadism
- **\*\*** Localised or patchily distributed (eg. B\*\*= breeds locally)
- ? Status uncertain
- **1** Abudant or very common
- 2 Common
- **3** Fairly common
- 4 Uncommon

#### Free Range Mammals of Rajgir Zoo Safari, Nalanda.

S.No.	Name of species	Scientific Name
1	Blue bulls	Boselaphus tragocamelus
2	Wild boar	Sus scrofa
3	Civet – Common Palm	Paradoxurus hermaphroditus
4	Stripped Squirrel	Funambulus palmarum
5	Porcupine	Hysterics indica
6	Jackals	Canis aureus
7	Hare	Lepus nigricollis

	Free Range Reptiles of Rajgir	Zoo Safari Nalanda
S.No.	Name of species	Scientific Name
1	Indian spectacled cobra	Naja naja
2	Krait	Bungarus caeureleus
3	Russell's viper	Daboia russelli
4	Indian rock python	Python molurus
5	Common wolf snake	Lycodon capucinus
6	Common vine snake	Ahaetulla nasuta
7	Common bronzeback tree snake	Dendrelaphis tristis
8	Monitor lizard	Varanus varanus
9	Rat snake	Zamenis longissmus
10	Oriental rat snake	Ptyas mucosa
11	Common cat snake	Boiga trigonata
12	Common sand boa	Eryx conicus
13	Chekered keelback	Fowlea piscator
14	Brahminy worm snake	Ramphotyphlops braminus
15	Buff striped keelback	Amphiesma stolatum
16	Common kukri	Oligodon arnensis

#### **ANNEXURE A**

### **30 DETAILS ON COMPLIANCE OF THE CONDITIONS STIPULATED BY**

### THE CENTRAL ZOO AUTHORITY

#### (as per the earlier letter of grant of recognition issued to the zoo)

Issued vide Letter No. (1) Computer. No. 139450, F. No. 20-4/2015-CZA(Vol-II)(E), dated 18.12.2020.

Sr. No	Norm No. under RZR, 2009	Condition Stipulated	Time Period to Comply	Since when pending	Status with regard to compliance of the conditions as submitted by the Officer-in-charge of the Zoo
1.	10 (1.1)	The zoo should make efforts to maintain population of physically, genetically and behaviourally healthy animals.	Right from the opening/ beginning of zoo.	18.12.2020	Complied.
2.	10 (2.2)	The zoo should appoint a Biologist and Education Officer before the Zoo is opened to public.	Once the Zoo is opened.	18.12.2020	The appointment is under process.
3.	10 (3.1)	The amended Master Plan of the Zoo should be prepared and submitted to CZA for its approval.	Six months.	18.12.2020	Master Layout Plan has been submitted for approval. Master Plan is under process of submission.
4.	10 (3.5)	The rescued animals to be housed at the Rescue Centre should have prior approval from the Chief Wildlife Warden of the state.	With immediate effect.	18.12.2020	Complied
5.	10 (4.3)	The zoo should ensure completion of minor construction works such as chain-link fixtures, entry gate, finishing touches in holding rooms, door locking mechanism towards keeper gallery etc. and a report should be submitted to CZA before opening the Zoo.	Before the time of opening of the Zoo.	18.12.2020	Complied
6.	10 (4.10)a & 10 (11.1)a	The Zoo should ensure installation of appropriately located bilingual signages containing the biological & behavioural information of respective animals.	Before the Zoo is operationalized.	18.12.2020	Complied. It is a Safari where visitors are taken in a Bus to see the wild animals. Hence, the information about the animal biology, behaviour etc are being provided to the visitors through audio-visual means in the Safari Bus and Guides deployed in the Safari Bus.
7.	10 (4.10)c & 10 (11.1)b	The Zoo should also make effort to complete the work of Interpretation Centre at the earliest.	One year.	18.12.2020	Complied.

Sr. No	Norm No. under RZR, 2009	Condition Stipulated	Time Period to Comply	Since when pending	Status with regard to compliance of the conditions as submitted by the Officer-in-charge of the Zoo
8.	10 (5.2)3	The Zoo should have appropriate storage facility for meat and feed for the animals, at least for one week keeping in view the emergency situation like prevailing pandemic (COVID-19).	With immediate effect.	18.12.2020	Complied.
9.	10 (5.2)6	The Zoo authorities should take up the random food and water samples being tested periodically for microbiological, toxicological and any other contaminants at recognized laboratory.	Six months.	18.12.2020	Complied.
10.	10 (5.3)3	At the time of acquisition of animals, all animals arriving should be screened for parasitic loads and prophylactic medicines administered as per clinical requirements and vaccination of animals against infectious diseases are also done, as per the prescribed schedule.	Six months.	18.12.2020	Complied.
11.	10 (5.3)4	The Zoo should have written schedule of vaccination and de- worming of different species of wild animals proposed to be housed at Zoo and the same should also be displayed at the enclosure.	With immediate effect.	18.12.2020	Complied. Written schedule of vaccination and de-worming of different species of wild animals has been prepared, followed, and displayed at the enclosure.
12.	10 (5.3)5	The Zoo should maintain detailed records of observations of biological and social behaviour and health status of the animals including feed intake, medication and treatment provided in the keeper's diary, daily reports, animal history cards and treatment cards, as per standards specified by the Central Zoo Authority.	With immediate effect.	18.12.2020	Complied. All records are being maintained as per the standards specified by the CZA.
13	10 (5.3)6	All staff of the Zoo involved with upkeep and healthcare of Zoo animals screened against zoonotic diseases once every year and action appropriate should be ensured.	With immediate effect.	18.12.2020	Complied. The staff involved in animal upkeep and health care are being screened for zoonotic diseases every year.
14.	10 (5.3)8 & 10 (6.4)	The Zoo should have formal linkages with some Veterinary University/Institution through a MoU on healthcare, preventive, health management, surgical interventions, clinical tests, disease diagnosis and consultation in treatment and management.	One year.	18.12.2020	Complied. MoU with Bihar Veterinary College, Patna is under progress.
15.	10 (1.9)	Prior to operationalising the Zoo, it shall be ensured that all wild and domestic animals shall be driven out of the Zoo campus, before releasing animals in safari.	With immediate effect.	18.12.2020	Complied.

Sr. No	Norm No. under RZR, 2009	Condition Stipulated	Time Period to Comply	Since when pending	Status with regard to compliance of the conditions as submitted by the Officer-in-charge of the Zoo
16.	10 (6.2)1	The Zoo should have appropriate animal restraint equipment, accessories and drugs before operationalized.	With immediate effect.	18.12.2020	Complied.
17.	10 (6.3)	The Zoo/Rescue Centre Should appoint support staff (Lab Assistant & Compounder) as specified by the CZA.	As early as possible.	18.12.2020	Complied.
18.	10 (8.1)	The Zoo/Rescue Centre should not euthanize any animal unless doing so is essential for relieving from suffering from incurable disease/condition as per the norms of CZA.	With immediate effect.	18.12.2020	Complied.
19.	10 (10.1)	The Zoo should have act on implementation of research plan as indicated in the Master Plan and conducted research on need-based solution-oriented research projects.	From the beginning itself.	18.12.2020	Research papers have been presented by the Zoo Veterinarians at different forums. Also, detailed need-based solution-oriented research is being taken up once MoU with Bihar Veterinary College, Patna is signed.
20.	10 (12.1) a & b	Additional number (1 or 2) of drinking water point and urinals can be provided alongside the exit road of the Zoo Safari.	One year.	18.12.2020	Complied.
21.	10 (12.2)	The Zoo should ensure availability of first-aid facilities including snake anti-venom and life saving drugs, readily available in the Zoo premises.	With immediate effect.	18.12.2020	Complied.
22.	10 (12.3)	The Zoo should ensure that visitor facilities are "Divyang Jan" friendly and have easy access. Further, wheel chair should also be readily available.	Before opening of the Zoo to public.	18.12.2020	Complied.



Bhola, Male Sloth Bear and Sundari, Female Sloth Bear

