

Livestock Predation Control Workshop

Full Text:

The snow leopard (*Uncia uncia*) is an endangered species which inhabits mountainous highlands of 12 Central Asian countries. Ladakh and the surrounding area of Lahul-Spiti supports most of India's snow leopard population, estimated at 200-600 individuals. Hemis National Park (HNP), established in 1981 and expanded to about 4,400 km² in 1990, is considered by some as the best protected area for snow leopards in India. An estimated 50-75 snow leopards occur in the park, along with some 1,500 blue sheep (*Pseudois nayaur*), 300 endangered Ladakh urial (*Ovis vignei*) a few endangered Tibetan argali sheep (*Ovis ammon*), and ibex (*Capra ibex sibirica*). Other predators include the wolf (*Canis lupus*), wild dog (*Cuon alpinus*), fox (*Vulpes vulpes*) and lynx (*Lynx lynx*). The primary threats to snow leopard are illegal hunting and sale of pelts, bones and body parts for the fur-trade and traditional Asiatic medicines; depletion of natural prey populations; retribution by herders for depredation of valuable livestock; and habitat degradation and fragmentation.

Over 1,600 people live in Hemis National Park, which has a traditional land use based upon agriculture and animal husbandry. Tourism has increased significantly in recent years, but relatively few households currently benefit from this sector. In response to increased reports of people-wildlife conflict in Hemis and the surrounding area, The International Snow Leopard Trust (ISLT) sponsored a survey in February-March, 1999 to determine the extent of livestock depredation. Dr. Yash Veer Bhatnagar (Snow Leopard Conservationist) and Mr. Rinchen Wangchuk (Field Program Associate) found high rates of crop damage from blue sheep and livestock depredation by snow leopard and wolf in nearly all of the 15 settlements of HNP. Losses ranged from 1.5 per household in Shang to 14.2 in Markha, mostly comprised of sheep and goats. Several communities lost horses, a significant economic impact given that the average horse sells for Rs 15,000-30,000. The interviews of village leaders, farmers and herders from 79 households indicated that a total of 492 animals (with a market-value estimated at Rs.10 lakh or US\$ 2,325) were killed by predators between January 1998 and March 1999. About 38% of the losses involved livestock killed after a predator entered the night-time corral; one case involved 53 sheep and goats killed in a single incident by a snow leopard. Other valuable baseline data on depredation patterns and conservation attitudes in the park were collected, and a number of depredation "hotspots" were identified and mapped, notably winter pastures.

It appears that the local residents of HNP are inadvertently "providing" wolves and snow leopards with a regular supply of food, even in areas with an abundant natural prey-base of blue sheep, marmot, hare and game-birds. In fact, these predators may find domestic stock much easier to hunt and kill than the wary wild goats or sheep, because livestock are often poorly guarded or because they lack the better developed anti-predator instincts of their wild cousins. In any event, reducing livestock depredation and related conflict with herders is vital if the future of the endangered snow leopard in Ladakh (and elsewhere) is to be better assured. Therefore, it is important for conservationists to find ways of reducing depredation loss while encouraging herders to guard their flocks more closely. In response to increasing public pressure, the Ladakh Wildlife Department initiated a compensation program in 1996, but by late 1997 the number of claims had exceeded the department's capacity to reimburse herders (even at sub-market rates). The Wildlife Department was thus forced to suspend the program, and not surprisingly, with the continued loss of valuable livestock to wild predators resentment has grown among the local populace. Consequently relations between wildlife officials and local people have also suffered, making management of this important protected area more difficult.

Changing pastoral lifestyles and increased economic pressures demand that park managers seek new solutions to satisfy the local residents and accommodate their traditional uses, while also protecting wildlife and the rangeland habitat. Tourism provides an increasingly important source of revenue, both locally and regionally, and could help offset some of the economic impact resulting from livestock predation. However, this necessitates that more benefit accrues to the local residents, rather than going mainly to persons who live outside the park, as currently occurs.

While increased herder vigilance and better constructed night-time corrals can significantly reduce livestock loss, these cannot be entirely prevented. In the interests of program cost, sustainability and public support, alternative approaches are needed for addressing this vexing problem. Over the past few years, ISLT and The Mountain Institute (TMI) have been working on small-scale community-based initiatives designed to enhance animal husbandry and livestock guarding practices in order to reduce livestock depredation loss rates, while also promoting alternative income for helping affected households to offset the economic impact of losing livestock. It was thought that lessons from this work in Tibet, Nepal and Sikkim could be profitably extended to Hemis National Park, a keystone protected area for snow leopard, blue sheep and other high-altitude biodiversity.

As noted above, a specially commissioned survey indicated that the highest livestock losses to snow leopard and wolf occurred in the village of Markha, amounting to some 14 animals per household (26 families) over a 14-month period. This provided the basis for holding a People-Wildlife Conflict Resolution Workshop in this community to seek an equitable low-cost and sustainable solution that could be applied throughout Hemis National Park.

Workshop Objectives

Specific workshop objectives were to:

- (1) Prepare an Action Plan assisting villagers and the local protected area authority (Jammu & Kashmir Wildlife Department) to identify cost-effective, sustainable and ecologically compatible means for reducing livestock losses especially from snow leopard;
- (2) Train representatives from local NGOs, government and villagers in APPA (Appreciative Participatory Planning and

Action) techniques pertaining to applied People-Wildlife management; and

(3) Increase understanding and awareness about people-wildlife relationships, in particular the importance of conserving snow leopards, their prey and habitat.

People-Wildlife Conflict Project Conditions and Planning Criteria:

Based upon previous initiatives in Tibet, Nepal and Sikkim, we have developed a set of criteria and conditions to help guide how remedial interventions should be designed and under what circumstance conservation-development investment is best made. Thus the People-Wildlife Conflict Planning initiatives supported by the International Snow Leopard Trust require that project-supported activities directly benefit both people and snow leopards through implicit linkages which strengthen biodiversity conservation. Beneficiary communities are required to contribute within their means in the interests of strengthening “buy-in” and program effectiveness and sustainability (Table 1).

Finally, project interventions should be sound environmentally, socially, culturally and economically, a condition best achieved through participatory planning and monitoring using clearly defined Action Plans (Table 2).

Table 1: Conditions Governing Community Engagement and Donor Support

ISLT support (external investment) is *only* made available to prospective communities *if* the following conditions are met:

1. Project activities should be implicitly linked with snow leopard and mountain biodiversity conservation;
2. Each stakeholder (whether villager, NGO, or government) must make a reciprocal (co-financing) contribution, within their means, in support of the agreed-to project activities. This may be in the form of cash or in-kind services like materials and labor, which are valued using existing market rates and prices;
3. There must be strong commitment to active and equitable participation from each involved stakeholder group throughout the life of the project (from planning to implementation, monitoring, evaluation and reporting). In addition, project supported activities should benefit as many households as possible;
4. The beneficiary community must be willing to assume all or a significant responsibility for repairing and maintaining any infrastructural improvements that may be provided by the project; and
5. Stakeholders should be willing to employ simple but realistic indicators for measuring project performance and impact, according to a M&E Plan.

Table 2: “Best Practice” Design and Operational Criteria (adapted from Jackson, In Press).

Project activities should be designed so that they are:

Environmentally sound -- measures which are compatible with habitat, species and ecosystem requirements of the area, as well as the Protected Area regulations (*i.e., there should be no overall reduction in predator numbers; no hunting, trapping or poisoning of endangered species; should lead to improvement in prey species numbers; should avoid rangeland over-use and grazing; and should help rehabilitate disturbed areas and restore ecosystem functioning, for example. However, it may be necessary in some situations to identify and remove or eliminate habitual livestock predators which may also be an endangered or rare species*)

Economically sustainable -- measures which are cost-effective and contain cost-sharing mechanisms that are capable of being sustained with minimal outside cost and technical input (*communities should share in the cost of implementing and monitoring control measures; there should be minimal dependence on high-tech, expensive deterrents; control measures should be well integrated with land-use and income-generation opportunities; cost of implementation and maintenance should be reasonable, and preferably supported internally*)

Socially responsible -- measures should build upon proven traditional customs and “good” animal husbandry practices (*measures implemented should strengthen Buddhist precepts prohibiting the killing of wildlife; encourage or empower local communities to act responsibly and achieve greater economic independence while operating in an environmentally responsible manner*)

Imbedded with clear responsibilities and a transparent budget -- Implemented based upon a mutually-agreed-to work-plan and budget which sets forth responsibilities, contributions and obligations of each partner. *Thus, the work-plan should specify details such as: “where (location); who (responsible party); what (inputs/activities); how much (quantity); when (scheduling); how implemented (method) and how monitored (indicator and process to be used).”*

From: Jackson, R. In Press. Managing people-wildlife conflict in Tibet’s Qomolangma Nature Preserve. Proceedings of the Second International Wildlife Management Congress, Hungary, June 1999.

RECOMMENDATIONS:

APPA Workshop Format and Design:

1) In Ladakh, it is best to conduct People-Wildlife participatory planning programs during the winter months (November through March) when people have the most time available. Setting the optimal date for any field-based APPA initiatives is critical given the busy schedule of farmers and herders, but this can be influenced by factors which are difficult to predict. Since the barley harvest was later than expected this year, our ability to interact and involve villages in participatory sessions was hampered. For example, the motivating set of exercises around dreaming and visualizing the future were shortened and had to be undertaken in several small groups, at which not all households were represented. The late harvest also precluded a

final village meeting involving all residents to be held; instead this was convened with the leaders of the established livestock corral groups.

2) Attendance at the pre-field training that we offered in Leh varied from day-to-day, making it difficult for the facilitators to focus on the key items and to maintain continuity between the daily sessions. Therefore, it is strongly recommended that only field trainees/participants attend pre-field training programs in the future.

3) Handouts should be provided in advance of the training session so that the participants could be better prepared.

4) Participants to both the Leh and field-based sessions concluded that the APPA planning approach could be profitably used in helping guide NGO operations and activities across a wide range of disciplines and interests.

Enhancing Sustainability - the next steps:

1) A community-based tourism training workshop should be held in Ladakh as soon as possible, especially in view of the growing interest and dependence upon trekking and cultural tourism. The Markha circuit is the most heavily trekked route in Ladakh.

2) Planning and management in the Hemis National Park is at a crucial stage: park authorities realize the need to more closely involve people in wildlife conservation, while the local community would like to see more benefits from the park accruing to them. APPA could provide a very useful tool for exploring options and for forging links between biodiversity conservation and income-generation -- especially in relation to tourism and value addition of locally produced wool products.

3) There is an urgent need to promote systematic tourism initiatives which reduce leakages of revenues from individual and group trekkers (i.e. capture more benefits for local communities)

4) Rural development initiatives supported by both government and NGOs could be greatly strengthened if mechanisms for community fund-raising and commitment involving cash funds, in-kind services or materials could be strengthened. There appears to be a strong sense of community involvement among villagers in Hemis National Park. By seeking village contributions, greater self-reliance and pride is built, a key requirement for increased sustainability of both community-based conservation and development initiatives.

5) The overall process and the specific facilitative planning and action techniques used in this workshop could be applied in other settlements to reduce people-wildlife conflicts due to crop and livestock damage. Such planning can be conducted by small teams of 2-3 trained persons from local NGOs and government line agencies. We therefore urge the Wildlife Department and collaborating government departments to take up a similar approach in this and other protected areas across Jammu and Kashmir State.

6) Compensation for livestock losses does not represent a sustainable strategy for several important reasons. First, it requires a continual annual influx of funding, and secondly it will not reduce livestock depredation losses in the future. A better option would be investing compensation program funds in a Conservation Fund, the interest of which could be used to purchase corral materials for corral predator-proofing under matched contributions through negotiated agreements between villages and the Wildlife Department (possibly with NGOs serving as intermediaries).

7) Livestock depredation and disease losses could be significantly alleviated through improved animal husbandry practices and herder education. For example, free-ranging depredation losses could be reduced by training herders (especially full-time shepherds) in better guarding practices; evaluate the option for using guard and shepherd dogs by improving behavioral traits of the indigenous *Chang-ki* dog through selective breeding. The establishment of community-based corral management/maintenance committees could also be promoted as a means for reducing the night-time loss of livestock.

8) Another approach to compensation and one involving less investment annually would be to improve only those corrals of households which have suffered from incidents of mass-killing by snow leopard or wolves.