



No.BDC2-26574/2018

Date : 22.01.2019

**Circular No. 01/2019**

Sub: Forests & Wildlife Department – Alarming rate of death of Captive Elephants in Kerala – Ensuring proper management and welfare of captive elephants – Recommendations of Expert Committee on death of Captive Elephants – Instructions issued – Reg.

- Ref: 1. Circular No. 04/2018 dated 02.05.2018 of Chief Wildlife Warden, Kerala  
2. Circular Nos. 05/2018 dated 10.07.2018 and 07/2018 dated 03.10.2018 of Chief Wildlife Warden, Kerala.  
3. Proceedings Order No. BDC2-16169/2018 dated 28.06.2018 of Chief Wildlife Warden, Kerala  
4. Circular No. 02/2018 dated 27.03.2018 of APCCF (BDC)

Increase in mortality of captive elephants in recent times is suspected to be caused by improper upkeep, poor management (without considering biological requirements) of these pachyderms, lack of timely treatment etc. Instructions on strengthening of implementation of legal provisions and its monitoring were issued vide reference 1<sup>st</sup> and 2<sup>nd</sup> Circulars. An Expert Committee consisting of experienced Veterinarians and chaired by the APCCF (BDC) was constituted by the Chief Wildlife Warden vide reference 3<sup>rd</sup> to critically analyze these deaths and to propose remedial measures. The Committee, among other things, found that prolonged malnutrition, faulty feeding practices, overwork and inadequate rest caused physiological and psychological stress to the animals, which predisposed these animals to many diseases leading to their deaths. The Committee's findings and proposed remedial measures for ensuring welfare of these animals in captivity were critically examined and the following instructions are issued for immediate compliance by all the stakeholders in management of these animals in captivity.

**I. DFOs, WLWs, ACFs (SF)**

1. Shall arrange training to Owners, Mahouts and members of the Festival Committees within their respective jurisdiction and sensitize them on the proper welfare measures for the Captive Elephants, scientific feeding, health care, responsible ownership and the various legal aspects of their management.
2. Ensure proper maintenance of records prescribed in Kerala Captive Elephant (Management & Maintenance) Rules 2012, which is an indispensable part of scientific management of Captive Elephants. Periodic inspections, once in three months, through an officer not below the rank of a Section Forest Officer shall be

conducted so as to ensure proper maintenance of mandatory registers like elephant data book, feeding, movement, work, treatment and vaccination registers of all the Captive Elephants.

3. Submit quarterly reports (March / June / September / December) these inspections to the CF (SF) who in turn shall prepare a consolidated report on these inspections in the Circle and submit his report to the Chief Wildlife Warden once in three months.
4. Should circulate a copy of the balanced diet plan prescribed for scientific feeding of captive elephants (**Appendix I**) to elephant owners/custodians in the district and should ensure that it is pasted in the feeding register and shall monitor the implementation of this.
5. A programme for long term health monitoring with a complete hematological and serum biochemistry analysis is insisted to ascertain the exact health status of the Captive Elephants and Assistant Conservator of Forests (SF) should monitor the compliance of this health monitoring programme by owners. Result of periodical health evaluation as part of long term health monitoring is to be obtained from concerned AFVO/FVO in the format enclosed (**Appendix. II**).
6. Major physical injuries to Captive Elephants are happening during Musth period due to unscientific tethering practices which hampers the natural movement and induce stress and predispose them to many disease conditions. DFOs / WLWs in charge of Departmental Captive Elephants will establish Musth Kraals in each of the Elephant Camp in the Department for management of camp elephants during Musth period.
7. Ensure that animals refractory to treatment even after 5 days of treatment as reported by the owner/custodian, are referred to the opinion of Panel of Expert Veterinarians for ensuring qualified veterinary expertise in treatment and health care of elephants. This Panel of Expert Veterinarians for treatment of elephants should be constituted by Assistant conservator (SF) in consultation with Chief Forest Veterinary Officer, on individual case basis.
8. Instruction regarding post-mortem and handling of carcass of dead Captive Elephants were issued vide reference 4. However, it is observed that autopsy reports of dead Captive Elephants lack uniformity. Supportive historical, toxicological or microbiological reports are not resorted to in many cases and pathological lesions are not properly recorded in many of the reports. These instructions should be scrupulously followed and ACF (SF) shall submit proper video-graphic and photographic documentation of post-mortem process along with report of death of the Captive Elephants. Mahazar should be comprehensive and must also record any external injuries, Musth conditions or such salient details. The video-graphic and photographic documentation should depict the external part of elephant carcass in addition to process of post-mortem. Postmortem report of Captive Elephants should be submitted in the format enclosed (**Appendix. III**).

## II. Custodians / Owners and Mahouts of the Captive Elephants

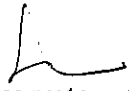
1. Shall attend trainings organized by Kerala Forest Department from time to time on various topics in management of captive elephants such as scientific feeding, health care, responsible ownership and the various legal aspects of their management.
2. It was found that the diet given to the Captive Elephants is very low in protein and vital nutrients. Almost all animals are under-nourished and this condition makes the animal susceptible to many disease conditions. Custodian/Owners and Mahouts shall ensure that Captive Elephants are fed as per the scientific balanced diet plan prepared by the Expert Committee, a copy of which is attached (**Appendix I**).
3. Intense overwork and inadequate rest are labeled as conditions for increasing physiological and psychological stress, which predispose these animals to many diseases. These stress conditions cannot be found out through visual examinations. A programme for long term health monitoring with a complete hematological and serum biochemistry analysis is insisted to ascertain the exact health status of the Captive Elephants. Owners / Custodians of all Captive Elephants should ensure that complete hematological and serum biochemistry analysis with following mandatory tests are conducted once in six months (April and October) for each of the Captive Elephant under their custody as part of long term health monitoring and the report shall be obtained from concerned AFVO/FVO in the format in **Appendix II**. It will be the responsibility of Owner/Custodians of Captive Elephants to conduct these tests at their costs.

(a). HB	(b). TLDC	(c). LFT	(d). RFT
(e). Urine analysis	(f). Dung analysis	(g). Testosterone level in blood	(e). Faecal cortisol level
4. Owners / Custodians of Captive Elephants shall also ensure that periodic foot and preferably dental examination are done by a registered Veterinarian at least once in six months.
5. Treatments of Captive Elephants are now being carried out without any support from clinical-pathological tests or expert panel opinions. Modern diagnostics tests were seldom conducted to assess the condition of the animal. These were the major constraints in the systematic treatment. Animal's refractory to treatment even after 5 days of treatment should be referred to the opinion of Panel of Expert Veterinarians for ensuring qualified veterinary expertise in treatment and health care of elephants. It shall be the duty of owners / custodians of captive elephants to inform concerned ACF (SF) immediately about the details of animals refractory to treatments for ensuring service of Panel of Expert Veterinarians.
6. Major physical injuries to Captive Elephants are happening during Musth period due to unscientific tethering practices which hampers the natural movement and induce stress and predispose them to many disease conditions. Therefore, the owners and

custodians of captive elephants must take action for construction of such Musth enclosures as a long term strategy for elephant friendly Musth management.

### III. FVO/AFVO

1. It is found that effectiveness of treatment is low due to the poor nutrition level of the animal in most cases. Therefore, veterinarians treating the Elephants in disease conditions may recommend special diet whenever necessary for ensuring better effectiveness of treatments given to elephants. These recommendation should be pasted on the feeding register and its compliance shall be monitored.
2. AFVOs/FVO should render necessary help to owners and facilitate for conducting of the hematological and serum biochemistry analysis tests prescribed for long term health monitoring and results should be made available in the format enclosed **(Appendix. II)**.
3. The FVO and all AFVOs conducting post-mortem of Captive Elephants shall strictly follow the detailed post-mortem protocol attached and shall inform the same to CFVO and post-mortem report should include supportive histological, toxicological and microbiological test results. Report preparation and submission must be done by the Veterinary officers in the Forest Department. Details such as pathological lesions, external injuries, Musth condition and treatments given should be included in the post-mortem report.

  
Principal Chief Conservator of Forests (WL) &  
Chief Wildlife Warden, Kerala.

#### Appendix

- I. Model Feeding Schedule for Captive Elephants
- II. Format for Report of periodical health evaluation of Captive Elephants
- III. Format of Postmortem report and post-mortem protocol for Captive Elephants

To

The PCCF & HoFF  
All PCCFs / APCCFs  
All CCFs/CFs (Territorial & Wildlife Circles)  
All DFOs/WLWs/ACFs (SF) for information & necessary action  
CFVO/ FVO/ AFVOs

✓ Copy to: The APCCF (FMIS) for uploading the Circular on official Web site of the Department.

**Model Feeding Schedule for Captive Elephants in Kerala**

Sl. No.	Item	Calves Up to 01 year	Juvenile 01 – 05 yrs	Sub-adult 05 – 15 Yrs	Adult >15 Yrs	Remarks
1	Rice	1 Kg.	1 Kg.	2 Kg.	3 Kg.	-
2	Wheat	0.5 Kg.	0.5 Kg.	1 Kg.	4 Kg.	-
3	Ragi	1 Kg.	1 Kg.	2 Kg.	3 Kg.	-
4	Horse gram	0.5 Kg.	0.5 Kg.	0.5 Kg.	0.5 Kg.	-
5	Green gram / Bengal gram	-	0.5 Kg.	0.5 Kg.	0.5 Kg.	-
6	Common salt	-	100 gm.	100 gm.	100 gm.	-
7	Turmeric powder	-	10 gm.	10 gm.	10 gm.	-
8	Jaggary	-	150 gm.	150 gm.	150 gm.	-
9	Mineral mixture	-	150 gm.	150 gm.	150 gm.	-
10	Green fodder	Below 1.5m Ht Not less than 100 kg.	1.5 to 1.8 m Ht Not less than 150 kg.	1.81 to 2.25 m Ht Not less than 200 kg.	Above 2.25 m Ht Not less than 250 kg. or 5% of its body weight	Green fodder includes a mixture of Fodder grass, Green (Country) grass and tree fodder
11	Lactogen	700 gm.	-	-	-	This can be reduced to half after 1½ years.
12	Glucose	250 gm.	-	-	-	-
13	Karipatti	100 gm.	-	-	-	-
14	Protein B	100 gm.	-	-	-	Not required after 1 year.
15	Water melon	-	-	-	-	Required only during hot months
16	Tender Coconut	-	-	-	-	Required for very young calves at the time of rescue.
17	Sugarcane	-	-	-	-	Required only as a reward during Kumki training
Feeding regime	Concentrate	Divide and feed every hour	6 times	2 to 3 times	2 times	Divide the per day total quantity as per the feeding timings prescribed
	Fodder	Continues	4 to 5 times	4 to 5 times	3 to 4 times	

### Periodic Health Evaluation of Captive Elephant

Certified that I/we have this day the (in words) ..... examined at the request of Sri. .... the Owner / Custodian of the elephant with the description given hereunder and my / our observations and comments are as follows..

1. Name of Elephant :
2. Sex :
3. Age :
4. Name and Address of Owner/Custodian :
  
5. Name of the Mahout :
6. Ownership Certificate number and date :
7. Microchip Certificate number and date :
8. Elephant Data Book number and date :
9. Insurance Policy details

Details	Elephant	Mahout	Cavady	Third party
Policy No.				
Sum Assured				
Valid till				

10. Registers maintenance details :

Sl. No.	Record	Date of last entry	Remarks
1	Vaccination Record		
2	Disease and treatment record		
3	Movement Register		
4	Feeding Register		
5	Work Register		

11. Tusks (Measurement) :

Details (in Cm.)	Outer Length	Mid Circumference	Date of last trimming	Remarks
Right				
Left				

12. Temperament of Animal  
(Docile, Controllable, Aggressive etc.) :

13. Date of last health check-up of the  
Mahout with remarks if any :

14. Health parameters – condition of :

Trunk            Trunk            Oral Cavity            Eyes  
Temporal Glands

Limbs            Nails            Feet/Pad            Wounds/Chain            Dung/Urine

15. Other relevant observations if any :

16. Result of complete blood examination :

(Test to be done as part of monitoring long term health parameters for elephants are CDC (HB, TC/DC, LFT, RFT, Urine analysis, Dung analysis, Testosterone level in blood, Faecal Costisol etc.)

17. Specific abnormalities if any :

18. General observations :

19. Directions to Mahouts / Owner :

20. Remarks if any :

Place:

Date :

Signature of Government Veterinary Doctor  
Name and Registration No.

Address:

(Note : Give notes in separate paper if required)

### Post Mortem Report of Captive Elephant

Date :

A. Autopsy number :

B. Description of the animal:-

Microchip Certificate No. :

Ownership Certificate No. :

Data Book :

Sex : Age : Colour : Height :

Marks of identification

Date and time of death

Address of Owner / Custodian

C. Clinical Abstract :

D. Clinical Diagnosis :

1. Blood smear examination :

2. General findings :

(Rigor mortis, condition of carcass, natural orifices, superficial tumours, wounds, etc.)

3. Skin, subcutis, muscle :

4. Peritoneum and Thorax :

(Position of organs, serous membranes, of fusions, lymph nodes)

5. Pericardium and Heart :

(Appearance, colour, size, chambers valves, main vessels, serous coverings etc.)

6. Respiratory System :

(Gross appearance, weight, section, presence of parasites, lymph nodes, larynx, trachea, bronchi, lungs and pleura)

7. Diaphragm :

8. Thyroid and parathyroid :

9. Liver :

(Colour, size, capsule, substance, bile ducts, vessel, lymph nodes, presence of parasites.)

10. Gall Bladder :

11. Spleen :



12. Kidney, Ureter and bladder : (Appearance, capsule, cortex, pelvis, etc.)
13. Adrenals :
14. Mouth, tongue, pharynx, oesophagus :  
(Appearance, foreign bodies, parasites, examine lymph nodes of head)
15. Thymus :
16. Stomachs :
17. Intestines and pancreas :  
(Mesenteric vessels, lumen, lining, serous coats, contents, lymph nodes, parasites, etc.)
18. Reproductive system and mammary glands :
19. Brain and cord :
20. Report of examination of heart, blood, brain and other impression smears:
21. Summary of report :
22. Histopathological findings :
23. Post-mortem diagnosis and remarks :

Place :

Signature

Date :

Designation

### POST MORTEM REPORT FOR VETRO-LEGAL CASES

Post-mortem Examination on the body of the Captive Elephant belonging to .....  
Or sent by ..... with letter No. ....  
dated ..... in charge of P.C. No. .... received at  
..... A.M./P.M on ..... (date) at  
..... conducted by Veterinary ..... (the place of death)  
of ..... at ..... (Veterinary Hospital /  
Dispensary) on .....

#### POST MORTEM EXAMINATION

##### A. Description of the animal:-

Name or Number :

Sex : Age : Colour : Height :

Marks of identification

B. Precise of the case:-

1. Date and time of death
2. Whether death was sudden or unexpected
3. Symptoms just before death
4. Important information obtainable regarding death
5. Summary of case presented by police
6. Articles which were sent with the carcass

C. External Examinations :-

1. Condition of the carcass
2. Position of the carcass if at the spot of death
3. Rigor mortis
4. Placidity
5. P.M. discolouration
6. Marks of blood
7. Eyelids
8. Eyes
9. Nostrils
10. Muzzle and lips
11. Mouth, gum, tongue etc.
12. Ears
13. Chest
14. Umbilicus (important in new-borne)
15. Mammary glands
16. External genitals
17. Anus
18. Limbs
19. Purification or decomposition
20. Injuries

(Veterinary Officer's opinion as to probable cause and nature of production of injuries – also injuries should be verified by dissection whether they are ante or post-mortem.)

D. Internal Examination :-

1. The Abdomen

- Fat :                                      Colour :
  - Muscles
  - Extravasations
  - Peritoneum
  - Level of diaphragm
  - Position of organs in situ
  - Fluid – its character, colour and quantity
2. The Udder – Quarters and milk sinuses
  3. The Intestines (referring to its different parts)
    - Outer surface
    - Contents and parasites
    - Mucous membranes
    - Ileocaecal valve
    - Rectum
    - Wound or Rupture
  4. The Stomach (in ruminants in the order of compartments)
    - Condition
    - Outer surface
    - Contents and parasites
    - Mucous membranes
    - Wound or Rupture
  5. The Liver
    - Colour, surface and consistency
    - Weight and size
    - Section
    - Capsule
    - Gall bladder and bile duct
    - Wound or Rupture
  6. The Pancreas
  7. The Spleen (First examined in case of sudden death and suspected for anthrax)
    - Colour, weight and consistency

- Capsule
- Section and colour pulp

#### 8. The Omentum and mesenteries

- Condition
- Glands
- Effusion

#### 9. The Kidneys Right Left

- Surface and size
- Weight
- *Colour and consistency*
- Capsule
- Condition of different layers on medial section

#### 10. The suprarenals

#### 11. The bladder

- Outer surface
- Contents
- Mucous membranes
- Wound or Rupture
- Prostrate

#### 12. The Uterus and Ovaries

- Condition
- Size
- Wound or Rupture

#### 13. The Thorax

- Pleura
- Pericardium
- Position or organs, in situ
- Fluid, character and quantity

#### 14. The Heart

- Condition
- Weight

- The Auricle
- The Ventricle
- Valves and endocardium
- Blood vessels
- Wounds or Rupture

#### 15. Lungs

- Condition
- Colour and Weight
- Consistency
- Section
- Wound or Rupture

#### 16. Neck and Head

- Trachea
- Larynx
- Pharynx
- Oesophagus
- Sub-maxillary glands
- Sinuses
- Septum nasi

#### 17. Brain

- Membrane
- Ventricles
- Substance
- Clots
- Weight

#### 18. Spine and Spinal Cord

- Bones Membranes Cord Clots
- Nerve roots

#### 19. Any special features or abnormalities

#### 20. Viscera forwarded for chemical examination

- Stomach contents

- Intestinal contents
- Spleen
- Liver and Kidney
- Sample of spirit used

Opinion as to the cause of death  
(when definite, how arrived at or reasons for it should be mentioned).

Post-mortem commenced at ..... am/pm ended at ..... am/pm

Station :  
Date :

Signature :  
Designation :

1. It should be filled in as the post-mortem examination is proceeded with and no addition should be made to it later.
2. The post-mortem notes should be written, legibly and when there is not enough space under a particular heading it should be entered on a separate flip of paper and attached firmly against the heading.
3. Copy of post-mortem examination should be sent to the controlling officer within 48 Hours after conducting post-mortem examination