

MANIPUR ZOOLOGICAL GARDEN

ANNUAL REPORT 2016-17

Report on the activities of Manipur Zoological Garden for the period April, 2016 to March, 2017 is provided with supportive pictures of events along with the Status of compliance of conditions communicated vide letter no. 19-58/93-CZA(190)(vol.iv) dated 26/02/2016.

**WILDLIFE WING, FOREST DEPARTMENT
GOVERNMENT OF MANIPUR**

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1. MANIPUR ZOOLOGICAL GARDEN

1.1 About Manipur Zoological Garden:

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 8kms from Imphal city. 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 Schedule II of the Wildlife (Protection) Act, 1972. Manipur Zoological Garden was categorised as a “Medium Zoo” by the Central Zoo Authority (CZA) on 02.02.2009. It was further identified to be developed as a “model zoo” by CZA in November, 2014.

Manipur Zoological Garden maintained a Captive Breeding Centre (CBC) at the Langol Reserve Forest which extends to an area of 6.007 ha. for three (3) important species; (i) Brow-antlered deer (The State Animal of Manipur), (ii) Mrs Hume’s Bar Pheasant (The State Bird of Manipur and (iii) Kalij Pheasant.

1.2 Objectives:

- i. Conservation of Wildlife – sustain population of physically, genetically and behaviourally healthy animals.
- ii. Captive breeding –eg. Sangai, Kalij pheasant.
- iii. Ex-situ conservation of endangered species – appropriate to provide stock for recovery programme.
- iv. Resource of natural gene pool.
- v. Source of scientific data – behaviour, nutrition, pathology, breeding.
- vi. Education and awareness.
- vii. Recreation.

2. ACTIVITIES OF MANIPUR ZOOLOGICAL GARDEN FOR PERIOD APRIL, 2016 TO MARCH, 2017.

2.1 Animal Enclosures and Upkeep:

The following activities were 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 is done for all the enclosures before feeding by the respective zoo keepers/ animal attendants.
- b) Sweeping and cleaning the visitor areas are done by a group of sweepers.
- c) Weekly cleaning of the Zoo Campus is done every Monday which is a holiday for the Zoo and closed to the visitor.
- d) The veterinary doctor also takes important role in maintaining sanitation of the zoo particularly for the enclosures and the waste disposal sites. He is the custodian of all cleaning chemicals.
- e) The team take care of the proper functioning of drainage system of the campus, cleanliness of the animal enclosures/cages and houses, maintain the lawns, the visitor amenities and general cleanliness of the zoo campus.

The routine work for upkeep of Zoo including Maintenance of enclosures, visitor amenities, infra-structures 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 as assisted by Deputy Rangers Foresters and Forest Guards under the overall supervision of the Director as per the recommendation.

The following construction of new enclosures was done during the year 2016-17:

- i. Construction of SAMBHAR ENCLOSURE WITH NIGHT SHELTER at MZG
- ii. Construction of DEER ENCLOSURE WITH NIGHT SHELTER at MZG
- iii. Extension of KALIJ PHEASANT ENCLOSURE at Captive Breeding Centre (CBC)
- iv. Construction of pucca boundary wall between North-eastern side of CBC.
- v. Construction of boundary brick wall adjacent to CAU southern side Phase I of MZG
- vi. Construction of boundary brick wall adjacent to CAU southern side Phase II of MZG
- vii. Construction of one night shelter & improvement of Hoolock Gibbon enclosure at MZG

2.2 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. Facilities for drugs, medicines, the feed supplements and sanitation are available for the animals.

Animal Health care activities are as follows:

- 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-month.
- The Veterinary officer and its team regularly kept check of the injuries and illness of the Zoo inmates.
- Vaccination programme for cattles around the Zoo areas is done on regular basis against Food and Mouth diseases.
- Facility of referring sick animal to the State Veterinary Hospital which is only 8 kms away from the Zoo is done as and when required.

2.3 Birth, Death and rescue of endangered and important animals in the Zoo:

Sl.No.	Name of Species	Date of birth	Sex				Remarks
			M	F	U	T	
	BIRTH						
1	Slow loris	10-04-2016	-	-	1	1	
2	Leopard cat	21-04-2016	1	-	-	1	
3	Slow loris	08-05-2016	-	-	1	1	
4	Leopard cat	16-06-2016	-	1	-	1	
5	Brow antlered deer	04-11-2016	-	-	1	1	
6	Hog deer	19-01-2017	-	-	1	1	
7	Hog deer	21-01-2017	-	-	1	1	
8	Hog deer	25-01-2017	-	-	1	1	
	Total:		1	1	6	8	
Sl.No.	Name of Species	Date of rescue	Sex				Rescue from
			M	F	U	T	
	RESCUE						
1	Hoolock Gibbon	02-08-2016	-	1	-	1	Kamjong
2	Leopard cat	04-09-2016	1	-	-	1	Mayang Lanjing
3	Mrs Hume's Pheasant	16-10-2016	1	1	-	2	Siroi, Ukhrul
4	Goral	17-01-2017	1	-	-	1	Kumbi, Bishnupur
	Total:		3	2	0	5	

Sl.No.	Name of Species	Date of death	Sex				Remarks
			M	F	U	T	
	DEATH						
1	Brow antlered deer	20-06-2016	-	1	-	1	Traumatic injury
2	Barking deer	05-07-2016	1	-	-	1	Traumatic injury
3	Porcupine	12-08-2016	3	1	-	4	Buried in its burrow
4	Brow antlered deer	22-12-2016	1	-	-	1	General weakness
5	Barking deer	31-12-2016	1	-	-	1	Due to fighting
6	Barking deer	04-01-2017	-	1	-	1	Due to fighting
7	Barking deer	07-01-2017	-	1	-	1	Traumatic injury
8	Crested serpent eagle	09-01-2017	-	-	1	1	Cataract (Blind)
9	Spotted deer	26-01-2017	-	1	-	1	General weakness
10	Brow antlered deer	23-02-2017	1	-	-	1	Traumatic injury
	Total:		7	5	1	13	

2.4 Other activities:

2.4.1 Observance of Swachh Bharat Mission

Swachh Bharat Mission was observed for the period of 1st to 15th June, 2016 as a part of the Action Plan on Swachh Bharat Mission to maintain hygiene and cleanliness in the surrounding areas of Zoo. Shops around the Zoo campus were made to mandatorily place a dust-bin while the Zoo and its surrounding areas were made a “plastic free” zone.



2.4.2 World Environment Day Celebrated on 5th June, 2016

World Environment Day was observed on 5th June, 2016 with an awareness programme of locals and visitors. This not only maintain the cleanliness and sanctity of the Zoo and its surrounding areas but also helped instilling in the Zoo staffs, visitors and the locals, a habit of keeping their surrounding neat and clean.



2.4.3 Cleanliness Drive

Social service on mass scale was carried out every Monday (non-visitors' day), in addition to the routine daily cleaning activities of the Zoo. The main focus was given to the water points and toilets within the Zoo premises.



2.4.4 Sensitization on cleanliness by Veterinary Officer

A temporary sensitization area was set up where students, visitors and locals were educated and made aware of the importance of cleanliness and hygiene especially in the natural areas.



2.4.5 Zoo Foundation Day Celebrated on 2nd October, 2016

The 40th Zoo Foundation day was celebrated on 2nd October, 2016 which kick start the week long Wildlife Week Celebration, 2016. The Brochure on Manipur Zoological Garden was also released on this day by the PCCF/Wildlife, Forest Department, Government of Manipur.



2.5 Details of sanction for Manipur Zoological Garden during 2016-17:

The detailed items of works done during the financial year 2016-17 for the development and up-keeping of Manipur Zoological Garden funded by State Plan and CAMPA are as follows:

Sl.No.	Particulars of work	Amount (in lakhs)
	CAMPA FUND	
1	Construction of SAMBAR ENCLOSURE WITH NIGHT SHELTER at MZG	98,00,900.00
2	Construction of DEER ENCLOSURE WITH NIGHT SHELTER at MZG	97,88,000.00
3	Extension of KALIJ PHEASANT ENCLOSURE at CBC	13,79,000.00
	Total:	2,09,67,900.00
	STATE PLAN FUND	
4	Construction of pucca boundary wall between North-eastern side of CBC	2,50,000.00
5	Construction of boundary brick wall adjacent to CAU southern side Phase I at MZG	9,62,000.00
6	Construction of boundary brick wall adjacent to CAU southern side Phase II at MZG	8,21,400.00
7	Construction of one night shelter & improvement of Hoolock Gibbon enclosure at MZG	16,500.00
8	Upkeeping & cleanliness of Zoo campus	2,95,896.00
9	Publicity and printing for awareness generation	1,34,800.00
10	Repairing and maintenance of animals enclosures	5,35,714.00
11	Medicines and supplements of Zoo inmates	1,59,565.00
12	Animal Feeds	32,98,907.00
13	Rescue and rehabilitation of animals from the wild	44,500.00
14	Vaccination programme for nearby cattle around Zoo	20,000.00
15	Development of Manipur Zoological Garden	3,32,412.00
	Total:	68,71,694.00

2.6 Status of compliance w.r.t. conditions conveyed by CZA vide letter no. 19-58/93-CZA(190)(vol.iv) dated 26/02/2016:

As per the evaluation of the Manipur Zoological Garden, Imphal carried out by Dr. M. L. Smith and Sh. R. Bhattacharjee on 13.12.2015 and 14.12.2015, CZA has decided to grant renewal of recognition to Manipur Zoological Garden, Imphal as Medium Zoo category under Section 38H of the Wildlife (Protection) Act, 1972 beyond 20.01.2019 subject on the basis of compliance with the conditions stated as follows and general performance of the Zoo.

Sl.No.	Norm. No.	Conditions Stipulated	Status of compliance as on 31/03/2017
Animal housing, display of animals and animal enclosures:			
1	4.6	Enrichments of all enclosures should be improved in general; the water bird aviary in particular with earth mound and planting of suitable species.	Continuous process
Upkeep and healthcare of animals:			
2	5.1	Periodic testing of pond water at recognised lab to be conducted	Completed
3	5.2 1 (a)	Feed supplement should be given to all the deer species round the year as per recommended dose	Continuing since April 2016
Veterinary and infrastructure facilities:			
4	6.1	Priority to be given for new veterinary hospital and infrastructure conforming to the status of the Zoo	Included in APO 2016-17 submitted to CZA
	6.1(i)	Advance training to be given to Zoo Veterinary and officers for immobilisation of animals and other management aspects	Proposed
Acquisition and breeding of animals:			
5	9.4b	Pairing of Jungle cat, Pelican, leopard and Hoolock Gibbon to be done with the prior approval of Central Zoo Authority	Included in Annual Collection Plan
Visitor facilities:			
6	12.3	Ramp toilets for differently-abled visitors should be made available	Completed

2.7 Number of visitors and revenue for the period 2016-17:

The total number of visitors recorded during the financial year 2016-17 is 95919 and the revenue collected is Rs. 7,75,324.00. The details of number of visitors and revenue collection are as follows:

MONTH	NO. OF ADULT VISITORS	NO. OF CHILD VISITORS	NO. OF STUDENT VISITORS	TOTAL VISITORS	TOTAL REVENUE IN RS.
APRIL, 2016	11000	3025	2961	16986	1,45,916.00
MAY, 2016	4611	1419	3769	9799	76,116.00
JUNE, 2016	6881	3177	4820	14878	1,11,338.00
JULY, 2016	7275	2719	2594	12588	1,03,806.00
AUG, 2016	3358	1251	978	5587	46,654.00
SEPT, 2016	3259	1009	1439	5707	47,248.00
OCT, 2016	2338	1748	2333	6419	47,230.00
NOV, 2016	1935	1552	2126	5613	40,974.00
DEC, 2016	2511	975	1195	4681	38,130.00
JAN, 2017	4029	1187	799	6015	52,206.00
FEB, 2017	2857	538	948	4343	36,412.00
MARCH, 2017	2369	442	492	3303	29,294.00
TOTAL:	52423	19042	24454	95919	7,75,324.00

2.8 Annual diet chart 2016-17 for Zoo inmates:

The diet chart providing the quantity and items of feed given to each animals and species at Manipur Zoological Garden is as follows:

Sl.No .	Name of Species	No. of animals	Items	Qnty. per day/animal (in kg)	Qnty. per day/spp (in kg)	Qnty. per month/spp (in kg)	Qnty. per year/spp (in kg)	Feeding Schedule
1	Leopard	1	Beef	4.00	4.00	120.00	1440.00	Daily
		Total:		4.00	4.00	120.00	1440.00	
2	Leopard cat	14	Beef	0.23	3.22	96.60	1159.20	-do-
			Chicken	0.40	5.60	168.00	2016.00	-do-
		Total:		0.63	8.82	264.60	3175.20	
3	Jungle cat	1	Beef	0.25	0.25	7.50	90.00	-do-
			Chicken	0.50	0.50	15.00	180.00	-do-
		Total:		0.75	0.75	22.50	270.00	
4	Toddy cat	1	Beef	0.40	0.40	12.00	144.00	-do-
			Chicken	0.35	0.35	10.50	126.00	-do-
			Egg	1.00	1.00	30.00	360.00	-do-
			Banana	0.30	0.30	9.00	108.00	-do-
		Total:		2.05	2.05	61.50	738.00	
5	Golden jackal	1	Beef	0.70	0.70	21.00	252.00	-do-
			Chicken	0.30	0.30	9.00	108.00	-do-
			Banana	0.10	0.10	3.00	36.00	-do-
			Potato	0.10	0.10	3.00	36.00	-do-
		Total:		1.20	1.20	36.00	432.00	
6	Bengal monitor lizard	3	Beef	0.20	0.60	18.00	216.00	-do-
			Egg	1.00	3.00	90.00	1080.00	-do-
		Total:		1.20	3.60	108.00	1296.00	
7	Himalayan vulture	7	Beef	1.00	7.00	210.00	2520.00	-do-
			Chicken	0.50	3.50	105.00	1260.00	-do-
		Total:		1.50	10.50	315.00	3780.00	
8	Green peafowl	2	Beef	0.05	0.10	3.00	36.00	-do-
		Total:		0.05	0.10	3.00	36.00	
9	Oriental pied horn bill	1	Beef	0.30	0.30	9.00	108.00	-do-
			Banana	0.50	0.50	15.00	180.00	-do-
		Total:		0.80	0.80	24.00	288.00	
10	Crested serpent eagle	3	Beef	0.50	1.50	45.00	540.00	-do-
		Total:		0.50	1.50	45.00	540.00	
11	Pariah kite	1	Beef	0.50	0.50	15.00	180.00	-do-
		Total:		0.50	0.50	15.00	180.00	
12	Chinese ferret Badger	1	Beef	0.10	0.10	3.00	36.00	-do-
			Egg	1.00	1.00	30.00	360.00	-do-
			Banana	0.30	0.30	9.00	108.00	-do-
		Total:		1.40	1.40	42.00	504.00	

Sl.No	Name of Species	No. of animals	Items	Qty. per day/animal (in kg)	Qty. per day/spp (in kg)	Qty. per month/spp (in kg)	Qty. per year/spp (in kg)	Feeding Schedule
13	Python	2		2.50	5.00	20.00	240.00	(once in a week @ 2.5 kg/animal)
		Total:		2.50	5.00	20.00	240.00	
14	Rosy pelican	1	Lata/Carp fish	1.50	1.50	45.00	540.00	-do-
		Total:		1.50	1.50	45.00	540.00	
15	Greater adjutant	2	Lata/Carp fish	1.50	3.00	90.00	1080.00	-do-
		Total:		1.50	3.00	90.00	1080.00	
16	Purple heron	2	Lata/Carp fish	0.65	1.30	39.00	468.00	-do-
		Total:		0.65	1.30	39.00	468.00	
17	Turtle	20	Small fish	0.05	1.00	30.00	360.00	-do-
		Total:		0.05	1.00	30.00	360.00	
18	Heron/Egret	33	Small fish	0.05	1.65	49.50	594.00	-do-
		Total:		0.05	1.65	49.50	594.00	
19	Swamphen / coot	31	Small fish	0.08	2.33	69.75	837.00	-do-
			Snail	0.04	1.27	38.13	457.56	-do-
			Paddy	0.08	2.33	69.75	837.00	-do-
			Panna	0.08	2.33	69.75	837.00	-do-
			Wheat whole	0.03	0.93	27.90	334.80	-do-
		Total:		0.30	9.18	275.28	3303.36	
20	Duck/Teal	38	Small fish	0.08	2.85	85.50	1026.00	-do-
			Snail	0.04	1.52	45.60	547.20	-do-
			Wheat whole	0.03	0.95	28.50	342.00	-do-
			Paddy	0.08	2.93	87.78	1053.36	-do-
			Panna	0.08	2.85	85.50	1026.00	-do-
		Total:		0.29	11.10	332.88	3994.56	
21	Western hoolock Gibbon	2	Egg	1.00	2.00	60.00	720.00	-do-
			Whole gram	0.08	0.15	4.50	54.00	-do-
			Apple	0.25	0.50	15.00	180.00	-do-
			Sweet potato	0.15	0.30	9.00	108.00	-do-
			Sugarcane	0.10	0.20	6.00	72.00	-do-
			Banana	0.50	1.00	30.00	360.00	-do-
			Cabbage leaf	0.05	0.10	3.00	36.00	-do-
			Carrot	0.07	0.14	4.20	50.40	-do-
			Guava/ Pear	0.05	0.10	3.00	36.00	-do-
			Pomegranate	0.05	0.10	3.00	36.00	-do-
			Palak	0.30	0.60	18.00	216.00	-do-
		Total:		2.60	5.19	155.70	1868.40	

Sl.No.	Name of Species	No. of animals	Items	Qty. per day/animal (in kg)	Qty. per day/spp (in kg)	Qty. per month/spp (in kg)	Qty. per year/spp (in kg)	Feeding Schedule
22	Bengal slow Loris	13	Egg	1.00	13.00	390.00	4680.00	-do-
			Apple	0.15	1.95	58.50	702.00	-do-
			Sweet potato	0.10	1.30	39.00	468.00	-do-
			Banana	0.15	1.95	58.50	702.00	-do-
			Cucumber	0.08	0.98	29.25	351.00	-do-
			Carrot	0.07	0.91	27.30	327.60	-do-
			Bean/ Long bean	0.05	0.65	19.50	234.00	-do-
			Guava/ Pear	0.10	1.30	39.00	468.00	-do-
			Pomegranate	0.05	0.65	19.50	234.00	-do-
			Orange	0.08	1.04	31.20	374.40	-do-
			Bread	0.05	0.65	19.50	234.00	-do-
		Total:		1.88	24.38	731.25	8775.00	
23	Sambar	23	Rice bran	1.00	23.00	690.00	8280.00	-do-
			Wheat bran	0.85	19.55	586.50	7038.00	-do-
			Crushed maize	0.50	11.50	345.00	4140.00	-do-
			Whole gram	0.18	4.14	124.20	1490.40	-do-
			Oil cake	0.12	2.76	82.80	993.60	-do-
			Rock salt	0.05	1.15	34.50	414.00	-do-
			Heikru/heibong	0.10	2.30	69.00	828.00	-do-
			Cabbage leaf	0.08	1.84	55.20	662.40	-do-
			Green fodder	10.00	230.00	6900.00	82800.00	-do-
		Total:		12.88	296.24	8887.20	106646.40	
24	Brow antlered deer	14	Rice bran	0.70	9.80	294.00	3528.00	-do-
			Wheat bran	0.75	10.50	315.00	3780.00	-do-
			Crushed maize	0.45	6.30	189.00	2268.00	-do-
			Whole gram	0.18	2.52	75.60	907.20	-do-
			Oil cake	0.10	1.40	42.00	504.00	-do-
			Rock salt	0.05	0.70	21.00	252.00	-do-
			Cattle feed	0.08	1.12	33.60	403.20	-do-
			Heikru/heibong	0.10	1.40	42.00	504.00	-do-
			Cabbage leaf	0.08	1.12	33.60	403.20	-do-
		Green fodder	8.00	112.00	3360.00	40320.00	-do-	
Total:		10.49	146.86	4405.80	52869.60			
25	Spotted deer	33	Rice bran	0.70	23.10	693.00	8316.00	-do-
			Wheat bran	0.75	24.75	742.50	8910.00	-do-
			Crushed maize	0.45	14.85	445.50	5346.00	-do-
			Whole gram	0.18	5.94	178.20	2138.40	-do-
			Oil cake	0.10	3.30	99.00	1188.00	-do-
			Rock salt	0.04	1.32	39.60	475.20	-do-
			Heikru/heibong	0.10	3.30	99.00	1188.00	-do-
			Cabbage leaf	0.07	2.31	69.30	831.60	-do-
		Green fodder	6.20	204.60	6138.00	73656.00	-do-	
Total:		8.59	283.47	8504.10	102049.20			

Sl.No.	Name of Species	No. of animals	Items	Qty. per day/animal (in kg)	Qty. per day/spp (in kg)	Qty. per month/spp (in kg)	Qty. per year/spp (in kg)	Feeding Schedule
26	Hog deer	34	Rice bran	0.30	10.20	306.00	3672.00	-do-
			Wheat bran	0.30	10.20	306.00	3672.00	-do-
			Crushed maize	0.29	9.86	295.80	3549.60	-do-
			Whole gram	0.13	4.42	132.60	1591.20	-do-
			Oil cake	0.10	3.40	102.00	1224.00	-do-
			Rock salt	0.04	1.36	40.80	489.60	-do-
			Heikru/heibong	0.09	3.06	91.80	1101.60	-do-
			Cabbage leaf	0.09	3.06	91.80	1101.60	-do-
			Green fodder	3.75	127.50	3825.00	45900.00	-do-
	Total:			5.09	173.06	5191.80	62301.60	
27	Barking deer	6	Rice bran	0.30	1.80	54.00	648.00	-do-
			Wheat bran	0.33	1.98	59.40	712.80	-do-
			Crushed maize	0.19	1.14	34.20	410.40	-do-
			Whole gram	0.12	0.72	21.60	259.20	-do-
			Oil cake	0.10	0.60	18.00	216.00	-do-
			Rock salt	0.04	0.24	7.20	86.40	-do-
			Heikru/heibong	0.09	0.54	16.20	194.40	-do-
			Cabbage leaf	0.05	0.30	9.00	108.00	-do-
			Green fodder	2.50	15.00	450.00	5400.00	-do-
	Total:			3.72	22.32	669.60	8035.20	
28	Deer group	Total:	Onion	-	1.00	30.00	360.00	-do-
					1.00	30.00	360.00	
29	Himalayan Goral	2	Rice bran	0.38	0.76	22.80	273.60	-do-
			Wheat bran	0.33	0.66	19.80	237.60	-do-
			Crushed maize	0.19	0.38	11.40	136.80	-do-
			Whole gram	0.12	0.24	7.20	86.40	-do-
			Oil cake	0.10	0.20	6.00	72.00	-do-
			Rock salt	0.04	0.08	2.40	28.80	-do-
			Heikru/heibong	0.09	0.18	5.40	64.80	-do-
			Cabbage leaf	0.08	0.16	4.80	57.60	-do-
			Green fodder	2.50	5.00	150.00	1800.00	-do-
	Total:			3.83	7.66	229.80	2757.60	
30	Wild pig	1	Wheat bran	0.18	0.18	5.40	64.80	-do-
			Crushed maize	0.54	0.54	16.20	194.40	-do-
			Rice	0.95	0.95	28.50	342.00	-do-
			Whole gram	0.12	0.12	3.60	43.20	-do-
			Dal	0.10	0.10	3.00	36.00	-do-
			Milk powder	0.10	0.10	3.00	36.00	-do-
			Gur	0.10	0.10	3.00	36.00	-do-
			Pumpkin	0.30	0.30	9.00	108.00	-do-
			Cabbage leaf	0.10	0.10	3.00	36.00	-do-
			Arum/Pan	1.00	1.00	30.00	360.00	-do-
			Potato	0.20	0.20	6.00	72.00	-do-
			Green fodder	1.25	1.25	37.50	450.00	-do-
	Total:			4.94	4.94	148.20	1778.40	

Sl.No.	Name of Species	No. of animals	Items	Qty. per day/animal (in kg)	Qty. per day/spp (in kg)	Qty. per month/spp (in kg)	Qty. per year/spp (in kg)	Feeding Schedule
31	Himalayan black bear	10	Rice	1.88	18.80	564.00	6768.00	-do-
			Whole gram	0.20	2.00	60.00	720.00	-do-
			Dal	0.20	2.00	60.00	720.00	-do-
			Milk powder	0.10	1.00	30.00	360.00	-do-
			Gur	0.20	2.00	60.00	720.00	-do-
			Honey	0.02	0.20	6.00	72.00	-do-
			Pumpkin	0.50	5.00	150.00	1800.00	-do-
			Cabbage leaf	0.14	1.40	42.00	504.00	-do-
			Bean/Long bean	0.14	1.35	40.50	486.00	-do-
			Palak	0.50	5.00	150.00	1800.00	-do-
	Total:			3.88	38.75	1162.50	13950.00	
32	Peafowl/pheasant	15	Wheat whole	0.05	0.75	22.50	270.00	-do-
			Whole gram	0.05	0.75	22.50	270.00	-do-
			Bajra	0.10	1.50	45.00	540.00	-do-
			Paddy	0.10	1.50	45.00	540.00	-do-
			Poultry feed	0.10	1.50	45.00	540.00	-do-
			Onion	0.03	0.38	11.25	135.00	-do-
			Banana	0.10	1.50	45.00	540.00	-do-
			Cabbage leaf	0.05	0.75	22.50	270.00	-do-
	Total:			0.58	8.63	258.75	3105.00	
33	Parakeet	8	Whole gram	0.03	0.20	6.00	72.00	-do-
			Bajra	0.05	0.40	12.00	144.00	-do-
			Paddy	0.03	0.20	6.00	72.00	-do-
			Apple	0.05	0.40	12.00	144.00	-do-
			Onion	0.03	0.20	6.00	72.00	-do-
			Green chilly	0.01	0.08	2.40	28.80	-do-
			Banana	0.08	0.64	19.20	230.40	-do-
	Total:			0.27	2.12	63.60	763.20	
34	Emu	1	Rice bran	0.10	0.10	3.00	36.00	-do-
			Crushed maize	0.15	0.15	4.50	54.00	-do-
			Wheat whole	0.09	0.09	2.70	32.40	-do-
			Whole gram	0.10	0.10	3.00	36.00	-do-
			Bajra	0.10	0.10	3.00	36.00	-do-
			Paddy	0.10	0.10	3.00	36.00	-do-
			Onion	0.10	0.10	3.00	36.00	-do-
			Banana	0.10	0.10	3.00	36.00	-do-
			Cabbage leaf	0.09	0.09	2.70	32.40	-do-
	Total:			0.93	0.93	27.90	334.80	
35	Tortoise	6	Yendem	0.19	1.11	33.30	399.60	-do-
			Pumpkin	0.15	0.90	27.00	324.00	-do-
			Cabbage leaf	0.05	0.30	9.00	108.00	-do-
			Palak	0.10	0.60	18.00	216.00	-do-
	Total:			0.49	2.91	87.30	1047.60	
36	Turtle	19	Yendem	0.10	1.90	57.00	684.00	-do-
			Cucumber	0.09	1.71	51.30	615.60	-do-
	Total:			0.19	3.61	108.30	1299.60	

Sl.No.	Name of Species	No. of animals	Items	Qty. per day/animal (in kg)	Qty. per day/spp (in kg)	Qty. per month/spp (in kg)	Qty. per year/spp (in kg)	Feeding Schedule
37	Rhesus macaque	40	Whole gram	0.05	2.00	60.00	720.00	-do-
			Apple	0.15	6.00	180.00	2160.00	-do-
			Pumpkin	0.10	4.00	120.00	1440.00	-do-
			Sweet potato	0.25	10.00	300.00	3600.00	-do-
			Sugarcane	0.10	4.00	120.00	1440.00	-do-
			Banana	0.28	11.00	330.00	3960.00	-do-
			Cabbage leaf	0.05	2.00	60.00	720.00	-do-
			Cucumber	0.15	6.00	180.00	2160.00	-do-
			Carrot	0.05	2.00	60.00	720.00	-do-
			Bean/Long bean	0.05	2.00	60.00	720.00	-do-
			Guava/ Pear	0.05	2.00	60.00	720.00	-do-
			Pomegranate	0.03	1.20	36.00	432.00	-do-
			Palak	0.20	8.00	240.00	2880.00	-do-
			Bread	0.10	4.00	120.00	1440.00	-do-
	Total:			1.61	64.20	1926.00	23112.00	
38	Malayan porcupine	4	Whole gram	0.05	0.20	6.00	72.00	-do-
			Pumpkin	0.10	0.40	12.00	144.00	-do-
			Sweet potato	0.40	1.60	48.00	576.00	-do-
			Banana	0.10	0.40	12.00	144.00	-do-
			Arum/pan	0.20	0.80	24.00	288.00	-do-
			Potato	0.10	0.40	12.00	144.00	-do-
			Carrot	0.10	0.40	12.00	144.00	-do-
			Bean/Long bean	0.10	0.40	12.00	144.00	-do-
			Palak	0.10	0.40	12.00	144.00	-do-
				Total:			1.25	5.00

2.9 Performa for Zoo keeper's Diary:

ANNEXURE-IV(A)
MANIPUR ZOOLOGICAL GARDEN: IROISEMBA, IMPHAL, MANIPUR
Keeper's diary

Name of Zoo Keeper : _____

Section/Beat : _____

Day and date : _____ // _____

Sl.No.	Enclosure	Species/Individual/Sex	Observation

Signature of the Keeper

Signature of the Animal Supervisor

2.10 Master Plan Layout:



2.11 Annual Inventory Report 2016-17:

Annual Inventory Report Submitted to CZA. Click below to save the file as PDF. Take a printout, sign and sent the same to CL-1.
[Click to save as PDF](#)

Manipur Zoological Garden		2016-2017							
S.No.	SPECIES NAME	ANIMAL NAME	SCIENTIFIC NAME	OPENING STOCK M F U T	BIRTHS M F U	ACQUISITIONS M F U	DISPOSALS M F U	DEATHS M F U	CLOSING STOCK M F U T
Endangered Species (Schedule I and II)									
1	Bird	Hornbill Indian Pied	<i>Anthracoeros malabaricus</i>	0 1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 1 0 1
2	Bird	Pheasant Humes Bar-backed	<i>Symaticus humiae</i>	3 2 0 5	0 0 0	0 0 0	0 0 0	0 0 0	3 2 0 5
3	Bird	Pheasant Kalij	<i>Lophura leucomelanos</i>	3 4 0 7	0 1 0	0 0 0	0 0 0	0 0 0	3 5 0 8
4	Bird	Vulture White Backed - Bengal	<i>Gyps bengalensis</i>	0 0 5 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 5 5
5	Mammal	Badger Ferret	<i>Melogale moschata</i>	0 1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 1 0 1
6	Mammal	Bear Himalayan Black	<i>Ursus thibetanus</i>	6 4 0 10	0 0 0	0 0 0	0 0 0	0 0 0	6 4 0 10
7	Mammal	Cat Jungle	<i>Felis chaus</i>	1 0 0 1	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0 1
8	Mammal	Cat Leopard	<i>Pitonalurus bengalensis</i>	6 5 0 11	1 1 0	1 0 0	0 0 0	0 0 0	8 6 0 14
9	Mammal	Givet Common Palm - Cat Toddy	<i>Paradoxurus hermaphroditus</i>	1 0 0 1	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0 1
10	Mammal	Deer Brow-antlered (Sangal)	<i>Rucervus eldii eldii</i>	9 7 0 16	0 0 1	0 0 0	0 0 0	2 1 0	7 6 1 14
11	Mammal	Gibbon Hoolock	<i>Bunopithecus hoolock</i>	1 0 0 1	0 0 0	0 1 0	0 0 0	0 0 0	1 1 0 2

(Signature)
 Dr. L. Saratohendra Singh
 Veterinary Officer
 Manipur Zoological Garden

(Signature)
 DIRECTOR
 Manipur Zoological G.
 Government of Manipur

12	Mammal	Jackal	<i>Canis aureus</i>	0 1 0 1	0 0 0	0 0 0	0 0 0	0 1 0 1	
13	Mammal	Leopard (Panther)	<i>Panthera pardus</i>	0 1 0 1	0 0 0	0 0 0	0 0 0	0 1 0 1	
14	Mammal	Loris Slow	<i>Nycticebus bengalensis</i>	5 6 0 1 1	1 1 0	0 0 0	0 0 0	6 7 0 1 3	
15	Mammal	Macaque Rhesus	<i>Macaca mulatta</i>	25 15 0 4 0	0 0 0	0 0 0	0 0 0	25 15 0 4 0	
16	Mammal	Marten Yellow Throated	<i>Martes flavigula</i>	1 0 0 1	0 0 0	0 0 0	0 0 0	1 0 0 1	
17	Mammal	Porcupine Himalayan Crestless	<i>Hystrix brachyura hodgsoni</i>	6 2 0 8	0 0 0	0 0 0	1 3 0	5 1 0 4	
18	Reptile	Monitor Lizard / Common Indian	<i>Varanus bengalensis</i>	0 0 3 3	0 0 0	0 0 0	0 0 0	0 0 3 3	
19	Reptile	Python Indian - Rock	<i>Python molurus</i>	1 1 0 2	0 0 0	0 0 0	0 0 0	1 1 0 2	
			Total of Endangered Species	68 50 8 126	2 3 1	1 1 0	3 4 0	68 50 8 127	
Species (Schedule III and IV)									
20	Bird	Cock Water	<i>Gallix cinerea</i>	0 0 3 3	0 0 0	0 0 0	0 0 0	0 0 3 3	
21	Bird	Coot Common	<i>Fulica atra</i>	0 0 6 6	0 0 0	0 0 0	0 0 0	0 0 6 6	
22	Bird	Crow Hill	<i>Corvus macrorhynchos</i>	0 0 0 0	0 0 0	0 0 1	0 0 0	0 0 1 1	
23	Bird	Duck Brahminy - Ruddy Shelduck	<i>Tadorna ferruginea</i>	0 0 2 2	0 0 0	0 0 0	0 0 0	0 0 2 2	
24	Bird	Duck Spotbill	<i>Anas poecilorhyncha</i>	0 0 2 2	0 0 0	0 0 0	0 0 0	0 0 2 2	
25	Bird	Eagle Crested Serpent	<i>Spilornis cheela</i>	0 0 4 4	0 0 0	0 0 0	0 0 1	0 0 3 3	
26	Bird	Egret Cattle	<i>Bubulcus ibis</i>	0 0 10 10	0 0 0	0 0 0	0 0 0	0 0 10 10	
27	Bird	Hen Moorhen Purple	<i>Porphyrio porphyrio</i>	0 0 4 4	0 0 0	0 0 0	0 0 0	0 0 4 4	
28	Bird	Heron Night	<i>Nycticorax nycticorax</i>	0 0 8 8	0 0 0	0 0 0	0 0 0	0 0 8 8	
29	Bird	Heron Pond	<i>Ardeola grayii</i>	0 0 15 15	0 0 0	0 0 0	0 0 0	0 0 15 15	
30	Bird	Heron Purple	<i>Ardea purpurea</i>	0 0 2 2	0 0 0	0 0 0	0 0 0	0 0 2 2	

Dr. L. Saratchandra Singh
DIRECTOR


32	Bird	Kite Pariah/Black Kite	<i>Milvus migrans govinda</i>	0 0 1 1 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 1 1
33	Bird	Moorhen	<i>Gallinula chloropus</i>	0 0 2 0 2 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 2 0 2 0
34	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 0 0	4 4 0 8
35	Bird	Peafowl Green /Burmese	<i>Pavo muticus</i>	2 0 0 2	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	2 0 0 2
36	Bird	Pelican Rosy / White	<i>Pelecanus onocrotalus</i>	0 0 1 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 1 1
37	Bird	Pochard White Eyed	<i>Aythya nyroca</i>	0 0 1 1 1 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 1 1 1 1
38	Bird	Stork Adjutant Teal Common	<i>Leptoptilos dubius</i> <i>Anas crecca</i>	0 0 2 2 0 0 6 6	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 2 2 0 0 6 6
39	Bird	Teal Lesser Whistling	<i>Dendrocygna javanica</i>	0 0 1 7 1 7	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 1 7 1 7
40	Mammal	Deer Barking (Kakar)	<i>Muntiacus muntjak</i>	4 6 0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	2 4 0 6
41	Mammal	Deer Hog	<i>Axis porcinus</i>	1 1 2 0 1 3 1	0 0 3	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 1 2 0 1 3 1
42	Mammal	Deer Sambar	<i>Rusa unicorn</i>	6 1 7 0 2 3	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	6 1 7 0 2 3
43	Mammal	Deer Spotted (Chital)	<i>Axis axis</i>	1 2 2 2 0 3 4	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 2 2 2 0 3 4
44	Mammal	Goral	<i>Naemorhedus goral</i>	1 0 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	2 0 0 2
45	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 0 0	0 1 0 1
46	Reptile	Tortoise elongated	<i>Indotestuda elongata</i>	0 0 1 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 1 1
47	Reptile	Turtle (Unidentified)		4 1 0 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	4 1 0 5
48	Reptile	Turtle Malayan Box	<i>Cuora amboinensis kamaroma</i>	0 0 1 4 1 4	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 1 4 1 4
49	Reptile	Tortoise Asian	<i>Manouria emys</i>	4 4 7 1 1 2 9	0 0 3	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	4 4 7 1 1 2 9
Exotic Species				244	0 0 3	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	2 3 1
				1243							4 3 6 8 1 3 2
											1243

Dr. L. Saratchandra Srineth

	Brown												
		Total of Exotic Species	4 1 0 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	4 0 5	
		Grand Total	116 122 137 375	2 3 4	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	115 119 141 375	
End of Report													

Signature of the Biologist Incharge of the Zoo


 Dr. L. Saratchandra Singh
 Veterinary Officer
 Manipur Zoological Garden


 DIRECTOR
 Manipur Zoological Garden
 Government of Manipur