



GOVERNMENT OF INDIA

सर्वतः सरकार

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

Central Zoo Authority

केन्द्रीय विडियाघर प्राधिकरण

BY EMAIL & BY POST



F. No. 9-3/2011-CZA(NS) | 2965/2018

To

Sh. Kartick Satyanarayan
Co-founder, Wildlife SOS,
D-210, Defence Colony,
New Delhi - 110 024
(Email: kartick@wildlifesos.org)

By Post/Email
DATE: 24.04.2018

Sub:- Research project titled "Study on utilization pattern by Sloth bear and enrichment requirement in non-conventional captivity" - regarding.

- Ref:-**
- (i) Your office letter no. /WSOS/ABRF/780 dated 06.07.2017.
 - (ii) This office letter no. 9-3/2011-CZA(NS)/1035/2017 dated 07.06.2017.
 - (iii) This office letter no. 9-3/2011-CZA(D)/2017/2016 dated 11.07.2016.
 - (iv) Your office letter no. /WSOS-O46 dated 11.04.2016.
 - (v) This office letter no. 9-3/2011-CZA(NS)/554/2016 dated 04.04.2016.
 - (vi) This office letter no. 9-3/2011-CZA(NS)/6775 dated 03.03.2015.
 - (vii) Your office letter no. nil dated 05.02.2015.
 - (viii) This office letter no. 9-3/2011-CZA(NA)/2604 dated 10.04.2013.
 - (ix) This office letter no. 9-3/2011-CZA(NA)/785 dated 10/14.05.2012.

The Central Zoo Authority had signed an MoU with Wildlife SOS organization for the above mentioned project to be completed within 24 months from 30.11.2011 for grant of Rs. 5.95 lakh. As per the MoU, the first installment for an amount of Rs. 3.00 lakhs (Rupees three lakhs only) was released to the Wildlife SOS during the month of November, 2011.

2. To assess the progress made towards achieving the project objectives, the Central Zoo Authority had requested you to submit annual progress report for the year 2011-12 vide reference (ix). However, no response has been received from your end.

3. The Central Zoo Authority again requested you to submit annual progress report for the year 2011-12 vide reference (viii). Again no response has been received from your end till 05th February 2015. The Wildlife SOS vide reference (vii) has submitted the utilization certificate for the first year grant and requested to release the balance amount of Rs. 2.95 lakhs towards the 2nd year of the study. Further, informed that the Utilization certificate has been send to the Central Zoo Authority during December, 2012 and December, 2013 with request to release the 2nd year grant. However, annual progress report of the research project has not been submitted.

4. In response to this, the Central Zoo Authority vide reference (vi) has informed you that as per the Article 5 of the signed MoU the 30% of the total approved grant will be released on the submission of the

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first year progress report and appraisal by the Central Zoo Authority. Accordingly, the Central Zoo Authority has requested you to submit annual progress report for the project at the earliest. However, no progress report was submitted from your end.

5. The Central Zoo Authority vide reference (v) has again informed you that the progress report of the project has not been received from your end and requested to submit the detail final report of the project for approval on or before 15.04.2016 to this authority, or surrender the grant released towards the project with interest accrued to this effect.

6. In response, the Wildlife SOS has submitted the progress report (2012-2013) of the project and requested to consider the release of the second installment of the approved grant vide reference (iv). The progress report has been reviewed at the Central Zoo Authority office. The observations and suggestions on the report were communicated to you vide reference (iii). It was also requested to complete the study as per the MoU according to methodology approved to achieve the aim of the project and submit a detail report again to the Central Zoo authority at the earliest for further necessary action. However, again no report has been received from your end in spite of one year duration.

7. The Central Zoo Authority vide reference (ii) again requested you to submit a pre-final draft report of the project as per approved methodology with in a period of one month for review and approval or surrender the earlier released grant towards the project with interest accrued thereon. The Wildlife SOS, New Delhi vide reference (i) submitted a revised report of the aforesaid study.

8. The pre final draft report has been reviewed at the office of Central Zoo Authority. It was observed that the amendments/suggestions communicated by the Central Zoo Authority earlier on the report vide reference (iii) were not incorporated in the report. The observations were also made on the report as per the signed MoU and the proposal approved for the carrying out the study. The observations are mentioned below:

S. No.	Objective as per MoU	Work conducted	Remarks
Article 1 (i)	The Sloth Bear Rescue Facility, Agra/ Wildlife SOS will take up all four objectives in study as mentioned in the proposal and will achieve the outcome as stated.	On perusal of the report, it was observed that four objectives mentioned in the proposal and MoU, have not been completely achieved. Although the efforts has been made towards achieving the objectives but the same has not been done completely on scientific pattern. The proposal says that the Scan sampling will be carried out <u>at intervals of five minutes</u> and behavioural parameters such as animal location and few animal activities (Resting, playing, fighting, repetitive pacing, climbing, continuous rubbing, drinking, digging, vocalization, licking its paws, or other parts, eating, growling, etc. will be recoded in	Not carried out as per the MoU.

		<p>predesign formats. However, the study says that the Scan sampling was carried out <u>at intervals of 30 minutes</u> and behaviour parameters such as animal location and few animal activities (Resting, Sleeping and Moving) has been recorded without any proper detailed analysis with regard to time frame. The use of predesigned formats used for collection of the data during the study is not clear, as no format has been enclosed/ referred in the report.</p>	
Article 1 (ii)	<p>The Sloth bear Rescue Facility, Agra/Wildlife SOS shall collect all relevant information of Sloth bear on <u>behaviour ecology, enrichment & housing of sloth bear in captivity from individuals, libraries and internet.</u></p>	<p>It is not evident from the report that this objective has been achieved scientifically as only brief information on bear biology has been included in the report. The focus of the study should have been to collect information on <u>behavior, ecology, enrichment and housing of Sloth bear in captivity.</u></p> <p>However, the report does not include any detail relevant information of Sloth bear behaviour ecology, enrichment and housing of sloth bear in captivity from individuals, libraries or internet.</p>	Not carried out as per the MoU.
Article 1 (iii)	<p>The Sloth bear Rescue Facility, Agra/Wildlife SOS will <u>review existing enrichment practices, upkeep and veterinary care of sloth bear in Indian zoos and at abroad based on literature,</u> and also implement feasible practices as proposed in the proposal. Review of the existing housing and enrichment practices <u>would be one of the chapters of the proposed study.</u></p>	<p>As per the objective, review of the existing housing and enrichment practices would be one of the chapters of the proposed study. However, the report does not include any review regarding any existing enrichment practices of sloth bear in Indian zoos or even at abroad. The report only includes the enrichment activities done during the study in the ABRF, that also very briefly.</p> <p>It was also to review existing enrichment practices, upkeep and veterinary care of sloth bear in Indian zoos and at abroad based on literature.</p> <p>However, the report does not include any review in respect of upkeep and veterinary care of sloth bear in Indian zoos and at abroad based on literature. This should</p>	Not carried out as per the MoU.

		have been done for the reference and use for other zoos for reducing the stress to animal and improve the health of the animal at respective zoos which is very essential for the animal welfare.	
Article 1 (iv)	The study may include all aspects which are directly or indirectly related to bring positive attitude in sloth bear behaviour, care and management e.g. activity pattern of animal, designing of enclosures, enrichment, veterinary care, and dietary etc.	It was to carry out the aspects which are directly or indirectly related to bring positive attitude in sloth bear behaviour, care and management e.g. activity pattern of animal, designing of enclosures, enrichment, veterinary care, and dietary etc. This would be very useful & helpful to the other zoos housing the bear for the reference and welfare of the captive animals. However, as per the report it has been observed that nothing related to objective has been mentioned anywhere in the report.	Not carried out as per the MoU and incomplete.
Article 1 (v)	The Sloth bear Rescue Facility, Agra/Wildlife SOS will prepare sloth bear management plan for such non-conventional power fenced enclosure to guide other zoos for similar & other species. Impact of the study should be reflected on bear behaviour through proper results comparing the upkeep with and without enrichment practices.	It was planned to study the utilization of solar power fenced enclosure by sloth bear so that a Management plan for non-conventional power fenced enclosure (sloth bear enclosure) to guide other zoos for similar & other species shall be prepared. However, it has not been done. Bear behavior with enrichment has been mentioned in brief. However, the comparison with and without enrichment practices on upkeep of Sloth bear has not been done.	Not carried out as per the MoU and the study is incomplete.
Article 1 (vi)	The Sloth bear Rescue Facility, Agra/Wildlife SOS shall take inputs or collaborate with various organizations e.g. <u>Wildlife Institute of India, Sloth bear Expert Group of IUCN, and individuals</u> in refining the methodology for collecting the information on enrichment and housing of Sloth bear and its utilization and utility of the study for Wildlife SOS and animal both.	It appears that no expertise input has been taken for the study from the Indian or the international specialists of the Bear species since it is not mentioned in the report. The study required consultation for technical inputs and collaboration in study with the Forest Department, Uttar Pradesh; Wildlife Institute of India, Dehradun and Sloth bear expert from Bear Specialist Group of SSC and IUCN to achieve the objective of the study.	Not carried out as per the MoU.

		However, it has been observed that no collaboration has been done with any expert, zoo or organization nationally or internationally for the study. It appears that even from the Wildlife Institute of India, expert on the subject has not been consulted.	
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9. The Research Proposal received from the Wildlife SOS for the study has mentioned four objectives and methodology for the study. The CZA approved grant based on this proposal. However, it is observed that the same has not been followed. The details in this regard are mentioned below:

1. Utilization of solar power fenced enclosures by Sloth bear		
(i)	Five separate enclosures to be selected for studying the utilization pattern	Carried out
(ii)	Enclosures to be divided into grids to study space utilization	Carried out
(iii)	Scan sampling to be carried out <u>at interval of five minutes</u>	The scan sampling has been carried out <u>at intervals of 30 minutes duration during the study instead of 5 minutes duration as proposed for the Study.</u> Hence, Not done as per the Proposal.
(iv)	Recording of following behavioral parameters in predesigned formats:	No pre-designed format has been used as per the report submitted, since the same has not been annexed in the report. Not done as per the Proposal.
	(a) Animal location	Mentioned
	(b) Following Animal activities were to be observed during study, in addition to others : <ul style="list-style-type: none"> i. Resting ii. Playing iii. Fighting iv. Repetitive pacing v. Climbing vi. Continuous rubbing vii. Drinking viii. Digging ix. Vocalization x. Licking its paws, or other body parts xi. Eating xii. Growling etc 	The report has mainly mentioned about the following activities only: Resting Sleeping Moving Other activities have been clubbed together. The each activity studied should be elaborated as the activities included may be once or twice in a day, but play very important role in the life of animal. For example, the bear may drink water once in a day but is very important activity of animal. On perusal of the data, it is observed that it has not been done scientifically.
(v)	Selected enclosures and different periods of the days are covered	Carried out
(vi)	Analyses of the results	Not carried out
2. Developing new enrichment techniques for wider application		
(i)	Use of following material and combinations for	

	identifying and developing enrichment devices:	
	(a) Different kinds of woods	Carried out
	(b) Barrels	Carried out
	(c) Food items	Carried out
	(d) Combination of various food items	Carried out
	(e) Resting platforms	Carried out
	(f) Fruit scent sprays	Carried out
	(g) Different kind of artefacts	Carried out
	(h) Use of water	Not mentioned
(ii)	Non-feeding enrichment includes:	Not carried out
	(a) Objects to play	Carried out
	(b) Olfactory materials	Carried out
	(c) Training to get immersed in activity	Not mentioned
	(d) Area rotation within enclosures	Not mentioned
	(e) Major exhibit change:	Not carried out
	Shelter structures like caves etc.	Not carried out
	Live vegetation	Not mentioned
	Climbing structures	Carried out
	branch	Not mentioned
	Elevated perches	Carried out
	(f) Water sources	Not mentioned
	(g) Loose substrate (digging, resting)	Not mentioned
	(h) Other permanent movable furnishings	Not mentioned
	(i) Other unmovable permanent furnishings	Not mentioned
	(j) Increase in enclosure area/size	Carried out
(iii)	Feeding enrichment measures used:	
	(a) Designed to increase search time (e.g. scatter or hide)	Not carried out as per proposal
	(b) Designed to increase capture time (e.g. live prey such as ants and termites)	
	(c) Designed to increase extraction time (e.g. puzzle feeder)	
	(d) Designed to increase processing time related to handling and mastication (e.g. vegetation/browse, ice blocks with food, whole food)	
	(e) Designed to increase temporal variability of feeding times (change from feeding at set times)	
	(f) Designed to increase number of feeding times in a day	
(iv)	Preparation of Comprehensive list of enrichment	Carried out but not elaborately
(v)	Amount of food given and consumed and time utilized noted for assessing the acceptance of new items	Not carried out
(vi)	Preference level over enrichment graded into points system of 1 to 4	Carried out only for selected items.
3. Impact of the various enrichment techniques on the behavior of the Sloth bears		
(i)	Comparing the impact of enrichment devices on bear biology and behavior within enclosures with enrichment and with those enclosures without enrichment devices	Not carried out as per proposal
(ii)	Five selected enclosures (Model enclosure) not have additional measures of enrichment devices.	Not carried out as per proposal
(iii)	Five enclosures to be used as Experimental enclosures for the experiment	Not carried out as per proposal

(iv)	Comparison of Model and experimental enclosures	Not carried out as per proposal
(v)	To record following behavior types and their relation with enrichment measures:	Not carried out as per proposal
	resting	
	Playing	
	Fighting	
	Repetitive pacing	
	Climbing	
	Continuous rubbing	
	Drinking	
	Digging	
	Licking its paws, or other body parts	
	Eating	
	Growling etc	
(vi)	Grouping behavior exhibited into desirable and undesirable.	Not carried out as per proposal
(vii)	Regular monitoring of both model and experimental enclosure on alternate day at 5 minutes interval for 2 hours each between 6:00-8:00, 11:00-13:00 and 16:00-18:00	Not carried out as per proposal
(viii)	Analysis done to establish any association between animal's behavior and enrichment provided.	Not carried out as per proposal
4. Housing requirement and pattern of housing preference for sloth bear in captivity.		
(i)	Data gathered in the methodology used to assess the housing requirement of sloth bear in captivity	Not carried out as per proposal
(ii)	Understanding the housing requirement by using the following factors:	Not carried out as per proposal
	(a) Requirement and utilization of night shelter	
	(b) Size of enclosure	
	(c) Food preference	
	(d) Response to enrichment devices	
(iii)	Assessing the night area designs and size, barrier, enrichment devices and basic requisite including landscape.	Not carried out as per proposal

10. The observations of the individual bears has to be collated and based on their sample study, the utilisation pattern for the bears has to be arrived at. This has not been done. The observations of the individuals have only been mentioned.

11. **Other general observations made are as follows:**

- 1) The content page of the report does not mention page number for each heads.
- 2) The report does not have Preface, Conclusion and Recommendation Chapters.
- 3) Many references referred in the text were not quoted in the chapter on reference.
- 4) The photographs used were not given caption and number.
- 5) The pie chart has two circles. But it is not clear in the report what it means.

The observations on the project report alongwith the status of the project was placed before the Technical Committee of the Central Zoo Authority in its 85th Meeting held on 23.03.2018 for deliberation and decision.

The Technical committee, CZA noted that the project work has not been carried out as per the objectives of the MoU and decided not to accept the project report. Further, the committee decided to recover the grant released earlier towards the project alongwith the penal interest at the rate of 10% per annum as per provision under Rule No. 258(1) of GFR, 2017 from the Wildlife SOS, New Delhi.

Keeping in view of the above, you are requested to surrender the earlier released grant towards project alongwith penal interest at the rate of 10% per annum against the grant of Rs. 3.00 lakh to this authority. The amount may be deposited to the Central Zoo Authority through RTGS as per the details below:

1	Name of Beneficiary	Member Secretary, Central Zoo Authority
2	Name of Bank	State Bank of India, Pandit Deendayal Antyodaya Bhawan, CGO Complex, New Delhi 110003
3	Account no.	35743814303
4	Branch Code	07837
5	IFSC Code	SBIN0007837
6	MICR	110002131
7	BSR Code	0007837
8	Shift Code	SBININ BB 382

As decided by the Technical committee, CZA the above mentioned research project stands closed.

Yours sincerely,



(Dr. D.N. Singh)
Member Secretary

Copy for information and necessary action to:

The Chief Wildlife Warden, Govt. of Uttar Pradesh, 17, Rana Pratap Marg, Lucknow – 226 001, Uttar Pradesh (Email: cwlwup@gmail.com).