



# Central Zoo Authority and Indian Zoos: A Current Overview

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Central Zoo Authority (CZA) (estab. Feb. 1992) is now a dozen years old. The Authority exists at the pleasure of the Central Government, which has reconstituted it four times and will undoubtedly do so again in the immediate future. CZA was set up to tackle many problems, among the most important, the rampant proliferation of zoos without adequate plan or principles, or even financial backing. Many of the then ~ 350 zoos had been set up for political reasons, to satisfy the whims of a Minister or other official and left to deteriorate after the founding function. It is very easy to open a zoo compared to closing one but this task -- closing zoos that could not meet a minimum standard -- was given to the fledgling Authority. This was, part of a process, also led by CZA, to provide oversight for zoo management and, after evaluation, to give technical and monetary support and time, so that the zoos could improve. In this process, which is well established today, if the zoos improve sufficiently, they are granted recognition for three years. If they do not improve within a specified time frame they are deemed "derecognised" and must be closed by their state. Only recognised zoo can operate legally in the country. As of this year there are 164 recognised zoos in the country and 90 recently derecognised zoos. Since a few years after the inception of CZA, many other zoos have been derecognised. This article is an update and overview of some of the last year's activities of Central Zoo Authority.

## Unique in the world

To our knowledge, CZA is a unique zoo organisation in the world. It is the only governmental zoo organisation which has so much control over all of a large nation's zoos. The decision to form CZA was not taken lightly or quickly. It was a process which probably can be dated from about 1955 when the first all India Zoo Superintendent meeting was held and 1972 when a committee was formed. In 1972, a report was formed to visit all major zoos and give a report on their management. The report recommended, among other things, a Central Coordinating Body such as a Zoo Grants Commission. Zoo Outreach Organisation used this report to "remind" government that such a step had been suggested. ZOO and the Nandankanan Zoo published lists of zoos which far exceeded the "official" list. A zoo policy was suggested but due to the gravity of the problem and scope of solution, it was replaced by a proposal for legislation. Changing governments cause this to languish for a time but a timely letter to Maneka Gandhi brought it out in the government marketplace where it remained until it was accepted by Parliament in 1991 and constituted in 1992.

## List Of Recognized Zoos as per Central Zoo Authority as on 31/03/2004

<u>State</u>	<u>Zoo Name</u>	<u>Location</u>
1 <b>A&amp;N Islands</b>	Mini Zoo,	Haddo, Port Blair
2 <b>Andhra Pradesh</b>	Deer Park, Satyam Technology Centre	Ranga Reddy
3	Deer Park, Chittoor Reserve Forest	Chittoor East Division
4	Deer Park, Kesoram Cement	Basant Nagar
5	Deer Park	Nfcl Green Belt, Kakinada
6	G.V.K.Industires	Hyderabad
7	Himayat Sagar Mini Zoo	Distt. Ranga Reddy
8	Indira Gandhi Zoological Park	Visakhapatnam
9	Jawahar Lake Tourist Complex	Shamirpet
10	Kinnerasari Deer Park	Kinnersari
11	Maanas Sarovar-Nature Park	Takellapadu, Guntur
12	Mahavir Harina Vanasthali Deer Park	Vanasthalipuram
13	Mrugaya-Ni Chilkur Deer Park	Chilkur
14	Nehru Zoological Park	Hyderabad
15	Pillalamarri Deer Park	Mahabub Nagar
16	Sakaligattu Deer Park	Nagarjun Sagar
17	Sanghi Deer Park	Sanghi Nagar
18	Sri Venkateswara Zoological Park	Tirupati
19	Vanavigyan Kendra	Hanamkonda, Warangal
20	Vijay Vihar Deer Park	Nagarjun Sagar
21 <b>Arunachal Pradesh</b>	Itanagar Zoological Park	Itanagar
22 <b>Assam</b>	Assam State Zoo Cum Botanical Garden	Guwahati
23 <b>Bihar</b>	Sanjay Gandhi Biological Park	Patna
24 <b>Chatisgarh</b>	Kanan Pandari	Bilaspur
25	Maitri Baagh Zoo	Bhilai
26 <b>Dadra &amp; Nagar Haveli</b>	Deer Park	Satmaliya
27	Vasona Tiger Safari	Vasona
28 <b>Delhi</b>	Deer Park	Hauz Khas
29	National Zoological Park	Delhi
30 <b>Goa</b>	Bondla Zoo	Usgao
31 <b>Gujarat</b>	Fertilizer Nagar Deer Park	Baroda
32	Indroda Nature Park	Gandhi Nagar
33	Kamla Nehru Zoological Garden	Ahmedabad
34	Nature Park	Surat
35	Rajkot Municipal Corporation Zoo	Rajkot
36	Sakkarbaug Zoo	Junagarh
37	Sayaji Baug Zoo	Vadodara
38	Sundervan Nature Discovery Centre	Ahmedabad
39 <b>Haryana</b>	Deer Park	Hissar
40	Mini Zoo,Pipli	Pipli
41	Rohtak Zoo	Rohtak
42 <b>Himachal Pradesh</b>	Dhauladhar Nature Park	Gopalpur

State	Zoo Name	Location
43	Himalayan Nature Park	Kufri
44	Pheasantry & Aviary & Musk Deer Form	Sarahan
45	Pheasantry at Chail	Solan
46	Renuke Zoo / Lion Safari	Sirmur
47 <b>Jammu &amp; Kashmir</b>	Manda Mini Zoo	Ramnagar
48	Mansar Mini Zoo	Mansar
49	Srinagar Deer Park Cum Zoo	Srinagar
50 <b>Jharkhand</b>	Bhagwan Birsa Biological Park	Ranchi
51	Birsa Mrig Vihar	Kalamati
52	Chandrapura Deer Park	Chandra Pura
53	Deer Park	Maithon Dam, Dvc
54	Jawaharlal Nehru Biological Park	Bokaro
55	Satsang Zoo for Children Education	Deoghar
56	Tata Steel Zoological Park	Jamshedpur
57 <b>Karnataka</b>	Bellary Childrens Park Cum Zoo	Bellary
58	Bhutanal Deer Park	Bijapur
59	Children Park & Zoo	Gadag
60	Deer Park, N.M.D.C.Ltd.	Bellary
61	I.P. Sangrahalaya Aragodu	Davangere Tal
62	Kittur Rani Cannamma Nisarg Dhama	Belgaum
63	Kudremukh Mini Zoo	Chickmagalur
64	Mini Zoo A. M. Gudi Balvana	Chitradurga
65	Mini Zoo at Gendekatte	Hassan
66	Mini Zoo Cum Children Park	Gulbarga
67	Namadachilume Deer Park	Tumkur
68	Bannerghatta Natl. Park & Zool Garden	Bannerghatta
69	Pililkula Wildlife Safari at Madushedde	Mangalore
70	Sri Chamarajendra Zoological Gardens	Mysore
71	Tiger & Lion Safari, Thyarekoppa	Shimoga
72	Tungabhadra Dam Mini Zoo	Bellary
73 <b>Kerala</b>	Hill Palace Zoo	Ernakulam
74	Lion Safari Park at Nayyar Dam	Trivandrum
75	SLNJPN Smrity Van	Walayar
76	State Museum & Zoo	Thrissur
77	Thiruvananthapuram Zoo	Trivandrum
78 <b>Madhya Pradesh</b>	Gandhi Zoological Park	Gwalior
79	Kamla Nehru Prani Sangrahalay Zoo	Indore
80	Van Vihar National Park	Bhopal
81 <b>Maharashtra</b>	Aurangabad Municipal Zoo	Aurangabad
82	Maharaja Shahaji Chhatrapati Zoo	Kolhapur
83	Maharajbag Zoo	Nagpur
84	Mahatma Gandhi Rastriya Udyan Zoo	Solapur
85	Nature Park	Karanja
86	Pal Wild Animal Orphanage	Jalgaon
87	Pratap Singh Udyan & Zoo	Sangli
88	Sanjay Gandhi National Park	Borivali (East)
89	Snake Park, Shikshan Mandal	Kolhapur
90	Somnath Prakalpa Zoo	Chandrapur
91	Vasant Smruti Mrig Vihar, Umarsara	Yeotmal
92	Veermata Jijabai Bhosale Udyan & Zoo	Mumbai
93	NBC Pranisangahalay	Pune, Pimpri
94	Peshwe Park	Pune
95	RG Zoo and Wildlife Research Centre	Pune
96 <b>Manipur</b>	Manipur Zoological Garden	Imphal
97 <b>Meghalaya</b>	Lady Hydari Park, Animal Land	Shillong
98 <b>Mizoram</b>	Aizawl Zoo	Aizawl
99	Deer Park, Thenzawl	Thenzawl
100 <b>Nagaland</b>	Zoological Park	Kohima
101 <b>Orissa</b>	Gandhamardan Deer Park	Balangir
102	Gharial Research & Conservation Unit	Tikarpara
103	H.A.L. Deer Park, Koraput	Sunabeda

Indian zoo legislation is probably the strongest zoo legislation in the world. India is certainly the only country which has closed so many zoos, and that too, after a period of giving them specific warning, instructions, and a chance to improve.

CZA specifies minimum standards for all aspects of animal management, including housing, husbandry and health care.

CZA evaluates zoos periodically on the basis of these legal standards, which have been amended twice since the inception of CZA. Some standards were deemed "unfeasible" and made less rigorous, and others were felt to be inadequate and strengthened. The courage of the Authority to look at its own functioning and make changes and the flexibility to change, is its great strength.

CZA identifies threatened species of wildlife which require captive breeding and can require specific zoos to undertake this. CZA also coordinates acquisition, exchanges and loans of animal for breeding. CZA initiated a Studbook Project which identified five key species and pays an external researcher to maintain the studbooks. Zoo design is also part of the mandate of CZA, which has the power to accept or reject any design which does not, vide the technical committee, fit the objectives of CZA for zoos.

CZA organises training for all levels of zoo personnel, either via the Zoo Cell of Wildlife Institute of India or through various zoos in the four regions of India. Two zoo personnel per year always are sent to Durrell Wildlife Preservation Trust for training.

CZA also coordinates research in captive breeding for zoos and their conservation research centre is about to be completed (below).

**CZA Research (LaCONES)**  
A "Laboratory for Conservation of Endangered Species" was initiated following a realisation that India did not have adequate organisation for important biotechnical work for

	State	Zoo Name	Location	
wildlife. Expertise in biotechnology was well established but not for wild animals. In 1998 CZA undertook a Project entitled LaCONES Laboratory for Conservation of Endangered Species. In this project there are three prestigious collaborators, the Department of Biotechnology (DBT), Central Zoo Authority (CZA) and the Government of Andhra Pradesh. The genesis of establishment of LaCONES, however, goes back to 1993 when Zoo Outreach Organisation, organised a mobile laboratory to be brought to India along with veterinary training workshops in three states to impart some of the most upto date technologies for the study of wild animals, in particular identification of pure <i>vis a vis</i> hybrid lions. In exchange, the donors of this equipment desired samples of genetic material for some species, and ZOO applied for a permit for export. No samples were taken out but mischievous people gave wrong reports to the press implicating the Ministry, CZA and ZOO. The genetic material which had been collected was stored in the Madras Veterinary College, where it deteriorated due to poor infrastructure in the college.	104	Indira Gandhi Park Zoo & Deer Park	Rourkela	
	105	Kapilash Zoo	Dhenkanal	
	106	Kuanria Deer Park Nayagarh, For. Div.	Nayagarh	
	107	Motijharan Deer Park	Sambalpur	
	108	Nandankanan Biological Park	Bhubaneswar	
	109	<b>Punjab</b>	Deer Park, Bir Moti Bagh	Patiala
	110		Deer Park, Bir Talab	Bhatinda
	111		Deer Park, Neelon	Ludhiana
	112		Mahendra Chaudhury Zoological Park	Chhatbir
	113		Tiger Safari	Ludhiana
	114	<b>Rajasthan</b>	Bikaner Zoo	Bikaner
	115		Deer Park, Shri Goverdhan Trust	Udaipur
	116		Jaipur Zoo	Jaipur
	117		Jodhpur Zoo	Jodhpur
	118		Panchwati Deer Park	Pilani
	119		Safari Park, Haridasji-Ki-Magri	Udaipur
120		Udaipur Zoo	Udaipur	
121	<b>Sikkim</b>	Himalayan Zoological Park	BulbuleyGangtok	
122		Rustomji Deer Park	Gangtok	
123	<b>Tamil Nadu</b>	Amirdhi Zoo	Vellore	
124		Arignar Anna Zoological Park	Vandalur	
125		Chennai Snake Park Trust	Guindy	
126		Children's Corner	Guindy	
127		Crocodile Rearing Centre	Amaravathi Nagar	
128		Deer Park, Udhaigai, Nilgiris	Ooty	
129		Gangaikondan Deer Park, Neliai	Kattabomman	
130		Hogainakkal Mini Zoo	Dharmapuri	
131		Kurumbapatti Zoological Park	Salem	
132		Madras Croc Bank/Centre for Herpetology	Mahabalipuram	
133		Shivganga Garden Mini Zoo	Thanjavur	
134		V.O.C. Park Mini Zoo	Coimbatore	
135		V.O.C. Park Mini Zoo	Erode	
136	<b>Tripura</b>	Sepahijala Zoological Park	Sepahijala	
137	<b>Uttar Pradesh</b>	Ban Devi Recreation Park	Mau	
138		Cheetal Park, Khatoli	Muzaffar Nagar	
139		Deer Park	Moradabad	
140		Deer Park - Kukrail	Kukrail	
141		Deer Park, Hindalco Industries Ltd.	Sunbhadra	
142		Indira Manoranjan Van ( Deer Park )	Lakhimpur Kheri	
143		Kanpur Zoological Park	Kanpur	
144		Lucknow Prani Udyan	Lucknow	
145		Nawabganj Deer Park	Unnao	
146		Sarnath Deer Park	Varanasi	
147		Triveni Environment Park	Allahabad	
148		Van Prani Udyan, I.V.R.I.	Bareilly	
149		Vinod Van Mini Zoo, Ramgarh	Gorakhpur	
150		Deer Park At Iffco	Bareilly	
151	<b>Uttaranchal</b>	Deer Park, Narain Tewari Dewal	Almora	
152		Malsi Deer Park	Dehradun	
153		Pt. Govind Ballabh Pant High Altitude Zoo	Nainital	
154		Rampur Mandi Deer Park & Aviary	Kalsi	
155	<b>West Bengal</b>	Alipore Zoological Garden	Calcutta	
156		Calcutta Snake Park, Zoological Garden	Badu	
157		Deer Park ( Mini Zoo )	Jhargram	
158		Deer Park Dow Hill	Kurseong	
159		Kumari Kangsabuti Deer Park, Bonpakuria	Bankura	
160		Life Science Corner	Burdwan	
161		Marble Palace Zoo	Calcutta	
162		Mini Zoo Science City	Caluctta	
163		Padmaja Naidu Himalayan Zoological Park	Darjeeling	
164		W. Bengal Snake Park & Laboratory, Badu	24-Parganas N	

Project objectives are listed on the following page :

## List Of Derecognized Zoos as per Central Zoo Authority as on 31/03/2004

State	Zoo Name	Location
1 Andhra Pradesh	Deer Park, Municipal Park	Rajahmundry
2	Deer Park, Tirumala Hills	Chittoor
3	Himabindu Deer Park (Pullaiah Deer Park)	Kurnool
4	Sabari Mini Zoo, Prathipadu	Minerva Nagar
5. Arunachal Pradesh	Miao Mini Zoo	Miao
6	Mini Zoo	Roing
7. Bihar	Chitrakoot (Runkun Vihar) Park, Paharpur	Gaya
8	Jaiprakash Udyan	Bhagalpur Town
9 Chatisgarh	Indira Udyan	Bilaspur
10 Dadra & Nagar Haveli	Khanvel Deer Park	Silvassa
11	Mini Zoo Silvassa	Khanvel
12 Daman & Diu	Deer Park	Diu
13 Delhi	Deer Park	Dilshad Garden, Jhilmil
14 Gujarat	Nature Education Centre	Jamnagar
15	Balbhavan Zoo	Rajkot
16 Himachal Pradesh	Mini Zoo, Kalapul Dharmasalla	
17	Nehru Pheasanry	Manali
18	Rewalsar Wildlife Zoo	Mandi
19 Jharkhand	Mugger Breeding Centre	Muta
20 Karnataka	Antharagange Children Park	Kolar
21	Childrens Mini Zoo	Dharwad
22	Children's Park Sirsi Division	Sirsi
23	Deer Park at Haliyal Town	Uttar Kannada District
24	Deer Park at Shri Kshetra Sogal	Soundatthi
25	Kaiwara Tapowana Chintamani Talluk	Kolar
26	Karadigudda Deer Park	Karjagi
27	Kempambudi Deer Park	Bangalore
28	Kempegowda Vanadhana, Savanadurga,	Magadi Taluk
29	Mini Deer Park	Chickmagalur
30	Mini Zoo at Induval Nature Park (Prakruti Vana)	Mandya
31	Mini Zoo at Kondajji Deer Park	Chitradurga
32	Mini Zoo at Minakanagurkai	Kolar
33	Nature Park	Raichur
34	Sorakayalahalli Children & Deer Park	Kolar
35 Kerala	Crocodile Farm	Calicut
36	Crocodile Farm at Nayyar Dam	Thirunvananthapuram
37	Deer Park at Calicut	Calicut
38	Deer Park, Ponmudi	Thirunvananthapuram
39	Mini Zoo	Kodanadu
40	Parassinikkadavu Snake Park	Kannur
41 Madhya Pradesh	Gharial Rearing Centre, Deori	Morena
42	Katayghat Soormya at Katni	Katni
43	Mrignayani Deer Park	Panchmarhi
44	Nandan Van	Raipur
45	S.F.R.I. Zoo	Jabalpur
46	Vikram Vatika, M.C.Ujjain	Ujjain
47 Maharashtra	Amita Zoo & Breeding Farm	Bombay
48	Amte's Animal Park	Gadchiroli, Allapalli
49	& Orphanage cum Rescue Home	
50	Aviculture And Captive Breeding	Thane
51	Esselworld Snake Park	Worli, Mumbai
52	Suryavan Zoo	Raigad
53 Meghalaya	Tikuji-Ni-Wadi Zoo	Thane
54	Ram Krishan Zoo	Shilong
55 Orissa	Tura Zoo	Akhongini Tura
56	Chilka Deer Park	Puri
57	Deer Park, Papadahandi	Nawarangpur
58	Harishankar Deer Park	Balangir
	Municipality Deer Park	Cuttack

**Monitoring of Genetic variation by modern techniques such as DNA fingerprinting:**  
In order to understand distribution of genetic variation among populations and the relationship among individuals within the population. Further, these techniques can be used in the area of wildlife forensic.

**Establishment of cell/gene resource bank:**  
By developing methods for cryopreservation of cells and semen, eggs and embryos of endangered species. These cells preserved under appropriate conditions could be used in the future for various purpose including cloning.

**Semen analysis:**  
In order to study the seminal profile for selecting animals for breeding programme.

**Determination of ovulation:**  
To achieve success in artificial insemination as well as captive breeding.

**Artificial insemination (AI):**  
Although well established in case of domestic animals, this technique needs to be standardized for use in wild animals. The main thrust will be on non surgical AI which is ideal for zoo conditions. Other options will be intrauterine insemination flowing laparoscopy / laparotomy.

**In vitro fertilization (IVF) and embryo transfer:**  
Involves fusion of spermatozoon with oocyte carried out *in vitro* and the transfer of the resulting embryo to the true or

surrogate mother, or its cryo-preservation for future.	<b>State</b>	<b>Zoo Name</b>	<b>Location</b>
	59	Panthanivas Deer Park	Chandipur, Balasore
	60	Regional Science Centre	Bhubaneswar
<b>Cloning:</b>	61	Taptapani Deer Park	Parlakhemundi
would be	62	Tribal Museum	Koraput
developed only for	63	Deer Park	Berhampur University
those species that	64 <b>Rajasthan</b>	Kota Zoo	Kota
are very much	65	Mrig Van	Chitorgarh
endangered or	66 <b>Tamil Nadu</b>	Manjunatha Mini Zoo ( Mobile ),	Nesapakkam, Madras
extinct.	67	Mini Zoo	Courtallam
Conferences and	68 <b>Uttar Pradesh</b>	Cheetal Grand Motels Pvt Ltd.	Muzaffar Nagar
workshops	69	Deer Park,	Air Force, Memaura
CZA organises or	70	Indira Park	Bijnor
funds others to	71	Katerniaghat Gharial Rehabilitation Centre	Bahraich
organise technical	72	Laxman Pahari Mrig Vihar, ( Deer Park )	Banda
workshops on a	73	Little Scholars Academy	Amroha
variety of topics,	74	Mini Zoo & Breeding Farm	Meerut Cantt.
such a veterinary	75	Van Chetna Kendra	Agra
management of	76	Van Chetna Kendra	Kumarganj, Faizabad
endangered species,	77	Van Chetna Kendra	Vrindavan, Mathura
and other such	78	Van Vihar	Jaunpur
topics.	79 <b>Uttaranchal</b>	Van Chetna Kendra	Brook Land Est, Musoorie
Occasional	80	Vanya Janti Vihar,	Dak Pathar, Dehradun
initiatives:	81 <b>West Bengal</b>	Bellilius Park	Howrah
CZA takes up projects	82	Chitra Touring, J.N.Sarkar Street	Calcutta
and initiatives also	83	Corporation Park, Jogmaya	Howrah
on ad hoc basis,	84	Deer Park, Belari Sri Ram Krishna Ashram	Howrah
whenever an	85	Gar Chumuk (Ulughata) Deer Park	Ulughata
important comes	86	Garmandaran Hooghly Zila Parishad	Hooghly
onto the	87	Krishna Sayar Park Snake Park	Burdwan
conservation stage:	88	Ramakrishna Mission Vidalaya	Student Home, Narendrapur
one example of this	89	Rapheal Academic & Vocational School	Darjeeling
in the last year were	90	Snake Park - Reptile, Research	Digha, Midnapore
the return of 1830 Star		& Snake Bite Treatment	
Tortoises to India from			
Singapore Zoo.			
CZA also maintains a			
website at <a href="http://www.cza.nic.in/">http://www.cza.nic.in/</a>			



## The future ?

India can be very proud of CZA although the desired standard of zoos has not yet materialised in several areas. One dozen years is a significant number both in time span and numerologically, so let us take advantage of ever present and good humoured willingness of CZA and the Ministry of Environment to listen to constructive comments, which is truly one of their great strengths.

### Conservation Education

Although CZA has highlighted the importance of Zoo Education in Zoo Policy, Zoo Act and Zoo Rules, in recommendations from various meetings, and by the formation of two Education Committees, there is to date very little systematic zoo education going on in the 164 zoos. Perhaps half a dozen zoos have followed the diktat of CZA to establish a "zoo cell" or "department". These few are in fact doing more in education than any zoo in this country has done, but these are far from the zoo education departments functioning in other parts of Asia not to mention the developed countries. Despite much verbiage to the contrary, zoo education is simply not a priority in the CZA agenda. There have been many other things to do and it is understood that time and money are limited. However, most of these 164 zoos will not have any role whatsoever in conservation of threatened species other than providing a holding place for wild animals that will not ever be used for any scientific conservation programme. On the other hand, all of those 164 zoos could contribute immensely to conservation education if they were given more training and encouragement to do so. Despite the formation of two Education Committees over the last few years and bringing experts to the table at great expense, not a single initiative came out of these Committees. Many zoos are interested in conducting education programmes. This is well-known to us in Zoo Outreach Organisation because we get requests from as many as 50 zoos every holiday which celebrates animals. These zoos -- for the most part -- do not have education officers, education departments, education budget, etc. It would not be suitable for CZA to fund education for all the country's zoos for all time, but, considering the crucial importance of the topic and the rate at which less fortunate countries with less well-funded zoos are improving, something could be done for this neglected topic.

### Zoo Records

The subject of zoo record keeping has been completely transformed in the last twenty years in most parts of the world. Some other, small countries even in South Asia, such as Nepal, Sri Lanka, Pakistan, etc. have joined the International

Species Information System (known as ISIS pronounced I sis, as in the fertility Goddess), a computer based global record system which has over 604 member zoos in worldwide. Every zoo that is not a "roadside attraction" in the entire world is a member of ISIS and gets immense benefit from having an integrated computer system in which to input and store their animal records. The records are backed up frequently at the main offices of ISIS so that if a zoo loses their data due to individual computer failure, they can always recover it via ISIS. In addition, the computer programme has built in other modules at no extra cost which enables zoos to maintain studbooks, create life-history tables, figure inbreeding coefficients, etc.

The International Species Information System is now undergoing a transformation which amounts to a quantum leap in information dissemination and sharing (See ZOOS' PRINT, Vol. 18, No. 10, October 2003). India is already out of the loop as far as international affairs and cooperation is concerned. Any country who does not join in this new system is going to be left quite dramatically behind. Many attempts have been made to introduce ISIS into India in the past and even recently, but there seems to be no interest at all in this highly useful tool.

#### **Species specific legislation**

Indian zoo legislation is some of the strongest zoo legislation in the world, particularly in the area of inspection, monitoring, etc. However, it provides very vague direction to zoo managers about how actually to manage and care for animals on a taxon or species basis. In United Kingdom, some states in Australia, and some of EU, zoo legislation now includes species specific guidelines, particularly for hard-to-manage or complex groups of animals. In India, because many zoo managers (both directors and vets) are without any experience of animal care at all it is particularly important to have such detailed guidelines -- AND to make them part of legislation to insure that they are followed.

#### **Rhinoceros exchange**

In recent years there have been a number of rhino deaths and few successful births. Some female rhinos have never conceived or have had such a gap between their last conception that the probability of their conceiving is very little. There is a dearth of females also with a long run of all male births. The International Rhino Foundation IRF, an American NGO tasked with coordinating both *in situ* and *ex situ* conservation for all species of rhinos on the earth, has stepped in with a proposal for India. The American Zoo Association zoo maintain a large national zoo population of Indian rhinos but has, according to their analysis, used up as much of the genetic diversity as exists with their current stock. They want four males from India which are unrelated to any of their existing rhinos. This is not difficult as few exchanges have taken place in the last two decades. They are prepared to give four fertile females, all of whom have bred in the recent past, in exchange for the four males and also pay transport. In addition, they are willing to give training in all aspects of rhino husbandry and management. This is a sweet deal for India as the only other alternative for its declining zoo population is to get female rhinos from the wild. Even this is not so good as there is no way of knowing if those females are fertile. Yet, this transaction languishes. CZA has supported it in principle but can't convince the zoos holding the surplus males to agree. These zoos have refused stating that they want some exotic animal like giraffes, chimps, etc. to wow their visitors. CZA claims to be helpless in the matter but the Authority actually carries a lot of clout. It is in such situations that CZA should exercise its powers of persuasion, at least issuing a call to arms for all zoos to urge the state governments of those zoos to think of the national interest instead of their individual zoos.

#### **Wiping atrocities off the face of the country**

The above are some few examples of lacunae still existing in the Indian zoo scenario. In the 12 years since its inception, CZA has done a mammoth task and these examples are in no way meant to detract from that. Possibly no other country in the world could have turned their neglected zoo system around the way India has. Not only have more than 100 bad zoos been closed, also the centuries old practice of travelling menageries has been tackled and practically wiped off the face of the country. Now, CZA has also put its hand to the old problem of confiscated animals with its rescue centres in five regions and the new bear rescue centre which has come up in Agra. The Agra Bear Rescue Centre, a collaborative project of U. P. Forest Department, Wildlife, SOS, CZA and some foreign donors, has taken in some 60 bears and found alternative employment for some of the Kalandars, the community of people who make their living by running "dancing bears". There are about 1000 more of these dancing bear routines in India. The Agra Bear Rescue Centre could be taken as a model for other states with this dancing bear problem. The rehabilitation of Kalandars is not easy and much more needs to be learned and tried before one can be sure they will not go back to their old ways. If every state took up this problem as systematically and enthusiastically as the Agra collaborators, India could wipe this atrocity too off the face of the landscape.



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