

Computer No. 142595
Government of India
Ministry of Environment, Forest and Climate Change
CENTRAL ZOO AUTHORITY

B-1 Wing, 6th Floor,
Pandit Deendayal Antyodaya Bhawan,
CGO Complex, Lodhi Road,
New Delhi – 110 003,
Telephone: +91-11-24367846/51/52,
E-mail: cza@nic.in
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OFFICE MEMORANDUM

Subject: Revised guidelines for housing Rhesus Macaque (*Macaca mulatta*) and Bonnet Macaque (*Macaca radiata*) in rescue centres.

As per National Zoo Policy (1998), the main objective of the zoos is to complement and strengthen the national efforts in conservation of the rich biodiversity of the country, particularly the wild fauna. To achieve this objective, the policy states that – “... zoos shall continue to function as rescue centres for orphaned wild animals, subject to the availability of appropriate housing and upkeep infrastructure...”.

2. Eight species of macaques are found in India. Of these, the Rhesus Macaque (*Macaca mulatta*) and Bonnet Macaque (*Macaca radiata*) occur extensively in a variety of ecological habitats in India. The species have incredibly adapted to live close to human habitations. As a result, they are often in conflict with humans across their distributional range. Owing to the increased instances of human-macaque conflicts, several states have intended to establish long-term care facilities to house animals removed from conflict situations.

3. It is likely the case that rescue centres created exclusively for housing individuals involved in conflict will have high influx and hence might necessitate housing at relatively higher densities. It is also important to note that both the species in question are group living animals and captive housing should account for this.

4. Recognising the need for managing conflict macaque species in facilities meant for their long-term care, the Central Zoo Authority, based on recommendations of an expert committee, formulated revised housing guidelines for Rhesus Macaque (*M.mulatta*) and Bonnet Macaque (*M.radiata*) in rescue centres.

5. Now, in partial modification of the Guidelines for Establishment and Scientific Management of Zoos in India (2008) circulated vide this office Circular 26-2/2008-CZA(M) dated 25th August, 2008, the guidelines for housing Rhesus Macaque (*Macaca mulatta*) and Bonnet Macaque (*Macaca radiata*) in rescue centres is revised.

6. The following stocking density is recommended:

| Species | Maximum number of individuals permissible to be housed per 500m ² | Minimum height of the enclosure |
|---------|--|---------------------------------|
|---------|--|---------------------------------|

| | | |
|--|----|----------|
| Rhesus Macaque (<i>M.mulatta</i>) | 10 | 6 meters |
| Bonnet Macaque (<i>M.radiata</i>) | 10 | 6 meters |

7. The revision is subject to the following:

- i. It is recommended to provide 3-5 feeding/retiring cell with minimum prescribed size of 2.0 (l) x 1.5 (b) x 2.5 (h).
- ii. At least one kraal with a minimum area of 30m² should be provided with each enclosure.
- iii. The enclosure should have removable partitions for easy compartmentalization of the enclosure to facilitate segregation of problem animals.
- iv. Adult males can be paired or integrated in a group after it is ensured that future cohorts have established clear dominance-subordinate relations during a non-contact familiarization period.
- v. Housing of animals in rescue centres must consider the complex relationships and provide for the same, so as to maintain healthy populations with minimal inter- group conflicts.
- vi. A circular shape of the enclosure may be adopted, which may reduce the likelihood of physical harm during aggressive encounters.
- vii. Species-specific needs (ground and arboreal) should be incorporated during enclosure design and enrichment.
- viii. Sufficient space and complexity are essential to allow macaques to engage in a normal range of social and non-social behaviour for adequate proportions of their day. Forage-based environmental enrichment could further diminish aggression by encouraging macaques to focus their attention on foraging tasks. Including a complex system of climbing apparatus would increase the overall space available and provide vantage points and improved scope for avoidance during cage-mate aggression.
- ix. Animals may be provided multiple feeding points. This will ensure uniform feeding of all the individuals irrespective of social hierarchy and physical state. Provision for separately feeding dominant individuals may be made.
- x. Wherever possible, enclosure furniture should be made from organic 'warm' materials, such as wood. The indoor enclosures should have a hay or a grass substrate which helps to keep the animals occupied and prevent stress and infighting. Suitable enrichment in the form of ledges shall be provisioned in the holding areas.
- xi. Breeding of animals housed in rescue centre should not be allowed. Suitable population control measures as per 'Guidelines of establishment and scientific management of zoos in India' 2008 should be implemented.

8. The revised guidelines will be applicable to exclusive rescue centres and off-display areas of zoos housing the said species for long-term care. For other species of macaques, the extant guidelines of the Central Zoo Authority shall remain effective.

9. The revised guidelines for housing Rhesus Macaque (*M.mulatta*) and Bonnet Macaque (*M.radiata*) in rescue centres is effective from date of issue of this O.M. The rest of the Guidelines for Establishment and Scientific Management of Zoos in India (2008) remains unchanged.

This issues with approval of the competent authority.

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(Sonali Ghosh)
Dy Inspector General Of Forest

Distribution to:

1. The Chief Wildlife Warden of all States and Union Territories.
2. The Member Secretary, State Zoo Authority as applicable.
3. The Municipal Corporation as applicable.
4. The Officer in-charge of all recognized zoos.
5. File No.25-1/2002-CZA(Vol-II) (Part)