

## Roles Zoos need to play

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I am a forester, whose basic interest is wildlife conservation. **It is not my hobby but my profession.** My relationship with wildlife is just like an Indian arranged marriage. Once you are into it, you start liking it, loving it and it becomes your obsession. I worked as Director of National Parks, Wildlife Sanctuaries, Tiger Reserve and Elephant Reserve for 12 years, before entering into zoos in 1997. Maybe because of my background as field wildlifer, my views on zoos are little different.

Humans share the universe with fellow living beings. Maybe with its developed brain, mankind tried to master the universe, and is still trying. In the beginning, man hunted or collected plants and animals for consumption and/or for domestication. Those which could not be domesticated were made captive. So this is how things got started: "if you do not surrender, I will kill you or capture you. Capture or captivity for dominance. Was that not wrong?

In the second half of the second millennium, man started using these collections for conducting studies or research. Research or studies for whom? In the 18th /19th century these animal collections were gradually opened to the public for recreation. Was not that immoral? In the 20th and 21st Century, the zoos started claiming that their objective is education. Is not this selfish? Do we have any right to keep these animals behind bars for educating our kids?

Let me repeat - we do not have any moral right to keep these animals in captivity, unless it is for their own sake. I will be the happiest man, if we really don't have or need zoos. It is unfortunate that we have and do need zoos.

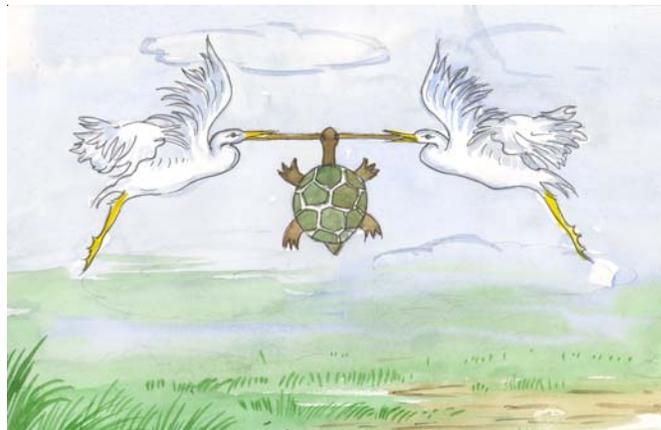
Things have become little too complicated now. Manifold increase in human population has resulted in large scale destruction of wild animals and their habitats. So in the changed scenario, the zoos need to reverse their role from taker from the wild, to giver and collaborator to conserve the wild. Zoos need to play many roles and link up with *in-situ* managers for conservation of wildlife.

In India, zoos are managed as per the provisions of the Wildlife (Protection) Act, 1972; the Recognition of Zoo Rules, 1992; National Zoo Policy, 1998 and National Wildlife Action Plan (2002-16). In the National Zoo Policy, 1998, conservation breeding, rescue and rehabilitation, research for conservation and conservation education are the primary roles assigned to Indian zoos.

I subscribe to the view, zoos are not Noah's Ark. They are just like lifeboats on Titanic. God forbid, if something happen to our ship - the earth, the zoos will be able to save some of the first class passengers. We call them critically endangered wild animal species.

### Conservation Breeding

This is a small story from an ancient Sanskrit text 'Panchtantra'. One turtle used to live in a pond. Rains failed. Pond was over used by human and got dried up. Case of habitat degradation. Pond was also frequented by these two swans. The turtle and the swans were good friends. Swans told the turtle "we know a bigger and better pond. We can move you over there" and that is what is being done in the drawing. Yes, together we can.



Central Zoo Authority was established in 1992, to oversee the functioning of zoos in India and to provide them technical and other assistance for their improvement. After its establishment, the Central Zoo Authority initiated work on conservation breeding, but because of many factors, not much could have been achieved, except few births here and there. Maybe it was too early and we were not ready for it in 1992. Taking note of the past successes and failures, the issue has again been taken up in the Central Zoo Authority recently. We have done lot of soul searching and homework on the issue in the last 2 years. After a series of meetings with *in-situ* wildlife managers, zoo directors, stakeholder, a concept paper on "*ex-situ* conservation breeding of endangered wild animal species" has been prepared in the Central Zoo Authority.

It is felt that critically endangered wild animal species with few hundreds/thousands (or say less than 2500) left in the wild, need to be taken up for *ex-situ* conservation breeding in the zoos on immediate basis. Species with localized distribution should get preference in the scheme of things.

Conservation breeding of critically endangered wild animal species with less than few thousands left in the wild, for proper display, insurance for future exigencies, experimental releases and re-introduction (if need be). Conservation breeding has to be the pri-

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mary role of zoos. We call it *ex-situ* wildlife conservation. Sixty-three different endangered wild animal species have been identified under the programme.

One major zoo within the natural habitat range of each identified species and having expertise and infrastructure has been identified as the coordinating zoo. Two to four more zoos again within habitat range of the targeted species are taking part in the breeding programme as participating zoos. The conservation breeding facilities in the form of off- display conservation breeding centres are being created only in coordinating zoos. Other zoos, in addition to co-ordinating and participating zoos, may continue to display the species in naturalistic enclosures, if available.

The possibility of identifying at least 25 founders for each identified species is assessed from existing captive stock. Efforts are also made to acquire suitable founders from outside, even from wild. The target is to have at least 250 physically, genetically and behaviourally healthy and identifiable individuals of each targeted species in captivity in the world, of which at least 100 must be in India. Planned Conservation Breeding of endangered species in India is a national programme, fully funded by the Government of India through the Central Zoo Authority.

A National Referral Centre (NRC) has been established as Indian Veterinary Research Institute, Bareilly (U.P) for providing specialised services and diagnostic facilities for better health care of animals under the programme. A laboratory (LaCONES) has been established for bio-technological interventions in conservation of endangered species. The facility is working on genetic fingerprinting of founders and also on developing Assisted Reproductive techniques.

The National Studbook Cells (NSC) have been established in the Wildlife Institute of India and Central Zoo Authority. All founders are being marked and history sheets are being prepared. All the major Indian Zoos are joining ISIS/ZIMS from 1st January, 2009. The Conservation Breeding Programme in India is a joint venture of *in-situ* and *ex-situ* wildlife managers. It is a need based activity. It is also part of a Species Recovery Plan of the Ministry of Environment and Forests, Govt. of India. We have also requested WAZA, CBSG and other specialist Groups of SSC/IUCN dealing with different species to co-operate in this very ambitious project. We discussed this in the international workshop on "India's Conservation Breeding Initiative" in February, 2008 at New Delhi.

### Rescue and rehabilitation

Another story - another role. Gautam Budha was meditating under a tree. His cousin Debbrata was out in the jungle for hunting. Debbrata attacked a bird with a arrow. The bird fell down where Budha was meditating. Budha removed the arrow and started treating the bird. In the mean time Debbrata arrived and asked for the bird, as he hunted it. Budha refused to give, as he saved the bird. So friends, question is whose bird is this. Budha's or Debbrata's?

In India, zoos are regularly have to deal with animals rescued/seized because of man-animals conflicts; straying in human habitations; sick/injured or infirm animals; orphaned young and from miscreants and illegal possession.

Seven rescue centres attached to seven different zoos have been established by the Central Zoo Authority for rehabilitation of lions and tigers rescued from circuses at Chennai, Bangalore, Visakhapatnam, Jaipur, Bhopal, Tirupati and Madarihat. 367 rescued lions and tigers are kept in these rescue centres. Central Zoo Authority is paying for all the maintenance including feeding for these animals. There are 3000 plus elephants in private ownerships and in captivity in India. Ministry of Environment & Forests is creating elephant camps for rehabilitation of the seized or abandoned old elephants. You can imagine what types of efforts are needed to keep elephants, that too, in hundreds. Leopards rescue is required mainly because of straying into human habitations or orphaned/ abandoned young. There are about 10 such Rescue Centres in the country with something like 300 leopards. We have also initiated a open top Leopard Safari with some of these. Dancing Bears - mainly Sloth Bears - again number something like 400. Rhesus Monkeys - in thousands and now Vultures - to save them from the effect of Diclofenac. Zoos have created rescue and breeding centres to save them from extinction. This is a huge responsibility and perhaps the second most important role zoos in India have to play.

Research for conservation? Yes, it is needed for wildlife conservation. Many Institutions and zoos are conducting research on many issues in India. We have MoUs with School of Planning and Architecture, New Delhi; Indian Veterinarians Research Institute, Bareilly; Wildlife Institute of India, Dehradun; Centre for Environmental Education, Ahmedabad and Centre for Cellular and Molecular Biology, Hyderabad to work on related issues. We are in process of establishment of an Institute of Zoo management at New Delhi. We call it Centre for Zoo Sciences - to co-ordinate all these activities.

### Conservation Education

Why not? If you already have a zoo. But let us not establish and manage zoos only for this. Unfortunately this is the most accepted role of zoos, today.

