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CONSERVATION STATUS OF KOSI CORRIDOR FOR TIGER AND ELEPHANT MOVEMENT: CURRENT STATUS FOR VIABLE SOURCE OF GENE FLOW, CORBETT & RAMNAGAR FOREST DIVISION, INDIA.

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Abstract

Corridors are connecting link between two habitats. This connectivity is very important for genetic viability for wildlife or animal for both the areas/ habitats. In and fro movement is the basic need of wild animal for vital fulfillment. Kosi River is the connecting linked between two areas i.e. Corbett Tiger Reserve and Ramnagar forest Division. Kosi formed the eastern boundary of Corbett along with Mohan road. But due to extreme anthropogenic stress this area and corridor nearly vanished at all. Kosi River is a vital source of water for both the habitats. But current scenario of the corridor is completely stressed and depressed at all. Continuous movement of tiger (*Panthera tigris*) are found here. On the other hand elephants (*Elephas maximus*) are also using this corridor to move towards sitabani or Ramnagar forest division area. Sunderkhal is prone to conflict. Direct interaction or face to face with big cat or wild animals are always dangerous to human & wildlife.

Keywords: Corridor, conflict, anthropogenic stress, interaction, vital fulfillment

Introduction

Corridors are the important vital connecting link between two or more forest. The wild animal use these path for in and fro movement. This frequent and easy in and fro movement maintain genetic viability of species. The Kosi corridor is vital source between Corbett Tiger Reserve and Ramnagar Forest Division. The Kosi River formed the eastern boundary for Corbett. This river plays a key role not only for tiger and elephant but whole wildlife of both the reserve forest. Corbett itself is known for roar and tusks. On the other hand Ramnagar FD is also having good movement of tiger and elephants. From Mohan to Ramnagar a lot of anthropogenic stress (hotels & resorts) are vanishing this vital corridor day by day. In these areas the conflict cases are very common, livestock predation by tiger & leopards are common. Village like Sunderkhal itself having great problem for wildlife and its residents. It should be relocate at any rate to conserve this corridor and the same condition with villages like Chukam, Mohan, Ringora, Tedha, Kyari etc. The residents of these village

always have conflict which is not good for both the animal & human beings ecologically.

MATERIAL AND METHODS:-

The Questionnaire surveys & informal interviews of key person of Resorts & Hotels were taken. Collection of sign survey (scat, pug marks, Livestock predation cases, elephant foot print and dung etc.) were taken from study area during field work.

Study Area:

I had taken the village areas which are situated in this corridor for livestock predation and the conflict cases. Finally these areas are situated between the Corbett and Ramnagar Forest Division along with this corridor and depict strong evidences of animal movement sign. But the frequent moment of wildlife is threatened by rapid development of resorts and infrastructure along the Ramnagar- Ranikhet highway, NH121 beside the bank of Kosi River.



Fig 1 shows the resorts (red line) and risk area for future (yellow line) on corridor along with Kosi.

Methodology

Semi structured (open & close ended question) questionnaire surveys and informal interview in village Chukam, Mohan, Sunderkhal, Dhikuli, Tedha and Ringora regarding conflict management and movement pattern. On the other hand collected scats from these villages depict the movement pattern and food & feeding behaviour. Scat analysis of tiger shows the scientific proof of livestock predation and conflict.

RESULTS AND DISCUSSION:-

Table 1: % occurrence of respondents (villagers) for movement pattern (Tiger& Elephant) in Corridor

S.No.	Village	No. of Respondent	Animal movement	% occurrence
1	MOHAN	32	24	16.4%
2	CHUKAM	27	21	14.4%
3	SUNDERKHAL	52	50	34.2%
4	DHIKULI	20	14	9.5%
5	RINGORA	20	18	12.3%
6	TEDHA	24	19	13.01%
Total	6 Villages	175	146	83.4%(overall)

Table2: Animal wise movement in villages (Regular or irregular pattern)

Village	No. of Respondents	Tiger	Elephant	Cheetal	Regular	Irregular
Mohan	32	-	√	√	√	-
Chukam	30	-	-	√	√	-
Sunderkhal	54	√	√	√	√	-
Ringora	20	√	√	√	-	√
Tedha	24	√	-	√	√	-
Total	160	98	106	160	140	20

Total 87.5%people said the regular movement of wild animal. Among them Cheetal (100%), Tiger (61%), Elephant (66%). So sequence is Cheetal>Elephant>Tiger.



Fig2; shows that elephant movement (in & fro) between two Corbett and Ramnagar FD.

Table 3: Shows collection of Sign survey detail.

VILLAGE	No. of Scat (A)	Pug Mark(B)	Total Sign(A +B)	Total %
MOHAN	13	24	37	16%
CHUKAM	19	29	48	2%
SUNDERKHAL	52	41	93	41%
RINGORA	12	10	22	10%
TEDHA	12	17	29	13%
Total	108	121	229	

Table 4: Result, Scat analysis for Livestock predation (conflict)

VILLAGE	No. of Scats	Finding of domestic remains in scat			
		COW	DOG	GOAT	GROSS
Mohan	13	7	-	2	9
Chukam	19	6	1	4	11
Sunderkhal	52	13	2	2	17
Dhikuli	8	2	1	1	4
Ringora	12	6	1	1	8
Tedha	12	5	2	1	8
Total	116	39	7	11	57

Result show in Table 4 that overall 49% livestock predation are found in these area near the corridor while on the other hand Table 3 shows the sign survey detail (scats and pugmarks). Other table shows that total 87.5% people of these areas depicts the regular movement of wildlife in this corridor.

Discussion:

Overall this study provides a serious result regarding corridor depressed by the anthropogenic stress. If the anthropogenic stress will not render than it will very difficult to conserve the corridor and vital need of wildlife. If they are not able to move through it, this affects the genetic viability because for breeding purpose tiger and elephant are not able to move across the both forest for gene flow. The results shown that good movement of wildlife in these areas related to corridor. The place like Sunderkhal should be relocating to conserve the corridor and wildlife to maintain the gene flow & genetic viability etc.

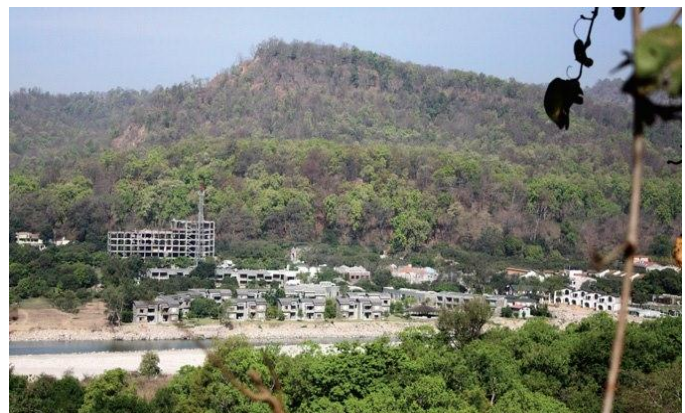


Fig3. Anthropogenic stress (construction of resorts & hotels) in corridor along with Kosi River.

Conclusion:

By all means the corridor is rich to wildlife, for the wildlife, but due to anthropogenic stress in this area the genetic viability will be vanished for future prospective. The area like Sunderkhal should be relocates because this area the Sunderkhal is having longest boundary. The chilikya kota corridor is also situated in this area. Some strict action should be implemented against such anthropogenic stress which is anti ecological to wildlife and nature.

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