Journal of Wildlife and Ecology. (2018). 2(1):10-21

Research Paper **Open Access**

Assessment of human and wild boar (*Sus scrofa*) conflict from district Bagh, Azad Jammu and Kashmir, Pakistan

Misbah Shaukat Chughtai[1*], Mehwish Altaf[1], Irum Manzoor[1], Bushra Safeer[1] and Sozina Yasrub[1]

1. Department of Zoology, Women University of Azad Jammu and Kashmir, Bagh-Pakistan

***Corresponding Author**: misbahchughtai44@gmail.com

Peer Reviewed

Citation: Chughtai, M.S., M. Altaf, I. Manzoor, B. Safeer, S. Yasrub. 2018. Assessment of human and wild boar (*Sus scrofa*) conflict from district Bagh, Azad Jammu and Kashmir, Pakistan. Journal of Wildlife and Ecology. 2: 10-21.

Received: 11, 11, 2017
Accepted: 01, 02, 2018
Published: 01, 03, 2018

Competing interests: The authors have declared that no competing interests exist.

Funding: Authors have no source of funding for this work.

ABSTRACT

Introduction: Human-wild boar conflict is most common in many countries. In numerous countries, their population has increased during the mid 20th century. Locally abundant food source is mostly exploited, and conflicts with humans have seen from this behavior. This study has been designed to collect detailed about human-wild boar conflict in the selected sites of district Bagh.

Material and Method: Data collected through questionnaire (n=100) that is consist of respondent profile, loss of wild boar (%), human sharing land with wild boar, livestock and agriculture management and effective methods to control wild boar.

Results: During the study noted that many of the informants were unhappy due to the presence of the wild boar. Most of the respondents visit daily to agricultural land for the protection of crops and also spent most of time with livestock. It is documented that local people is used different techniques to conserve crops and livestock i.e. poison, dog and stay with livestock. Mostly respondent said that if the predator population is decreased than it might be effective and only few said that may not effective and do not know.

Conclusion: It is concluded that this species is producing damage in the study area and most people of the area want to reduce its population.

Key words: Wild boar, Conflict, Population, Livestock

INTRODUCTION

Humans and wildlife conflicts have been documented from whole world (Manfredo and Dayer, 2004) and problems are also noted such as disease transmission from wildlife to domestic animals (Wolfe *et al.*, 2007), attacks by wildlife on domestic animals (Treves *et al.*, 2002; Fowler, 2011) and humans (Thirgood *et al.*, 2005) and also damage to forests by ungulates (Reimoser *et al.*, 1999). One of the topmost problems, however, is damage by wildlife to agriculture; certainly, crop damage by omnivore wildlife ranging in size from smallest mammals to largest mammals has been observed, affecting crops and often leading to major economic loss (Linkie *et al.*, 2007).

One species that has frequently come into clash with human being is wild boar (Schley *et al.*, 2008). Wild boar have modified to agriculture landscape (Tilman *et al.*, 2002). In numerous countries, their population has increased dramatically during the mid 20th century (Sáaez-Royuela and Telleriia, 1986). This is an omnivorous species (Herrero *et al.*, 2006). Locally abundant food source is mostly exploited, and conflicts with humans have seen from this behavior (Herrero *et al.*, 2006).

This specie is native in following countries Viet Nam, Uzbekistan, Ukraine, Turkmenistan, Turkey, Tunisia, Thailand, Tajikistan, Taiwan, Syrian Arab , Switzerland, Sri Lanka, Spain, Slovenia, Slovakia, Serbia, San Marino, Russia , Romania, Portugal, Poland, Palestinian, Pakistan, Netherlands, Nepal, Myanmar, Morocco, Montenegro, Mongolia, Monaco, Moldova, Malaysia, Macedonia, Luxembourg, Lithuania, Liechtenstein, Lebanon, Latvia, Kyrgyzstan, Korea, Kazakhstan, Jordan, Japan, Italy, Israel, Iraq, Iran, Indonesia, India, Hungary, Hong Kong, Herzegovina, Greece, Germany, Georgia, France , Finland, Estonia, Cyprus, Croatia, China, Cambodia, Bulgaria, Bosnia, Bhutan, Belgium, Belarus,

Bangladesh, Azerbaijan, Austria, Armenia, Andorra, Algeria, Albania, Afghanistan (Oliver and Leus, 2008).

The Wild boar is found up to 900m elevation in the Margalla Hills, Kahuta, Murree foothills and all over in the Sindh and Punjab down to Indus mouth. This species is the icreasing in sugar cane cultivation has favored species in all these regions, wild boar of all ages finding accommodation in standing crops. It is comparatively rare in Salt Range but found in Kala Chitta Hills of Attock district. This species population is stable and widespread (Roberts, 1997). This study has been designed to collect detailed about human-wild boar conflict in the selected sites of district Bagh.

MATERIALS AND METHODS

Study area*:* Bagh is located 80 Kilometers from Muzaffarabad, the capital city of Azad Jammu and Kashmir. It is 160 Kilometers from Islamabad, the capital of Pakistan. Topographically, the entire district Bagh is a mountainous area, generally sloping from northeast to south-west. The area falls in the lesser Himalayas zone. The main range in the district is Pir- Panjal. The Haji-Pir Pass is situated at the height of 3421 meters above sea level. The general elevation is between 1500 and 2500 meters above sea level. The mountains are generally covered with coniferous forests. Mahl Nala, in the Bagh sub-division, and Betar Nala, in the Haveli sub-division, are the two main streams. However, numerous other rivulets flow in the district (Bibi *et al.*, 2013).

Methodology: In this study area I asked the following question from the respondents; having agriculture? What is the size of agriculture? Are you owner or leasehold? How long is your agriculture experience? How often are you on the agriculture? How often wild boar loss your agriculture? How often you see sign of wild boar on your agriculture? How you feel about sharing the land with Wild boar? Which of the following agriculture management techniques

(i.e. poison, guarding animals, insure loss from wild boar, electric fenced and fenced) you currently used/have used in past/have never used/plan to use in future.

How effective could this potential solution be at enabling farmers and wild boar to coexist on agriculture? Change management to reduce agriculture loss, join any conservation organization and reduce wild boar number to tolerable level.

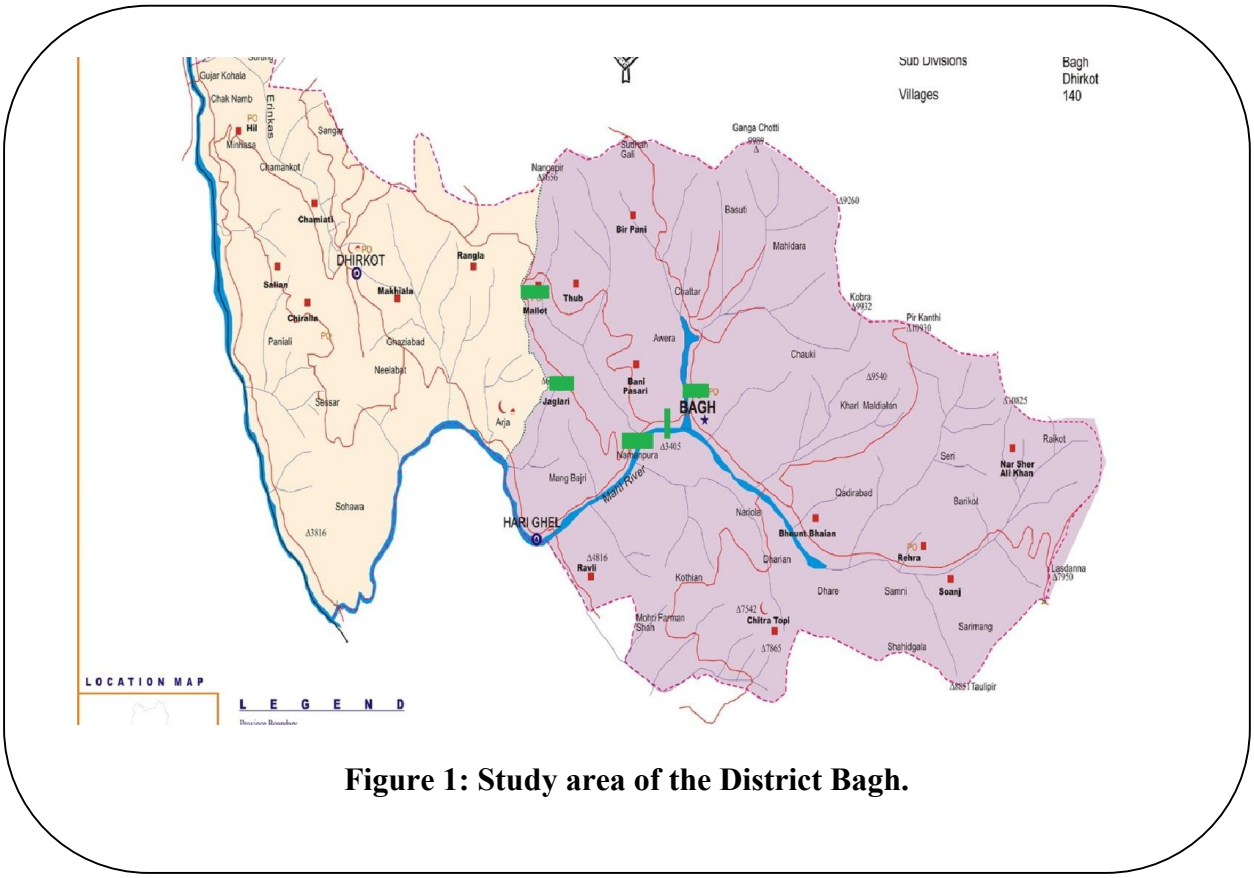

Figure 1: Study area of the District Bagh.

RESULTS AND DISCUSSION

Data collected from Male (83) and Female (17) respondents, all are Muslim and age of respondents as 25 to 40 (n=27), 41 to 50 (n=12), 51 to 60 (n=27), 60 and above (n=54). During the survey noted that selected respondents having education as; under matric (n=24), secondary school (n=27), did not complete secondary school (n=11), under graduate (n=24) and post

graduate (n=14); while the cast of respondents as Mughal (n=41), Khawajy (n=1), Butt (n=8), Raja (n=29), Syed (n=4), Sheikh (n=3), Rajpoot (n=1), Khan (n=2), Chahudary (n=2), Minhas (n=5), Saduzai (n=3) and Khokar (n=1) as shown in Figure 2. Altaf (2016) is used similar respondent profile.

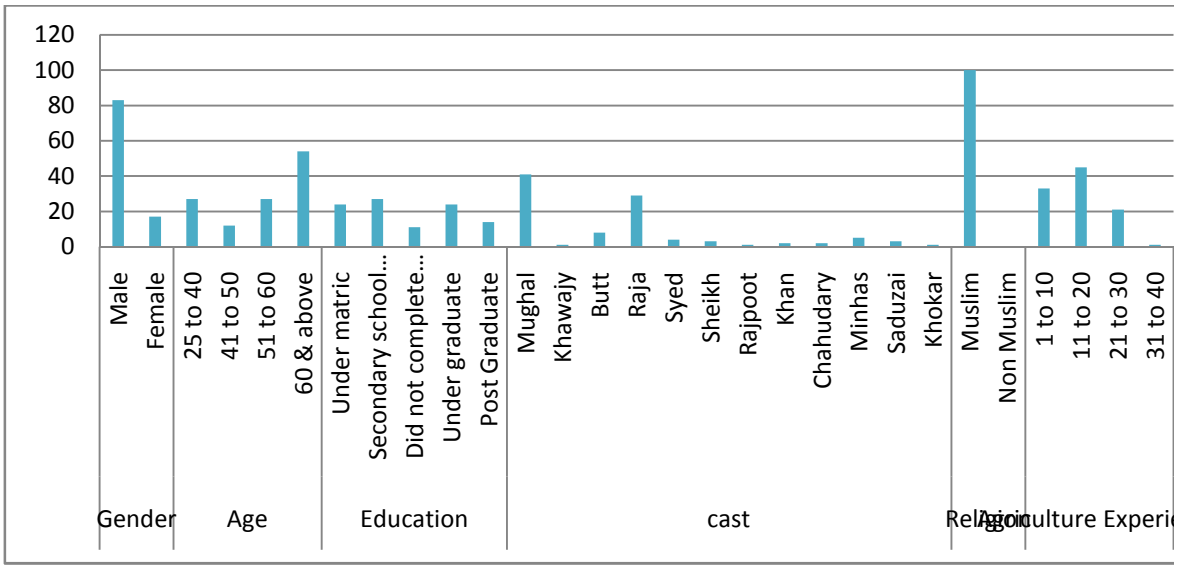

Figure 2: The profile of respondents in the study area.

During the study noted that many of the informant was unhappy due to the presence of the wild boar and visit daily (Figure 4 and 5). During the study recorded that local people use poison to remove wild boar, used in past by 5 people, currently used by 65 respondents and not used by 30 informants (Figure 5). During the study recorded that mostly informants (50) said that they save the livestock with the help of dog; while other said they used in past and never used (Figure 6). During the study recorded that local people use fenced to save livestock as; never used (18), used in past (29), currently used (16) and plan to use in future (37) (Figure 7). During the survey noted that mostly informants used the record of livestock while other informant said that they were used in past, never used and other would be used in future (Figure 8). During the

study recorded that local people insure livestock from predator as; never used (10), used in past (20), currently used (30), plan to use in future (40) (Figure 9). It is noted that local people use electric fenced to save livestock as; never used (16), used in past (21), currently used (28), plan to use in future (35) (Figure 10). During the study recorded that mostly respondent said that if the predator population is decreased than it might be effective and other said that may not effective and do not know (Figure 11).

Wild boar depend on plant as a main part of their diet, alongwith large body size and a tendency to crush crops and consume them, means that wild boar can reason major harm to a variety of crops. Further, when digging and rooting for small prey and plant roots, wild boar make holes of upto sixty cm in depth and, in the process, reason damage to grassland (Schley and Roper, 2003).

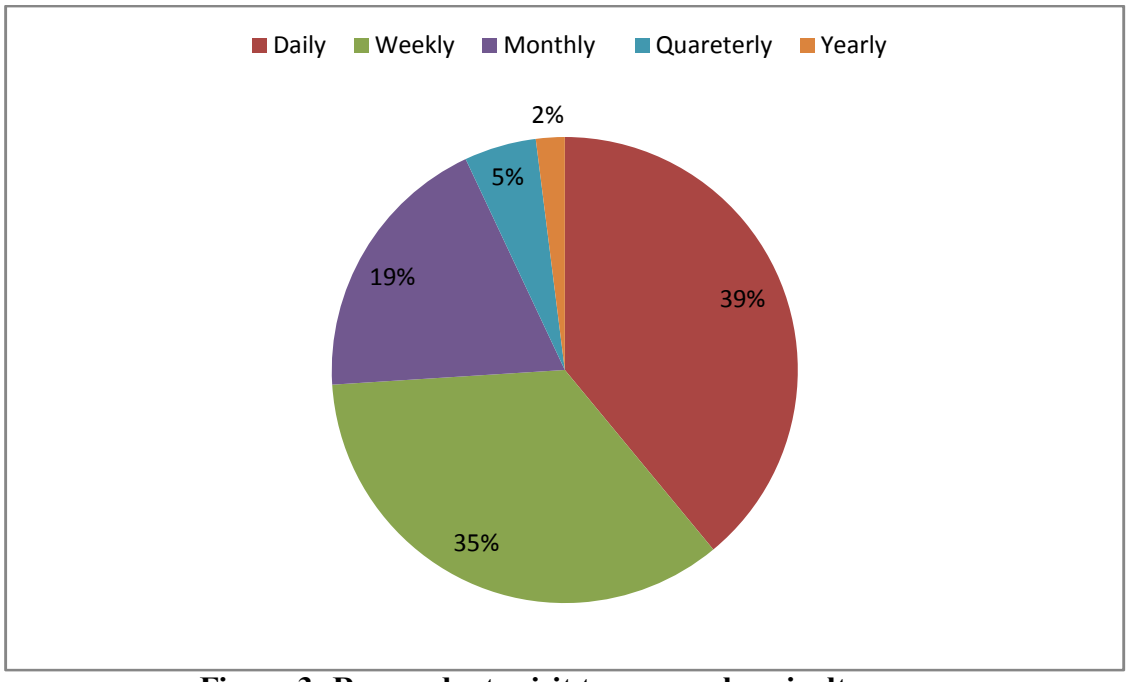

Figure 3: Respondents visit to personal agriculture area.

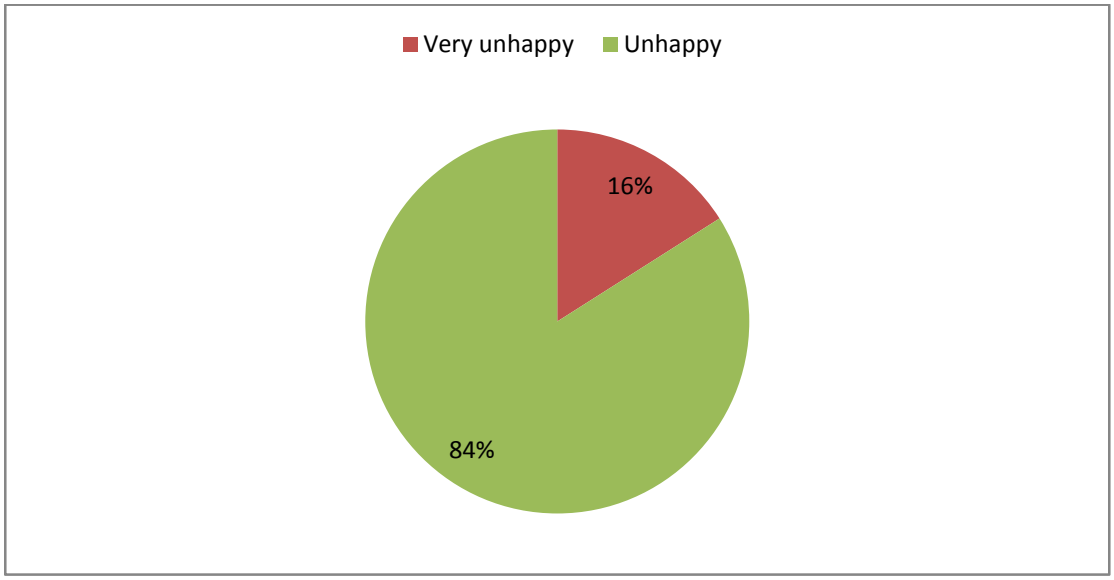

Figure 4: Respondents response about sharing land wild boar.

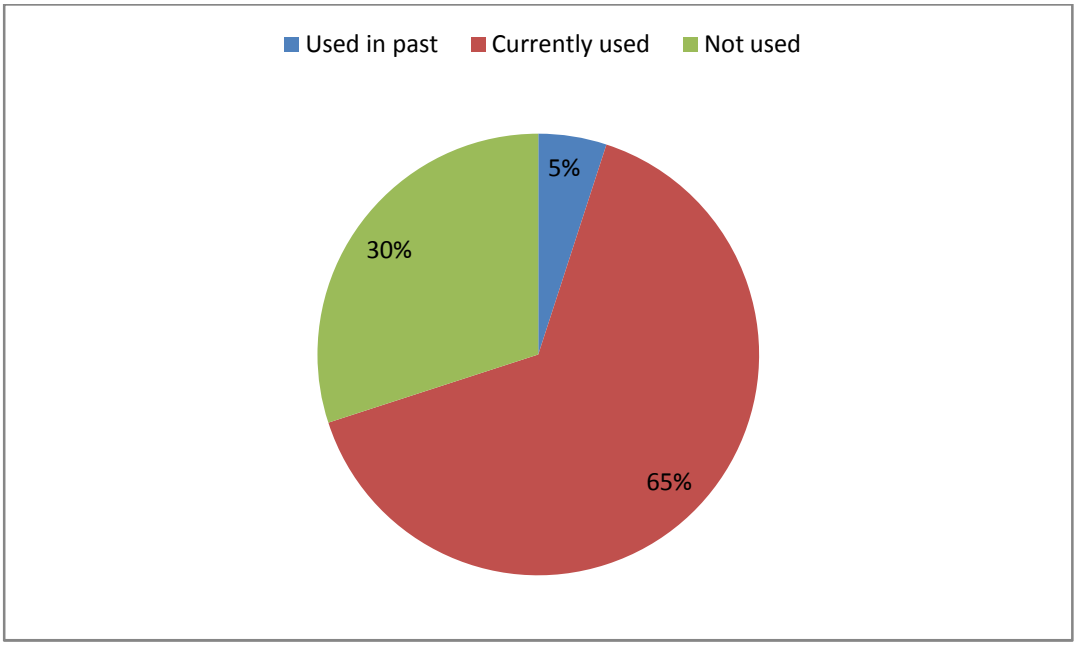

Figure 5: Respondents response about poison used to remove wild boar.

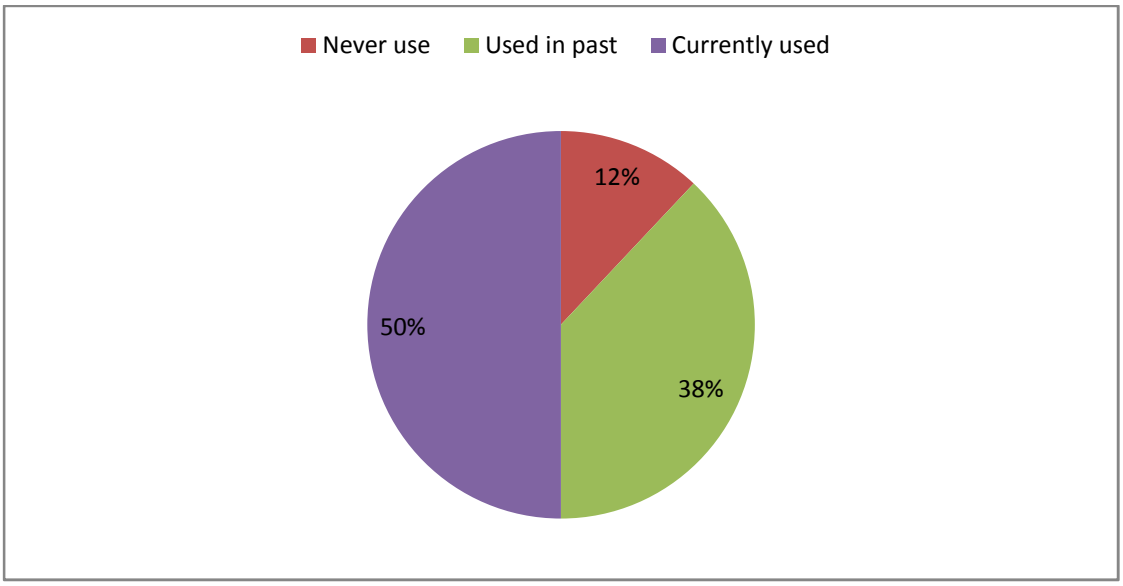

Figure 6: Save the livestock with the help of dogs.

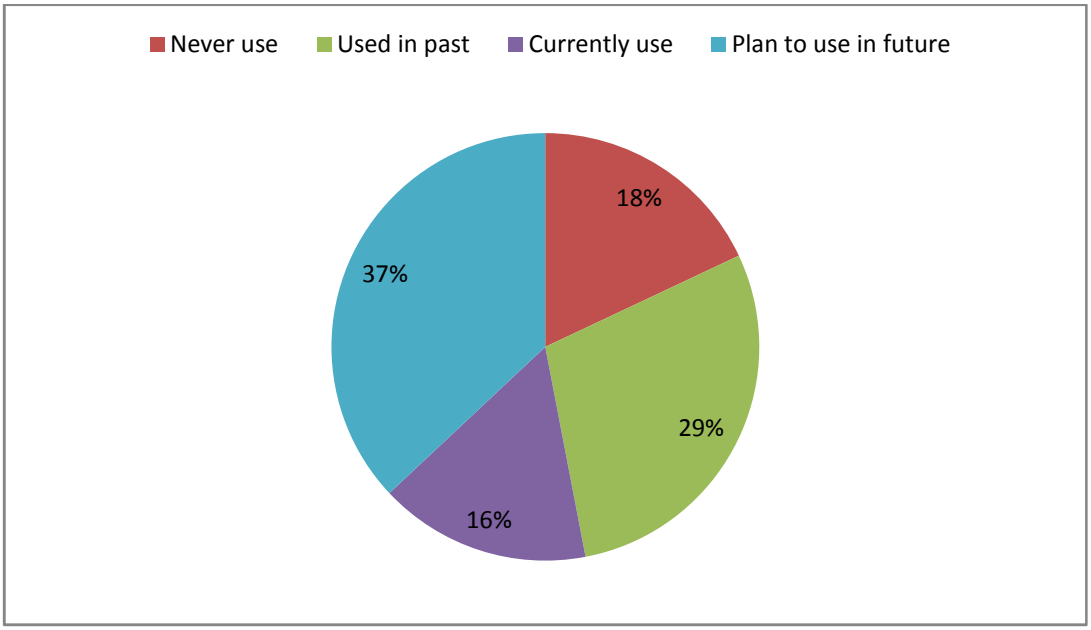

Figure 7: Respondents response about fenced used to save livestock.

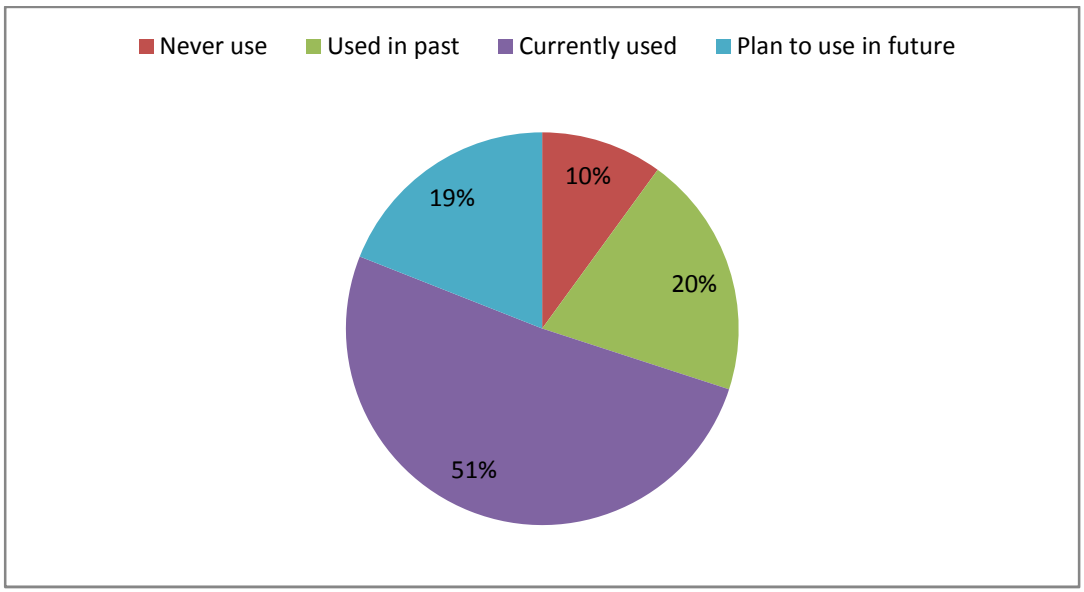

Figure 8: Respondents response about keeps records of live stocks numbers, birth and death.

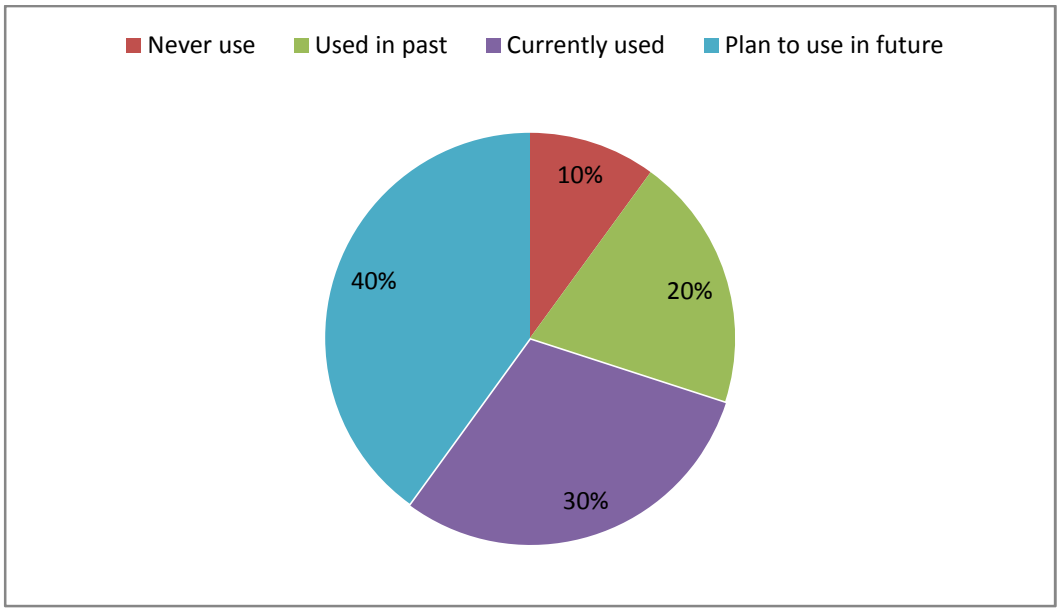

Figure 9: Respondents response about insure livestock losses from predator.

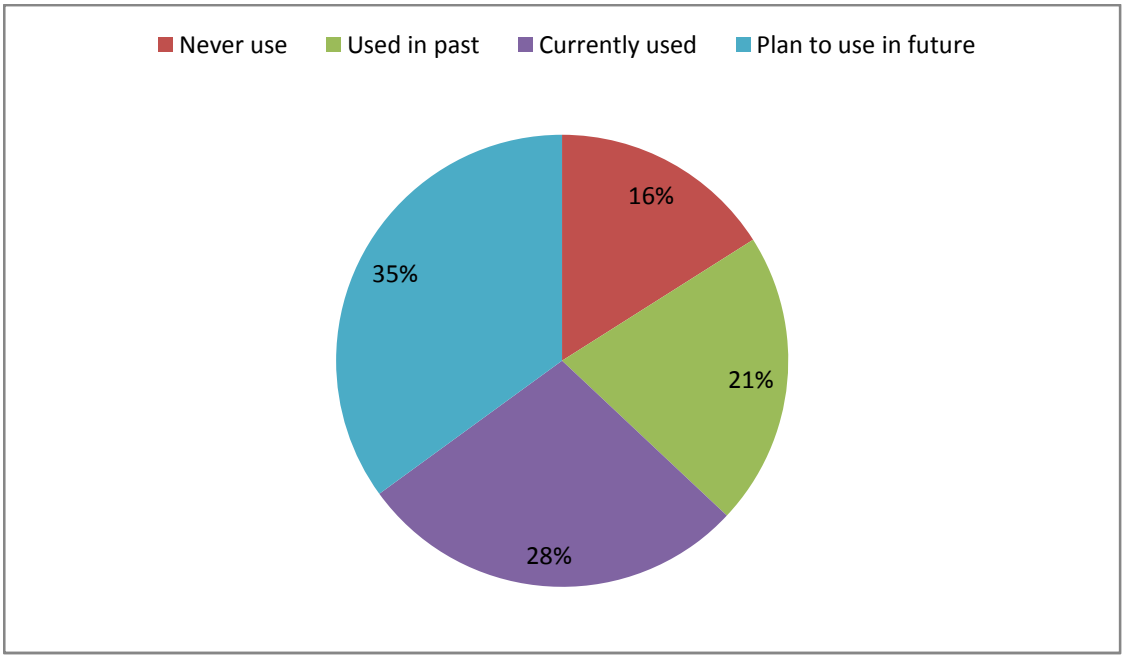

Figure 10: Respondents response about electric fenced used to save the livestock.

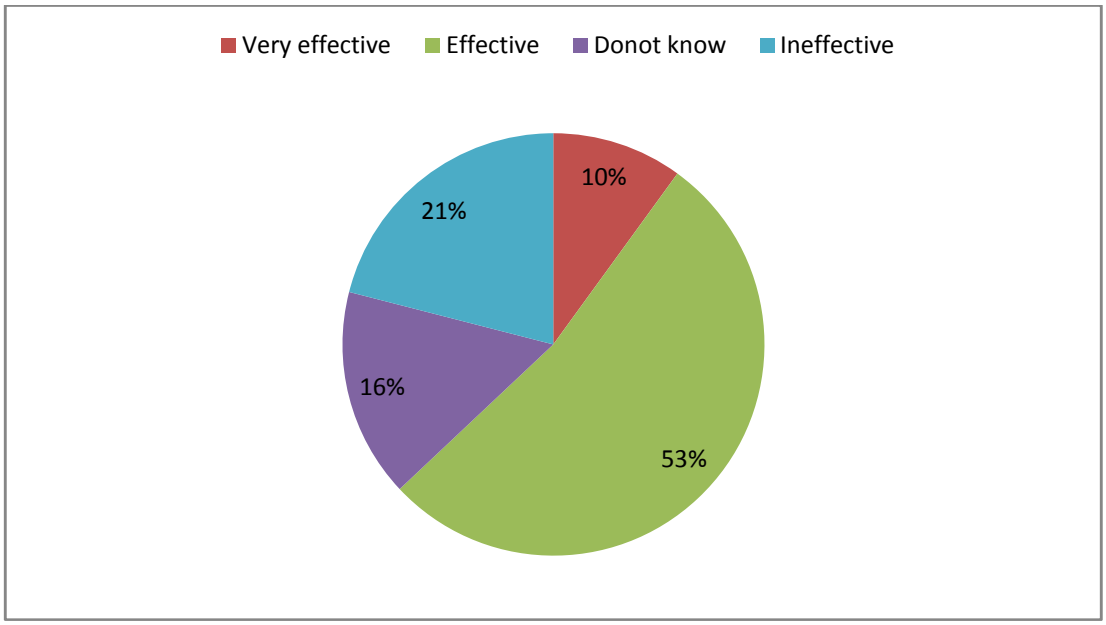

Figure 11: Respondents response about reduction of predator number to tolerable

Conclusion: It is concluded that wild boar is producing damage in the Bagh district and most people of study area want to reduce its population.

Acknowledgements: Authors are thankful to local people for sharing data about human-wild boar conflict.

Availability of data: We have included all relevant data in the manuscript that were collected during the field survey.

Authors' contributions: Chughtai designed this study and also performed the research; Altaf helped in data write up. Manzoor, Safeer and Yasrub were analyzed article and approved as final manuscript.

REFERENCES

Altaf, M. 2016. Assessment of Avian and Mammalian Diversity at Selected Sites along river Chenab University of Veterinary and Animal Sciences, Lahore-Pakistan.

Bibi, S.S., R.A. Minhas, M.S. Awan, U. Ali, N.I. Dar. 2013. Study of Ethno-Carnivore relationship in Dhirkot, Azad Jammu and Kashmir (Pakistan). Journal of Animal and Plant Sciences. 23: 854-859.

Fowler, M. 2011. Restraint and handling of wild and domestic animals. John Wiley & Sons.

Herrero, J., A. García-Serrano, S. Couto, V.M. Ortuño, R. García-González. 2006. Diet of wild boar *Sus scrofa* L. and crop damage in an intensive agroecosystem. European Journal of Wildlife Research. 52: 245-250.

Linkie, M., Y. Dinata, A. Nofrianto, N. Leader-Williams. 2007. Patterns and perceptions of wildlife crop raiding in and around Kerinci Seblat National Park, Sumatra. Animal Conservation. 10: 127-135.

Manfredo, M.J., A.A. Dayer. 2004. Concepts for exploring the social aspects of human–wildlife conflict in a global context. Human Dimensions of Wildlife. 9: 1-20.

Oliver, W., K. Leus. 2008. *Sus scrofa*. The IUCN Red List of Threatened Species 2008.

Reimoser, F., H. Armstrong, R. Suchant. 1999. Measuring forest damage of ungulates: what should be considered. Forest Ecology and Management. 120: 47-58.

Roberts, T.J. 1997. The Mammals of Pakistan. Oxford University Press. New Yark.

Sáaez-Royuela, C., J.L. Telleriia. 1986. The increased population of the wild boar (*Sus scrofa* L.) in Europe. Mammal Review. 16: 97-101.

Schley, L., M. Dufrêne, A. Krier, A.C. Frantz. 2008. Patterns of crop damage by wild boar (*Sus scrofa*) in Luxembourg over a 10-year period. European Journal of Wildlife Research. 54: 589.

Schley, L., T.J. Roper. 2003. Diet of wild boar *Sus scrofa* in Western Europe, with particular reference to consumption of agricultural crops. Mammal Review. 33: 43-56.

Thirgood, S., R. Woodroffe, A. Rabinowitz. 2005. The impact of human-wildlife conflict on human lives and livelihoods. Conservation Biology Series-Cambridge-. 9: 13.

Tilman, D., K.G. Cassman, P.A. Matson, R. Naylor, S. Polasky. 2002. Agricultural sustainability and intensive production practices. Nature. 418: 671.

Treves, A., R.R. Jurewicz, L. Naughton-Treves, R.A. Rose, R.C. Willging, A.P. Wydeven. 2002. Wolf depredation on domestic animals in Wisconsin, 1976-2000. Wildlife Society Bulletin. 231-241.

Wolfe, N.D., C.P. Dunavan, J. Diamond. 2007. Origins of major human infectious diseases. Nature. 447: 279.