

Striking a balance: human-leopard coexistence in the heart of the Greater Himalayan region

By Muzaffar A. Kichloo, 20th December 2023

Protected areas, from tiny local nature reserves to vast national parks, provide vital refuges for wildlife in a world that is ever more dominated by human activities. However, even those areas that are set aside for nature conservation are not without human impact, and it has become a familiar pattern that, as rural communities living in and around protected areas expand into the habitats of a diverse range of species, a delicate balance must be struck between the needs of people and wildlife. One landscape in which this is a critical concern is the Greater Himalaya, where India's Kishtwar National Park is located. Here, people share space with leopards, big cats that can be as dangerous as they are fascinating and beautiful. As human activities fragment forests, change their habitat and decimate their natural prey populations, leopards, like other carnivores, often venture into human-dominated landscapes in search of cover, easy prey and food provided by people. Encounters can lead to potentially dangerous situations for both people and leopards. There are some documented accounts of such negative interactions in different parts of India, but scientific reporting on this issue is scarce in Jammu and Kashmir. [Our research](#) aimed to bridge that gap in Kishtwar National Park, the largest protected area in the region, by exploring human-leopard interactions and the attitudes of local communities towards these elusive felines.



A leopard *Panthera pardus* in Kishtwar National Park. Photo: Muzaffar A. Kichloo.

Kishtwar National Park is part of a breath-taking landscape characterized by rugged mountains, snow-clad peaks, permanent glaciers and vast and narrow valleys. An array of large carnivores calls this place home: not only are there common leopards, but also stunning snow leopards, tree-climbing Asiatic black bears and their big cousins, Himalayan brown bears—the largest mammals in the region. All of them rely on healthy populations of prey species, which are primarily mountain-dwelling ungulates such as the Himalayan goral, the Siberian ibex and the [hangul](#) or Kashmir stag, a Critically Endangered deer species. Most local people rely on agriculture and livestock herding for their livelihoods, and the Park serves as a haven for a group of transhumant pastoralists, known as Bakerwals. The term Bakerwal is a vocational designation, originating from the *Gojri* language, where '*bakra*' means goat or sheep, and '*wal*' means someone responsible for taking care of. Each year during the summer months, these herders bring their livestock to the Park, where their grazing grounds overlap with the habitats of resident leopards and other predators. In September, at the onset of autumn, the Bakerwals begin to move with their livestock to the lower-lying plains, where they spend the winter.



Valleys and mountains of the Jammu and Kashmir Himalayas. Photo: Neeraj Sharma.

As these people know the landscape intimately and regularly share space with leopards, their knowledge and experiences are extremely valuable to inform conservation initiatives. In particular, we wanted to understand the patterns of livestock depredation in the landscape, what local people do to prevent or cope with leopard attacks on their herds, and how they feel towards these powerful and elusive predators. During the summer seasons of 2017–2019, we spoke with Bakerwals and members of the local community, collecting socio-demographic data and asking about their experiences with leopards. In these questionnaire-based interviews, we explored how many sheep, goats, cows, horses or yaks each participant owned, whether any wild carnivores had ever killed their livestock and which methods they believed to be appropriate for controlling livestock depredation. Numbers and hard facts are not the only things worth knowing about human–wildlife interactions, however; people’s emotions, perceptions and attitudes are equally important. We therefore also asked people to rank their attitude towards leopards on a scale from ‘strong dislike’ to ‘strong like’, as this can provide crucial insights for conservation.

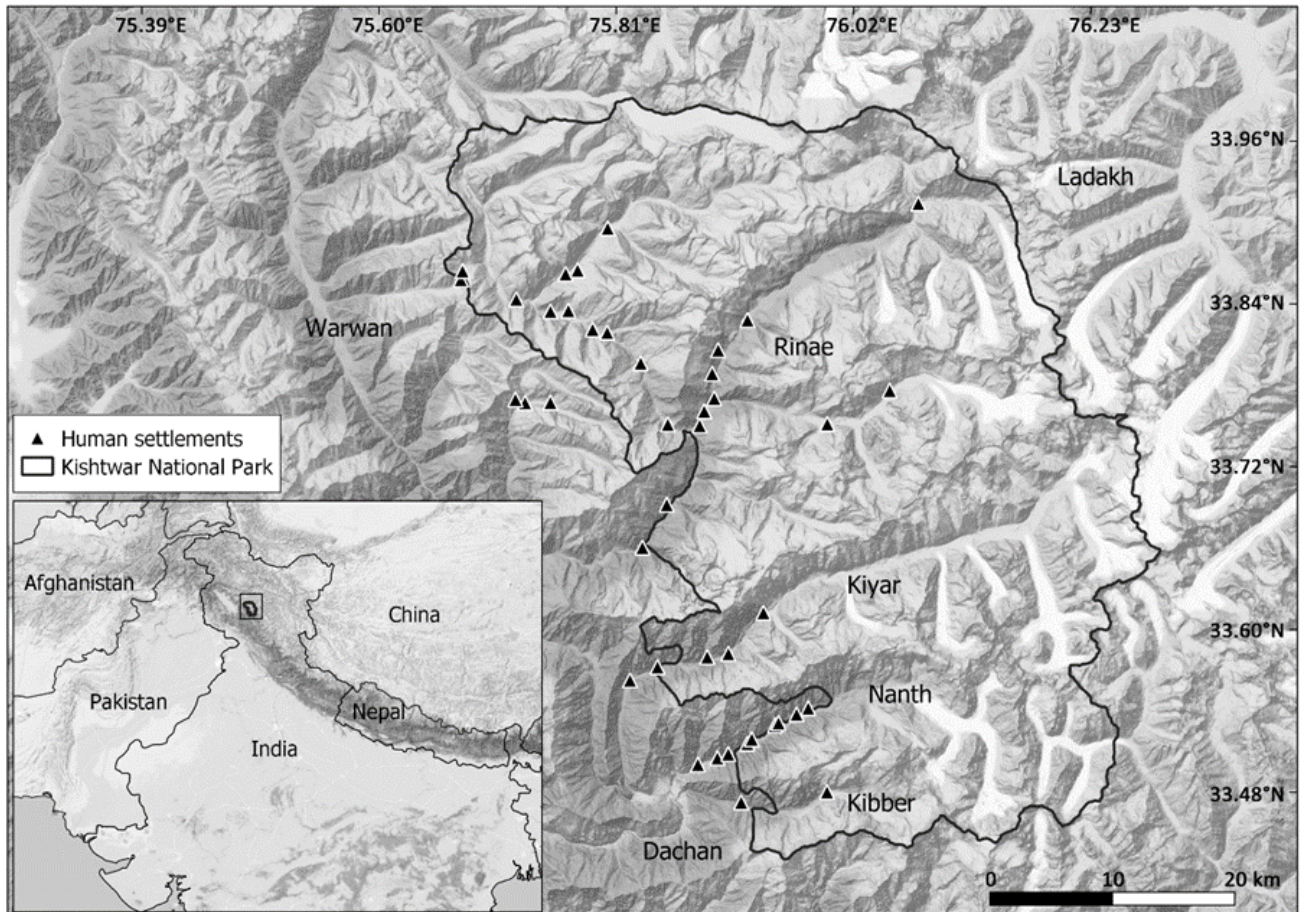


Interviewing a transhumant pastoralist, belonging to a group locally known as Bakerwal. Photo: Muzaffar A. Kichloo.

Listening to our interviewees and hearing their first-hand accounts of life in these wild mountains was fascinating, and when we analysed the responses from the just over 100 interviews we had conducted, we uncovered complex dynamics of human-leopard interactions in Kishtwar National Park. We learnt that livestock belonging to local and nomadic people are mostly left unattended in the upper reaches of the Park, where they can become easy prey for hungry leopards. The economic losses caused by this depredation are significant in the affected communities, and, unsurprisingly, lead to negative attitudes towards the big cats. Only 13 of our interviewees had a favourable opinion of leopards, and they were mostly forest and wildlife officials who had a specific interest in nature conservation. Interestingly, however, amongst the local people and herders, views of leopards were not unanimously negative: older respondents appeared to be more tolerant of leopards than younger people, perhaps as a result of longer experience of coexisting with predators.

When asked about their ideas for effective conflict mitigation strategies, many respondents mentioned financial compensation for livestock losses as crucial for improving human-wildlife coexistence in the region. Compensation payments, typically made by government authorities to farmers who report depredation of their animals by wild predators, have been shown elsewhere to be an effective tool in carnivore conservation: they can increase tolerance for wildlife, reduce retaliatory killings and garner community support for conservation efforts. The Indian government

supports such payment schemes in principle, but implementation varies across states. No such scheme is currently operational in Jammu and Kashmir, something that needs to be addressed to ensure people continue to tolerate leopards and other predators. Despite the damage caused by leopards, the killing of perceived problem individuals, and the eradication of all leopards, were the least favoured approaches amongst the people we spoke to. This is encouraging, but to ensure that the already negative perceptions of leopards do not turn into retaliatory action, it is crucial to develop—with full participation of the local community—effective mechanisms for reporting and responding to depredation, coupled with swift and adequate compensation.



The location of Kishtwar National Park in the Indian Himalaya, Jammu and Kashmir, India, showing the names of valleys and the locations of human settlements in the area where we carried out the survey.

Our findings also emphasized the need for better management practices, including improved animal husbandry techniques. Keeping livestock in fenced yards, avoiding high-risk areas where leopard attacks are known to have occurred in the past, and using guard dogs would go a long way to reducing livestock losses. And last but not least, education is key: we need to develop and implement a programme to highlight the plight of large predators as their lives come under increasing pressure from human activities. Campaigns are needed to raise awareness among the local population, especially the younger generations, of the importance of carnivore conservation and the crucial role that predators play in maintaining a healthy, balanced ecosystem that can continue to provide for wildlife and people. Taken together, these measures could help ensure that people, leopards and other wildlife can continue to harmoniously coexist in this uniquely beautiful and ecologically important region.

The article 'Living with leopards: an assessment of conflict and people's attitudes towards the common leopard *Panthera pardus* in a protected area in the Indian Himalayan region' is available open access in *Oryx—The International Journal of Conservation*.



Muzaffar A. Kichloo

Muzaffar A. Kichloo is a carnivore ecologist, currently working on human-carnivore interactions in high-altitude landscapes of Jammu and Kashmir, India. Besides carnivores, his areas of interest include wildlife-habitat relationships, human-wildlife conflict resolution, birds, ecological modelling and GIS.