ORIGINAL RESEARCH PAPER

Zoology

A SURVEY ON HUMAN WILDLIFE CONFLICTS IN THE NEARBY VILLAGES OF BANDIPUR NATIONAL PARK

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ABSTRACT

The aim of this research paper is to investigate the impact of Human wildlife conflict in Bandipur national park. The study carried out during 2015-19. The data collected from the aggrived farmers with the questionnaires and from Karnataka forest department. According to results the highest conflict cases recorded during 2015-16 (2927) followed by 2018-19 (2433), 2018-19 (2416), and lowest during 2017-18 (1641). In recent years wildlife conflict challenges turning into opportunity by certain mitigation strategies such as increasing in the reforestation, increase in the tree cover etc.

INTRODUCTION

Human- wildlife conflict arises when humans and animals compete for limited resources[1]. Major causes of conflict include crop raiding, property damage and livestock depredation by wildlife[2]. Conservation efforts in the developing countries have started to move away from an exclusionary approach in which forest dwelling communities are kept away from 'protected areas' towards community based conservation [3]. As humans and large carnivores come into conflict, there will be three types of damages- livestock depredation, prey depletion by overhunting and death of carnivores [4]. People increase in their population and tend to occupy forest area for their settlement agriculture, building dams and for other types of development. The shrinkage of habitat leads to the decrease in the wildlife populations[5]. Barriers to wildlife movement that is by solar, electric fences, trenching the boundary of cultivation. These are most commonly used methods in India. Electric fences by providing different volts [6] and also the Information and Communication technologies were used most in recent days [7]. Elephant proof trenches are used in order to prevent intruding of elephants. The highest number of wildlife conflicts due to elephants in the Mudigere forest range[8].

MATERALS AND METHODS

For this case study of Human wildlife conflict the nearby villages of Bandipur National park of Karnataka was selected. The data regarding conflict cases were collected from the aggrieved farmers and Karnataka forest department.

RESULT AND DISCUSSION

The Bandipur National Park comprises 10 ranges and these are Kundukere, N begur, Hediyala, Maddur, Moliyur, Omkar, GS betta, Gundlupete, Gundre, Nugu. According to the results in the Table 1, during 2015-16 total 3116 conflict cases were reported out of which 2927 cases of crop damage, 173 cases of cattle killed, 4 cases of human death, 12 cases of human injury reported. In Kundukere range total 211 cases of conflict reported, out of which 162 cases of crop damage, 48 cases of cattle killing, 1 case of Human injury reported. In N begur, total 115 cases of HWC reported out of which 89 cases of crop damage and 26 cases of cattle killing reported. In Hediyala range, total 52 conflict cases were reported, out of which 34 cases of crop damage, 10 cases of cattles killing, 1 case of Human death and 7 cases of human injury reported. In Maddur range out of 56 conflict cases, 55 cases of crop damage and 1 case of cattle killing reported. In Moliyur range the highest conflict cases were reported i.e 1327 out of which 1294 cases of crop damage, 31 cases of cattles killing and 2 cases of human injury reported. In Omkar range, the second highest conflict cases reported i.e 803 out of which 765 cases of crop damage, 36 cases of cattle killeing and 2 cases of

human death. In GS betta range, total 223 of conflict cases were reported out of which only 1 case of cattle killing reported. In Gundlupete range, total 270 cases of conflict reported, out of which 255 cases of crop damage, 14 cases of cattle killing and 1 case of Human death reported. In Gundre range, total 55 conflict cases were reported, out of which 48 cases of crop damage, 5 cases of cattle killing and 2 cases of human injury. In Nugu range, total 4 conflict cases were reported, out of which 3 cases of crop damage and 1 case of cattle killing were reported.

During 2016-17 total 2734 conflict cases were reported out of which 2416 cases of crop damage, 243 cases of cattle killing, 2 cases of human death, 25 cases of human injury reported. In Kundukere total 280 cases of conflict reported out of which 167 cases of crop damage, 108 cases of cattle killing, 5 case of Human injury reported. In N begur, total 163 cases of HWC reported, out of which 155 cases of crop damage and 5 killing of cattle, 1 case of human death and 2 cases of human injury. In Hediyala range only 93 cases of crop damage were reported. In Maddur range out of 97 conflict cases, 85 cases of crop damage and 11 case cattle killing reported, 1 case of human injury reported. In Moliyur range, the highest conflict cases were reported i.e 1010, out of which 943 cases of crop damage, 64 cases of cattles killing and 3 cases of human death. In Omkar range the second highest conflict cases were reported i.e 515, out of which 453 cases of crop damage, 55 cases of cattle killing and 7 cases of human death. In GS betta, range total 290 conflict cases were reported, out of which 264 cases of crop damage, 20 cases of cattle killing, 7 cases of human injury. In Gundlupete range total 167 cases of conflict reported out of which 146 cases of crop damage, 20 cases of cattle killing and 1 case of Human death. In Gundre range, total 104 conflict cases were reported out of which 97 cases of crop damage, 5 cases of killing cattle killing and 1 case of human injury. In Nugu range, total 15 conflict cases were reported, out of which 13 cases of crop damage and 2 cases of cattle killing.

During 2017-18, total 1869 conflict cases were reported out of which 1641 cases of crop damage, 218 cases of cattle killing, 1 case of human death, 14 cases of human injury. In Kundukere, total 271 cases of conflict reported, out of which 194 cases of crop damage, 73 cases of cattle killing, 4 case of Human injury. In N begur, total 109 cases of HWC reported out of which 97 cases of crop damage and 10 cases of cattle killing and 2 cases of human injury. In Hediyala range, total 314 cases of crop damage were reported, out of which 290 cases of crop damage, 20 cases of cattle killing, 1 case of human death, and 3 cases of human injury. In Maddur range out of 156 conflict cases, 143 cases of crop damage and 13 cases of cattle killing reported. In Moliyur range 249 conflict cases were reported

out of which 235 cases of crop damage, 17 cases of cattle killing and 2 cases of human death. In Omkar range, 425 conflict cases reported out of which 372 cases of crop damage, 51 cases of cattle killing and 2 cases of human death. In GS betta range total 204 conflict cases were reported out of which 203 cases of crop damage, and 1 case of cattle killing. In Gundlupete range, total 37 conflict cases were reported, out of which 35 cases of crop damage, 2 cases of cattle killing. In Gundre, total 12 conflict cases were reported, out of which 10 cases of crop damage, 2 cases of cattle killing. In Nugu range total 92 conflict cases were reported, out of which 62 cases of crop damage and 29 cases of cattle killing and 1 case of human death.

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During 2018-19, total 2714 conflict cases were reported, out of which 2433 cases of crop damage, 266 cases of cattle killing, 1 case of human death.and 14 cases of human injury. In Kundukere total 279 cases of conflict reported out of which 219 cases of crop damage, 56 cases of cattle killing, 4 cases of Human injury. In N begur, total 160 cases of HWC reported, out of which 122 cases of crop damage, 36 cases of cattle killing, and 2 cases of human injury. In Hediyala range, total 310 cases

of crop damage were reported out of which 255 cases of crop damage, 52 cases of cattle killing, 3 case of human injury. In Maddur range 148 cases of crop damage reported. In Moliyur range, 191 conflict cases were reported, out of which 154 cases of crop damage, 35 cases of killing cattles and 2 cases of human death. In Omkar range, 693 conflict cases were reported out of which 668 cases of crop damage, 22 cases of cattle killing and 1 case of human death and 2 cases of human injury. In GS betta range total 560 conflict cases were reported out of which 557 cases of crop damage, 22 cases of cattle killing. In Gundlupete range, total 73 cases of conflict reported, out of which 56 cases of crop damage, 17 cases of cattle killing. In Gundre, total 55 conflict cases were reported, out of which 43 cases of crop damage, 12 cases of killing cattle. In Nugu range, total 245 conflict cases were reported, out of which 211 cases of crop damage and 33 cases of cattle killing, and 1 case of human death and 14 cases of human injury reported.

According to Graph 1, during 2015-16, the crop damage cases were highest (2927) followed in 2016-17(2416) and lowest in the year 2017-18(1641) During 2018-19 the crop damage cases increase significantly (2433). The killing of cattle due to carnivore was highest in the year 2018-19(266), followed in the year 2016-17(243), 2017-18(218), and lowest in the year 2015-16(173). Human injury was highest in the year of 2016-17(25), followed by 2017-18(15), 2018-19(14). and lowest in the year 2015-16(12). Human death was highest in the year 2015-16(4) followed by 2016-17(2), one each in 2017-18 and 2018-19 respectively. The results collaborate studies from elsewhere that simple improvement in livestock husbandry practises would help to mitigate Human wildlife conflict [9]. With the increase in wildlife populations in response to protection human wildlife conflict also have increase in the past rural residence especially agricultural producers and forestry owner bore the brunt of wildlife damage. The emergence of the field of human wildlife conflict management and identify how public and private wildlife conservation agency and organization can turn these new challenges into opportunities to increase public support for professional management[10]. Human elephant conflict in India, driven by habitat loss and an expanding human population, is a complex challenge for biodiversity conservation. The expansion of conflict showed a significant southward trend and was associated with the forest cover cropping below 30%-40%. Maintenance of remaining forest areas, reforestation, and creation of habitat corridors are strategies that could prevent further expansion of conflict[11].

Tabel:1 Human wildlife conflict in Bandipur national park during 2015 to 2019

Sn	Ranges	Crop damage				Cattle killed				Human injury				Human death				Total			
		2015-2016	2016-2017	2017-2018	2018-2019	2015-2016	2016-2017	2017-2018	2018-2019	2015-2016	2016-2017	2017-2018	2018-2019	2015-2016	2016-2017	2017-2018	2018-2019	2015-2016	2016-2017	2017-2018	2018-2019
1	Kundukere	162	167	194	219	48	108	73	56	1	5	1	4	-	-	0	0	211	280	271	279
2	N begur	89	155	97	122	26	5	10	36	-	2	1	2	-	1	0	0	115	163	109	160
3	Hediyala	34	93	290	255	10	-	20	52	7	-	4	3	1	-	1	0	52	93	314	310
4	Maddur	55	85	143	148	1	11	13	0	-	1	0	0	-	-	0	0	56	97	156	148
5	Moliyur	1294	943	235	154	31	64	17	35	2	3	1	2	-	-	0	0	1327	1010	249	191
6	Omkar	765	453	372	668	36	55	51	22	-	7	5	2	2	-	0	1	803	515	425	693
7	GS betta	222	264	203	557	1	20	1	3	-	6	1	0	-	-	0	0	223	290	204	560
8	Gundlupete	255	146	35	56	14	20	2	17	-	-	2	0	1	1	0	0	270	167	37	73
9	Gundre	48	97	10	43	5	6	2	12	2	1	0	0	-	-	0	0	55	104	12	55
10	Nugu	3	13	62	211	1	2	29	33	-	-	0	1	-	-	0	0	4	15	92	245
	Total	2927	2416	1641	2433	173	243	218	266	12	25	15	14	4	2	1	1	3116	2734	1869	2714
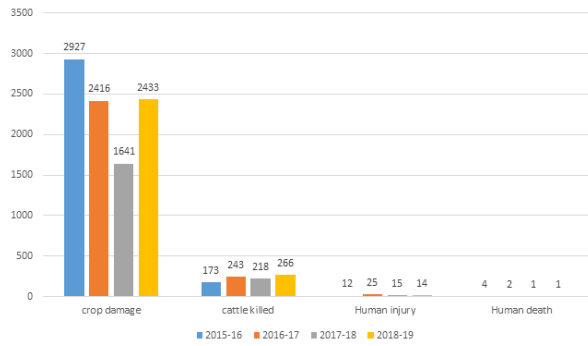
Graph :1 A Human wildlife conflict in Bandipur Nation park during 2015-19

CONCLUSION:

The habitat loss, deforestation, decrease in the trees cover encroachment of forest land are the main reason to increase the incidence of human wildlife conflict. Certain innovative mitigation strategies such as growing crops near the forest, afforestation increase in tree cover etc. may have better results than erecting electric poles, digging trenches, fences etc.

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