

## COMMENTARY

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# The Role of Zoos in the Rehabilitation of Animals in the Circus

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In 1998, the government of India enforced a ban on performance/exhibition of 5 species of nonhuman animals: (a) lions, (b) tigers, (c) leopards, (d) bears, and (e) monkeys. The Ministry of Environment and Forests gave the responsibility to the Central Zoo Authority (CZA) for rehabilitation of these animals. Between 1999 and 2001, the CZA created rescue centers for rehabilitation of lions and tigers in the off-display areas of 5 zoos: (a) Bangalore, (b) Chennai, (c) Vishakhapatnam, (d) Tirupathi, and (e) Jaipur. Today, the CZA has rehabilitated 314 lions and tigers from circuses. The CZA has been meeting the expenses toward maintenance (feeding of and providing health care for) of the animals, outsourcing of staff, and maintaining enclosures. This article focuses on the mammoth work that the selected zoos had to carry out in rehabilitating the lions and tigers from the circuses.

Throughout history, humans have hunted nonhuman animals in the wild for consumption and sport. They also have captured these animals to exhibit in zoos for human amusement and enjoyment. Traditionally, a zoo is a place that people visit to satisfy their curiosity and view specimens of exotic wild animals. In the past few decades, however, the focus of zoos has undergone a dramatic change, brought about by two main factors. The first, a change in public attitude and perception toward zoos, began in the early 1960s along with a surge in the animal rights movement. The second factor is the increased difficulty in procuring wild animals—as these animals become more rare in the wild—for exhibition in

zoos. Coupled with this is an increased awareness and recognition, particularly in the last 25 years, of the damage human activity has caused to the earth's biodiversity. This awareness has turned public opinion against acquisition of animals in the wild for exhibition in zoos.

The role of the modern zoo thus has changed from entertainment and amusement to the conservation of endangered species and the education of the public in conservation and environmental issues. Following the Central Zoo Authority's (CZA) admission of rescue centers involved in the rehabilitation and lifetime care into the fold of zoos, animal welfare and wildlife rehabilitation have been added to the list of other objectives; namely, captive breeding, conservation education, research, and reintroduction. However, rescue centers by definition are different from zoos. The term *Rescue center* denotes an establishment for the care of animals specified in the Schedules to the Act<sup>1</sup> and not open for exhibition to the public.

The CZA was established in the year 1992 under the Wild Life (Protection) Act of 1972 to oversee and monitor the functioning of the zoos in the country. Now, standards have been laid down for proper housing, upkeep, and health care of the wild animals in circuses, so that all the welfare factors of the animals are taken care of in captivity (see the Appendix). As a result, improvements also have been made in animal management techniques, with larger, more naturalistic enclosures and the development of animal enrichment methods to combat boredom and stereotypic behaviors. This article focuses on how the Indian zoos have played an important role in the rehabilitation of wild animals from the circuses.

## REHABILITATION OF ANIMALS IN THE CIRCUS

As per the National Zoo Policy of 1998, objectives of the zoos have been identified as follows:

1. Supporting the conservation of endangered species by giving species that have no chance of survival in the wild a last chance through coordinated breeding under ex situ conditions and by raising stocks for rehabilitating the wild animals as, and when, it is appropriate and desirable.
2. Inspiring empathy for wild animals among zoo visitors, understanding and awareness about the need for conservation of natural resources, and maintaining the ecological balance.

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<sup>1</sup>The Schedules of the Act provides protection to wild animals. The Government of India has categorized the species under Schedules I, II, III, IV, V, and VI.

3. Providing opportunities for scientific studies useful for conservation in general and creating a database for sharing among the agencies involved in in situ and ex situ conservation.

Zoos also function as rescue centers for marooned and orphaned wild animals. The establishment of a rescue center within a zoo shall be subject to the availability of appropriate housing and upkeep infrastructure. Where appropriate housing and upkeep are not available, state governments and the central government will ascertain setting up rescue facilities in the off-display area of the zoo, subject to the availability of land. Pursuant to the objective for providing shelter to rescued animals, standards have been laid down for the operation of such centers (see the Appendix).

The Indian zoos faced a challenging task when the Honorable Supreme Court imposed a ban on the use of five species of wild animals; namely, (a) lion, (b) tiger, (c) leopard, (d) bear, and (e) monkey (Government of India Notification No. 395, dated October 14, 1998). The ban was imposed because wild animals were subjected to unnecessary pain caused during performance in circuses, lifelong imprisonment in small cages, and the stress to which they were subjected during transport from one place to another.

Consequent to this ban on performance of wild animals in circuses, the Ministry of Environment and Forests entrusted the responsibility for rehabilitation of these wild animals to the CZA.

The government of India had put restrictions on the infrastructural cost for creating a rescue facility for the wild animals received from circuses. Costs were to be kept to a minimum. Therefore, it was decided that facilities should be created as part of existing zoos in off-display areas. A decision was made to rehabilitate only 300 lions and tigers. In 1999, the CZA invited proposals from the state governments of Tamil Nadu, Karnataka, Andhra Pradesh, Rajasthan, Uttar Pradesh, Gujarat, Madhya Pradesh, and Orissa for creation of off-site, lifetime-care facilities for the animals near the existing zoos. As the number of leopards, bears, and monkeys with circuses were few, it was decided to request existing zoos in the country that already had the expertise in managing captive wild animals.

In the meantime, the Ministry of Environment and Forests had directed all the state governments to take possession of the five species banned for performances in circuses and make arrangements for their rehabilitation in the designated rescue centers. A few of the major circuses, however, had moved to the Indian Courts and the Apex Court for obtaining a stay on the directives on seizing their animals issued by the Ministry of Environment and Forests. However, this action of the circus companies did not hinder the creation of rescue facilities. The rescue facility at Bannerghatta was the first to be created, and animals surrendered by small circuses

**TABLE 1**  
Summary Breakup of Animals Rehabilitated in Various Rescue Centers

<i>Name of the Zoo/Rescue Facility</i>	<i>Total Capacity for Housing the Circus Animals</i>	<i>No. of Lions So Far Rehabilitated</i>	<i>No. of Tigers So Far Rehabilitated</i>
1. Bannerghatta National Park, Bangalore, Karnataka	100	93	5
2. Arignar Anna Zoological Park, Vandalur, Chennai, Tamil Nadu	60	51	8
3. Indira Gandhi Zoological Park, Vishakhapatnam, Andhra Pradesh	60	47	12
4. SriVenkateswara Zoological Park, Tirupati, Andhra Pradesh	60	60	2
5. Nahargarh Biological Park, Jaipur, Rajasthan	50	30	15
	281	42	330

*Note.* There are following two more new facilities that are being set up for rehabilitation of animals: Van Vihar Zoo, Bhopal, which has a capacity for 58 (30 lions, 20 tigers, 8 bears) animals, and South Khairbari, Cooch Behar, West Bengal, which has a capacity for 30 (15 lions and 15 tigers) animals.

**TABLE 2**  
Minimum Prescribed Size for Feeding/Retiring Cubicle for Important Mammalian Species of Captive Animals

<i>Name of Species</i>	<i>Size of Feeding Cubicle/Night Shelter<sup>a</sup></i>			<i>Name of Species</i>	<i>Size of Feeding Cubicle/Night Shelter<sup>a</sup></i>		
	<i>Length</i>	<i>Breadth</i>	<i>Height</i>		<i>Length</i>	<i>Breadth</i>	<i>Height</i>
Family: Felide				Family: Equidae			
Tiger & lions	2.75	1.80	3.00	Wild ass	4.0	2.0	2.5
Panther	2.00	1.50	2.00				
Coloured leopard & snow leopard	2.00	1.50	2.00	Family: Ursidae			
Small cats	1.80	1.50	1.50	All type of Indian bears	2.5	1.8	2.0
Family: Elephantidae				Family: Canidae			
Elephant	8.0	6.0	5.5	Jackal, wolf, & wild dog	2.0	1.5	1.5
Family:				Family: Vivirridae			
Rhinocerotidae							
One-horned Indian rhinoceros	5.0	3.0	2.5	Palm civet	2.0	1.0	1.0

*(continued)*

TABLE 2 Continued

<i>Name of Species</i>	<i>Size of Feeding Cubicle/Night Shelter<sup>a</sup></i>			<i>Name of Species</i>	<i>Size of Feeding Cubicle/Night Shelter<sup>a</sup></i>		
	<i>Length</i>	<i>Breadth</i>	<i>Height</i>		<i>Length</i>	<i>Breadth</i>	<i>Height</i>
Family: Cervidae				Large Indian civet & binturong	2.0	1.5	1.0
Brow antlered deer	3.0	2.0	2.5	Family: Mustellidae			
Hangul	3.0	2.0	2.5	Otters all types	2.5	1.5	1.0
Swamp deer	3.0	2.0	2.5	Ratel/hogbadger	2.5	1.5	1.0
Musk deer	2.5	1.5	2.0	Martens	2.0	1.5	1.0
Mouse deer	1.5	1.0	1.5				
Family: Bovidae				Family: Procyonide			
Nilgiri tahr	2.5	1.5	2.0	Red panda	3.0	1.5	1.0
Chinkara	2.5	1.5	2.0				
Four horned antelope	2.5	1.5	2.0	Family: Lorisidae			
Wild buffalo	3.0	1.5	2.0	Slow loris and slender loris	1.0	1.0	1.5
Indian bison	3.0	2.0	2.5				
Yak	4.0	2.0	2.5	Family: Cercopithecidae			
Bharal, goral, wild sheep, and markhor	2.5	1.5	2.0	Monkeys and langurs	2.0	1.0	1.5

*Note.* The dimensions have been given only in respect to the species that are commonly displayed in zoos. No dimensions for outdoor enclosure have been prescribed for chinkara and chowsingha because of the problem of in-fighting injuries. These animals may be kept in battery type enclosures of the dimensions suggested by the Central Zoo Authority. The designs of enclosures for Schedule I species, not covered in this table, should be finalized only after approval of the Central Zoo Authority.

<sup>a</sup>Given in meters.

TABLE 3  
Minimum Prescribed Size for Outdoor Open Enclosure for Important Mammalian Species  
of Captive Animals

<i>SI No.</i>	<i>Name of the Species</i>	<i>Minimum Size of Outdoor Enclosure<sup>a</sup></i>	<i>Minimum Area Extra per Additional Animal<sup>b</sup></i>
	Family: Felidae		
1.	Tiger and lions	1,000	250
2.	Panther	500	60
3.	Clouded leopard	400	40
4.	Snow leopard	450	50
	Family: Rhinocerotidae		
5.	One-horned Indian rhinoceros	2,000	375
	Family: Cervidae		
6.	Brow antlered deer	1,500	125
7.	Hangu	1,500	125
8.	Swamp deer	1,500	125
	Family: Bovidae		
9.	Wild buffalo	1,500	200
10.	Indian bison	1,500	200
11.	Bharal, goral, wild sheep, and serow	350	75
	Family: Equidae		
12.	Wild ass	1,500	200
	Family: Ursidae		
13.	All types of Indian bears	1,000	100
	Family: Canidae		
14.	Jackal, wolf, and wild dog	400	50
	Family: Procyonidae		
15.	Red panda	300	30
	Family: Cercopithecidae		
16.	Monkeys and langurs	500	20

*Note.* The dimensions have been given only in respect to the species that are commonly displayed in zoos. No dimensions for outdoor enclosure have been prescribed for chinkara (*Gazella gazelle bennetti*) and chowsingha (*Tetracerous quadricornis*) because of the problem of in-fighting injuries. These animals may be kept in battery-type enclosures of the dimensions suggested by the Central Zoo Authority. The designs of enclosures for Schedule 1 species, not covered in this table, should be finalized only after approval of the Central Zoo Authority.

<sup>a</sup>Given in square meters and are per pair. <sup>b</sup>Given in square meters.

were rehabilitated at this facility. By 2000, the other four rescue centers were ready to receive the animals. By November 2004, the CZA had received 255 lions and 59 tigers from various circuses throughout the country (see Tables 1, 2, and 3).

The circus animals' rehabilitation has come a long way in a short time. These rescue centers provide confiscated animals humane treatment and dignified coexistence until their death.

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## APPENDIX

### Recognition and Standards for Rescue Centres As Provided Under the Recognition of Zoo Rules, 1992

Definition (under the Wild Life [Protection] Act, 1972): "Rescue Center" is an establishment for the care of animals specified in the Schedules to the Act and not open for exhibition to the public.

#### Recognition

1. For recognition of a rescue center, an application under section 38H of the Act for recognition of a Rescue Center shall be made to the Central Zoo Authority in Form A.
2. Every application shall be accompanied by the prescribed fee of Rs. 500/-and shall contain clear particulars as to the matters specified in Form A.
3. Before granting recognition to a rescue center under section 38H of the act, the Central Zoo Authority may make such inquiries and require such further information to be furnished, as it deems necessary, relating to the information furnished by the zoo in its application in Form A.

4. The recognition granted to a rescue center shall be subject to the following conditions, namely:
  - 4a) That the recognition, unless granted on a permanent basis, shall be for such period not less than one year as may be specified in the recognition.
  - 4b) That the rescue center shall comply with such standards and norms as are, or may be, prescribed or imposed under the provisions of the Act and these rules from time to time.
5. For renewal of recognition, three months before the expiry of the period of recognition, a recognized rescue center desirous of renewal of such recognition may make an application to the Central Zoo Authority in Form A.
6. The Central Zoo Authority shall grant recognition with due regard to the interests of protection and conservation of wildlife and such standards, norms, and other matters as are specified in Recognition of Zoo Rules.

### Standards

1. The primary objective to operate the rescue center shall be conservation of wildlife, and no rescue center shall allow any activity that is not consistent with the well being of the wild animals.
2. No rescue center shall allow any animal to be subjected to the cruelties prohibited under the "Prevention of Cruelty to Animals Act, 1960 (59 of 1960)."
3. Animals pertaining to species whose performance has been banned under the Prevention of Cruelty to Animals Act, 1960 (59 of 1960), shall not be transported from place to place.
4. Rescue centers may accept wild animals brought to them under intimation to the Chief Wild Life Warden.
5. Every rescue center shall have one full-time officer in-charge of the zoo. The said officer shall be delegated adequate administrative and financial powers to purchase feed and medicine and carry out emergency repair of animal enclosures, as may be necessary for proper upkeep and care of zoo animals.
6. Every rescue center shall have at least one full-time veterinarian to look after the animals. The veterinarian should have minimum educational qualification of B.V.Sc and animal husbandry with diploma in zoo and wildlife animal healthcare management or masters degree in Wildlife Disease and management from a recognized university and should be duly registered with the State Veterinary Council or Veterinary Council of India.
7. All animal enclosures in a rescue center shall be so designed as fully to ensure the safety of animals and caretakers.
8. All animal enclosures in a rescue center shall be so designed as to meet the biological requirements of the animals housed therein. The enclosures shall be of such size as to ensure that the animals get space for their free movement

- and exercise and the animals within herds and groups are not unduly dominated by individuals. In case of species that cannot be kept in groups due to behavioral or biological reasons, separate enclosures shall be provided for each animal. The enclosures shall not be smaller than the dimensions given in Annexures A & B of these rules (see Tables 2 and 3, respectively).
9. Rescue Center operators shall provide appropriate screening between the adjacent enclosures to safeguard against the animals getting exited or stressed because of the visibility of animals in other enclosures.
  10. Every mammal in the rescue center shall be provided food inside a feeding cell/retiring cubicle or feeding kraal. The number and size of feeding cells or kraals also will be such that the dominant animals do not deprive other animals from getting adequate food. The endangered mammalian species shall be provided individual feeding cells or night shelters of the dimensions as specified in the Appendix to these rules. Each cubicle or cell shall have resting, feeding, drinking water, and exercising facilities according to the biological needs of the species. Proper ventilation and lighting for the comfort and well being of animals shall be provided in each cell or cubicle or enclosure.
  11. Each rescue center shall ensure timely supply of wholesome and unadulterated food in sufficient quantity to each animal according to the requirement of the individual animals, so that no animal remains undernourished.
  12. Every rescue center shall provide for a proper waste disposal system for treating both the solid and liquid wastes generated in the zoos.
  13. All leftover food items, animal excreta, and rubbish shall be removed from each enclosure regularly and disposed of in a manner congenial to the general cleanliness of the zoo.
  14. The rescue center operators shall make available a round-the-clock supply of potable water for drinking purposes in each cell/enclosure/cubicle.
  15. Periodic application of disinfectants in each enclosure shall be made according to the directions of the authorized veterinary officer of the zoo.
  16. The animals shall be handled only by the staff having experience and training in handling the individual animals. Every care shall be taken to avoid discomfort, behavioral stress, or physical harm to any animal.
  17. The condition and health of all animals in the rescue center shall be checked every day by the person in-charge of their care. If any animal is found sick, injured, or unduly stressed, the matter shall be reported to the veterinary officer for providing treatment expeditiously.
  18. Routine examination, including parasite checks, shall be carried out regularly; preventive medicines, including vaccination, shall be administered at such intervals as may be decided by the authorized veterinary officers.
  19. The rescue center operators shall arrange for medical check-ups of the staff responsible for upkeep of animals at least once every 6 months to ensure that they do not have infectious diseases that can infect the zoo animals.

20. Each rescue center shall maintain animal history sheets and treatment cards in respect of each animal of endangered species, identified by the Central Zoo Authority.
21. Every rescue facility shall have a treatment room with basic diagnostic facilities, a comprehensive range of drugs, and a reference library on animal health care and upkeep. Each veterinary unit shall have isolation and quarantine wards to take care of newly arriving animals and sick animals so as to minimize the chances of infections spreading to other animals of the zoo.
22. Every rescue center operator shall provide one qualified laboratory assistant/compounder for assisting the veterinarian in the health care of the zoo animals.
23. Every rescue center shall have facilities for restraining and handling wild animals.
24. Any animal who dies in a rescue center shall be subjected to a detailed post-mortem operation by a veterinarian registered with the State Veterinary Council or Veterinary Council of India, and the findings of such operation shall be recorded and maintained for a period of at least 6 years.
25. Each rescue center shall have a proper facility for disposal of carcasses without affecting the hygiene of the zoo. However, carcasses of large cats shall be disposed of only by burning in presence of the director or an officer not below the rank of a curator duly authorized by the director.
26. Every zoo shall keep in its collection only such number of animals and such species for which appropriate housing facility exists. The zoo operators shall be responsible for ensuring that the number of animals of any species does not go beyond the holding capacity of the enclosures available in the zoo and that housing standards are not compromised for keeping the excessive numbers.
27. To safeguard against uncontrolled growth in the population of prolifically breeding animals, every rescue center shall implement appropriate population control measures such as separation of sexes, sterilization, vasectomy, and implanting of pallets.
28. Every rescue center shall keep a record of the birth, acquisitions, sales, disposals, and deaths of all animals. The inventory of the animals housed in each rescue center as of March 31 of every year shall be submitted to the Central Zoo Authority by April 30 of the same year.
29. Every rescue center also shall submit a brief summary of the death of animals in the zoo for every financial year, together with the reasons of death identified on the basis of post-mortem reports and other diagnostic tests, by April 30 of the following year. In case of death of critically endangered species, a report, together with details specified above, shall be submitted to the Central Zoo Authority within 24 hours.