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# A CASE STUDY ON HUMAN-WILDLIFE CONFLICT IN NEAR BY VILLAGES OF MUDIGERE FOREST RANGE IN CHIKKAMAGALURU DISTRICT OF KARNATAKA STATE, INDIA

Zoology

**Dr. Padmanabha.B** Professor & head, PG departnment of Applied zoology Maharani's science college for women, Mysuru

**Prathibha.S*** Student, MSC (Applied zoology) Maharani's science college for women, Mysuru.
*Corresponding Author

## ABSTRACT

The objective of this research project is to analyze human-wildlife conflict in the Mudigere forest range of Chikkamagaluru district Karnataka state during 2017-2019. The data collected from the farmers with questionnaires and also from Karnataka Forest Department (KFD). According to the results, total 1,826 wild life conflicts were reported and total Rs41,73,800 compensation distributed to the aggrieved farmers. During 2018-19, even though higher number of conflicts cases (962) reported but lesser compensation distributed due to lesser area damage due to conflicts. The highest number of conflicts reported from elephants (1799) followed by Bison (18), and lowest from wild boar (8). The highest crop damage was documented to the areca, followed by coffee, paddy, banana, cardamom, coconut & jackfruit. Recent researches indicated that human wildlife interactions turning conflict into coexistence.

## KEYWORDS

Mudigere Forest Range, Human wildlife conflict, Bharathibylu, Devarunda, Banakal.

## INTRODUCTION

Human-wildlife conflict often undermines the objectives of wildlife conservation and sustainable use initiatives. Although the benefits of utilizing wildlife may be directed to communities through community-based natural resource management (CBNRM) programmes [1]. According to the World Conservation Union, it occurs when human population overlap with wildlife requirements resulting in costs to both native residents and animals [2]. The HWC is a common Phenomenon from the past and has become a significant problem throughout the World [3]. The damage and destruction caused by a variety of animals to the human property and sometimes to human life is a real and significant danger to many human communities. In many parts of the world, people and animals are increasingly coming into conflict over living space and food. This is mainly due to expanding human population and the continued loss of natural habitats. where humans and elephants coexisted, human welfare is inversely related to elephant welfare however there is a need to strike a balance between human welfare and elephant conservation[4]. The mitigation strategies are helpful to bring balance between human welfare and elephant conservation.

Many traditional methods like prayer, noise, shouting, beating drums, burning bamboos etc. used by the people to protect the crop from wildlife damage. Wherever the conflict is severe barriers are popular as these separated people and wild animals the commonly used barriers are fences and trenches [5].

## MATERIALS AND METHODS

In the Mudigere forest range of Chikkamagaluru district, Karnataka state, three sections namely Bharathibylu, Devarunda and Bankal, were selected for this study. The study was carried out during 2017-2019. The data collected interacting with the aggrieved farmers with questionnaires and from Karnataka Forest Department.

## RESULTS & DISCUSSION

According to table 1&2 during 2017-2018 total 852 number of conflicts were reported for which 34,06,720 rupees distributed as compensation. In Bharathibylu section of Mudigere forest range, 301 number of conflicts cases were reported for which 28,19,010 paid as compensation. Among 301 cases highest crop damage was reported to coffee (82) followed by areca (80), banana (54), pepper (52), paddy (18), cardamom (13), and jackfruit (2).

In Devarunda section 189 number of conflicts cases were reported for which 2,74,200 paid as compensation. Among 189 cases highest crop damage was reported paddy (70), coffee (37), areca (26), pepper (22), banana (19), cardamom (15).

Among three sections of mudigere forest range highest number of conflicts cases were reported in Banakal i.e. 362 for which Rs3,01,380 paid as compensation. Among 362 cases the highest damage to coffee crop (94), followed by pepper (84), areca (74). Banana (62), cardamom (33), and paddy (15).

The total number of 284 cases of crop damage documented by the elephants, followed by 15 cases from the bison and 3 cases from wild boar. In these 3 sections the highest crop damage reported to coffee (208), followed by areca (175), pepper (155), banana (130), paddy (103) and cardamom (61), jackfruit (2) cases from the elephants. 4 each cases of conflicts for coffee, areca and banana reported by the Bison. Out of 3 cases of conflict by the wild boar crop damage to coffee, areca and banana one each respectively.

During 2018-19, total 962 conflicts cases were reported for which Rs7,67,080 paid as compensation to loss incurred farmers. In Bharathibylu total 128 conflict cases were reported for which Rs1,93,940 paid as compensation, the highest crop damage was reported to coffee (38), followed by areca (33), banana (27), pepper (20), cardamom (5), and paddy (1) by the elephants. Crop damage one each to coffee, pepper, areca reported by the Bison and one case of crop damage to paddy reported by the wild boar.

In Devarunda section of mudigere forest range total 238 cases of conflict reported for which Rs2,40,740 paid as compensation. The highest crop damage reported to coffee (52), followed by paddy (49), pepper (42), banana (40), areca (39) and cardamom (12) cases reported by the elephants. One case each of crop damage to coffee, pepper, paddy & areca reported due to Bison. One case of crop damage to paddy reported by the wild boar. Out of 238 cases, 233 cases of crop damage reported by the elephants, 4 cases of conflicts reported by the Bison, and one case of crop damage reported by the Wild boar.

In Banakal section of mudigere forest range total highest number of conflicts (596) reported for which Rs3,33,160 compensations. The highest crop damage was reported to coffee (152) followed by Areca (118), pepper (116), banana (101), cardamom (56), paddy (51) and lowest for coconut due to elephant conflict.

According to Graph 1, in comparison even though higher number of wildlife conflict cases were reported during 2018-2019 but lesser compensation was distributed. These results suggested that in the first year of study period even though lesser cases were reported but damage occurred to large areas. So, more compensation was paid to aggrieved parties.

In India human elephant conflicts are serious challenge to wildlife conservation which needs a much improve scientific and social understanding. According to his study human and livestock demographic variation cropping patterns, availability of irrigated agriculture land among the forest range, correlates the intensity of conflicts[6]. Human elephants conflict resulted in the death of human and elephants in the Coimbatore forest division. The study revealed that drastic increase in human death for last five years since 2014 [7]. In Bandipur National Park the crop damage was intense in the months of December and more than 20 cultivated species were damaged by the elephants [8]. The elephant conflict was more in the Bandipur national park. and 90% of crop damage by elephants [9]. Human wildlife

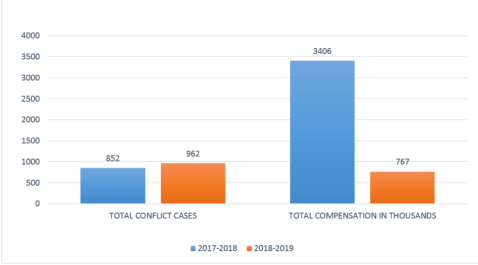
interaction is turning conflict into coexistence The study and mitigation of HWC as gradually expanded its scope to incorporated the human dimension of whole spectrum of human wildlife relationship from conflict to coexistence [10].

**Table:1 Crop damage cases in the Mudigere forest range due to Huma wildlife conflict during 2017-2019.**

| Year | Crop | Bharathi bylu | Devarunda | Banakal | Total |
|---|---|---|---|---|---|
| | Areca tree | 20,72,800 | 68.400 | 1,23,600 | 22,64,800 |
| 2017-2018 | Banana | - | 34.920 | 32,200 | 67,140 |
| | Coffee | 4,78,800 | 65,000 | 86,400 | 6,30,200 |
| | Cardamom | - | 10,800 | 11,000 | 21,800 |
| | Coconut | 13,000 | - | - | 13,000 |
| | Paddy | 1,78,800 | 84,400 | 22,240 | 2,85,500 |
| | Pepper | 86,540 | 10,620 | 25,920 | 1,23.080 |
| | Jackfruit | 1200 | - | | |
| | Total | 28,19,010 | 2,74,200 | 3,01,380 | 34,06,720 |
| 2018-2019 | Areca tree | 50,800 | 10,400 | 63,540 | 1,24,740 |
| | Banana | 46,440 | 48,240 | 1,04,700 | 1,99,380 |
| | Coffee | 72,000 | 87,200 | 37,200 | 1,96,400 |
| | Cardamom | 9,200 | 8,800 | 4000 | 21,200 |
| | Coconut | - | - | 95.280 | 95,280 |
| | Paddy | 5,280 | 74,040 | 28,440 | 1,07,760 |
| | Pepper | 10,260 | 12,060 | - | 22,320 |
| | Total | 1,93,940 | 2,40,740 | 3,33,160 | 7,67,080 |

**Table:2 Compensation analysis in three sections Mudigere forest range during 2017-2019.**

| Year | Wild animal | Crop | Bharathi Bylu | Devarunda | Banakal | Total |
|---|---|---|---|---|---|---|
| | Elephant | Areca tree | 75 | 26 | 74 | 175 |
| 2017-2018 | | Banana | 49 | 19 | 62 | 130 |
| | | Coffee | 77 | 37 | 94 | 208 |
| | | Cardamom | 13 | 15 | 33 | 61 |
| | | Paddy | 18 | 70 | 15 | 103 |
| | | Pepper | 49 | 22 | 84 | 155 |
| | | Jackfruit | 2 | - | - | 2 |
| | Bison | Coffee | 4 | - | - | 4 |
| | | Areca tree | 4 | - | - | 4 |
| | | Banana | 4 | - | - | 4 |
| | | Pepper | 3 | - | - | 3 |
| | Wild boar | Coffee | 1 | - | - | 1 |
| | | Areca tree | 1 | - | - | 1 |
| | | Banana | 1 | - | - | 1 |
| | | Total | 301 | 189 | 362 | 852 |
| 2018-2019 | | Areca tree | 33 | 39 | 118 | 190 |
| | | Banana | 27 | 40 | 101 | 168 |
| | | Coffee | 38 | 52 | 152 | 242 |
| | | Cardamom | 5 | 12 | 56 | 73 |
| | | Coconut | - | - | 2 | 2 |
| | | Paddy | 1 | 49 | 51 | 101 |
| | | Pepper | 20 | 42 | 116 | 178 |
| | Bison | Coffee | 1 | 1 | - | 2 |
| | | Pepper | 1 | 1 | - | 2 |
| | | Paddy | - | - | - | 1 |
| | Wild boar | Areca tree | 1 | 1 | - | 2 |
| | | Paddy | 1 | 1 | - | 1 |
| | | Total | 128 | 238 | 596 | 962 |




**Graph:1 Comparative analysis of wildlife conflict and compensation given in the Mudigere forest range during 2017 to 2019.**

## CONCLUSION

The presence of wildlife animal like elephant, Bison, Wild boar, inflicts costs on local communities and develop negative attitude among local people towards wild animal, we must take certain long term solutions so that which shows enhance coexistence between human & wild animals.

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