

Guidelines on Minimum Dimension of Enclosures for Housing Exotic Animals of Different Species



**Central Zoo Authority
(Ministry of Environment & Forests)**

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Introduction

The Central Government has through amendment of the Wild Life (Protection) Act, 1972 and notification of Recognition of Zoo Rules, 2009 prescribed minimum standards and norms for housing, upkeep and healthcare of Indian animals housed in the zoos. However guidelines on the minimum dimension on housing of various exotic species of animals and birds are not yet prescribed though there are 137 species of exotic animals and birds are housed in various Indian zoos.

Dimensions and size of animal enclosures

In order to meet above requirement, a sub-committee was constituted to develop the minimum prescribed standards for the exotic animals and birds. Recommendations of the committee following are prescribed:-

- (1) As per the Recognition of Zoo Rules, 2009, the land area to be given to any animal exhibit enclosure should be decided having due regard to the maximum number of animals that can be displayed in the animal enclosures. Many times multiple species can be housed together for display. However, the maximum number of animals that can be displayed in a single enclosure shall vary from species to species.
- (2) The area of the enclosure should have adequate land space for facilitating the animals to have free movement and exercise, adequate area to rest in shade and bask in the sun and have safe refuge from dominant animals and express their natural, social and reproductive behaviour.
- (3) The animal exhibit enclosures should not be given geometrical shapes, as the presence of corners is not congenial to smooth and unrestricted movement of animals. Enclosures with greater depth facilitate the animals to keep a safe distance from the visitors and are always preferable.
- (4) The dimensions and the area of any enclosure should be decided having due regard to various factors mentioned above and the topography and naturalistic features of site identified for construction of the enclosure. The indicative sizes for the outdoor enclosures and feeding cubicles/night shelter of exotic animals as given in Annexure I. The indicative sizes for outdoors are minimum, zoo operator should always try to provide for larger and bigger outdoor to the extent possible.

It is desired that display of animals in a zoo should be done on the concept of nature immersing enclosures with following objectives:

- (i) Landscape around every animal exhibit/ enclosure should comprise of plantations of appropriate tree and shrub species of adequate extent and such shape that the enclosure should not be visible to the visitors from any place other than the animal viewing areas.
- (ii) All the hard exteriors of the enclosure i.e. the enclosure barrier and the frontage of the feeding cells, feeding kraals should be effectively camouflaged through planting of bamboo, dwarf tree species and shrubs.
- (iii) Planting of appropriate trees and shrubs should be done around the animal viewing areas to break up the visitors into small viewing groups.
- (iv) Visitors should be made to move through the green landscape around the enclosure for reasonable distances.
- (v) Planting, appropriate trees species should be done in the enclosure to ensure that entire animal enclosure is not visible to the visitors from any of the viewing points. The animal should be seen to the visitors in near natural settings.
- (vi) Enclosure Barrier - Barrier of every enclosure should be of a design, dimension and material that can effectively contain the animals housed within the enclosure and safeguard against any animal escaping from the enclosure. Due care should also be taken to ensure that the shutters and doors fitted in the enclosure, kraal and feeding cell are of such material and design that these can not be broken/ opened by the animals housed in the enclosure. The barriers of all the enclosures, except the animal viewing area could comprise of natural cliffs (if any), wall, glass, power fence or chain-link fence, etc. of prescribed dimensions. However, in animal exhibit enclosures, provision of a moat could be made in the animal viewing area, to facilitate the visitors in having an unobstructed view of the animals without getting close to them. Wet moats shall normally not be used as enclosure barrier for the viewing area except in case of water loving animals. The total land area under moat should not exceed 20% of the land area of the enclosure.
- (vii) Other safeguards :
 - (a) Due care should be taken to ensure that no power line/ power cable passes over any animal enclosure.

- (b) Enclosure barrier should be erected/ constructed at a safe distance from such trees that can aid the animals to escape from the enclosure or damage the enclosure barrier.
- (c) Where walls are used as enclosure barriers, due care should be taken to plaster the same with such proportion of cement mix that the plaster does not wither away leaving gaps that could be used by the animal as holds for escaping out of the enclosure.
- (d) Live wire overhangs or chainlink should be used to prevent the animals from escaping out of the enclosure.
- (e) Water pipelines and sanitary fittings should be fixed within the enclosure in such a manner that the same can not be used by the animal as aid to escape from the enclosures.
- (f) Adequately deep foundation to be provided for enclosure barrier housing the burrowing species.
- (g) Attention should be given to different barrier materials, fixtures, shutters etc. to see that they are safe and can not be broken or cause injuries to animals.

Annexure I.

Minimum prescribed size for feeding/retiring cubicle for important mammalian species of exotic animal and birds.

S. No.	Name of the species	Minimum size of the outdoor enclosure (sq. mtrs.)	Number of animals /birds to be housed	Size of the feeding cubicles/ night shelter (mtrs.) (Length x Breadth x Height) for each animal/bird.	Minimum size of the water body (if any) (in sq. mtrs.)
1.	Flightless birds, Emu, Cassowary,	500 (upto 10 nos.)	1:1	3 x 2 x 2.5	-
2.	Exotic Pheasants	80 (with minimum size of the aviary – 3 x 3 x 6 m)	1:3		-
3.	Flying birds	80 (with minimum size of the aviary – 3 x 3 x 6 m)	2:2	Height of the aviary should be 6 mts	-
4.	Parrots, Macaws, Cockatoos, Conures, Rosella	80 (with minimum size of the aviary – 3 x 3 x 6 m)	2:2	Height of the aviary should be 5 mts	-
5.	Baboon, Capuchin, Lemur, exotic monkeys	500	1:1	2 x 1.5 x 2.5	-
6.	Marmosets, Squirrel monkey	50	1:1	1 x 1.5 x 2	-
7.	European bear	1000	1:1	2.5 x 1.8 x 2.5	-
8.	Cape buffalo	1500	1:1	3 x 2 x 2.5	-
9.	Chimpanzee, Orangutan, Gorilla	1000	1:1	2.75 x 1.8 x 3	-
10.	Fallow deer, Sikka deer & Lechwe deer	1000	2:3	3 x 2 x 2.5	-
11.	African elephant	5000	1:1	8 x 6 x 5.5	-
12.	Giraffe	1500	1:1	8 x 5.5 x 6	-

S. No.	Name of the species	Minimum size of the outdoor enclosure (sq. mtrs.)	Number of animals /birds to be housed	Size of the feeding cubicles/ night shelter (mtrs.) (Length x Breadth x Height) for each animal/bird.	Minimum size of the water body (if any) (in sq. mtrs.)
13	Hippopotamus	1000	1:1	5 x 3 x 2.5	-
14	Jaguar	500	1:1	2 x 1.8 x 2.5	-
15	African Lion	1000	1:1	2.75 x 1.8 x 3	-
16	African Rhino/ White Rhino	2000	1:1	5 x 3 x 2.5	-
17	Tapir	500	1:1	2.5 x 1.5 x 2.5	100 m ²
18	Tigers (other than Bengal tiger)	1000	1:1	2.75 x 1.8 x 3	-
19	Zebra	1500	1:1	3 x 2 x 2.5	-
20	Wallaby	300	1:1	2.5 x 1.5 x 2.5 The floor should have a provision of ramp.	-
21	<u>Crocodiles/Alligator</u> African Dwarf, American, Australian Freshwater, False gharial Crocodile Morelets, Nile, Siamensis, Snouted, African Slender, West African Dwarf Gavial False, Caiman Spectacled, Yacare & Dwarf.	500	1:1		200 (with a depth of 2 mtrs.)

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22	Iguana	100 (covered partly by chain link)	1:2	No house required	May also keep reptile house/ glass terrarium type enclosure
23	Giant Aldabra tortoise	200	1:1	With 20 sq. mtrs. (small shade from rain & heat)	-
24	Small aviary birds (Love birds, finches, Lorikeet, Java sparrows, Munia, Budgerigar)	15	2:3	Earthen pots of appropriate size for nesting and shelter should be provided.	-

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