



Original research article

Assessing patterns of human–Asiatic black bear interaction in and around Wangchuck Centennial National Park, Bhutan

Yonten Jamtsho^a, Sangay Wangchuk^{b,*}^a Wangchuck Centennial National Park, Bumthang, Bhutan^b Ugyen Wangchuk Institute for Conservation and Environment Bumthang, Bhutan

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ABSTRACT

Bhutan has 2 of the 8 species of bears recorded in the world: Asiatic black bear and Sloth bear. Asiatic black bear is listed in Appendix I of the CITES and categorized as vulnerable in IUCN Red List. Asiatic black bear is increasingly becoming nuisance to people by attacking crops, livestock and even humans, threatening its own existence as a result of retaliation. With the need to understand the interactions between the communities living within the Wangchuck Centennial National Park (WCNP) and the Asiatic black bears, 620 households in and around WCNP were interviewed in 2010. Between 1960 and 2010, Asiatic black bears mauled 40 people in and around WCNP and four district hospitals within which WCNP operates recorded 19 cases of humans mauled by bear from 2013 to 2015. Majority (45% and 43% of respondents) reported the crop and livestock depredation during summer and autumn season respectively and 75% of the respondents reported sighting bear in 2010. About 52% of respondents believed that killing of bears could reduce the conflict, which may be a potential threat to the bear, though stringent conservation rules of the country restricts killing it. Community outreach programs like creating awareness on importance of bear and its habitat conservation may be pursued to help reduce the conflict. Integrated conservation measures such as providing electric fences may be initiated to help garner support for conservation. This may ensure the survival of Asiatic black bear, and also reduce the significant economic losses to inhabitants in and around WCNP.

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1. Introduction

Out of the total 8 species of bears recorded in the world, six of them are known to occur in Asia (Bargali, 2012) and in Bhutan two species of bears are recorded; Asiatic black bear (*Ursus thibetanus*) and Sloth bear (*Melursus ursinus*) (Wangchuk et al., 2004). Asiatic black bear has a restricted global distribution range; from Bhutan through Kashmir and Sikkim in India to Pakistan (Abbas et al., 2015; Roberts, 1997) and Afghanistan to Baluchistan province of Iran, China, Korea, and Japan with isolated population in Taiwan (Cowan, 1972; Sathyakumar and Choudhury, 2007). Asiatic black bear is listed as a Schedule I species in the Forest and Nature Conservation Act of Bhutan 1995 (RGoB, 1995); listed in Appendix I of the CITES; and as Vulnerable in IUCN Red List of Threatened Species. According to the Forest and Nature Conservation Rules of Bhutan 2006, totally protected species in Bhutan are categorized as Schedule I species (RGoB, 2006).

Among the carnivores in Asia, the Asiatic black bear is also reported to involve in conflicts with rural people of Bhutan (DoFPS, 2011; Sangay and Vernes, 2008), China (Liu et al., 2011a), India (Chauhan, 2003), Nepal (Stubblefield and Shrestha, 2007) and Pakistan (Abbas et al., 2015). Conflicts between humans and bears generally include damage to agricultural and

* Corresponding author.

E-mail address: swangchuk@uwice.gov.bt (S. Wangchuk).

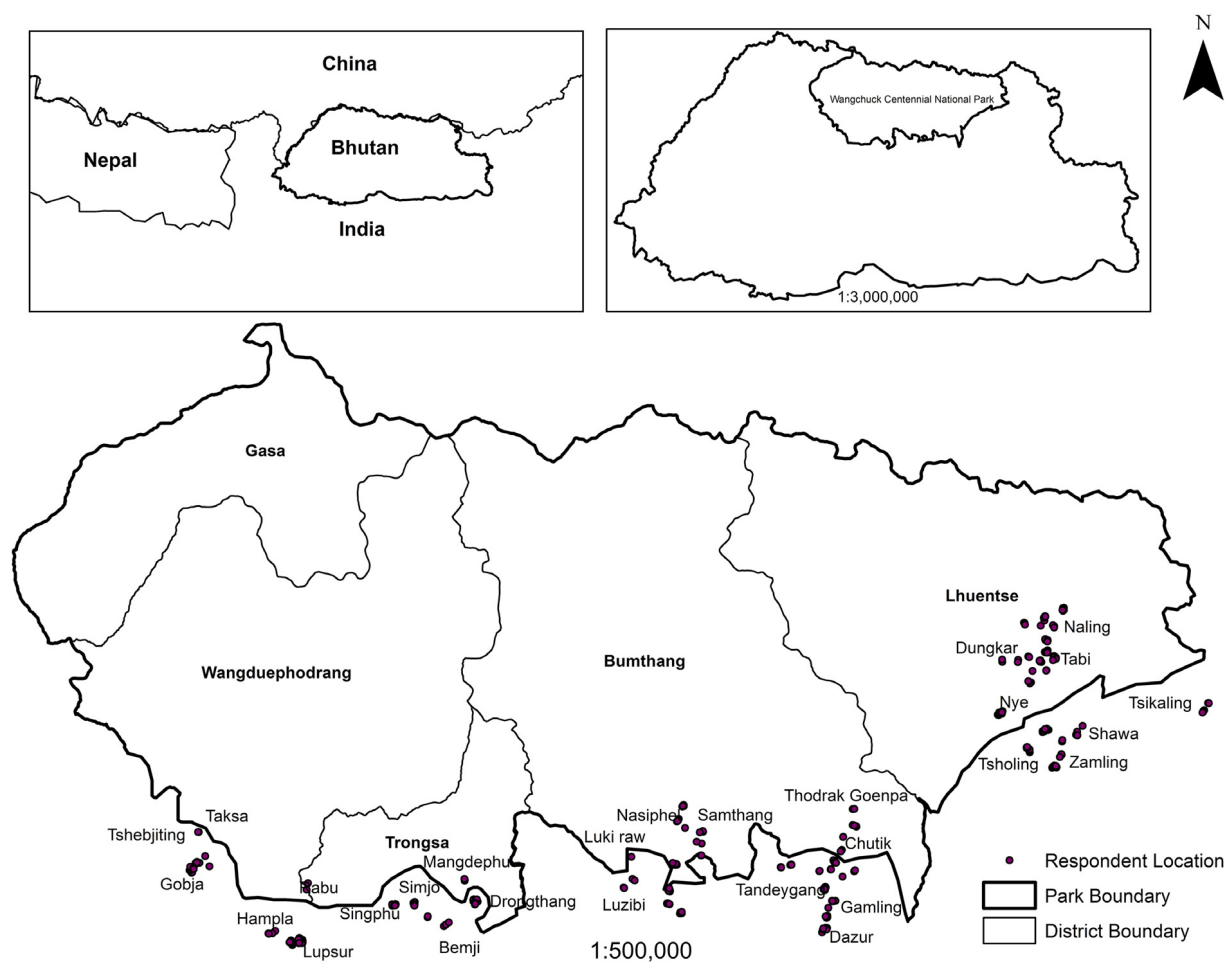


Fig. 1. Study site.

horticultural crops, apiaries, fish farms, livestock, and even humans (Charoo et al., 2011; Liu et al., 2011b; Sangay and Vernes, 2008) throughout the bear range countries. Fear of bears raiding agricultural fields and livestock barns has become a constant problem for rural farmer throughout the Himalayas and results in men, women and even children guarding their farm fields and barns both days and nights (Abbas et al., 2015; NCD, 2008), even to the extent of building watch-towers in farm fields to stay overnight (Liu et al., 2011b; Sillero-Zubiri et al., 2007).

Bears are often killed by people for gall bladder and paws (Charoo et al., 2011; Graham et al., 2005; Liu et al., 2011a; Sathyakumar and Choudhury, 2007) and this is further coupled by retaliation, threatening its survival (Charoo et al., 2011; Graham et al., 2005; Can et al., 2014). Habitat degradation (Peyton, 1994), trade in bear body parts and conflicts with humans are the main threats to bear populations throughout their range (Bargali, 2012). Human–wildlife conflicts in general are of considerable economic importance in many parts of the world (Graham et al., 2005) and are particularly controversial when protected species are involved (Thirgood et al., 2000).

Reports of conflicts between Asiatic black bears and humans are common in Wangchuck Centennial National Park (NCD, 2008; Tshering, 2012; WWF, 2014, WWF, n.d) and Bumthang is reported as one of the three districts in Bhutan (of the twenty districts) wherein highest bear kills were recorded (Sangay and Vernes, 2008). However, the types, distribution and nature of human–bear conflicts have not been documented in WCNP. With reports of bear conflicts within WCNP and human mauling cases treated every year in hospitals, it may become difficult to make people appreciate the conservation activities. Thus, before the animal attacks and retaliation gets out of proportion, which in-turn might affect the survival of the bear, it becomes important to understand the extent in which areas conflicts generally occur in order to draw certain conservation measures.

This study was undertaken in four districts of Bhutan (Bumthang, Lhuentse, Trongsa and Wangduephodrang) that are within WCNP in northern Bhutan (Fig. 1). WCNP was established in 2008 and is Bhutan's largest protected areas covering

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