Research Journal of Recent Sciences ISSN 2277-2502
Vol. 4**(IYSC-2015),** 1-4 **(2015)** *Res. J. Recent. Sci.*

Causes and Consequences of Tiger Mortality in Corbett Tiger Reserve, Ramnagar, Uttrakhand India

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Available online at: www.isca.in, www.isca.me
Received 10th May 2015, revised 20th August 2015, accepted 8th September 2015

Abstract

Panthera tigris in any forest is a good sign of healthy habitat. But its mortality indicates the destruction of habitat and red alert for conflict and ecological stress. Due to many causes like, carrying capacity of area, socio-ecological factor, anthropogenic stress, negative attitude of people towards tiger conservation. Livestock grazing in reserve area lead conflict and death. Depletion of food leads struggle between same species as tiger show territorial behaviour. So inter and intra specific struggle is very common in same are for survival. Especially in mating season (Nov-Feb) the fighting cases were observed directly and indirectly (postmortem report). Corbett is a land of roar, sometime tiger shown unnatural feeding behaviour i.e. preys upon elephants. And this type of conditional behaviour is very typical and depicts the intelligence of tiger in human-dominated landscapes. Total 26 cases were studied.

Keywords: Habitat-destruction, territorial behaviour, livestock grazing, inter specific struggle.

Introduction

The survival of tiger (Panthera tigris) is very less in the environment. The mortality rate is very high in tiger. A lot of behavioural cum ecological reason behind it. Movement pattern toward railway track or in human-dominated areas is also cause of death and conflict for both the tiger and man. In this study only 8 deaths is natural others out of 26 depicts the ecological struggle for survival. Figure-1 shows the train hit near the army cant, Hempur Kashipur the adjoining area of Corbett Jhirna zone with Tarai west forest division. Presence of tiger evidence like scats, kill, and conflict case also depicts the movement pattern due to socio-ecological factor, were included for this study. Adjoining forest and vanishing corridors is also hurdle in genetic viability[1] from one area to another and this disturbance also leads the mortality rate of tiger in Corbett landscape. Anti ecological activity like cutting of forest and excavation of land, stone for lucrative purpose leads the destruction of forest which causes the mortality in tiger. In mating season the territorial fight is very common. For vital purpose the struggle[2] for existence is must i.e. it may be inter specific or intra specific but in some cases I had found during postmortem of dead body. Some evidence indicates the ill legal activity like poaching and poisonings etc.

Figure-1
Train hit case near army cant Hempur, Kashipur adjoining area of Tarai west forest division with Corbett

Methodology

Direct observation (during postmortem) and data collection from Corbett Research Range. Officially data had been collected. In this data detail the sex, date and cause of death along with place and area are mentioned.

Study area: study area is in and around Corbett tiger reserve of Ramnagar is chosen. The block and range wise detail of place along with cause of mortality is given in table 1 from 2007 to 2013. At least seven year data analysis had presented with cause of death.

Table 1
Year wise detail of Tiger Mortality cases along with cause and Place

S. No	Species and Sex	Date	Cause of Death	Place / Area
2007-08				
1	Tiger Cub (F)	15-6-2007	Totally Putrefied	Dhela Range Dhella Hill Block CNo.2and8
2	Tiger (M)	22-9-2007	Natural	Kalagarh Range Dhara Block C.No.13
3	Tiger(F)	31-10-2007	Fighting	Kalagarh Range Paterpani BlockC.No-18
4	Tiger (M)	31/1-11-2007	Fighting	Sonanadi Range Lal darwaja C.No.-15
5	Tiger (F)	10-3-2008	Fighting	Jhirna Range Jaminagawar Block C.No.-10
2008-2009				
1	Tiger(F)	4-11-2008	Natural	Kalagarh Range Mohanpani Chouar
2	Tiger(M)	9-3-2009	Natural	Dhela Range Pathurwa (W) BlockC.No.4
3	Tiger(M)	17-3-2009	Fighting	Dhela Range Sawlde Bhavar Plot-5
2009-2010				
1	Tiger(M)	27-5-2009	Decomposed	Maidavan Range (E) Mandal C.No-10
2	Tiger(M)	1-8-2009	Fighting	Mandal Range (E) Dumunda C.No-1
3	Tiger(M)	13-12-2009	Fighting	Dhikala Range Dhikala Block C.No.-4
4	Tiger(F)	16-12-2009	Old Age, Natural	Sarpduli Range Tairiya C.No-1Near Ramganga River
5	Tiger(M)	5-1-2010	Natural	Dhikala RangeKanda BlockC.No.23
6	Tiger(M)	11-1-2010	Natural	Dhikala Range Kanda Block C.No.-1A
2010-2011				
1	Tiger Cub (M)	2-7-2010	Found Injured, death under treatment	Kalagarh Range
2	Tiger(F)	25-1-2011	Fighting	Kalagarh Range Dhara Block C.No-1 Maiggeen sot
3	Tiger (M)	19-2-2011	Fighting	Kalagarh Range Dhara Block Khatpani
			2011-2012	
1	Tiger(F)	1-4-2011	Natural	Kalagarh Range Dhara Block C.No-12and13
2	Unknown	3-5-2011	Fighting	Sarpduli Range Dhikala Block C.No-24 Kothidhunga Sot
3	Tiger (F)	7-6-2011	Brain damage/ Fracture of cervical vertebrae	Kalagarh Range Dhara Block C.No.-7
4	Tiger Cub (F)	28-7-2011	Accident	Dhela Range Sawalde Bhavar Block N-1
5	Tiger(M)	15-9-2011	Fighting	Bijrani range Himmatpur DotiyalNainital Zoo
6	Tiger Cub (F) 15-20 days	14-12-2011	Natural	Dhela Range Bhavar Block C.No.5and6 Joint
7	Tiger Cub(M)	13-1-2012	Serious dehydration	Jhirna Range Jhirna Block C.No.-8
8	Tiger (M)	20-2-2012	Fighting	Sonanadi Range Dholkhand C.No.-11
2012-2013				
1	Tiger unknown	8-4-2012	Natural	Bijrani Range Phutal Block C.No-10

Source; CTR Official Research Range

Results and Discussion

Total 26 tiger death cases were analyzed with the help of data collected from CTR office and direct observation during postmortem 2011-12 was critical to tiger that 8 tiger were lost while earlier in 2009-10 there were 6 tiger mortality. Overall in 7 years total 26 tiger including male, female, cubs and unknown were lost. The table 1 shows that most cases were related to fighting which indicated that ecological pressure[3] on Corbett. Following chart showing that description of 7 years data analysis of tiger mortality (sex wise).

Discussion: This study depicts the detail of tiger mortality in Corbett in seven years (2007-2013). Data shows that 2009-10 five tiger were lost in Corbett. There are 11 cases belongs to fighting. This analysis indicates that ecological pressure[4] on habitat, Inter specific and intra specific struggle[5] is very common in this regards. When carrying capacity is decrease than conflict and struggle will rise for vital need. Tiger marks their area in forest[6]. Due to vital need they can be entering in other tiger territory and chances of conflict, fight etc will take place. In these cases we have to work on carrying capacity of tiger habitat by all means. Which depicts the actual requirements of tiger to survive in wild with wild for wild?

Table-2
Year wise loss of tiger with sex detail

YEAR	Tiger					Total
	U	M	F	C(m)	C(f)	
2007-08	-	2	2	-	1	5
2008-09	-	2	1	-	-	3
2009-10	-	5	1	-	-	6
2010-11	-	1	1	1	-	3
2011-12	1	2	2	1	2	8
2012-13	1	-	-	-	-	1
Grand Total	2	12	7	2	3	26
7 Yrs	2	12	7	2	3	26 loss

U-Unknown, M-Male, F-Female, C(m)-cub male, C(f)-Cub female.

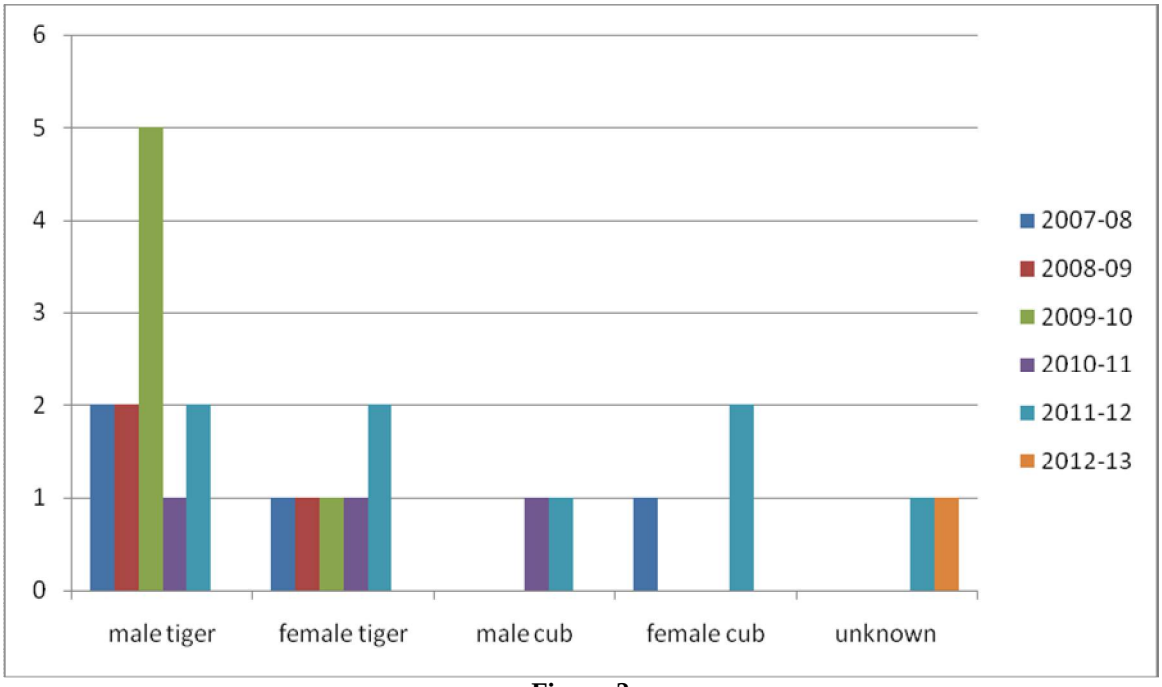

Figure-2
Tiger mortality year wise along with sex detail

Conclusion

This analysis provides the actual ecological aspects of tiger mortality in area and depicts the future prospective of tiger conservation. The loss of female tiger is not only the loss of a tigress but this is a loss of family because the tigress is also producer of generation also. India accounts about 8 percent wildlife in the world. Unabated poaching, land encroachment, grazing, loss of habitat and diseases[7] are some of the much highlighted factors causing threatened to the wildlife in all over the world. Ecological monitoring is very important in tiger reserves by which we can alert for any anti conservation practices in any protected forest or reserve.

Acknowledgement

All the forest officials from bottom to top always help me for my journey of tiger conservation in Corbett landscape.

References

1. Akckaya H. R., Population viability analysis in conservation Planning: An overview, *Ecological Bulletins* **48,** 9-21 **(2000)**

2. Ashraf N.V.K., Procedures for monitoring wildlife health and investigating disease, Wildlife Institute of India **(1992)**

3. Bennett A.F., Linkages in the Landscape. The role of Corridors and connectivity in wildlife conservation IUCN, The world Conservation Union **(2003)**

4. Allee W.C. and Schmidt, Karl P., Ecological Animal geography, John Wiley and Sons, New York **(1951)**

5. Akcakaya H.R., Burgman M.A. and Kindvall O. et.al., Species Conservation and Management, Oxford University Press, Oxford **(2004)**

6. Batten J., when good animals love bad habitats: ecological traps and the conservation of animal populations, *Conservation Biology*, **18,** 1482-91 **(2004)**

7. Ajit Kumar Santra , Handbook on Wild and Zoo animal, A Treatise for Students of Veterinary, Zoology, Forestry and Environment Science **(2008)**