A COMMUNITY-BASED APPROACH TO MITIGATING LIVESTOCK-WILDLIFE CONFLICT IN LADAKH[1]

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Introduction

Livestock depredation by snow leopard and wolf is widespread across the Himalayan region, and similar conditions occur in the Hemis National Park in Ladakh, India, which covers 3,350 square kilometers in the TransHimalayan Range of Ladakh (Fox and Nurbu 1990).

The key management issues involve increasing levels of complaint over livestock depredation due to snow leopard and wolf. A survey of 79 households in 1999 indicated that park residents owned 3,977 livestock comprised of six different kinds, with an average household holding of 50.3 animals consisting mostly of sheep and goat (Bhatnagar et al. 1999). Local villagers reported losing 492 animals to predators over a 14 month period from late 1997 to early 1999, equaling about 12% of the total livestock herd and valued at an estimated $23,500 (US).

Snow leopard and wolf were associated with 55% and 31% of presumed depredation incidents respectively, with sheep and goats constituting 75% of all stock lost, followed by yak-cattle (13%) and horses (8%) (Bhatnagar et al. 1999). Snow leopards have no trouble jumping over the low stone wall which most livestock pens have. Thus the most significant and adverse impact occurs when a snow leopard enters a poorly constructed corral and then wounds or kills all of the crowded sheep and goats, which cannot escape the enclosure.

With rising complaints from the local populace, the Ladakh office of the Jammu and Kashmir Wildlife Department initiated a compensation program in 1996 meant to benefit the local population, but this backfired because of lack of funds and cumbersome registrat-

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ion claim procedures it back-fired. These factors have led to deteriorating relations between the park authorities and the local people. This is the point at which the Snow Leopard Conservancy, an NGO, became involved with the aim of addressing root causes for depredation loss.

Remedial Actions and Planning Process used to Address Livestock Depredation in Hemis National Park

Recognizing the importance of a bottom-up rather than the top-down approach, we are employing Appreciative Participatory Planning and Action (*APPA*) as the driving process for involving villagers in planning and design of remedial appropriate measures. *APPA* is used throughout the project to facilitate interaction between the various players and stakeholders. Effective remedial actions hinge upon a sound understanding of the root causes for depredation, which requires a deep appreciation of how people manage their domestic herds and their rationale for decision-making.

The participatory 'discovery' phase exercises conducted in the five settlements of Markha, Rumbak, Skyu-Kaya and Hankar have all implicated poorly constructed livestock pens and lax daytime guarding practices as the primary cause of depredation. Stock are allowed to forage, often completely unguarded, in areas with well-broken terrain and cliffs, and thus offering prime habitat to snow leopard (Jackson et al 1996).

The next step entailed envisioning how each village might look within a time frame of 1-2 years (short-term) and 5-10 years (long-term) if the community acted to reduce predation losses, protect snow leopards and other wildlife, and successfully enhanced their income-generation skills. Participants tended to visualize a situation in which people and wildlife lived in harmony, and in which the people's prosperity supported this balance.

Remedial measures ranked highest by villagers were predator-proofing of night-time corrals to prevent multiple losses of livestock, followed by protection of the natural prey base and herder education to improve day-time guarding and animal husbandry practices. Participants readily concurred that virtually all existing corrals were poorly constructed with low and flimsy walls which offer little or no

deterrent to a predator intent on an easy meal. Participatory planning enabled stakeholders to design and construct predator-proof night-time enclosures with strong, high (2.5– 3m) walls and mesh wire covering the roof to preclude any access from above, along with well-made wooden doors.

Villagers were asked to follow 'Best Practices' guidelines in designing the remedial actions so that they would be (1) environmentally responsible; (2) economically sustainable within the local context; (3) socially responsible (e.g. build upon proven traditions and cultural values that protect nature rather than damaging it); and (4) implemented under a mutually agreed-to and signed "Action or Work Plan" which sets forth the responsibilities, contributions and obligations of each partner as described below (Jackson and Wangchuk 2001).

It is important to agree on what can and cannot be realistically achieved in terms of reducing loss, and to understand the impossibility of eliminating all livestock depredation from a particular area. For example, there is no easy solution to depredation on the open range. Large-bodied stock like yak, yak-cattle crossbreeds, and horses need to roam widely when foraging, and consequently are rarely tended by shepherds, yet they may also fall victim to snow leopards or wolves, especially in winter when they are weaker.

Using a poster depicting good and poor animal husbandry practices, and which illustrates examples of some economic and social benefits associated with protecting wildlife, we have explored ways in which wildlife can be of benefit to the local people. In Ladakh, where adventure trekking is well established, local people needed help in capturing more tourist dollars and other indirect benefits, without increasing their dependency on upon tourism in these uncertain times.

The Action Plan specifies such details such as, "where (location); who (the responsible party or parties); what (details of required inputs and activities); how much (quantity); when (scheduling); how implemented (the method or methods to be used) and how the effectiveness of the action will be monitored ('success' indicators and process to be used by both SLC and the community).

The Action Plan includes the names of households and user groups who will assume responsibility for constructing and

maintaining the improved pen. Any new or re-constructed corrals must benefit all livestock-owning households, who agree not to file any compensation claims with the Wildlife Department, and to immediately report any instances of poaching to the authorities.

The agreement is developed for signature by the primary implementing agency and beneficiary community, represented by the leader of each corral user group or a member from each household in the case of a small settlement. The agreement specifies key conditions, such as the materials, labor and technical expertise each partner will provide, special provisions for protecting snow leopards and their prey species, and specific indicators the community will employ for measuring the success of the proposed initiative. Local people identified the following expected outputs or indicators for assessing project success:

- Numbers of livestock lost would decline very significantly and no multiple depredation incidents would occur if corrals are properly constructed, utilized and maintained;
- By eliminating multiple predation incidents, the community's attitudes toward snow leopards, general tolerance of wildlife, and the presence and regulations of Hemis National Park would improve markedly (SLC is assessing these attitudes through focused interviews and a comprehensive questionnaire);
- Herders would spend less time guarding at night, leaving time for other more productive activities; and
- Villagers would earn more income, especially if corral improvements were accompanied by efforts to enhance livelihood skills from tourism (to be monitored annually by SLC staff). Over time these changes would lead to more stable wildlife populations within Hemis National Park, along with a better working relationship between the park authorities and the local residents.

Conclusions:

The highly participatory process employed under *APPA* indicated that the most cost-effective option for reducing depredation, especially multiple losses to snow leopard or wolf, lay in predator-proofing existing structures. Furthermore, *APPA* is a powerful tool for

empowering herders and farmers. It builds pride by highlighting positive community attributes and building upon traditional values and successes. This approach is highly effective in mobilizing rural communities toward greater self-reliance, and thus a more harmonious long-term relationship with the National Park in which they live, and on whose resources they depend so heavily. The degree of success appears to be proportionate to the community's perceived 'ownership' of the project and the materials or resources it contributes. The greater their involvement, commitment and contribution, the more likely the structure will be well looked after.

It is apparent that corral predator-proofing can go a long way in reducing losses and alleviating conflict due to livestock depredation by snow leopard. As the experience in Ladakh shows, enhancing existing structures can be accomplished inexpensively and with considerable input from local communities. It is now widely acknowledged that the future of most protected areas hinges on the degree to which local people's concerns, needs and aspirations are addressed by conservationists. Toward the long-term goal of community-based conservation and resource management, we have started to recruit local villagers to serve as 'Wildlife Stewards'. For more details visit the Snow Leopard Conservancy's website at: www.snowleopardconservancy.org.

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