

Part IV

Comments of the Nodal Officer Forest Conservation Act (FCA) W Bengal

on the proposal Barjora North Coal Mine Project (Proposal: FP/WB/MIN/43000/2019)

West Bengal Power Development Corporation Limited (WBPDCCL) has submitted a proposal for diversion of 338.74 ha of forest land in Bankura North Forest Division for the Barjora North Coal Mine Project for 22 years.

WBPDCCL is currently operating open cast coal mine on non-forest land. It is now proposing open cast coal mine on 683.044 ha of which 338.74 ha is forest land. Lease area is 683.03 ha.

The forest land proposed for diversion through this project has 67,755 standing trees of mainly Sal (*Shorea robusta*), Madhuca (*Madhuca latifolia*), Pila (*Buchnanian lanzan*), Amla (*Phyllanthus emblica*) and other sal associates as per enumeration listed by the DFO in Part II of the proposal on Parivesh 1.0 portal. This sal forest is an elephant habitat, and the last large patch of sal forest in Bankura North Division before the Damodar River which borders the Bardhaman district.

Both DFO Bankura North Division and the CCF Central Circle have recommended the diversion with the stipulation of preparation of Wildlife Conservation Plan.

Available official records reveal that Bankura North Division, and specially Barjora Range, has considerable wild elephant movement, with man-elephant conflict being unfortunately prevalent. As reported by the DFO Bankura North Division vide his memo No.710/26-1 dated 10.3.2023 there were seven (7) human deaths during 2022-23 (upto February 2023) and compensation of Rs 90.96 lakhs was paid out towards death and damages during 2022-23 (upto February 2023). Three (3) of the reported human deaths were in Barjora Range, and two (2) in nearby Beliatore Range.

The District Disaster Management Plan Bankura (2019-2020) prepared by District Management Cell, Bankura, included depredation caused by wild elephant as "a common phenomenon", "causing a great deal of loss of life and properties". The Plan suggests allocation of earmarked fund from State Disaster Relief Fund for prevention of elephant depredation and payment of compensation for crop-loss and loss of human life.

DFO Bankura North further reported in his memo dated 10.3.2023 that 72 to 74 elephants were present 28 days during February 2023 in his Division. As per the elephant movement report of Bankura North Division dated 10.3.2023, total elephant presence days (EPD) for 2022-23 upto 28.2.2023 was 7023. During February 2023, EPD was 2024, out of which EPD was 1874 in Barjora Range alone. This indicates that more wild elephants stayed longer in Barjora Range compared to other ranges in Bankura North Division.

The Report on Human-Elephant Conflict Situation in South West Bengal submitted by the State Nodal Officer to address Human – Elephant conflict (and circulated vide o/o PCCF Wildlife & Chief Wildlife Warden West Bengal memo No.1125/WL/2W-823/2022 dated 26.4.2023) stated that "About 70 elephants stayed in 29 sq. km area of Barjhora in Bankura district for three and half months peacefully from middle of December 2022 to the end of March 2023. This area is rich in fodder species and have sufficient water bodies...elephants choose to move from Medinipur to Barjhora. This indicates that elephants raid agriculture crop because there is almost nothing to eat inside most of the forests in South Bengal....Habitat of elephants in South Bengal (about 4000 sq. km) is not good except in Barjhora Bankura (29 sq. km)".

The above documents indicate that the sal forests of Barjhora are sheltering elephants for considerable part of the year. These documents should not be seen as stand-alone reports and discrete statistics, but need to be studied together for a holistic and informed view of the ecological services being provided by the sal forests of Barjhora in containing the wild elephant depredation problem of South Bengal.

Diversion of these elephant forests for a coal mine will deprive the wild elephants of their preferred shelter and food source, potentially forcing them to seek shelter and food over other areas of South Bengal, causing more damages. The prospective situation following diversion of Barjhora sal forests for a coal mine cannot be deduced to be conducive to man – elephant conflict mitigation on which multiple meetings were held, and directives issued, over the past few years.

Preliminary scrutiny of the Mining Plan including Mining Closure Plan (Revision-2) for Barjhora North Coal Mine (dated September 2019) uploaded in Part I of the project proposal on Parivesh 1.0 portal reveals the Plan to be silent on wildlife / elephant management. Blasting is prescribed in said Mining Plan (Chapter 6). Blasting and resultant ground level vibration and noise will definitely disturb any wildlife in and around the blasting area.

Said Mining Plan further envisages diversion of existing Tartora / Tartola Nala (pg 117). Total length of nala diversion is planned at 6.3 km, and that at the end of 15th year of mining operation “TartoraNala will be shifted completely” (pg 187). Shifting of a natural stream which forms the “major drainage within the block” (pg 111) will adversely affect soil moisture regime and overall health of the standing forests even outside the forest area being proposed for diversion for a coal mine.

It is, in addition, not known, whether prior permission from competent authorities in Forest Department was taken before survey and bore hole drilling was carried out in forest land while prospecting for this coal mine project.

Notwithstanding any utopian Wildlife Conservation Plan formulated, the 70+ wild elephants cannot be restrained / held in captivity / enclosures elsewhere (outside of Barjhora sal forests) throughout the year, for years to come. It must be realized that if Barjhora sal forest is cut, and the land put to non-forest use (coal mine), the wild elephants will have no barrier to their northward progress across Damodar River in search of food and shelter into the rice bowl of Bardhaman.

For a 22 year mining life this proposal essentially aims to permanently destroy 338.74 ha of rich sal forest with biodiversity which cannot be replicated through any compensatory afforestation (CA) scheme in vogue. Equivalent ecological services including support to wild elephants cannot be transferred to any other service provider. Employment generation for mine workers and ancillary service providers cannot compensate for potential loss of human / animal life and property through escalated conflict scenarios which diversion of Barjhora sal forests will catalyze inevitably.

In view of the above, given the potential disastrous loss of a favoured elephant forest of 338.74 ha through forest land diversion for a coal mine, and visualizing the resultant acceleration of man-elephant conflict situations in South Bengal with more deaths and damage to precious resources, as a forest officer entrusted with conservation of forest, and on ethical grounds, **the undersigned does not recommend this proposal for diversion of 338.74 ha of forest land for the Barjhora North Coal Mine Project.**

 8/9/2023
(Kana Talukder)

Dated 8.9.2023

Nodal Officer FCA West Bengal

✓ 19/3/2023

PA To PCCF (HOFF)
Reg. No 521 Dt 18/3/23

Government of West Bengal
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Memo No. 710 / 26-1

Dated, Bankura, the 10/02/2023

From :: The Divisional Forest Officer,
Bankura (North) Division.

To :: The Chief Conservator of Forests
Central Circle, West Bengal.

Sub :: **Record of movement of Elephant and Compensation paid for the
Month of February '2023, during F.Y -2022-23**


Ref :: Your Office letter Memo no-197-99/2W-10 dated.29-04-2015

Sir,

With reference to the above submitting the report in the enclosed format regarding elephant presence days, their movement and compensation paid for 2022-23 up to February '2023.under Bankura (North) Division.

This is for your kind information and necessary records.

Enclosure: 1. Abstract of elephant movement.
2. Elephant compensation paid.



Divisional Forest Officer
Bankura (North) Division.

Memo No. 710 / 26-1

Dated, Bankura, the 10/02/2023

Copy forwarded for kind information to :-


1. The Principal Chief Conservator of Forests (HoFF), West Bengal.
2. The Principal Chief Conservator of Forests Wildlife & Chief Wildlife Warden, West Bengal.


Divisional Forest Officer
Bankura (North) Division.


Ref-bkn

Elephant Compensation of Bankura(North)Division upto February'2023,during F.Y -2022-23

Range	Human Death		Human Injury		Crop Damage		Hut damage		Live Stock		Misc	Total
	No.	Amount paid	No.	Amount paid	Ha.	Amount paid	No.	Amount paid	No.	Amount paid		
Sonamukhi	2	10,00,000.00	1	6,732.00	32.091	4,79,620.00	25	1,01,120.00				15,87,472.00
Patrasayer			1	8,056.00	84.13	12,47,400.00	6	15,000.00				12,70,456.00
Beliatore	2	10,00,000.00					85	3,59,100.00				13,59,100.00
Barjora	3	15,00,000.00			57.36	8,50,440.00	167	5,46,900.00				28,97,340.00
Chhatna		1,25,000.00										1,25,000.00
G.Ghati							94	2,50,480.00				2,50,480.00
Mejia												-
Bankura(North)					4.71	69,840.00	43	1,72,400.00				2,42,240.00
Saltora												-
Radhanagar					89.64	13,28,920.00	11	35,000.00				13,63,920.00
Total	7	36,25,000.00	2	14,788.00	267.931	39,76,220.00	431	14,80,000.00	0	0	0	90,96,008.00


 Divisional Forest Officer,
 Bankura(North)Division

ABSTRACT OF OF ELEPHANT MOVEMENT REPORT
BANKURA (NORTH) DIVISION

A. No.of Elephant Presence Days (EPD) in Ranges under Bankura(North)Division.

Month	Sonamukhi Range	Beliatore Range	Radhanagar Range	Barjora Range	Patrasayer Range	Mejia Range	G.Ghati Range	Bankura(North) Range	Saltora Range	Chhatna Range	Total (EPD)
Feb'23	29	65	12	1874	00	00	28	16	00	00	2024
Total no. of elephant presence days in this Division upto 28.02.2023 ,during F.Y -2022-23											7023

B. Total Elaphant Presence Days(EPD) & their numbers

Month	Number of elepliant stay days in Divison	Number of elephant (in Nos)	Remarks
Feb'23	28	72-74 nos	


 Divisional Forest Officer,
 Bankura (North) Division.



GOVERNMENT OF WEST BENGAL
DIRECTORATE OF FORESTS



Office of the Principal Chief Conservator of Forests (Wildlife)
& Chief Wildlife Warden, West Bengal

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Memo No.: 1125 / WL/ 2W-823/ 2022

Date: 26 / 04 / 2023

To: The Principal Chief Conservator of Forests,
and Head of Forest Force, West Bengal.

Sub: Insights on Human Elephant Conflict Situation in South West Bengal

Ref: Your office's office order no. 42-MISC/CS/2022 dated 05.09.2023.

Sir,

Given the responsibility as State Nodal Officer to address Human-Elephant conflict, in your order mentioned above, undersigned interacted with Field officers and Staffs, Elephant driving teams, NGOs, elected public representatives and senior officers in last eight months and tried to understand the problem of Human Elephant Conflict in South West Bengal, from various angles. Based on experience I gathered so far, I am sharing a write-up on "insights on Human Elephant Conflict Situation in South West Bengal" for your kind information and taking necessary action.

(Rajesh Kumar)

Addl. Principal Chief Conservator of Forests
Wildlife, West Bengal

Memo No.: 1125 / WL/ 2W-823/ 2022

Date: 26 / 04 / 2023

Copy forwarded for information and necessary action to :-

1. The Additional Chief Secretary, Department of Forests, West Bengal.
2. The Principal Chief Conservator of Forests, Wildlife & Chief Wildlife Warden, West Bengal.
3. The Principal Chief Conservator of Forests, General, West Bengal.
4. The Principal Chief Conservator of Forests, Research, Monitoring & Dev., West Bengal.
5. The Principal Chief Conservator of Forests & CEO, CAMPA, West Bengal.
6. All Additional Principal Chief Conservator of Forests, West Bengal.
7. All Chief Conservator of Forests and Conservator of Forests, West Bengal.
8. The Divisional Forest Officers/ Deputy Field Directors/ Deputy Con. of Forests, West Bengal.
-With request to forward and discuss it with ADFOs and ROs.
9. The P.S. to HMIS, Department of Forests, West Bengal.
10. The P.S. to HMOS, Department of Forests, West Bengal.

Necessary comments are welcome at silicab@yahoo.com.

(Rajesh Kumar)

Addl. Principal Chief Conservator of Forests
Wildlife, West Bengal

Insights on Human Elephant Conflict Situation in South West Bengal

By Sri Rajesh Kumar, IFS, APCCF/Wildlife HQ

Every evening, around 160-200 elephants present in South Bengal, come out of forest and roam in villages and agriculture fields in search of food and water, and every evening thousands of people come out of their homes to protect their agriculture crop, livestock and homes. This is every day affair and the battle continues whole night.

Humans find temporary respite by driving the elephants away from their area but elephants are constantly being agitated by new set of humans. Aggression of humans as well as elephants is increasing day by day and the situation is getting worse gradually.

In the end, elephants are likely to suffer more than humans. Therefore, it is high time that we understand the problem from the point of view of elephants and find solutions.

But before we find solutions, we need to understand that why saving the elephants and its habitat is important?

West has always advocated the philosophy of conquering the nature but East has advocated the philosophy of living in harmony with nature. Philosophy of East appears to be sensible as explained below:-

Life on earth is a complex phenomenon and survival of one species is connected with other species. Extinction of any one species will disturb the complex balance of life. Therefore, coexistence of animals, plants and nature is necessary and inevitable.

Indian culture has always practiced the idea of coexistence of humans with plants, animals and nature. Animals like Elephant, Tiger, Monkey, Rat, owl, Snake etc., and plants like pipal, bargad and tulsi etc., and nature like sun, air, fire, water and earth etc. are worshiped as God. This shows that idea of coexistence is given an important place in our Indian culture.

Government of India has also from time to time reiterated 'coexistence' as its management vision for wildlife conservation.

Having understood the importance of coexistence, we need to find solutions. Solutions will come only if we see elephants as opportunity and not as problem.

Gir National Park is a successful example where human-lion conflict is resolved now. Local people have understood the nature of lions and both are living peacefully together. The change came when locals realised the benefits of protecting lions. Tourism has become a major economic activity in the area and growing every day. Locals as well as Government now take pride in conserving lions.

In West Bengal also people rush to see elephants, when they hear that elephant is present near a particular village. So, there is a good scope of elephant tourism.

Elephants go out of forest because there is not enough food inside forest, which triggers Human-elephant conflict. If we create few elephant oasis inside forest and connect it with regulated tourism, we can find peaceful solution for everybody.

Before we proceed further, we need to understand following facts.

1. Nature of elephants to move in a Landscape

Elephants of South Bengal move from Dalma to Kuldiha. Dalma wildlife sanctuary is in Jharkhand and Kuldiha wildlife sanctuary is in Orissa. No matter how many obstacles we create in their migratory routes, they will explore alternate routes. Keep moving between the boundaries of a landscape is the basic nature of elephants and they cannot be restricted in an area anything less than the total landscape. They have their own calculations and information of food and water present in different locations at different time and they keep moving accordingly at a pace they like.

In West Bengal, we created elephant proof trenches to restrict their movements and driven elephants from one area to other, against their wish, to shift the problem from one area to other, making elephants agitated most of the time.

2. Old migratory routes vs new corridors

It is very important to understand the difference between old migratory routes and new corridors.

Elephants give warning sound to humans, if they come close. If humans come closer, they mock chase humans to drive off. After this when they feel threatened, they attack humans.

In old migratory routes, people were accustomed in living with elephants. They knew these warning signs and kept a respectable distance with elephants. Human elephant conflict was not zero but at its minimum.

Elephant proof trenches and energised fencing were tried initially as solutions. As explained above that elephants will move between the boundaries of a landscape, they explored new routes and started going in new areas. This actually increased the problem.

In new areas, elephants encountered with new set of humans where both had no idea of dealing with each other. Humans, initially went close to elephants without realizing warning signs from it and when attacked, they used cruel methods to control the aggression of elephants. This further agitated the elephants and now both, humans as well as elephants are confused and constantly living in aggression with each other.

3. Tribal belts vs non-tribal belts

It is noticed that in tribal belts, people are more comfortable in living with elephants rather in non-tribal belts. Tribal people consider elephants as part of their culture and know

coexistence. They know that elephants attack humans only when they feel threatened. Tribal belt people prefer in living with nature despite presence of natural threats.

Therefore, coexistence with elephants is possible more in tribal belts and awareness is the key to reduce the conflict. Damages can be minimised with right use of technology.

4. Myth about change of food habit of elephants

About 70 elephants stayed in 29 sq km area of Barjhora in Bankura district, for three and half months peacefully from middle of Dec 2022 to the end of March 2023. This area is rich in fodder species and have sufficient water bodies. During this period 95% of land surrounding Barjhora is noticed without crop and 5% area grown with mustered, which elephants don't eat. Also it is noticed that during this period potato is grown in entire area of Medinipur and Bishnupur, but elephants choose to move from Medinipur to Barjhora. This indicates that elephants raid agriculture crop because there is almost nothing to eat inside most of the forests in South Bengal.

Therefore, elephants can be contained inside forests if we provide food, water and shelter for them inside forests.

5. Human nature

Humans are basically adventurous. Upon hearing news of presence of elephants at a particular location (outside forest), rather going safe place, they rush to spot on motorcycles etc. to see the elephants. Also few people enter inside forests and tease elephants for fun. This sometimes results in accidents.

6. Adverse results of driving

Systematic driving of elephants first started in West Bengal about two decades back. Elephants are driven from an area of its depredation to some other area by using hulla (a fire ball tied to an iron stick). This in fact, rather giving any solution, only shifted the problem from one area to other.

In the process, hulla teams learnt the tricks of going nearer to elephants. Seeing hulla teams, inexperienced villagers also lose fear of elephants and started going closure to elephants, making elephants agitated and chasing humans which sometimes resulted in accidents.

Driving is also done in a direction where humans think comfortable and not where elephants want to move naturally. This also makes elephant agitated.

7. Other accidental deaths vs elephant deaths

Other accidental deaths due to road accidents, snake bite, floods and cyclone etc. are much higher compared to about 100 deaths due to elephants in a year. However, death due to

elephants is a major issue because it is everyday clash of large number of humans with elephants for saving crop, livestock and house. Crop compensation amount is also inadequate and delayed payment of which develops bitterness in humans towards elephants.

8. Elephant Habitat in South Bengal forest

Habitat of elephants in South Bengal (about 4000 sq km) is not good except in Barjhora, Bankura (29 sq km) and Tapovan, Kharagpur (20 sq km).

In Lalgah-Chandra forest of Medinipur (120 sq km), where large numbers of elephants stay most of the time, though water is available to some extent, there is hardly anything to eat. Apart from this more than 50% of area here is affected by fire every year during March and April. Elephants will not prefer to stay inside fire affected area, so their habitat area reduces further due to fire.

In other part of South Bengal (approximately 4000 sq km) condition of forests is worse than Lalgah.

9. Kaziranga example

Area of Kaziranga is about 1000 sq km. About 5000 elephants and 2500 rhinos live there inside forest and don't come out of forest as there is enough food inside forest. There are only 29 deaths last year in entire state of Assam.

In West Bengal, area of Midinipur, Jhargram and Bankura is about 3000 sq km. We can enrich about 200 sq km out of total area as elephant habitat and easily keep our 200 elephants inside forest.

Considering the above facts and information, we can now proceed to draw strategy for elephant management in South Bengal.

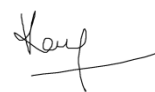
Suggested Management Approach for elephants in South Bengal

Management approach suggested is primarily based on less driving of elephants and habitat improvement inside forests along old migratory routes.

1. Management of elephants should be similar in common landscape of West Bengal, Odisha and Jharkhand. There should be one elephant management plan in these three states. Free migration of elephants should be allowed and sufficient elephant habitats to be developed in all 3 states so that elephants follow old seasonal migration.
2. Old migratory routes to be restored by removing trenches and energised fencings.
3. Due to coming up of liner projects like canals, Roads, Railway lines and growing human habitation, the elephant corridors are distributed. These agencies may be written to

restore the elephant corridor by providing under pass or over pass for smooth elephant migration.

4. Elephants should be managed on old migratory routes. They needed to be contained inside forests along old migratory routes and pushed back gently in forest, if they deviated from old migratory route.
5. Elephants should be allowed to move at their pace, will and direction. They may be driven peacefully only to take them back in forest when they come out of forest.
6. About 200 sq km. area is to be targeted, to develop as elephant habitat. About 30 numbers small oasis of 1 sq km for elephants is required to be created with one large water body and by growing fodder species around it. Other area of 170 sq km is to be protected from fire and small water retention structures to be created to increase soil moisture. Watch tower to be made near these 30 number elephant oasis to promote elephant safari and ecotourism.
7. There should be timely and adequate crop compensation to villagers.
8. While finding solutions we should keep in mind that Human Elephant conflict can never be made zero. Therefore, we should concentrate on adopting right solutions rather than short-term result-oriented gimmicks.
9. Elephants have tendency to extend their territory and explore new areas, which may not be allowed and their movement is required to be confined along migratory route only.
10. Humans have to understand the nature of elephants and adjust accordingly rather than controlling or taming it. Awareness is required to stop the torture on elephants. Elephants also deserve peaceful living away from human and other disturbances.
11. Coexistence goes with acceptance and tolerance. People are required to be motivated to save forests, wildlife and nature by giving reasons like 1) religious faith, 2) cultural traditions, 3) pride etc. This alone may not work fully therefore it has to be connected with economic benefits like ecotourism etc.
12. Above solutions are likely to increase the population of elephants, therefore, we need to address the issue of population control also.



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