

মহাশয়লৈ টুটংগিঅন পৰেশমণ্ড

# MANIPUR ZOOLOGICAL GARDEN

ANNUAL REPORT FOR THE YEAR  
2019 - 2020



GOVERNMENT OF MANIPUR  
FOREST DEPARTMENT



MANIPUR ZOOLOGICAL GARDEN  
IROISEMBA

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### **1. Director's message**

This year Manipur Zoological Garden has special focus on Acquisition of Zoo animals, Adoption of Zoo animals, Relocation of Sangai (Brow Antlered Deer), Awareness programmes amongst other activities.

One of the objectives of Manipur Zoological Garden being conservation of endangered species, a single female Common Leopard has been paired by acquiring a male common leopard from Assam Zoo under Animal Exchange Programme of Central Zoo authority, Government of India, New Delhi.

One of the main objectives of the Zoo management is to create awareness, a sense of involvement and love for wild life among the people. Manipur Zoological Garden launched "Sangai Adoption" programme by involving The Sangai Express, a popular new daily of Manipur in sponsoring the feed of Sangai deer.

Manipur Zoological Garden also successfully carried out jointly with Wildlife Institute of India, Government of India, Dehradun the Relocation of 4 (four) compatible Sangai Deer from Conservation Breeding Centre, Langol, Imphal. The contribution and guidance of Central Zoo Authority are highly acknowledged.

Manipur continued with its sincere efforts to generate awareness about the Wild life and Management of Zoo to all stakeholders especially students and children by organising various awareness/ training programme.

Gaithaolu Thaimai  
Director, Manipur Zoological Garden  
Government of Manipur



## **2. About the zoo:**

Manipur Zoological Garden was established on 2nd October, 1976 on the advice of the then State Wildlife Advisory Board. It covers an area of 8.17 Ha at Iroisemba, Imphal which is about 8 km. from the city of Imphal. Manipur Zoo is home to a number of rare and endangered species which are endemic to this region, many of which are included in Schedule I and II of the Wildlife (Protection) Act, 1972. Manipur Zoological Garden is categorised as a "Medium Zoo" by the Central Zoo Authority (CZA), New Delhi on 02.02.2009. It is further identified to be developed as a "Model Zoo" by CZA in November, 2014.

Manipur Zoological Garden maintains a Captive Breeding Centre (CBC) at the Langol Reserve Forest which extends to an area of 6.007 Ha. for three important species, viz., (i) Brow-antlered deer (The State Animal of Manipur), (ii) Mrs Hume's Bar Pheasant (The State Bird of Manipur and, (iii) Kalij Pheasant. There is scope for future expansion of the zoo. There is also the vision for conversion of zoo to the status of Manipur State Zoo.

## **3. Our Objectives:**

- a) Conservation of Wildlife – sustain population of physically, genetically and behaviourally healthy animals.
- b) Captive breeding – e.g. Sangai, Mrs Hume's Pheasant, Kalij pheasant, Slow Loris, Burmese Green peafowl.
- c) Ex-situ conservation of endangered species – appropriate to provide stock for recovery programme.
- d) Resource of natural gene pool.
- e) Source of scientific data – behaviour, nutrition, pathology, and breeding.
- f) Education and awareness.
- g) Recreation.

## **4. Animal Enclosures and Upkeep:**

The following activities are taken up as a part of improving upon the existing enclosures, and enhancing the enrichment activities to improve the condition of animal enclosures:

- a) Daily cleaning of enclosures is done before distribution of feeds by the respective zoo keepers/ animal attendants.
- b) Sweeping and cleaning the visitor areas are done by sweepers.
- c) Social service or basic cleanliness of the Zoo campus is done every Monday which is a day closed for visitors.
- d) The routine work for upkeep of Zoo including maintenance of enclosures, visitor amenities, infrastructures including boundary wall, office buildings, veterinary set-up, visitor roads, external approach-road to zoo, museum, ticket counter, staff quarter, drainage, water supply, electric and other facilities are done by a team consisting of 2 Range Officers and assisted by Deputy Rangers, Foresters and Forest Guards under the overall supervision of the Director.

## **Animal Health care:**

Veterinary section is headed by a Veterinary Officer assisted by Animal Attendants. At present, the zoo has no Veterinary Field Assistant for assisting the Veterinary Officer. Nevertheless, facilities for drugs, medicines, feed supplements and sanitation are available for the animals with utmost care.

Representatives from Directorate of Veterinary & Animal Husbandry Services, Government of Manipur visit zoo at regular basis for examining the zoo animals and give technical information on the health of the animals.

#### Activities for Animal Healthcare:

Precaution and preventive measures against any outbreak of disease is maintained by regular spraying of Kohrsolin solution and lime-bleach around all the animal enclosures throughout the year.

- Daily supply of supplements such as Mineral mixture, Calcium, B-Complex, etc. are given to the Zoo inmates.
- De-worming of Zoo inmates is done every 3 months.
- The Veterinary Officer and his team regularly keep check of the injuries and illnesses of Zoo inmates.
- Vaccination program for domesticated animals around the Zoo areas is done on regular basis against Food and Mouth diseases, Rabies, etc.
- Manipur Zoological Garden receives technical expertise from Directorate of Vety. & A.H. Services, Govt. of Manipur on monthly basis for better management of zoo in the health care sector.

#### 5. Births and rescue of endangered and important animals

##### Births

Sl. No.	Name of Species	Date of birth	Sex				Remarks
			M	F	U	T	
1	Hog deer	11-04-2019	-	-	1	1	
2	Spotted deer	13-04-2019	-	-	1	1	
3	Hog deer	17-04-2019	-	-	1	1	
4	Kalij pheasant	23-04-2019	-	-	1	1	Hatching
5	Kalij pheasant	24-04-2019	-	-	2	2	hatching
6	Sambar deer	25-04-2019	-	-	1	1	
7	Kalij pheasant	25-04-2019	-	-	2	2	hatching
8	Spotted deer	18-05-2019	-	-	1	1	
9	Barking deer	24-05-2019	-	-	1	1	
10	Leopard cat	05-06-2019	-	-	1	1	
	<b>Total</b>		-	-	<b>12</b>	<b>12</b>	

##### Rescues

Sl. No.	Name of Species	Date of rescue	Sex				Remarks
			M	F	U	Total	
1	Nongin	13-04-2019	1	-	-	1	ukhrul
2	Grass owl	29-04-2019	-	-	1	1	wangoi longjam
3	Barn owl	13-05-2019	-	-	1	1	uchekon
4	Rhesus monkey	14-05-2019	-	-	1	1	kumbi
5	Slow loris	31-05-2019	1	-	-	1	senapati
6	Barn owl	07-06-2019	-	-	1	1	waithou
7	Tokay gecko	07-06-2019	-	-	1	1	yaiskul
8	Bear cub	10-06-2019	-	-	1	1	nongpok sanjenbam
9	Slow loris	19-06-2019	1	-	-	1	lambuikhul
10	Slow Loris	05-07-2019	-	1	-	1	thoubal
11	Turtle	08-08-2019	-	-	1	1	lilong
12	Pheasant tail jacana	31-08-2019	-	-	1	1	moreh

13	Flying squirrel	06-09-2019	1	-	-	1	sekmai
14	Barn owl	17-09-2019	-	-	1	1	sawombung
15	Leopard cat	28-09-2019	-	-	1	1	saitu sapermeina
16	Common kestrel	04-10-2019	-	-	1	1	lmphal
17	Eagle	02-11-2019	-	-	1	1	hiyangthang
18	Barking deer	05-03-2020	-	-	1	1	waikhong
	<b>Total</b>		<b>4</b>	<b>1</b>	<b>13</b>	<b>18</b>	

6. Annual Inventory 2019-20

**ANNUAL INVENTORY REPORT FOR THE YEAR 2019-20**  
MANIPUR ZOOLOGICAL GARDEN

Sl No	SPECIES NAME	ANIMAL NAME	SCIENTIFIC NAME	OPENING STOCK			BIRTH			ACQUISITION			DISPOSALS			DEATHS			CLOSING STOCK					
				M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
<b>Endangered Species (Schedule I and II)</b>																								
1	Bird	Hornbill Indian Pied	<i>Antroceros malabaricus</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
2	Bird	Phasianus Humes Bar-backed	<i>Symanticus humesi</i>	4	3	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	7
3	Bird	Phasianus Kalij	<i>Lophura leucolophus</i>	2	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	7
4	Bird	Vulture Himalayan	<i>Gyps himalayensis</i>	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5
5	Mammal	Bear Himalayan Black	<i>Ursus thibetanus</i>	4	7	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
6	Mammal	Cat Leopard	<i>Prionailurus bengalensis</i>	8	5	2	15	0	2	0	0	0	0	0	0	0	0	0	0	0	2	8	5	2
7	Mammal	Civet common Palm - Cat Toddy	<i>Paradoxurus herminiferus</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8	Mammal	Deer Brow-antlered (Sangai)	<i>Buceros albidus</i>	7	7	0	14	0	2	0	0	0	0	0	0	0	0	0	0	0	7	7	2	16
9	Mammal	Deer Hog	<i>Axis porcinus</i>	10	20	13	54	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	9	28
10	Mammal	Gibbon Hoolock	<i>Hoolock hoolock</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11	Mammal	Jackal	<i>Canis aureus</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12	Mammal	Leopard Panther	<i>Panthera pardus</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
13	Mammal	Slow Loris	<i>Nycticebus bengalensis</i>	6	7	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
14	Mammal	Macaque Rhesus	<i>Macaca mulatta</i>	23	15	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	15	0
15	Mammal	Porcupine Malayan	<i>Hystrix brachyura</i>	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Reptile	Monitor Lizard Common Indian	<i>Varanus bengalensis</i>	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
17	Reptile	Python Indian - Rock	<i>Python molurus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	<b>Total Endangered Species</b>			<b>71</b>	<b>83</b>	<b>26</b>	<b>180</b>	<b>0</b>	<b>6</b>	<b>1</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>3</b>	<b>1</b>	<b>4</b>	<b>69</b>	<b>82</b>

*[Signature]*  
Asst. Conservator of Forest  
Manipur Zoological Garden  
Government of Manipur

*[Signature]*  
Director  
Manipur Zoological Garden  
Government of Manipur

**Species (Schedule III and IV)**

Sl No	SPECIES NAME	ANIMAL NAME	SCIENTIFIC NAME	OPENING STOCK			BIRTH			ACQUISITION			DISPOSALS			DEATHS			CLOSING STOCK					
				M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T	
18	Bird	Cock Water	<i>Gallus cinereus</i>	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
19	Bird	Coot Common	<i>Fulica atra</i>	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
20	Bird	Duck Brahminy - Ruddy	<i>Tadorna ferruginea</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
21	Bird	Duck Spottbill	<i>Anas poocellorhynchos</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
22	Bird	Egret Cattle	<i>Bubulcus ibis</i>	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
23	Bird	Hen Moorhen purple	<i>Porphyrio porphyrio</i>	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
24	Bird	Heron Night	<i>Nycticorax nycticorax</i>	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
25	Bird	Heron Pond	<i>Ardeola grayii</i>	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
26	Bird	Heron Purple	<i>Ardea purpurea</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
27	Bird	Moorhen	<i>Gallinula chloropus</i>	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
28	Bird	Parakeet (unidentified)	<i>Psittacula</i>	4	4	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
29	Bird	Parrot Green/ Burmese	<i>Pavo muticus</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
30	Bird	Parrot King White	<i>Ptilinopus macrotus</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
31	Bird	Poohard White Eyed	<i>Aythya erythrogastra</i>	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
32	Bird	Stork Adjutant	<i>Leptoptilos dubius</i>	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
33	Bird	Teal Common	<i>Anas crecca</i>	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
34	Bird	Teal Lesser Whistling	<i>Dendrocygna javanica</i>	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
35	Mammal	Deer Barking	<i>Moschus moschus</i>	4	2	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
36	Mammal	Deer Sambar	<i>Rusa saminator</i>	3	17	9	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
37	Mammal	Deer Spotted (Chital)	<i>Axis axis</i>	9	11	5	25	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
38	Mammal	Goral	<i>Naemorhedus goral</i>	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
39	Mammal	Pig Wild - Wild Boar	<i>Sus scrofa</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
40	Reptile	Tortoise elongated	<i>Indotestudo elongata</i>	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
41	Reptile	Assam leaf turtle	<i>Cyclemys gemellii</i>	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
42	Reptile	Turtle Malaya Box	<i>Cuora amboinensis</i>	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	<b>Total Species Sch III and IV</b>			<b>27</b>	<b>36</b>	<b>138</b>	<b>201</b>	<b>0</b>	<b>4</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>2</b>	<b>3</b>	<b>4</b>	<b>24</b>	<b>33</b>
<b>Exotic Species</b>																								
43	Reptile	Tortoise Asian Brown	<i>Manouria emys</i>	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	<b>Total exotic species</b>			<b>4</b>	<b>1</b>	<b>0</b>	<b>5</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>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
	<b>Total Total</b>			<b>102</b>	<b>120</b>	<b>164</b>	<b>386</b>	<b>0</b>	<b>10</b>	<b>1</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>5</b>	<b>4</b>	<b>8</b>	<b>97</b>	<b>116</b>

*[Signature]*  
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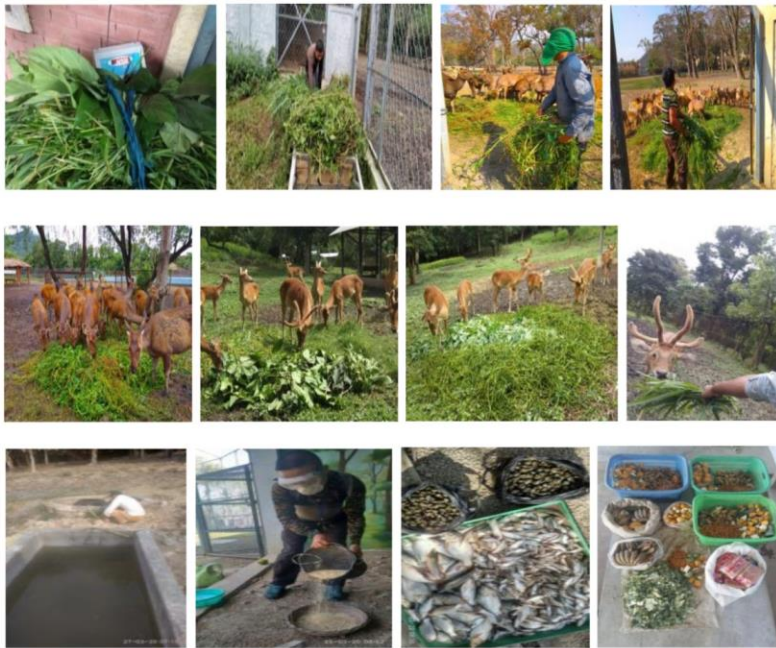


## 7. Feeding

### Clean water and tray for feed



### Animal fodder & feed



### Vitamin and de-worming for zoo animals



## 8. Cleanliness Drive

Every week, Monday, which is closed to visitors, is observed as Cleanliness Day where staffs of MZG along with shopkeepers and locality of Iroisemba gather together for all round cleanliness of Zoo campus. This is also observed to create awareness about the social responsibility as citizens of the country towards sanitation and waste disposal under Swachh Bharat Mission.





## 9. Rescue and rehabilitation

1. Pheasant tailed jacana



2. Owl



3. Hornbill



4. Former Chief Secretary/Manipur Shri O. Nabakishore Singh handing over Pariah kite



5. Treatment of injured leg of Nongin By Dr. Upendra of Vety. & A. H. Services, Govt. of Manipur



## 10. Leopard acquisition

Manipur Zoo is a centre of conservation for animals and birds in particular reference to endangered species and not merely an exhibition centre. A single/unpaired animal merely for the sake of increasing number of species for display is counter-productive. In order to provide quality life of adequate longevity for crucial self-sustaining population of endangered species such as Common Leopard. The male Common leopard, approximately 4 years of age, is acquired after the approval from Central Zoo Authority, Government of India New Delhi to pair a single/unpaired female Common Leopard of Manipur Zoo. Manipur Zoo comprising a team of staffs led by Shri Kh. Loteshore Singh, Range Forest Officer, Dr. L. Saratchandra, Veterinary Assistant Surgeon, Shri L. Deben Singh, Animal Attendant, Shri S. Ninghor, Animal Attendant, Shri Durgacharan Krmkr, Animal Attendant and Shri W. Shyamochandra transported a male Common Leopard from Assam Zoo and the team successfully reached Manipur Zoo on 5<sup>th</sup> September 2019 at around 5PM. As per proper protocol, the newly acquired animal was kept under observation for three weeks at the quarantine cubicle of Veterinary Hospital of Manipur Zoo. This acquiring of the Common Leopard is carried out under Animal Exchange Programme between Indian recognized zoos under Central Zoo Authority.

### The team along with the leopard on journey



At the quarantine cubicle, Veterinary Hospital, MZG



At the quarantine cubicle, Veterinary Hospital, MZG after completing quarantine period, it was shifted to the enclosure



## 11. Capacity building

### A. Workshop at Manipur State Museum, Imphal

Zoo staffs including two Forest Guards and two Animal Keepers attended a 5-day workshop on “Conservation & Preservation of Biological Specimens” from 3<sup>rd</sup> May 2019- 7<sup>th</sup> May 2019 which was organised by Manipur State Museum, Imphal under the Department of Art & Culture, Government of Manipur.

Dry methods of preservation using Taxidermy were conducted starting with preservation of eggs to birds. Our team has successfully stuffed one Mrs. Hume’s Pheasant male as Museum specimen.



### B. FG trainees

Forest guard trainees of Manipur Forest Training School, Luwangsangbam visited the zoo to learn about wildlife and management of the zoo.



### 12. Vaccination program for domestic animals around zoo

As an annual event, the vaccination program for domestic animals within 5km radius of MZG was conducted in order to ensure no vector for contagious diseases between domestic animals and wild animals.

### 13. Health check up of staffs



### 14. Major development works under state plan

#### Angle iron drain cover



#### Ceiling for feed go-down





**Vulture standoff barrier**



**Rest shed at Sangai enclosure 1 at Conservation Breeding Programme, Langol**



**Rest shed at Sangai enclosure 2 at Conservation Breeding Programme, Langol**



**Rcc water tank at Conservation Breeding Programme, Langol**



**15. Minor repairs/maintenance**



**16. Awareness/Exposure visits**

**A. 1 day Awareness programme for students on the topic 'Forest and Wildlife' under Nature Learning Centre funded by National Mission on Himalayan Studies, Govt. of India – June 3 2019**



**B. Exposure visit by students from Ukhrul District organized by MZG and DFO/Ukhrul**





**C. 1 day Awareness Program for students on Sangai Deer-7 December 2019**



**D. Exposure visit by students from Noney Distict organized by MZG and DFO/Noney**



**E. Exposure visit by students from Senapati-29 February 2020 organized by MZG and DFO/Senapati**





#### 17. Number of Visitors & Revenue for 2019-20

MONTH	NO. OF ADULT VISITORS	NO. OF CHILD VISITORS	NO OF STUDENT VISITORS	NO OF STUDENT TOUR VISITORS	TOTAL NO OF VISITORS	TOTAL REVENUE (IN RS)
April, 2019	12088	2585	1190	150	16013	1,44,580
May, 2019	7171	2632	7506	1894	19209	1,38,898
June, 2019	12900	3788	8545	3346	28579	2,11,573
July, 2019	8989	1837	3105	160	14091	1,21,267
August, 2019	5851	1111	1440	-	8402	79,566
September, 2019	3856	941	1140	190	6127	53,046
October, 2019	2533	977	1420	70	5000	40,437
November, 2019	3191	1099	1980	120	6390	52,334
December, 2019	5410	1994	2128	508	10040	81,757
January, 2020	5127	1232	607	-	6966	62,804
February, 2020	3758	708	529	-	4995	45,302
March, 2020	2020	302	264	69	2655	24,171
<b>Total</b>	<b>72894</b>	<b>19206</b>	<b>29854</b>	<b>6507</b>	<b>128467</b>	<b>10,55,735</b>

#### 18. DETAILS of sanction for Manipur Zoological Garden during 2019-20:

There is no Central Sponsored Scheme for FY 2019-20.

Major works during the financial year 2019-20 for the development and up-keep of Manipur Zoological Garden under State Plan are as follows:

Sl. No.	Particulars of work	Amount (Rs)
<b>STATE PLAN Fund</b>		
1	Construction of angle iron drain cover at MZG	3,17,800
2	Replacement of angle iron & barb wire for boundary wall, northern side at MZG	2,50,000
3	Construction of ceiling for feed go down at MZG	99,600
4	Construction of temporary rest shed at Sangai enclosure, MZG	69,960
5	Construction of vulture standoff barrier at MZG	59,400
6	Construction of entrance gate at 2 <sup>nd</sup> home, Langol hill	3,12,400
7	Construction of rest shed at Sangai enclosure 1, 2 <sup>nd</sup> home, Langol hill	97,700
8	Construction of rest shed at Sangai enclosure 2, 2 <sup>nd</sup> home, Langol hill	97,700
9	Construction of RCC water tank, 2 <sup>nd</sup> home, Langol hill	1,34,600
10	Construction of visitor rest shed at MZG	4,06,700
11	Construction of vermi compost shed at MZG	4,25,100
12	construction of pucca boundary wall 20 Rm behind vulture enclosure at MZG (eastern side)	4,33,400
13	Renovation of barb wire fencing of boundary wall behind vulture enclosure at MZG	1,00,000
	<b>Total:</b>	<b>28,04,360</b>

## 19. Official visits

2. Members of Combating Wildlife Trafficking, India for study of animal rescue at MZG



1. Dr William Mc Shea of Smithsonian Institution, Virginia studying Sangai at MZG



4. Officials from Panchayati Raj Ministry, Govt of India visiting MZG



3. PCCF, UP along with PCCF & HoFF Manipur and other senior officials of forest department visiting MZG



6. Visit to MZG by IGP, Govt of Manipur with family



5. Veterinary students from Aizawl studying zoo animals



## 20. Zoo Foundation day Celebration 2019

Manipur Zoological Garden celebrated its Foundation Day dated 2<sup>nd</sup> October, 2019 involving students and children from all the districts on the theme “The Future of Wildlife is in Our Hands” to start the celebration of Wildlife Week 2019 across the State of Manipur. The students/ children were facilitated to watch animals, enjoy and learn. The Media houses such as ISTV, DDK imphal interview the students/ children about their experience at Zoo. Interaction programs with the officials by DDK imphal, AIR imphal on conservation of Forests and wildlife. A panel discussion was also conducted with NGOs namely People For Animals, Yenning Animal Foundation, along with officials of Veterinary & Animal Husbandry Services, Government of Manipur & officials of Wildlife Wing, Forest Department, Government of Manipur on the topic of “Management of Zoo and Protection & Conservation of Wildlife in general”.

**Inauguration & naming ceremony of newborn zoo animals**



**Tree Plantation**



**Media interaction of students & zookeepers**



**Extempore, prize distribution & panel discussion**



**Unveiling of animated standees of zoo animals**



**Inauguration of swipe POS machine at MZG by CCF/Wildlife and Director/MZG**





## 21. Translocation of Sangai from Conservation Breeding Centre, Langol to MZG

### Need for translocation

Manipur's Brow antlered deer (*Rucervus eldii eldii*) also known as Sangai with a small and isolated population is restricted to Keibul Lamjao National Park, Manipur. A small population of 14 number of this endangered species is being maintained at Conservation Breeding Centre (CBC), Langol under Manipur Zoological Garden. A need was felt for relocation of Sangai from Conservation Breeding Centre (CBC), Langol to Manipur Zoological Garden (MZG), Iroisemba for exhibit purpose.

### Approval

Following receipt of necessary approvals from Ministry of Environment, Forest and Climate Change, Government of India and Central Zoo Authority, Manipur Forest Department in consultation with Wildlife Institute of India project team carried out necessary preparations prior to translocation. The translocation was subsequently initiated between 16th and 19th October 2019.

### Observation prior to translocation- 27<sup>th</sup> March to 30<sup>th</sup> June 2019

Observation of the fourteen individuals at CBC, Langol was done from 27th march 2019 for a period of three months. This was done to identify individuals for relocation to MZG and check the health and fitness level.

### Enclosure preparation at MZG

The existing chain-linked fence at the Sangai enclosure was covered with green agro-net mesh to act as visual barrier and provide stress free environment. A ramp using sand was developed at the enclosure that was designed to place the vehicle and facilitate off-loading. The vegetation of the enclosure was also structured according to its natural habitat. A swampy area was also developed in the central part of the enclosure and variety of plants like *Zizania latifolia*, *Phragmites karka*, *Leersia hexandra*, *Alpinia galanga* (simulating phumdi) were planted. Shrubs and herbs were also planted at specified location to provide refuge, shelter and hiding site. Also, two security cameras were installed for monitoring.



### Field visit, briefing and mock drill-16<sup>th</sup> October 2019

Director, MZG and staffs along with WII team comprising Dr. S.A. Hussain and Dr. Parag Nigam, Scientists, WII, and the Sangai Research team visited MZG and CBC on 16th October 2019 to initiate the field operation.

A briefing on the procedures for successful approach, capture and relocation was done at the office of the Director, MZG. Various inputs were discussed such as:

a. Placing of visual physical barrier around the entire enclosure (to the height of the fence) to provide stress free environment and prevent undue disturbance during the initial period since the enclosure is open on all sides.

b. Developing off-loading ramp at the temporary exit point for placing the transport vehicle.

c. Planting vegetation (Hedge, trees and grasses) inside the enclosure to provide visual barrier and hiding areas.

d. Increasing complexity of the enclosure by placing dry logs in the facility.

e. Grooming poles for herbivores as practiced in other zoos.

f. Creating barrier at the crossing to avoid disturbance.

g. The travel time from CBC, Langol to MZG, Iroisemba and distance were recorded. The distance of about 800m between the facilities could be covered in less than 15 minutes at a speed of 10-15 km/hr and provided conditions safe for transport of immobilized animals.

h. Various options for capture of animals were discussed and it was decided to chemically immobilize the animals.



Subsequently the transport vehicle was inspected and modified to meet animal's demand during transport. The side walls were cushioned with thermocol sheets, roof raised, flooring modified by provisioning of sand and straw (padding), plywood with ventilation holes (to cover the rear end of truck) provisioned to avoid animal fleeing out in case of sudden arousal, inspection window at the driver's end provisioned and possible openings covered using agrimesh to avoid light and animal escape, gunny sacks with straw (to provide support) placed and integrity of the vehicle using nylon ropes were ensured.



A mock drill for animal loading and off-loading was also carried out. Animal stretcher was suitably modified to ensure that animal weighing could be effectively carried out and placed inside the transportation truck.



### Field Operation-17<sup>th</sup> and 18<sup>th</sup> October 2019

After ensuring that all the preparations were in place, the field operation was initiated on 17 and 18 October 2019. Specific tasks were provided to identify individuals to have smooth operation.

Each of the animals at the CBC, Langol was lured using fodder and concentrate prior to darting. Following careful observation by Dr. Parag Nigam and Dr. S.A. Hussain, apparently healthy animals in good body condition were identified and remotely delivered a drug mixture (Medetomidine–Ketamine) for immobilization. The dose rate of the drug of immobilisation were decided on spot taking due consideration of each of the animal's health, condition, level of excitement, physiological status, sex, time of the day, ambient temperature besides other relevant parameters. The animals were left undisturbed following darting and sequence of event during drug induction (drowsiness, ataxia, sagging of hind quarters and animal coming into sternal recumbency) were recorded. After ensuring that the anaesthesia safe for animal handling was achieved, the animals were blindfolded and their ears were plugged and mouth cavity inspected for presence of cud. The animals were positioned appropriately taking due care of positioning of head to ensure that the airways were patent, breathing was normal and circulation was not compromised. Physiological parameters were assessed and found to be within normal range. Following animal stabilization and after ensuring that the animal was fit for transport, the animal was loaded into the vehicle and continuously monitored during the transportation and care was taken to maintain sternal recumbency. Ectoparasiticide topical application on the dorsum was done during transport. On reaching the location (MZG, Iroisemba), blood samples were collected and the animal off-loaded from the vehicle. The animal was taken to the feeding shed-I where further procedures were initiated for each animal such as

1. Bodily measurements.
2. Biological sampling: (Blood, Nasal, rectal swabs, dung pellets, hair).
3. Animal tagging.
4. Recording of physiological parameters (heart rate, respiration rate, body temperature, capillary refill time, palpebral reflex and jaw tone).
5. Medication (Antibiotics, tranquilizer, ectoparasiticide, etc).

Following completion of all the procedure, the animals were administered drug reversal Atipamezole. They were monitored intensively and found to exhibit normal behaviour 20 minutes post reversal. The animals showed smooth recovery.





### Surveillance (19th October 2019)

The team along with the Director, MZG visited the enclosure for checking the status of the relocated animals. The animals exhibited normal behaviour and did not show any signs of stress that can result from transport, anaesthesia or new environment. The animals were reported to have consumed fodder and concentrate in less quantity however based on observation were active and alert. Advice to avoid any disturbance was given.

The animals were monitored intensively for next 3 days and none of the animals expressed any sign of stress or infirmity. All the animals started using the feeding area, pathways as well as the central thicket. An additional thatch was placed to act as visual barrier inside the enclosure. Covered area to act as shade was also provided. Animals were apparently in good condition and exhibited normal behaviour.

### Closing of Sangai enclosure after successful translocation

It was advised to monitor the animals closely for three weeks as mentioned in the Central Zoo Authority guidelines and subsequently the enclosure was closed for display to public.



### Conclusion

The field operation involving capture and relocation of four Sangai to Manipur Zoological Garden, Iroisemba was the first successful initiative carried out jointly by the Wildlife Institute of India and Manipur Forest Department. The contributions and inputs of CZA are gratefully acknowledged.

### 22. New births

#### Birth of two Sangai fawns-6<sup>th</sup> November 2019& 26<sup>th</sup> March 2020

One of the Sangai doe (tag no.-200: colour-green) which was Trans located from CBC, Langol to its enclosure at MZG gave birth to a healthy female fawn on 6<sup>th</sup> November 2019. Also, another fawn was born on 26<sup>th</sup> March 2020 from a Sangai doe at Conservation Breeding Centre, Langol.



**Details of newborn Nongin chicks at zoo (photos currently NA)**

Details of egg laying-

Sl. No.	Date of laying	No. of eggs	remarks
1	22/03/2020	1	
2	26/03/2020	1	
3	31/03/2020	1	
4	02/04/2020	1	
5	04/04/2020	1	
	<b>Total no. of eggs</b>	<b>5 nos.</b>	

Hatchling date-01/05/2020

No. of chicks hatched- 4 nos.

No. of chicks survived- 3 nos.

Rate of survival-60%

Incubation-

Sl. No.	particulars	Date	Remarks
1	Date of starting	05/04/2020	
2	Date of hatchling	01/05/2020	
	<b>Total no. of days for incubation</b>	<b>27 days</b>	

**Details of newborn Nongin chicks at Conservation Breeding Centre, Langol (photos currently NA)**

Details of egg laying-

Sl. No.	Date of laying	No. of eggs	remarks
1	22/03/2020	1	
2	27/03/2020	1	
3	29/03/2020	1	
4	30/03/2020	1	
5	02/04/2020	1	
6	04/04/2020	1	
	<b>Total no. of eggs</b>	<b>6 nos.</b>	

Hatchling date -05/05/2020

No. of chicks hatched- 1 nos.

No. of chicks survived- 1 nos.

Rate of survival-16.66%

Incubation-

Sl. No.	particulars	Date	Remarks
1	Date of starting	05/04/2020	
2	Last day of hatchling	04/05/2020	
	<b>Total no. of days for incubation</b>	<b>30 days</b>	

**Details of newborn Kalij Pheasant chicks at zoo (photos are currently not available for time being)**

Details of egg laying-

Sl. No.	Date of laying	No. of eggs	remarks
1	15/03/2020	1	
2	17/03/2020	1	
3	19/03/2020	1	
4	21/03/2020	1	
5	23/03/2020	1	
6	25/03/2020	1	
7	27/03/2020	1	
8	28/03/2020	1	
9	31/03/2020	1	
	<b>Total no. of eggs</b>	<b>9 nos.</b>	

Hatchling date -27/04/2020

No. of chicks hatched- 4 nos.

No. of chicks survived- 4 nos.

Rate of survival-44.44%

Incubation-

Sl. No.	particulars	Date	Remarks
1	Date of starting	01/04/2020	
2	Last day of hatchling	26/04/2020	
	<b>Total no. of days for incubation</b>	<b>26 days</b>	

### 23. Inauguration of Sangai Enclosure-7<sup>th</sup> December 2019

On 7<sup>th</sup> December 2019 Hon'ble Minister, Forest & Environment, Shri Th. Shyamkumar inaugurated Sangai Enclosure at Manipur Zoological Garden for public display.



### 24. Night patrolling

Night patrolling is carried out from time to time at MZG and CBC. Further, round the check monitoring is being undertaken regularly.



### 25. Retiring staffs

On February 29 2020 in a simple function, a farewell program was organised for the three retiring staffs of the zoo. They were presented small token of appreciation for their service in Manipur Zoological Garden, Forest Department.



### 26. Research work by Turtle Survival Alliance, India

A research work was conducted by a research team of Dr. Parimal Chandra Ray and Dr. Daniel Gillard of Turtle Survival Alliance, India on Malayan Box Turtle in Manipur Zoological Garden, Iroisemba during the second week of December 2019. They collected swab samples of turtles hoisted in the zoo under the supervision of zoo official staffs.





### 27. Sangai adoption

On 20 August 2019, in a simple yet significant function, the owner of The Sangai Express Shri Nishikanta Singh Sapam have sponsored the feed of Sangai deer of MZG. It was attended by Shri K. Angami, PCCF&HoFF, Shri DJN Anand, PCCF/Wildlife and eminent members from other media houses.



### 28. Van Mahotsav 2020 - July 1 (Wednesday) to July 7 (Tuesday)

As a part of Van Mahotsav celebrations, **tree plantation activities were taken up** in and around the zoo in a bid to retain the vanishing forest covers of the country. Native trees of the state were planted as they readily adapt to the local conditions, integrate into eco-systems and have a high survival rate. Besides, such trees are helpful in supporting local birds, insects and animals as well. Plantation drive was also carried out in nearby schools by distributing seedlings and organising plantation.



### 29. Covid19 measures

The following are some of the precautionary measures taken up by MZG as per guidelines issued by CZA-

1. Essential screening and proper sanitation measures to be maintained at entry and exit gates.
2. Use of mask by all the Zoo staff especially dealing with public and regular hand washing, sanitization and social distancing must be maintained (at ticket/ entry gates).
4. All personnel entering zoo to wash hands with soap and water for 20 sec and use hand sanitizer at entry gate.
5. Spraying with 65% ethanol/methanol/isopropanol.
6. Vegetables to be thoroughly washed.
7. Zookeepers screened at gate for respiratory illness and enquired for any ailments.
8. Restricting movement in and around zoo premises.
9. Coughing spitting urinating or cleaning nostrils not allowed.
10. Keepers provided with gloves, sanitizer, face mask, boots.
11. Avoid unnecessary stress to animals.
12. Animals being monitored for any signs.

- 13. Isolate & quarantine sick Animals.
- 14. Have least contact while providing feed to animals.

Personal hygiene, respiratory hygiene and social distancing are being advocated by staffs of the zoo and keepers maintaining minimum contact with animals, among others are being taken up to ensure the welfare of animals. All arrangements have been made as per NTCA and CZA directions.

Additional bio security measures including daily health screening of staffs using Infrared thermometer as well as monitoring to study behaviour of animals. In addition, instructions were given to minimise human-animal interactions, use of safety gear by staffs, isolation of sick animals and sending of samples for testing to identifies labs, etc.

**Cleaning & disinfecting enclosures**



**Distribution of masks and sanitizers to staffs**



**Hand washing and temperature monitoring using IR thermometer**



**Regular inspection of carnivore groups for behaviour study**



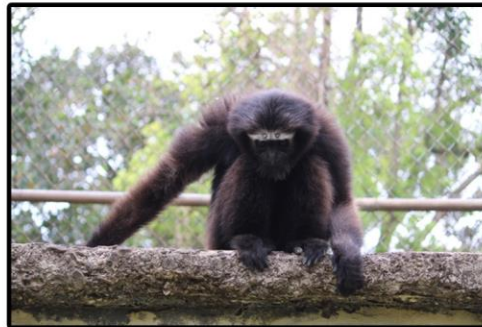
### 30. Interaction with media and visitors



### Newspaper reports







“The Greatness of a Nation can be Judged by the way its Animals are Treated.”  
- Mahatma Gandhi