### OCCASIONAL REPORT NO. 15

### **NO MAST KALANDAR**

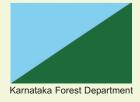


The beginning to the end of dancing with bears

Anand Ramanathan, Ashraf N.V.K and Vivek Menon







Wildlife Trust of India (WTI), Wildlife Trust of India (WTI), is a non-profit conservation organisation, committed to conserve nature, especially endangered species and threatened habitats, in partnership with communities and governments. Its vision is the natural heritage of India is secure.

The International Fund for Animal Welfare (IFAW) works to improve the welfare of wild and domestic animals through out the world by reducing commecial exploitation of animals, protecting wildlife habitats, and assisting animals in distress. IFAW seeks to motivate the public to prevent cruelty to animals and to promote animal welfare and conservation policies that advance the well-being of both animals and people.

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March 2004

An Occasional Report of Wild Rescue Programme







Karnataka Forest Department

# **CONTENTS**

Pret	ace	III
Ackı	nowledgement	iv
Exe	cutive Summary	٧
1	Introduction	1
2.	Background to the problem and project justification	2
3.	Concept, strategy and planning of the project	5
4.	Evolution of project and use of temporary exhibit	8
5.	Design of facilities	10
6.	Development of agreement for project management and	
	recognition of NGO participation	15
7	Husbandry practices followed	16
8.	References	16
9	Annexure - I Evaluation of preliminary proposal	
	by Anand Ramanathan, Program Officer, WTI	19
10	Annexure -II Agreement	28

#### **PREFACE**

India is a land of several thousand years of human civilization. This has led to the spawning of a million traditions, some holy, others customary, few downright weird but all followed by sizeable chunks of our population. Bear dancing is an old tradition that is in parts cruel and in others an abject rendition of the necessities of life that make people earn a livelihood any way they can. The Kalandars earn theirs by street performance and bears and monkeys are accompanying artiste to their show. This report looks at finding a way to end this centuries old tradition that like 'Sati' (another old tradition that is abhorrent is today's society and is therefore banned) needs social ostracisation. Not only is the practice cruel but is also a conservation threat as it deals with sloth bears (Melursus ursinus) that is endemic to the Indian subcontinent.

This project centered around the "wild-within-walls" concept tried out at the Bannerghata National Park. The bears were surrendered by Kalandars who were being offered rehabilitation. Twenty five (25) bears were surrendered during one such drive and this report documents the life-time care facilities that were built to accommodate them. This was also the start of a much more long term project that looked at the holistic issue of Kalandars and bear welfare. In spawning this larger project, this particular project in Karnataka has shown the way.

Vivek Menon Executive Director

#### **ACKNOWLEDGEMENT**

The establishment of the first sanctuary for dancing bears in South India was possible through the joint efforts of various governmental and non-governmental organizations. These include the International Fund for Animal Welfare (IFAW), Animal Welfare Division under the Ministry of Social Justice and Empowerment and the Department of Forests, Government of Karnataka. The project would not have become a reality without these organizations coming together at the right time.

Wildlife Trust of India (WTI) would like to thank Mrs. Maneka Gandhi, the then minister for Ministry of Social Justice and Empowerment, for her initiatives and dedication to the cause of establishment of a bear sanctuary in Karnataka. WTI is also grateful to its international partner IFAW for supporting the project by making a major contribution to the sanctuary's establishment.

The Karnataka Forest Department always evinced a keen interest in the project and WTI would like to thank the PCCF (WL) Mr. S.K. Chakrabarty for his leadership in realizing the project's objectives. We also thank Mr. Vidyasagar, CF (WL) and Mr. Gopal Krishnan, DFO, Bannerghatta National Park for their cooperation and commitment in the field. The Bannerghatta zoo veterinarian Dr. Basavarajappa, Asst. Director, was kind enough to join hands with WTI veterinarian in all matters pertaining to the health care of the confiscated bears.

Lastly, we thank Dr. Valentin Pazhetnov and Mr. Curt Clumpner for participating in one of the governing council meetings and contributing to the development of a management plan for the captive bears.

#### **EXECUTIVE SUMMARY**

No Mast Kalandar addresses the problem of 'dancing' sloth bears in India. More than a thousand sloth bears in captivity were engaged in this cruel tradition of 'bear dancing' for several years before the practice was outlawed. With the prohibition, large numbers of surrendered bears needed to be accomodated in lifetime care facilities. Releasing them back in the wild was not an option as having spent years in captivity in contact with humans, they were considered unsuitable for release, It was not possible to accommodate these displaced bears in zoos either. Ultimately a 'wild within walls' life time care facility project was conceived and developed in Bannerghatta Biological Park (BBP), Karnataka, by the Wildlife Trust of India, International Fund for Animal Welfare, Karnataka Forest Department and Zoo Authority of Karnataka with additional support from Ministry of Social Welfare & Empowerment and Central Zoo Authority, Government of India. The site chosen was a 100 sq km mixed deciduous forest near Bannerghatta National Park. The Bannerhatta Biological Park is well known for its safari exhibits using tigers and lions. The park has wilderness areas with a suitable vegetation with many fruiting trees and anthills. A large, free-ranging area of about 35 acres was cordoned off mostly by a moat, and night enclosures for the bears and accommodation built inside this for the keepers. The keepers were specially chosen from among the Kalandar people to offer them an alternative livelihood while at the same time utilizing their traditional skills of hand-rearing and managing sloth bears.

The project space was designed to allow visitors to see sloth bears in their natural environment without allowing the visits to be intrusive. It was expected that this exposure to bears in their natural environment would help change public attitude by sensitizing people and making them aware of the pain and torture of bear dancing, encouraging conservation and welfare of the sloth bears.

#### INTRODUCTION

"Dancing bears" refer to sloth bears kept in captivity by certain (performing) nomadic communities, called *kalandars*, who make their bears dance and perform tricks to beg for money. This practice of keeping sloth bears (*Melursus ursinus*) for performance is found in many parts of the world especially India, Pakistan, other parts of the subcontinent, central Asia and Eastern Europe including the Balkans.

In India, young sloth bear cubs are captured from the wild by removing them after hunting (killing) of the mothers or when the mother is away in search of food, by certain performing nomadic communities. These communities, who are called *Kalandars* in north India and by other names in various parts of India, earn their livelihood traveling across the country and making young bears street-perform tricks and dances in front of people. Over the decades the nomadic lifestyle of these communities is on the decline due to cultural influences. These communities have located themselves near big cities and tourist destinations to further their livelihood. Apart from tourists, who are a prime source of income for them, Kalandars also travel through towns and cities to dance their bears and beg for money. The dancing bear tradition is widespread in many states of western India (Rajasthan, Gujarat) north India (Himachal Pradesh, Punjab, Haryana, Uttaranchal, Uttar Pradesh, Bihar), central India (Maharashtra, Madhya Pradesh) and south India (Karantaka, Goa, Tamil Nadu, Andhra Pradesh).

These communities capture sloth bear cubs and hand-raise them in captivity. In order to control and manage them in captivity, they remove the canine teeth so of the cubs that they cannot inflict painful bites. They also put metal rings, tied with ropes, in their intranasal septum. The bear

cubs are then subjected to a period of torture and beating, including pulling of the ropes tied to their noses to inflict pain as part of a negative

reinforcement training and to make them submit to the will and dominance of man. Bear cubs often succumb as soon as they are removed from their dens due to dehydration, malnourishment starvation. It is also likely that the cubs that do make it to Kalandar households may also be dying of shock, pain, stress and septic infections caused by nosepiercing and of infectious diseases exacerbated by close proximity to other infected animals, and due to stress and lack of immunity.



Fig. 1 A bear cub with rope tied to the nose rings

# BACKGROUND TO THE PROBLEM AND PROJECT JUSTIFICATION

Sloth bears are endemic to the Indian sub-continent. About 7,000 sloth bears are estimated to be present in the wild (Garshelis *et. al.*, 1998). They are listed in Appendix I under CITES (Convention on International Trade in Endangered Species of wild fauna and flora) and Schedule I of

the Indian Wildlife (Protection) Act (WPA), 1972. With the enactment of WPA (1972), the practice of dancing bears was outlawed by the act of the parliament in India. As per the notification of Govt. of India No. GSR No. 252 Ministry of Environment and Forests, New Delhi and GSR No. 485 dated 2-3-991, the sloth bear is part of the list of banned animals for performance, exhibition and training. Any use is completely prohibited and is in violation of the Prevention of Cruelty to Animals Act, 1960-Performing Animals (Registration) Rules, 2001 and Wildlife Protection Act, 1972. Unfortunately, in the seventies, there existed no places to house the "dancing" bears, as the zoos also would not accept them. There has been an estimated 1,200 dancing bears on the streets in India. The exact numbers are not known, this figure is only a guestimate. All these bears have been poached from wildlife reserves straight from their dens when they were just few weeks old, and forced to 'dance' on their hind legs for hours to entertain tourists and local spectators, who pay money to watch this spectacle that forms a tragic, cruel tradition.



Fig. 2 A Bear dancing performance

Wildlife Trust of India (WTI) along with its partner the International Fund for Animal Welfare (IFAW) decided to make a beginning to end this tradition of forcing captive bears to perform tricks for street entertainment. WTI and its partner IFAW set up its Wild Rescue program in India, which works primarily to save displaced wild animals in distress by rehabilitating and eventually releasing them in their natural environment. The goal of this program is to rescue, rehabilitate and release (including reintroduce) wild animals rescued; provide health care, conserve wildlife and promote humane methods to optimize wildlife welfare. Thus, in keeping with the welfare goals of the program, WTI–IFAW collaborated with the Forest Department, Government of Karnataka, who had shown a keen interest in developing a lifetime care facility for "dancing" bears in Karnataka.



Fig.3 A dancing bear being tied to a tree by a Kalandar

# CONCEPT, STRATEGY AND PLANNING OF THE PROJECT

The project was conceptualized as a "wild-within-walls" drive-through safari in Bannerghatta Biological Park (BBP) near Bangalore in Karnataka. The center was developed to provide a near natural captive facility for rescued 'dancing' bears and to act as a model project contributing to awareness generation and conservation education for the visiting public. This could result in changing public attitudes towards conservation of bears so that they do not patronize such cruel traditions. The center was developed as a collaborative project between Forest Department, Government of Karnataka, Zoo Authority of Karnataka (ZAK), WTI and IFAW with additional funding from Ministry of Social Welfare & Empowerment, and Central Zoo Authority, Government of India.



Fig.4 Natural habitat in Bannerghatta Biological Park where the rehabilitation project was planned

"Dancing" bears are permanently displaced, mutilated and imprinted on the Kalandars, therefore they are not suitable for release back to the wild. From a species' welfare point of view, it is essential to manage the bears in a habitat akin to the wild situation, so that it provides them ample opportunity to forage on natural foods and exhibit natural behaviors. Bannerghatta Biological Park (BBP), which is one among the renowned zoological parks in India, known for its safari exhibits, was found suitable because of its proximity to Bannerghtta National Park (BNP), which is a



Fig.5 Rocky outcrops and undulating terrain in bear habitat in Bannerghatta Biologital Park

mixed deciduous forest of about 100 sq.kms. The BNP has an existing wild population of sloth bears. BBP, by virtue of being carved out of BNP, has many fruiting tree species, other natural vegetation and food for sloth bears. The natural habitat also has a lot of anthills and other invertebrates on which sloth bears can forage. Given the above reasons, and the BBP's

history of managing captive wild animals in open safari concepts, it was considered suitable to develop the sloth bear project at BBP.

The large free-ranging area that would be available to the bears (about 35 acres) was considered optimal for the welfare of the bears; perhaps helping to wean the bears off abnormal behaviors learnt during their long association with human beings and the improper husbandry practices employed by the kalandars.

Possible legal issues, which could arise as a result of confiscating or taking bears away from Kalanadars were also taken into account. Although, the *Kalandars* were already violating the law by poaching bears from the wild, it was suggested that human welfare organizations, especially those working on livelihood issues could intervene on their behalf about the lack of alternate professional opportunities available to these communities. With their only breadwinner, the sloth bears being taken away from the Kalandars to be rehabilitated and used for visitor education, the loss of livelihood may have been considered a drawback in the project. The above arguments arising from different government departments were countered by the ability of the project to significantly change the welfare of the bears in captivity rather than in their existing situation. Further, in order to accommodate the issues relating to livelihood aspects, the project considered it ideal to provide employment to few Kalandars to utilize their knowledge base on hand-rearing and managing sloth bears in captivity.

With the above plan, *Kalandars* in the southern Indian state of Karnataka were cajoled to give up bears in addition to urging the state forest department to strictly enforce wildlife laws. This led to 25 sloth bears ending up in Bannerghata Biological Park in a short span of time.

# EVOLUTION OF THE PROJECT AND USE OF A TEMPORARY EXHIBIT

The initial project proposal developed by the forest department, of Karnataka secured a grant from Animal Welfare Division, Ministry of Social Welfare & Empowerment, Government of India. Since the initial grant was found to be inadequate, the Government of Karnataka sought the help of NGOs like IFAW and WTI for support. IFAW and WTI then evaluated the project's needs and decided to support (evaluation report by Anand Ramanathan, Program Officer, WTI enclosed as Annexure I) the establishment of the sloth bear safari in BBP as it was very much part of the goal of the Wild Rescue program and the mandate of IFAW. The project began in June 2001 as a collaborative project of the Forest Department and the Zoo Authority of Government of Karnataka. Subsequently, the Central Zoo Authority (CZA) also contributed with funding support. The project was finally completed and the facilities inaugurated in November 2002. As part of the project development and



Fig. 6: Inauguration of the bear rehabilitation cente on Nov. 30, 2002

evaluation, inputs from WTI and IFAW were incorporated in addition to the involvement of external consultants in the development of schematic design (Fig. 7 a&b). While, the project was being developed, the BBP had already received 22 bears due to the efforts of local NGOs like People for Animals (PfA), Bangalore, Compassion Unlimited Plus Action (CUPA), and local police. The rescued bears were housed in a temporary enclosure of two acres with two animal keepers to look after the bears (Fig. 8).



Fig.8 Temporary facility at Bannerghatta Biological park to house rescued sloth bears



Fig. 9 A rescued sloth bear housed in a temporary moated enclosure

#### **DESIGN OF FACILITIES**

Since, the "dancing" bears come with a history of abnormal behaviors, in the best welfare interest of the bears, it was essential to phase out human contact with them gradually. This could be possibly achieved more successfully only in large spacious enclosures where the bears have the option to move away from visitors who would be driven around in vehicles, thereby reducing contact with, and conditioning to, visitors significantly. It was also envisaged to allow visitor access to create awareness about the plight of the bears. In addition, education of visiting public could help change callous attitude of tourists towards bears and thereby reduce use of bears for entertainment as a profession. Visitor

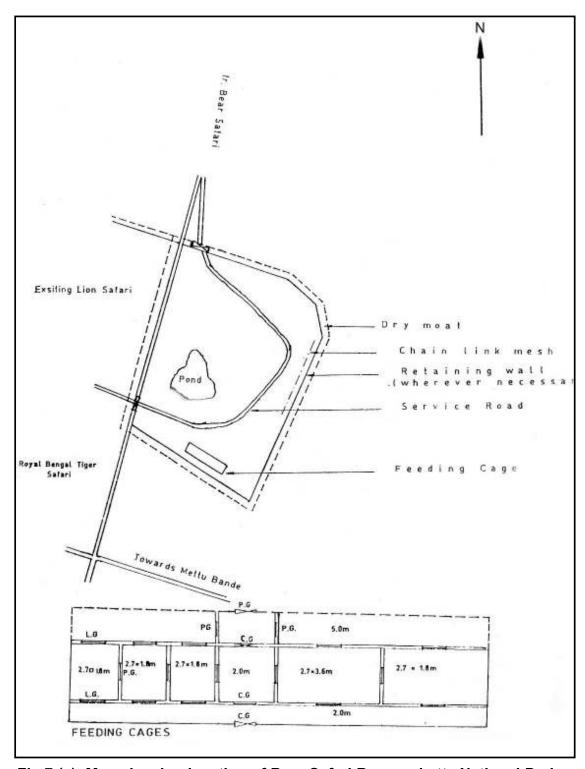


Fig.7 (a). Map showing location of Bear Safari Bannerghatta National Park

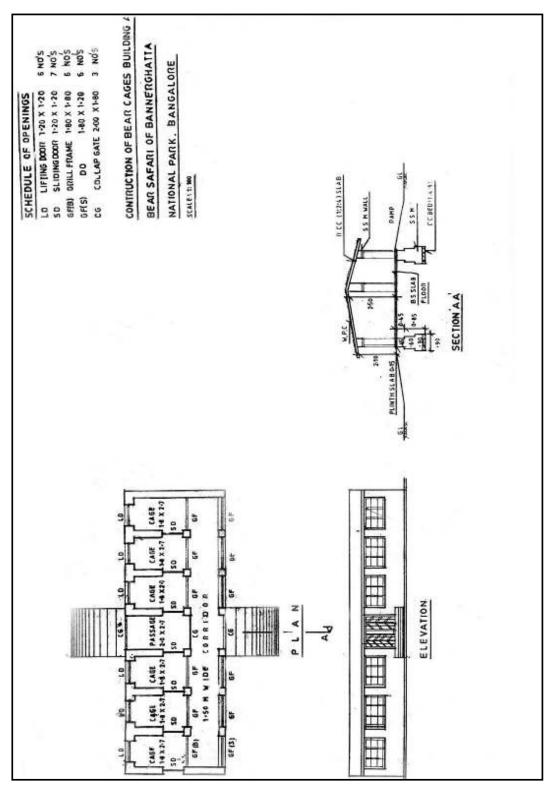


Fig. 7(b) Schematic design layout of the bear cages building at Bannerghatta National Park

entry to the facility would also help in gaining revenue, which would help in managing the project in a sustainable way thus reducing the burden on the government exchequer.

The basic design of the facility constituted three parts:

- Free ranging area for bears
- Holding cages for bears
- Food preparation of kitchen and keeper quarters
- Accessory facilities like bore well, generator, solar panels etc

The barrier employed for the free ranging area was a moat. The moat was planned as a double-walled dry moat lined with slabs. The inside lining of slabs in the moat is inclined on a slant so that the bears that accidentally fall into the moat, could climb out. The slab lining of the outer retaining wall of the moat was vertically inclined to prevent bears from climbing out of the facility. The moat is discontinuous in two locations, which are the entry and exit gates though which visitors would be driven inside the free ranging area to observe bears. Dirt tracks have been created in the free ranging area for vehicles to ply. The tracks may be converted to metalled roads if need be as they can get very dusty sometimes. The holding cages have been planned in one single area to have common keeper access and to enable transfer of bears, veterinary examination and providing health care. Sloth bears are usually solitary but territoriality has not been observed. However, instances of adult sloth bears killing young cubs during times of feeding have been recorded in captivity in BBP. In addition, the rescued sloth bears may be coming from different families and unlikely to be closely associated. Therefore, to preempt any aggression especially during feeding, it was imperative to provide retiring cubicles or feeding enclosures. Thirty individual feeding enclosures, each of (3x2 m), were built. The outlay of enclosures was planned as two rows



Fig. 10 Sloth bears adjust to a new life in the rehabilitation centre



Fig.11 Sloth bears exploring the natural habitats and forage for food

of five enclosures facing each other, thus accommodating 10 bears in each animal house. Access to the free ranging area was made mandatory so that the bears could choose to be in the enclosure or free ranging area at night.

In addition, keepers' quarters were kept close to the animal houses to enable the keepers to stay near the bears. A kitchen and food preparation area was also built in the same area. A watchtower was developed at an elevation to keep a watch over the bears in the free ranging area.

# DEVELOPMENT OF AGREEMENT FOR PROJECT MANAGEMENT AND RECOGNITION OF NGO PARTICIPATION

The project was developed as a collaborative project and in order to recognize this, an agreement was signed between the Department of Forests, Government of Karnataka and Wildlife Trust of India (see Annexure II). The agreement also recognized the need for the participation of non-governmental organizations and this led to the formation of an Advisory Board, specifically for the purpose of development of the center and the action plan. The 'Advisory Board' was constituted with the following members:

- Director, Bannerghetta National Park, Department of Forests, Government of Karnataka
- 2. Deputy Director, Veterinary Services, Bannerghatta National Park, Department of Forests, Government of Karnataka
- 3. Director of Instruction, College of Veterinary Sciences, University of Agricultural Sciences, Hebbal.
- 4. Representative, Institute of Animal Health & Vet.Biologicals, Hebbal

- 5. Representative, International Fund for Animal Welfare
- 6. Representative, International NGO
- 7. Representative, Wildlife Trust of India
- 8. Representative, Wild Rescue, Wildlife Trust of India

The primary role of the 'Advisory Board' was to assist the management, which is essentially the Department of Forests and Zoo Authority of Karnataka, Government of Karnataka in the functioning, evaluation and improvement of the facility. This would include aspects such as exhibit design, enclosure enrichment, veterinary care, behavioural, health, husbandry and nutritional management of the bears.

#### **HUSBANDRY PRACTICES FOLLOWED**

Sloth bears, being omnivores, are easy to maintain in captivity. Based on the season, their diet in the wild consists of ground-living ants and termites and sugar-rich fruits of commonly occurring plants like *Zizyphus mauritiana*, *Ficus glomerata*, *Diospyros melanoxylon*, *Buchanania lanzan*, *Cassia fistula*, *Aegle marmelos*, *Lantana camara*, *Grewia asiatica*, *Cordia domestica*, *Syzigium cumini*, *Phoenix humilis*, and flowers of *Bassia latifolia* and *Madhuca indica*. They also feed on honeybee hives whenever available (Bargali, *et. al.* 2002). Based on this available information attempts were made to provide the sloth bears with as composite a diet as possible. The deciduous forest habitat within the safari enclosures has many of the above wild species of fruiting trees. In addition, fruiting trees were also planted so that bears have more access to natural foods than substitute foods.

Since, most rescued bears had been used to human diets due to their association with *Kalandars*, they were slowly weaned off those diets.

Subsequently, this was substituted with a diet comprising milk, brown sugar, coconut, seasonally available fruits like annona, banana, pineapple, along with jaggery, cooked rice or baked wheat flour. Once the bears learn to forage on naturally available foods, such provisioning of food was kept only as supplementation.

As part of veterinary health management, all rescued sloth bears were given general physical exams and health checks.

It has taken nearly 30 years for a sanctuary to be established for the placement of confiscated "dancing" bears. The project has been unique where it has seen the coming together of government and non-government agencies to make a beginning to the end of the cruel tradition involving "dancing" bears. Hopefully, many more such steps will be taken up in the near future by both government and non-government agencies to make dancing bears a thing of the distant past.

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#### **ANNEXURE - I**

# EVALUATION REPORT OF THE PROPOSED BEAR RESCUE CENTER

# **Background & nature of the proposed project:**

In order to tackle the problem of "dancing bears" and to find a lifetime care option for such bears confiscated from the bear handlers, the Karnataka forest department (KFD) has taken the initiative to develop a bear rescue center.

# What is being planned by the Karnataka forest department?

KFD plans to house upto 30 sloth bears in an area of 40 acres (18 hectares), which is part of the Bannerghetta National Park (BNP), in an open safari at a cost of INR 172.5 lakhs. The department has envisioned enclosing the animals in semi free-ranging enclosures, surrounded by a dry moat with visitor circulation roads inside. The safari will have night shelters or feeding chambers, wherein animals will be taken in at dusk.

# Financial outlay for creation of Rescue Centre for Sloth Bears at BNP during 2000–2001

SI. No	Particulars	Amount in Lakhs
I.	Costs of construction	III Lakiis
1. 1	Survey and demarcation site preparation etc	2.00
2.	Preparation of dry moat	11.25
3.	Providing B. S. Slub lining for dry moat	28.15
4.	Formation of approach road 1.6 Kms	5.00
5.	Formation of service road 1.0 Kms	3.00
6.	Water supply and drainage facilities	5.00
7.	Construction of cages	33.00
8.	Construction of kitchen, store,	00.00
	animal attenders' shed etc.	6.00
9.	Entrance double gate, for vehicle	2.50
10.	Rough stone, cloding construction of wall etc.,	2.00
11.	Store troughs 30 nos	0.80
12.	Construction of water pond	2.30
	Sub total	103.00
II	Feeding and maintenance for one year	
1	Providing annual feeding to animals at	
	Rs. 0.20 lakhs per animal for 30 animals	6.00
2.	Purchase of medicines, sanitary etc.,	1.00
3.	Engaging animal attenders, watch and ward,	
	gate keepers – 10 Nos. 365 x 68.30 x 10 Nos.	2.50
	Sub total	9.50

#### III Maintenance of animals

A deposit of Rs. 2.00 lakhs has to be placed on each animal in the name of Zoo Authority of Karnataka for future maintenance by using the interest accrued on deposit for 30 animals at the @ Rs. 2.00 lakhs per animal

60.00

Sub total 60.00

#### **ABSTRACT**

1 2	Infrastructure  Feeding and maintenance for one year	103.00 9.50
3	Subsequent maintenance deposit	60.00
	Total	172.50

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The proposal has been evaluated by Wildlife Trust of India, by means of a field visit and having met with the KFD officials in order to discuss the project.

# Following are comments on the proposal:

On infrastructure cost: Expenses to be incurred on the construction of moats and slub lining for dry moat can be minimized by going-in for cost-effective replacements like using a combination of chain-link and electric fencing (if not for the entire perimeter of the exhibit) at least for parts of the exhibit. Reducing the number of cages and store troughs too can reduce the expenditure on the same.

On recurring costs: The bank deposit of Rs. 60 lakhs, which has been proposed, can be done away with. A guarantee to give Rs. 6 lakhs per annum can be made, so that it can take care of the recurring expenditure to be incurred. Also, since the bear rescue center is being developed as an open safari, it can be used as a conservation education center, with promotion for public visits, education and entertainment. This in turn can help raise funds, which could help cover the recurring costs.

On husbandry: Currently, BNP houses the 15 odd bears in a two acre dry-moated enclosure and are fed on a diet of boiled rice, cooked wheat, milk and honey. It may be considered to include other components in the diet, including the planting of fruiting to encourage natural feeding behavior. This can also help in reducing the percentage of abnormal behaviors that hand-reared and captive bears are predisposed to.

On veterinary care, quarantine and health management: The veterinary medical needs of the animals should be adequately addressed too. Quarantine and screening for infectious diseases must be considered before housing the animals in the center. Health management and regular screening programs must be incorporated as part of the captive management. A decision tree to decide on captive housing or quarantine or release into the wild should be planned after evaluating the animals for infectious diseases, ability to survive in the wild, behavioral anomalies etc.

On breeding management: As a policy, it may be considered not to breed any animals in the center, unless and otherwise any restocking into the wild is warranted. Additionally, if the animals are found unsuitable for release to the wild, breeding can compound the situation by creating a surplus animal. Hence, all the bears in the center can be sterilized to

prevent any breeding. This will also enable the center to take in more bears after the lifetime of the bears is over, in addition to optimizing the use of resources.

On rehabilitation of kalandars or bear-handlers: As per the proposal, it has been planned to engage as many as 10 kalandars or bear-handlers as animal keepers and gatekeepers for a period of one year. Hence, plans regarding their long-term employment as part of their rehabilitation program must also be drawn up. At this juncture, it must also be clear to all the agencies contributing or participating in this project that removal of a few bears from their owners may not solve the problem of dancing bears on the streets. Only a phased rehabilitation of the people and subsequently that of the animals may be able to offer some solutions to wean the kalandars off this practice of keeping bears.

#### **Funding situation:**

### Funds available from Indian agencies

Ministry of Social Justice & Empowerment,

Government of India – INR 22.5 lakhs

Department of Forests, Government of Karnataka INR 2.5 lakhs

# **Funds sought from**

International Fund for Animal Welfare USD 75000 INR 34.5 lakhs

#### Possible fund availability

INR 59.5 lakhs

### What is being suggested by Wildlife Trust of India?

Depending on the availability of funds and the area available, the number of bears to be housed may be kept flexible. Currently, the 16-20 rescued "dancing" sloth bears can be housed in exhibits, designed with different

vegetation types created in order to elucidate to the visitor about the range of habitat types that this animal is found in and the type of pressures the animals face in their natural habitat in roughly half the area suggested by the BNP. Additional area available can be used in future for any extension or expansion.

# A range of cost cutting measures is being suggested to reduce the infrastructure cost.

#### On barriers:

To use a combination of chainlink and "hot wires" or electrical fences to fence off the safari or some parts of the safari, and keep bears inside instead of moats.

Even if the moats are being planned throughout, a double-walled moat is not necessary. Instead a single-walled moat is suggested, while a gentle slope is given on the inner side. In order to prevent bears from going into the moat, a single line or a multiple line electric fence. Using plants, especially fruiting trees along the safari roads itself can also effectively wean away bears from going near the moat.

# On construction of cages:

Bears need not be taken into the night dens every night. Animals can easily stay outside both during summer and winter. This obviously stresses the bears and restricts the animals' preference to remain outside.

The specification for the bear cages that has been proposed is  $1.8 \times 2.7$  m, while CZA guidelines stipulate  $3 \times 2$  m for any species of bear. The specifications for the bear cages are  $1.8 \text{ m} \times 2.7$  m as proposed by KFD, wherein 5 singly loaded sets of 6 cages each will be built for INR 33 lakhs.

The following is what is being suggested, wherein doubly loaded cages are suggested. This will mean only 3 doubly loaded sets of 10 cages each to be built thereby a reducing 24% area in construction. This will mean a reduction of INR 8.0 lakhs out of the proposed 33 lakhs.

Costs on the construction of cages can come down by reducing the number of cages and by using simple cage design as the one below (where) can also help reduce costs.

#### What is being suggested as feeding enrichment?

- 1. To develop colonies of ground living ants and termites, as sloth bears are primarily myrmecophagus
- 2. To use snags and logs as means to facilitate development of ant and termite colonies.
- 3. To plant species which provide sugar-rich fruits, especially of commonly occurring plants that produce large fruit crops. Some of the species, which would be useful, are listed below. Fruits of the following species like Zizyphus mauritiana, Ficus glomerata, Diospyrus melanoxylon, Buchanania lanzan, Cassia fistula, Aegle marmelos, Lantana camara, Grewia asiatica, Cordia domestica, Syzigium cumini, Phoenix humilis, and flowers of Bassia latifolia are preferred by bears
- 4. To practice apiculture to develop honey-bee hives.

# What is being suggested on visitor attraction & immersion?

The facility can be a drive through safari (but for the duration of drive).

Visitor immersion can be done by making the visitor entry into the Safari not conspicuous (but concealed) and thereby giving a feeling of continuity.

But even making it a walk-through facility will be interesting, with some bridges, some fenced off tunnels where visitors can walk through etc. This feeling being close to bears will be very attractive for the visitors. Bears can be kept from the fence by using similar hot wire fence as used in the barriers for the safari enclosure.

#### What is being suggested for socialisation of bears?

The whole facility can be divided in at least 4 sections by means of a combination of chainlink and electric fencing. The sliding doors on the perimeter of the fences can be used for handling them from the outside of the sections. Males, females, sub adults etc. can be separated this way, while this also gives an opportunity to introduce new bears to the already existing group.

#### Some thumb rules:

Do not keep more than 5 bears per ha (10,000 m<sup>2</sup>).

Try to introduce new animals in a professional way. For this, develop an enclosure adjacent to the bear safari and in direct contact with the outdoor safari. Release the new animals into the enclosure, so that new animals can have contact with other animals, thereby enabling socialisation.

Have a small quarantine building, which will give an opportunity to separate animals if needed.

Provide a perennial source of water by way of a pool or a stream, as water is essential and will benefit the bears in hot summers.

The food should be given as often as possible.five times per day is better

than three times, but as labour is available, it can even be spread more times during the day.

#### It will be ideal if it can be a safari where

- 1. many different vegetation types can be created in order to elucidate to the visitor about the range of habitat types that this animal is found in.
- 2. animals need not be taken into the enclosures all the time
- various types of barriers are used contrary to conventional drymoated enclosures
- 4. feeding, structural and behavioral forms of enrichment are used
- contraception is practiced in order not to increase the number of animals
- 6. animals can be used for visitor education & awareness
- 7. best practice guidelines for rehabilitation can be used

### What has been done by WTI as of now?

- 1. In order to develop species-specific exhibits for bears, a team of exhibit design professionals has been organized.
- 2. A concept plan for the safari has been made.
- The International Bear Foundation and other bear rescue centers & sanctuaries around the world have been contacted for inputs into the development of the center.
- 4. A video of the International Bear Foundation sanctuary and all their actions that have taken place in the last few years, is being obtained from them to be given to KFD.
- 5. The above recommendations have been communicated to KFD.

#### ANNEXURE II

#### AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE COLLABORATIVE PROJECT ON "REHABILITATION OF SLOTH BEARS" AT BANNERGHATTA NATIONAL PARK IN KARNATAKA

This Agreement is entered into on this Eighth day of June, 2001

#### BETWEEN

The DEPARTMENT OF FORESTS, GOVERNMENT OF KARNATAKA, hereinafter referred to as the "FIRST PARTY" (which term and expression shall unless repugnant to the context mean and include its successors, administrators, executors, legal representatives and assigns) on the ONE PART

#### AND

The WILDLIFE TRUST OF INDIA, hereinafter referred to as the "SECOND PARTY" (which term and expression shall unless repugnant to the context mean and include its successors, administrators, executors, trustees, legal representatives and assigns) on the OTHER PART

WHEREAS the FIRST PARTY is a government department engaged in the administration of protection and management of wildlife in the state of Karnataka, and matters incidental or related thereto.

AND WHEREAS the SECOND PARTY is a charitable trust registered under the Income Tax Act 1961 under Section 12 (A), and is engaged in the promotion of conservation and welfare of wildlife and matters incidental thereto.

AND WHEREAS both the PARTIES are desirous of establishing the collaborative project on "REHABILITATION OF SLOTH BEARS" at Bannerghatta National Park in Karnataka, a rehabilitation center for housing rescued sloth bears and to provide them with food, shelter, veterinary care, treatment and other rehabilitation measures and to do all acts necessary to relieve them of any form of suffering.

AND WHEREAS the SECOND PARTY also desirous in additionally providing technical support and guidance on aspects such as exhibit design, enclosure enrichment, veterinary care, behavioural, breeding, health, husbandry and nutritional management of sloth bears, for the collaborative project on "REHABILITATION OF SLOTH BEARS" at Bannerghatta National Park in Karnataka

AND WHEREAS both parties for that purpose desire to put their Agreement in writing.

NOW THEREFORE THIS AGREEMENT WITNESSETH AS UNDER:

#### ARTICLE I

Both parties agree that the following is the action plan and the scope of work related thereto:

(a) Rescue sloth bears, which have been astray, injured, maimed, orphaned, sick and/or confiscated from street entertainment industry,

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- (c) Promote ethical and humane methods of handling, maintenance in captivity, and veterinary care,
- (d) Rehabilitate the sloth bears for as long is deemed necessary and consider release back into wild of the sloth bears found suitable for the purpose.

#### ARTICLE II

Both parties also agree to the following in order to execute the action plan and the scope of work related thereto:

- (a) Collaborate at all stages of the execution of all mutually agreed activities, and shall not withhold from each other relevant information or otherwise hinder the execution of the action plan.
- (b) Establish the sloth bear rehabilitation center as an open safari in an area of 33 (thirty-three) acres in Bannerghatta National Park, which is a property of the FIRST PARTY.
- (c) Call the collaborative project as "Center for Rehabilitation of Sloth Bears".
- (d) Strive to provide the following to the rescued sloth bears:
  - i. Assessment of conservation and rehabilitation potential
  - Quarantine and comprehensive disease screening
  - iii. Shelter facility for rescued bears
  - iv. Ethical and humane methods of handling, transport, confinement, husbandry and management
  - v. Veterinary medical management involving treatment of diseases
  - vi. Behavioural, environmental, feeding, social, structural and others forms of enrichment
- vii. Rehabilitation measures for the rescued sloth bears
- (e) Display logos of all the collaborating parties at the sloth bear rehabilitation center.

#### ARTICLE III

- (a) The FIRST PARTY, for the purpose of the efficient management of the center, will oversee the management of the sloth bear rehabilitation center, under the auspices of Zoo Authority of Karnataka.
- (b) The FIRST and SECOND PARTIES, for the purpose of the development of the center and the action plan, agree to constitute an 'Advisory Board' consisting of the following members:
  - Director, Bannerghetta National Park, Department of Forests, Government of Karnataka
  - Deputy Director, Veterinary Services, Bannerghatta National Park, Department of Forests, Government of Karnataka
  - Director of Instruction, College of Veterinary Sciences, University of Agricultural Sciences, Hebbal
  - Representative, Institute of Animal Health and Veterinary Biologicals/ ADMAS, Hebbal
  - 5) Representative, International Fund for Animal Welfare

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6) Representative, An international NGO of repute with experience in bear rehabilitation

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- 7) Representative, Wildlife Trust of India
- 8) Representative, Wild Rescue, Wildlife Trust of India
- (c) The 'Advisory Board' will assist the FIRST PARTY by provision of inputs and be fully be fully involved in aspects such as exhibit design, enclosure enrichment, veterinary care, behavioural, breeding, health, husbandry and nutritional management of the sloth bears for the functioning, evaluation and improvement of the facility.
- (d) The representatives thereof of the 'Advisory Board' shall be nominated by respective Heads of the institutions / NGOs in consultation with the Chairman of the 'Advisory Board', who is the Director, Bannerghetta National Park, Department of Forests, Government of Karnataka.
- (c) It is also agreed by both parties that the 'Advisory Board' shall meet at least twice a year, and as necessary. This 'Advisory Board' will function for the period of the agreement.
- (f) The FIRST PARTY will nominate the convenor-cum-secretary of the 'Advisory Board'. The said board shall formulate policies, guidelines, rules and regulations regarding the management of the center and matters related thereto and ensure the smooth functioning of the center.

#### ARTICLE IV

- (a) The FIRST PARTY shall be fully responsible for the day-to-day running of the center, in addition to being primarily responsible for the development and proper execution of the action plan.
- (b) The First Party shall obtain all the necessary permits for the establishment of the aforesaid center, including for any such other complementary actions as may be initiated elsewhere in Karnataka in relation to the said center.
- (c) The FIRST PARTY will be responsible for the recurring and non-recurring costs of the aforesaid center for the period of the agreement and will make provisions and allocation of funds for further fixed periods of time before the termination of this agreement.
- (d) The FIRST PARTY will create and monitor budgets, which shall be put before the 'Advisory Board' for approval.
- (c) The FIRST PARTY will put up all the facilities for the sloth bears, which shall be built according to the housing and husbandry needs of the species, and will be approved by the 'Advisory Board'.
- (f) The FIRST PARTY agrees to rehabilitate at least six 'Kalandars' or bear-handlers by way of employing them in the project as animal keepers.

#### ARTICLE V

(a) The SECOND PARTY will provide all reasonable technical assistance towards aspects such as exhibit design, enrichment, breeding and health management of sloth bears, pertaining to the aforesaid center in collaboration with the representatives of the FIRTY PARTY.

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- (b) The SE'COND PARTY will facilitate the FIRST PARTY in securing tile funds to meet the initial infrastructural costs towards the establishment of the center as mentioned in the project proposal submitted with the SECOND I'AR'I'Y
- (c) The project personnel and/or other representatives of the SECOND PARTY in collaboration with the representatives of the FIRSTY PARTY shall also initiate or provide al reasonable technical assistance to any mutually agreed collaborative project or program intended to benefit the center.

#### ARTICLE VI

In the event of any dispute, disagreement or differences between the PARTIES hereto arising out of this Agreement and its implementation, the parties shall try to amicably resolve it. However, failing such resolution, both parties by mutual consent shall appoint an arbitrator. The decision of the arbitrator appointed by mutual consent of both the PARTIES shall be final and binding on both the PARTIES.

#### ARTICLE VII

This Agreement shall come into force with effect from the date of its signature and shall be valid for a period of three years unless either of the parties gives to the other a written notice, three months in advance of its intention to terminate this Agreement anytime before the period of expiry this Agreement. This Agreement may be renewed for a further period on mutual consent of both parties. It may also be modified or amended by the mutual consent of both the parties.

IN WITNESSES WHEREOF, the PARTIES above named have hereto signed this Agreement and affixed thereto their seals.

Executed at Bangalore on the day and month and year herein above written-

Vinanaow

(Wild Life) Bangalore - 560 003

S. K. CHAKRABARTI

Designation:

Designation:

EXECUTIVE DIL

Name in full: VIVER ME NON

#### **OTHER WTI PUBLICATIONS**

#### A. OCCASIONAL REPORTS

#### **Tribal Territories:**

Impact assessment around the Jarawa tribal reserve, middle and south Andaman Islands

#### **Captive Concerns:**

Health and management of captive elephants in Jaipur

#### **Jumbo Express:**

A scientific approach to understanding and mitigating elephant mortality due to train accidents in Rajaji National Park.

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#### **Elephant in Exile:**

A rapid assessment of the human-elephant conflict in Chhattisgarh

#### Ganesha to Bin Laden:

Human-elephant conflict in Sonitpur district of Assam

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Health and management of captive elephants at Kaziranga elephant festivals

#### Dog and Bull:

An investigation into carnivore-human conflict in and around Itanagar Wildlife Sanctuary, Arunachal Pradesh

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Otters in the river Cauvery, Karnataka

#### **Silent Stranglers:**

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#### **Search for Spectacle:**

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#### B. CONSERVATION ACTION REPORTS

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#### Goats on the Border:

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Rehabilitation of Asiatic black bears in Arunachal Pradesh

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Survey of Tibetan Antelope (*Pantholops hodgsonii*) and Wild Yak (*Bos grunniens*) in Ladakh, Jammu & Kashmir, India

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Attacks on humans by leopard and Asiatic black bear in the Kashmir valley – Analysis of case studies and spatial patterns of elevated conflict

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The campaign to save Vhali, the Whale Shark (Rhincondon Typus) in Gujarat

#### C. CONSERVATION REFERENCE SERIES

#### Wildlife Law:

A ready reckoner - A guide to the Wildlife (Protection) Act 1972

#### Back to the Wild:

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#### Right of Passage:

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Responding to poisoning in Asian elephants – A field guide

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Conserving the forest and wildlife of the Bodoland Territorial Council

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#### D. OTHERS

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An international campaign to save the endangered Tibetan Antelope

#### Tiger Bridge:

Nine days on a bend of the Nauranala

**Emergency Relief Network Digest 2005 – 2006** 

**Emergency Relief Network Digest 2006 – 2007** 

#### **Action Tiger:**

Tiger action plans of 12 tiger range countries

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'No Mast Kalandar' recounts the need for and steps taken to create a life time care facility for sloth bears rescued from their captive 'dancing profession' with Kalandars, a nomadic community that has traditionally persecuted and trained bears to street perform. The project to rehabilitate these freed 'dancing' sloth bears was conceived and implemented as a 'wild within walls' facility in Bannerghatta Biological Park, Karnataka.



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