



**CENTRAL ZOO AUTHORITY**

**APPLICATION FOR SMALL GRANT FELLOWSHIP**

**Please read appendix I for instructions (last page of this document)**

**Form must be filled in English**

Internal Project Number (To be filled in by CZA): .....

**1. GENERAL INFORMATION**

Date of application: ..... 9-10-07

Name of the Zoo / organization: .....SEPAHIJALA ZOO, TRIPURA, INDIA.....

Contact person/ project leader: ...Director, Sepahijala Zoo, P.O -Bishalgarh, Dist- Tripura(West), Pin-799102.

**2. CLASSIFICATION OF PROPOSAL**

Improvement of the Zoo	Scientific Management	Ex-situ Conservation	Welfare of animals	of the Any other, please specify
	YES	Yes	Yes	

**3. DATE OF INITIATION OF THE PROJECT**

9-10-07

**4. DURATION OF THE PROJECT: TWO YEARS**

**5. LOCATION OF THE PROJECT.**

Region /State : ..SEPAHIJALA ZOO, NORTH EASTERN INDIA, TRIPURA,

Closest main city  
.....AGARTALA.....

**6. STAFF INVOLVED IN PROJECT (please include Curriculum Vitae of the individuals):**

1. Name (+ title) + Zoo/Organization.....AJIT KUMAR BHOWMIK, DIRECTOR, SEPAHIJALA ZOO .....

Period to be spent on the project from: .....1-12-07 ..... to: ...30-11-09.....  
 (day/month/year/) for ..4500 HOURS..... hours/week  
 Role / Function in the project: ..... TO MANAGE ZOO SCIENTIFICALLY .....

2. Name (+title) + Zoo/Organization: ..... Dr. SUKANTA BANIK, TRIPURA UNIVERSITY .....

Period to be spent on the project from: .....1-12-07..... to: .....30-11-09..... (day/month/year/)  
 for 4500 ..... hours/week  
 Role / Function in the project: ..... TO MANAGE ZOO SCIENTIFICALLY .....

3. Name (+title) + Zoo/Organization: .....

Period to be spent on the project from: ..... to: ..... (day/month/year/) for .....  
 hours/week  
 Role / Function in the project: .....

**7. PROJECT PROPOSAL**

**7a. Background and history of the project (max. 300 words)**

Sepahijala zoo is the only zoo in the country which is situated with in a Sanctuary i.e at Sepahijala one can experience advantage of ex-situ and in-situ functioning. It is situated about 33 KM away from the state capital, Agartala. It has now covered in an area of 68 hact. . The park is composed of natural vegetation originally existed through out the area on which Sepahijala Wildlife Sanctuary has been declared.

Sepahijala Zoo came into existence initially in the year 1972 with setting up of one deer park and it was extended slowly over the years by introduction of more animals for Ex-situ conservation and creation of awareness among the masses particularly the school children on the values of wildlife life & necessity to conserve it. Animals have been kept both in open moated enclosures and in conventional enclosures. It consists of five distinct sections Viz (1) Carnivores (2) Primates section (3) Ungulate section (4) reptile section (v) Aviary section. We have been housing and rearing 56 species and a total of 636 animals (7 species of Reptiles, 24 species of Birds and 25 species of Mammals) as on 31-3-07 of in our Zoo. This zoo is proud of conducting successful captive breeding programme of Clouded leopard, Leopard cat, Binturong, Spectacled Langur, Toddy Cat, Pied Hornbill, Himalayan Black Bear, Small Indian Civet. As per list of critically endangered species supplied by CZA on 14-2-03, Sepahijala zoo is rearing 39 species of critically endangered species. The Central Zoo Authority has placed. Sepahijala Zoo among one of the 22 large Zoos in India

The animals maintained here are mostly rare and endemic species of the North East India. The species like Binturong, Clouded leopard, Phayre's leaf monkey, pig tailed macaque, Leopard, Pied Hornbill, Pig tailed macaque, Common Palm Civet, Small Indian Civet, Himalayan Black Bear, Indian porcupine are breeding here comfortably. About 1.5 lakh visitors visit the zoo annually. There is a small veterinary unit without having facility for Operation theatre, Post mortem room, and laboratory. There are both conventional type of enclosures and mooted enclosures. The animals are fed balanced diet as per feeding schedule approved by the Health Advisory Committee constituted for Sepahijala Zoo and found to be healthy and happy with open mooted enclosures than that of old type of enclosures. To maintain the species in the captivity, we need to formulate the basic requirements of each species in the captivity like feed intake, enclosure utilization, behavioural habits, breeding behaviour etc. For fulfilling the above requirements particularly for Clouded leopard, Binturong in the captivity, initiation of the project is felt necessity.

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**7b. Main problem or question (max 200 words)**

Due to fragmentation of natural habitats of the wild animals and ruthless removal of shelter and killing of animals by the human being, quite a good nos of species have become extinct from earth and many more are awaiting for becoming extinct due to the undesirable activities of Homo-sapiens (man). There has been worldwide cry for conservation and protection of biodiversity for the very existence of mankind as with the increasing pressure of population biodiversity has been getting depleted day by day. The significant factor is the diminishing of wild animals with great rapidity. The habitat being shrunk and fragmented rapidly their conservation has become arduous which warrants to have conservation in captivity. The global environmentalists have observed this process of diminishing of species seriously and called for conservation of endangered species by Captive breeding and reintroduction in the natural habitat by way of restoring the habitat side by side. Sepahijala zoo is one of such institution where more than 50 species of wild animals have been kept for conservation and protection. Zoo is a support to the conservation efforts and also a last chance of survival of any species.

The existing infrastructure remains totally busy for up-keep of animals in the captivity and do not have scope to take up research works with the animals even though the same is need of the hour. As our authority is keen to maintain the zoo scientifically hence the scope is open to us by the mobilization of fund from CZA. Hence the present proposal is initiated.

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**7c. Aims and objectives of the project (max 200 words)**

Clouded leopard (*Neofelis nebulosa*) is highly endangered one, which is recorded in scheduled-I of Wildlife (Protection) Act, 1972. It is distributed all over North East India, Nepal, Burma, and South China & Malayan. During the census carried out in the year 2002 in the State, it indicates the presence of 31 nos clouded leopard in the state. Census carried out at Sepahijala Sanctuary in the year 2005-06 indicated presence of 9 numbers of individuals through direct sighting & in 2003-04 there was 4 only sighted directly in Sepahijala Wildlife Sanctuary. On account of rampant destruction of its habitat, its population has been declining rapidly. Even though the animal is nocturnal in habit and the exact population as per record of the field census do not justify the actual still we have the trend of the population estimate. And such number is also not enough to maintain viable population of this species. Such poor population calls for taking immediate measures for its conservation to prevent from disappearance of the species from this region. The CZA, Govt. of India has identified Sepahijala Zoo for Conservation Breeding programme on Clouded leopard along with four other species which a right step to arrest further depredation of the species. Clouded leopard National Park has also been declared here to facilitate the in-situ conservation of the species.

The management of animals in the captivity is a science, which require research base. At present, adequate records are not available for maintaining the species for conservation. For scientific management of the species in the captivity and also to cater the biological needs of the species exhaustive research is required for each and individual species for their proper management in the captivity. Sepahijala Zoo is housing a very good nos of rare and endangered species and to create the data base on their actual feeding, requirement, enclosure ,breeding requirement are the main objectives., To facilitate the breeding programme as well as to maintain the species in-situ also we require database for the Clouded leopard.

**7d Methodology and/or proposed activities (max 300)**

For taking up such activities, a full time research scholar shall be engaged from Tripura University. The Head of the Department of Zoology of Tripura University have kindly agreed upon to extend all technical support to conduct such research works. The methodology would be selected in consultation with the Head of Zoology Department and would be implemented.

**8. COLLABORATION (IF ANY): Please specify with which institutions/organisations will collaboration take place and type of the collaboration & support should also be indicated.**

	NAME	LOCATION
NGO's		
Ministries	.....Dr. SUKANTA BANIK.....	
Universities	....Tripura University, Surzamani Nagar, West Tripura district, Tripura Pin-799130.....	
Research institutes / or any other	.... ARDD Deptt. Govt. of Tripura.....	
Type of the collaboration and support..... Scientific support from Tripura University and Technical Inputs. from ...ARDD.....		

**8a. Support from host zoo: (Please specify what support the host zoo will be providing, it could be in the form of laboratory, equipment, space or personnel).**

The Zoo administration will render all available support for taking up such research works in the zoo. At present the zoo do not posses laboratory. One modern hospital with all modern amenities is under active consideration of the CZA. However, we would be in a position to utilize the available facilities of state ARDD Department for our research purposes. The captive Clouded leopards would be targeted species and the zoo authority would allow to collect required datas as per requirement till completion of the project.

**9. BASIC TIME SCHEDULE**

It has been decided to take up the project field works wef 1-12-07 and to be completed with a period of two years i.e within 30-11-09. Since the animal is nocturnal in habit hence recording of observations are to be made both during day time as well as during nights.

**10. OUTPUT**

**10a. Describe which output can be expected from this project (reports, (scientific) publications, management plans, educational tools, etc. etc.) and how they will be disseminated.**

The feeding behaviour, breeding behaviour, enclosure space utilization and the requirement of furnishing etc. would be expected as output for scientific management as well as for education purpose. These would be disseminated by publication, workshops etc.

**10b. Describe the (practical) relevance of this project for ex-situ conservation and scientific management of animals in general**

The project report would effectively help us for managing successful breeding programme in future in the zoo as decided by the CZA. The feed requirement, exact housing environment and breeding aspects would be prime output we require to implement from the result of the project. It would also help to manage the in-situ population effectively in the nearby National Park.

**10c. Describe how results/output will be evaluated (timelines and benchmarks)**

The results/ outputs would be evaluated by way of further experiment in the Zoo over the same species of clouded leopard. By doing so the the results/outputs would be evaluated. The process would take three months.

**11. FEASIBILITY (How well is the execution of the project guaranteed? Possible risks such as logistics, permits, other finances and how are these risks dealt with).**

The project would be a real one for implementation of its result since both ex-situ conservation as well as In-situ conservation of Clouded leopard stands in one place. There would be no risk for execution of the project if fund flow in time if floated from CZA.

**12. FINANCIAL ASPECTS (please include budget overview (in Rs.) in an appendix)**

	07-08	During 08-09	Total
1. Salary/honorarium of Research Scholar			During the year
for two years @ Rs. 5500/- per month for			
24 month: (12+12) months.			Rs.0.66 lakhs.
	Rs. 0.66 lakh		Rs. 1.32 lakhs
2. Cost of conveyance etc.			Rs.0.125 lakhs
	Rs. 0.125 lakhs	Rs. 0.25 lakhs	
3. Stationery articles including Xerox			Rs.0.125 Lakhs.
	Rs. 0.125 lakhs	Rs. 0.25 lakhs	
4. Cost of apparatus/equipments			Rs.0.20 Lakhs
			Rs. 0.20 lakhs
			Rs. 0.40 lakhs
5. Wages of workers for helping the			
Scholar for two years i.e 730 days			

@ Rs.60/- per day		Rs. 0.22 lakhs
Rs. 0.22 lakhs	Rs. 0.44 Lakhs	
6. Publication/ documentation/ in/c photography during two years		Rs. 0.50 lakhs
Rs. 0.50 lakhs	Rs. 1.0 lakhs	
6. Misc. expenses		Rs. 0.10 lakhs
		Rs. 0.10
		Rs. 0.20
lakhs		
lakhs		
<b>Total</b>		
	<b>Rs.3.86 lakhs</b>	

**12a. Other financial sources applied for and/or guaranteed**

- In case of Forest Dept./Corporation/Trust: please also mention the details
- Indicate if source is applied for or already guaranteed :

No other financial sources applied or granted.

**2. Name Department / Institute: Self**

Address: .....

Amount applied for or guaranteed:

Rs. 3.86 lakhs

**3. Name Department / Institute:** .....

Address: .....

Amount applied for or guaranteed:

Rs.3.86 lakhs

**13. DECLARATION**

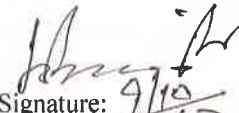
The information submitted in this application is true, to the best of my knowledge. Should any significant developments arise after this application is made, I shall notify the Member Secretary, Central Zoo Authority. .

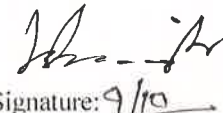
**SIGNATURE**

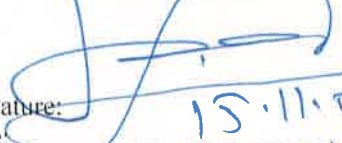
Director/Curator/  
Officer-In-charge of the Zoo  
(Supervisor of the Research)

Research Project Leader

Chief Wildlife Warden/  
Municipal Commissioner/  
Owner Zoo Operator

Signature:   
Date: 9/10/07  
**A. K. Bhowmik, T.F.S.**  
**Director**  
**Sepahijala Zoo**

Signature:   
Date: 9/10/07  
**A. K. Bhowmik, T.F.S.**  
**Director**  
**Sepahijala Zoo**

Signature:   
Date: 15.11.07  
**(Dr V.K Bahuguna)**  
**Chief Wildlife Warden, Tripura**  
**Government of Tripura**

09/10/07

Small Grant Fellowship - Central Zoo Authority