



SHAN



Hemis Community Initiates Conservation of the Great Tibetan Sheep

WITH GROWING AWARENESS ABOUT conservation and substantial economic benefits from the Himalayan Homestays programme, the Rumbak village community has decided to give a fighting chance to the small Argali population and promote it as a village tourism asset.

Standing 110-120 cms tall at shoulder level, the Tibetan Argali is the world's largest wild sheep and among the rarest species found in Ladakh. Popularly known as the Great Tibetan Sheep, Argalis are highly threatened, with only about 2,000 of them left in the wild today. The Hemis National Park area currently harbours approximately 20 of these wild ungulates, which may not be a viable population for survival. The main reason for their low and stagnant numbers has been competition for grazing from domestic livestock and limited habitat within the Hemis National Park.

Responding to this critical situation, the Rumbak community has decided to create a grazing reserve for the Argali by banning the grazing of all domestic livestock in the area north of the Gandala Trail, known to be the preferred habitat of these magnificent wild sheep.

Rinchen Wangchuk, Snow Leopard Conservancy-India Trust's programme director says, "when we started the programme back in 2000, villagers responded by asking us why we had chosen to name our organization after such a despised animal (namely, the snow leopard).

Today, conservation initiatives such as this from the community display *real* ecotourism models, where the word "eco" is not just about economics but about real conservation linkages with threatened species."



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WHO WE ARE

PREDATOR-PROOFING LIVESTOCK PENS

ECOTOURISM

SNOW LEOPARD CONSERVATION EDUCATION PROGRAMME

RESEARCH & MONITORING

MISSION

The Snow Leopard Conservancy India Trust (SLC-IT) is dedicated to promoting community-based stewardship of the endangered snow leopard, its prey and habitat to the benefit of local people and the environment in the Himalayan regions of India.



Making Snow Leopards Worth More Alive Than Dead

RATIONALE

Snow leopards are the barometers of a healthy ecosystem in the high mountainous regions they inhabit. In other words, a healthy snow leopard population is the sign of a healthy habitat, and conservation of this elusive cat leads to the conservation of the entire ecosystem. All across the snow leopard's range in the high mountain ranges of Central and South Asia, humans threaten the cat's survival. There are roughly just 4,000–7,000 snow leopards left in the wild (India is home to approximately 500). The cats are poached for their skin, organs and bone. Another threat comes from hunters who deplete their mainstay prey. Lastly, snow leopards suffer from escalating conflicts with locals who share their habitat. In Ladakh, socio-economic changes have led to more children going to school, leaving fewer people at home to tend livestock. This has resulted in lax herding practices.



Poster for Hemis Community's Argali Reserve

Livestock, meanwhile, has become something of a free and easy meal for the big cats, either while grazing free-range on open pastures or when corralled in poorly-built pens. A single attack often results in multiple killings (some times up to 50 sheep and goats), leaving angered herders with little choice but to kill the endangered cats.

THE SOLUTIONS to these problems, however, are straightforward. SLC-IT believes that truly sustainable conservation comes from participation & stewardship by the entire community.

With advice and financial support from The Snow Leopard Conservancy U.S. community-based conservation measures were initiated beginning in 2000. First, villagers were mobilized to predator-proof their pens to prevent livestock losses. Next a range of economic measures were introduced requiring minimal investment that provided incentives to herders to preserve wildlife and natural habitat. The additional income has also helped offset livestock losses caused by snow leopards, wolves and other predators.

Himalayan Homestays is one such initiative. Traditional homestays offer tourists an authentic cultural experience while trekking through snow leopard habitat. They also increase the stake that local communities have in conserving the wildlife that draws visitors to their homes. Income goes directly to local families, who use 10% of the profits to supplement a village conservation fund, which supports activities like tree plantation, garbage management and restoration of cultural features.

Another economic incentive has been the setting up of environment-friendly **parachute cafés**, run cooperatively by the village women's group. Selling traditional Ladakhi dishes, handicrafts & solar-cooked filtered water (which helps reduce the plastic bottle menace), this project strengthens the income-generation skills of women.

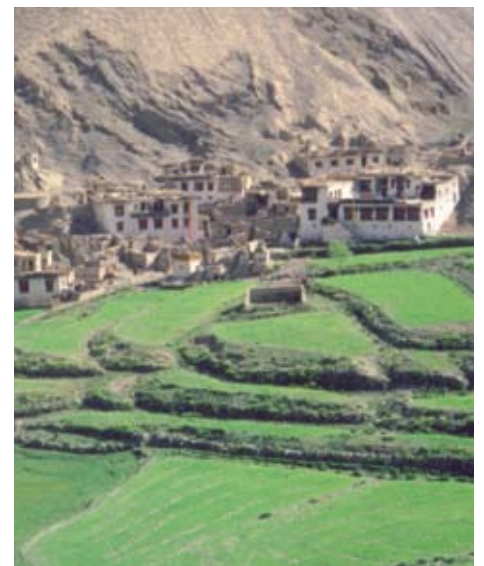
Next, a programme has been initiated to train youth as **nature guides**. Supported by the J&K Wildlife Department, it also trains them to monitor snow leopard and prey populations using cyber trackers, which helps to evaluate the effectiveness of the interventions. SLC-IT introduces its interventions on the premise of a firm commitment from locals that they will ensure no killings



Studying blue sheep horns during a Nature Guides' training session in Tangyar pasture

of predators, especially snow leopards. These initiatives have been bolstered by a **conservation education programme** that is raising awareness among children & herding communities, with the objective of making them future stewards of their environment. It is a collaborative effort between SLC-IT & Kalpavriksh, an environmental action group.

Clearly, **the solution** lies in building the capacity of local people to better their lives while simultaneously protecting wildlife & the environment. In doing so, we can transform perceptions towards snow leopards, from perceived threats into valued assets, worth more alive than dead, whose presence draws visitors & provides economic opportunities throughout the region. This is the strongest prescription for sustainable conservation, with locals acting as stewards of the elusive snow leopard.



Rumbak village, the site of several homestays



The Tibetan Argali or Great Tibetan Sheep

PROGRAMME 1: REDUCING DEPREDATION LOSSES BY PREDATOR-PROOFING LIVESTOCK PENS

RATIONALE

SLC-IT began its programme in 2000 in the 3,350 sq km Hemis National Park after a survey in 1998 showed that people of the Markha Valley and surrounding hamlets lost 12.4% of their livestock to predators over a 14-month period (late 1997-early 1999). The average loss per household was 6 animals (Rs 13,000/-) while the total loss in the park was 492 animals (Rs 10 lakhs or US\$ 23,250). This was a significant loss for these pastoralists. About 81% of the losses were to sheep & goats and 58% of the depredation came from snow leopards, 32% from wolves & 10% from smaller predators. Significantly, 61.8% of losses occurred in open pastures while 38.2% occurred in corrals. Although total losses were higher in open pastures, the average loss per attack by snow leopards in corrals was high (up to 50 animals killed in one attack versus 1-2 animals killed per attack in open pastures). Retributive killings of snow leopards were largely fuelled by multiple killings of livestock in corrals and it was clear there was a critical need for intervention in this area.

THE PROCESS

Curtailling multiple killings of livestock by snow leopards within corrals is a major focus of SLC-IT's interventions. The team began by encouraging locals to participate in planning & solutions, thus drawing on local knowledge regarding livestock movements, depredation hotspots and traditional guarding and corral-building methods. Through discussions, the causes of livestock depredation were found to be: poorly constructed corrals (built without roofs leaving livestock wide open to predators), lax daytime guarding & animal husbandry practices, little use of guard dogs and placement of livestock pens in prime predator habitat.

INNOVATIVE SOLUTIONS

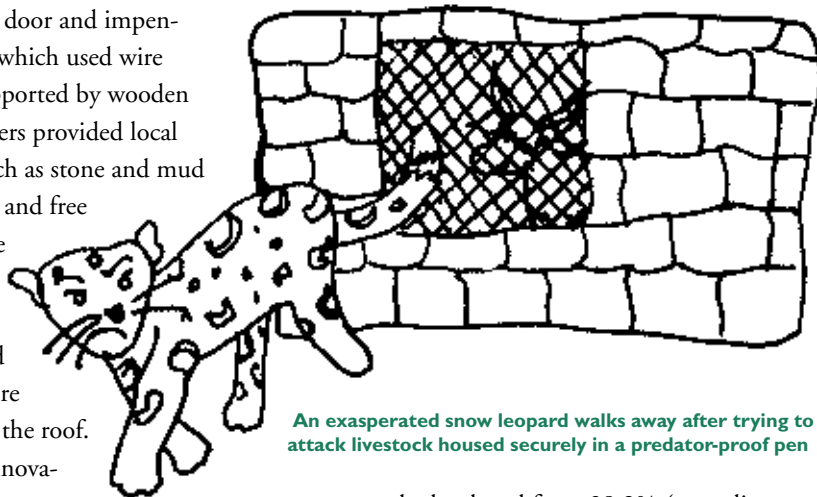
The outcome of the planning sessions was a simple but effective solution to depredation – to predator-proof nighttime corrals using low-cost methods and minimal external support. SLC-IT agreed to give technical and financial aid on the condition that no snow leopards or wolves would be killed. A superior pen was designed to prevent snow leopards from entering with features

like a sturdy door and impenetrable roof which used wire meshing supported by wooden poles. Villagers provided local materials such as stone and mud for the walls and free labour, while SLC-IT provided the door and poles and wire meshing for the roof.

On-going innovations by villagers have resulted in pens becoming even more cost effective (such as in Ulley), where villagers did away with extra walls and poles, without compromising on the sturdiness of the pens.

OUTCOMES OF PREVENTIVE MEASURES TO MITIGATE CONFLICTS

- It is estimated that each community predator-proof corral saves 2-5 snow leopards from retribution
- SLC-IT has predator-proofed 22 community livestock enclosures & 21 individual pens across 19 villages
- In villages where livestock pens have been improved, no revenge killings have been recorded
- A survey conducted in Hemis National Park in 2004-2005 showed that total livestock losses **from within enclosures**



An exasperated snow leopard walks away after trying to attack livestock housed securely in a predator-proof pen

had reduced from 38.2% (according to the 1999 survey) to less than 1% (To redress the possibility of there being gaps in the data collected, SLC-IT plans to conduct a more thorough survey at a later date)



Sheep and goats huddle together in their new predator-proof pen whose roof & door will prevent attacks from snow leopards, Tangyar village



A delighted herdsman holds up a sheep soon after the new community pen is completed in Tangyar village, Nubra Valley, 2007

“We villagers are very relieved to have these improved pens. Not only because our livestock is safer, but because our lives are now better. We can sleep at home instead of miles away on the cold ground guarding our pens. And we can be better Buddhists because we don't have to kill the snow leopard anymore.”

Herder in Sku Kaya Village on the Effectiveness of the Predator-Proof Pens

PROGRAMME 2: ECOTOURISM

RATIONALE

SLC-IT helps local communities develop supplementary sources of income from environmentally-sound tourism projects, that provide incentives to preserve wildlife while simultaneously raising household standards of living. It also helps offset economic losses from livestock depredation and reduces the dependency on animal husbandry.

THE PROCESS

In 2001, with financial support from TMI, SLC-USA & UNESCO, SLC-IT invited village participation to develop eco-friendly alternative livelihoods that required minimal investment. The idea was to enlist the community's support by demonstrating the social & economic benefits of wildlife conservation. Tourism was seen as a viable option, given the 5,000-odd visitors who passed through Hemis National Park & adjacent areas each summer but who, until then, had provided little or no benefit to local people.

HOMESTAYS

- The *Himalayan Homestays* programme focuses on poorer families from prime snow leopard habitats in Hemis National Park, Sham, Zaskar & Spiti involving 96 households in 21 villages. The programme has strong conservation linkages with species like the endangered snow leopard and threatened wild



Tea & biscuits in a traditional Ladakhi kitchen

“It gets you out of the tourist constructed ghettos.”

– Australian Traveller at a Ladakh Homestay

ungulates. In addition, 10% of all profits go to a village conservation fund that supports local conservation activities

- *Himalayan Homestays* was awarded Travel & Leisure Magazine's 2005 Global Vision Award for Community Outreach, New York and the 2005 First Choice Responsible Tourism Award of the World Travel Market, London
- *Himalayan Homestays* is listed in Alastair Sawday's Green Places to Stay and Special Places to Stay in India

INDIRECT BENEFICIARIES

- Over 70 women run 7 Parachute Cafés along trekking routes in Hemis National Park adopting eco-friendly devices such as parabolic solar heaters for boiling water. Income is also generated through the sale of handicrafts
- In Ladakh & Zaskar, 90 families benefit indirectly through pack horses, solar baths and by working as nature guides
- 42 youth have been trained as Nature Guides in Ladakh & Spiti
- The adoption of the Guides' Training Programme by the Department of Wildlife Protection builds for sustainability

CONSERVATION OUTPUTS

- Large-bodied livestock were insured against predatory animals in Ulley. 80%



Travellers enjoy a rest at a Parachute Cafe in Hemis National Park

- of the subsidy came from the village fund while just 20% came from SLC-IT
- With technical assistance from the Dept. of Animal Husbandry, the Ulley village fund helped immunize village livestock against foot & mouth disease
- Plastic mineral water bottles have been replaced by solar-boiled water at 6 Parachute Cafés in Hemis National Park. 200-300 bottlefuls are sold per season averaging Rs 2,000-3000/- annually
- Rumbak village has given a fighting chance to the threatened Tibetan Argali (Great Tibetan Sheep) by creating a grazing reserve for the 20-or-so Argali left in Hemis National Park
- Over 250 willow trees were planted in Kharlung Valley to help the greening process and reduce grazing pressure
- Mani walls and old stupas have been restored in Rumbak, Tarutse, Ulley, Hemis Shukpachan, Ang & Shingo
- Rumbak, Tarutse, Yangtang Tokpo, Ulley, Shingo & Ang villages clean up their surroundings each year. Several villages bring garbage back to Leh for recycling

“I enjoy interacting with visitors & have become a significant bread-earner of the house.”

– Sonam Palmo from Ang, Ladakh Homestay Provider



PROGRAMME 3: THE SNOW LEOPARD CONSERVATION EDUCATION PROGRAMME

The Snow Leopard Conservation Education Programme is a collaborative effort between the Snow Leopard Conservancy-India Trust (SLC-IT) and Kalpavriksh (KV), a Pune- and Delhi-based environmental action group, to facilitate the development and implementation of an environmental education programme in Ladakh for children of upper primary and middle school levels. The programme was conceptualized in 2005 and work began in December 2005.



Children learning about Ladakh's indigenous birds in a Conservation Education Workshop

PROGRAMME OBJECTIVES

- To instill in children the knowledge and appreciation of their rich natural biodiversity
- To encourage children to understand the importance of harmonious co-existence between humans & wildlife
- To help children understand conservation issues in the hope that they will become future stewards of their natural environment

OPERATIONS

In 2006, the programme was implemented in 5 government schools of Hemis National Park: Markha, Matho, Shang, Shang Chokdo and Nakdin. In 2007, SLC-IT included 2 more schools in Leh district (Hemis-shukpachan & the Central Institute of Buddhist Studies (CIBS) in Choglamsar) and 3 schools in Zaskar bringing the number of children involved up to about 300.

Tailing the Snow Leopard, one of several games used to increase wildlife awareness

“I have never seen these animals which live in the mountains because I live far from the mountains. I have learnt not only in the world but how many animals are endemic in Ladakh. We are proud of you for giving information about these animals. I am feeling in my heart.”

Tsering Chorol, Student, Class 7

CONTENT, DESIGN & TOOLS

The programme focuses on Ladakh's wild biodiversity, threats that it faces and conservation actions taken to tackle them. It is conducted through a series of workshops facilitated by 3 local youth who are working as environmental educators. A variety of tools are used such as outdoor and indoor games, nature study, art and craft, bird-watching trips & films. Kalpavriksh developed a handbook for educators (currently in draft form) with detailed activity sections. Material for games was also developed such as posters, nature card games (Nature Rummy, Who Eats What), Fauna Bingo, Tailing the Snow Leopard, an Insect Puzzle and Board Game. The material is entirely local in content.

LARGER OUTREACH

As the number of schools involved in the programme is relatively small (currently just 10), it was decided to mass produce 3



A group of boys peer through a pair of binoculars on a bird-watching trip

wildlife posters to increase the outreach. Efforts are on to disseminate these widely to all government schools.

CONSERVATION INITIATIVES

After 4 workshops, the children of Markha and Matho schools addressed some local issues. Markha school rebuilt the irrigation water channels and with the community's help, dug 3 deep garbage pits and painted signboards to address the village garbage problem. Children at Matho whitewashed *chortens* all around the school.



Signboard painted by the children of Markha School to address the village garbage problem

OTHER ACTIVITIES

- Conducted a field trip to the Tso-Kar basin for 54 students of Markha and Matho Government Schools
- Organized Parents' Functions at Matho & Markha where children shared what they had learnt with their families

“The students have improved much more than before. Infact, they seem to know much more than us teachers about Ladakh's biodiversity. Even during the games period they prefer to play the environmental games instead of cricket or other games.”

Mr. Namgyal, Headmaster of Markha School

PROGRAMME 4: RESEARCH & MONITORING

- SLC-India Trust along with California based SLC-US, with support from the Wildlife Department of J&K, Leh, conducted the first Snow Leopard Census in the world in 2003-2004 in the Rumbak Valley using remote cameras to identify individual animals in a given area
- Conducted livestock depredation surveys in all snow leopard hotspots to monitor impacts of interventions. In any area that SLC-IT undertakes depredation reduction or income improvement activities, the village stewards or households are asked to keep records of what kind and how much livestock each family owns from year to year

OUTCOMES

- **Hemis National Park:** Reduced Total Livestock Losses from 12.4% in 1999 to 9.8% in 2004-2005
- **Hemis National Park:** A survey by SLC-IT in 2004-2005 showed that livestock losses **from within enclosures** had reduced from 38.2% (as per 1999 survey) to less than 1% (0.4% to be exact)
(To redress the possibility of there being gaps in the data collected, SLC-IT plans to conduct a more thorough survey at a later date)

- Studies from Rumbak show that livestock dependency has reduced from 33% (Raghu Chandawat's 1990 study) to 11% (Sandeep Sharma's study in 2005). Studies analyse contents of snow leopard scats for their percentage of livestock versus wild animal content

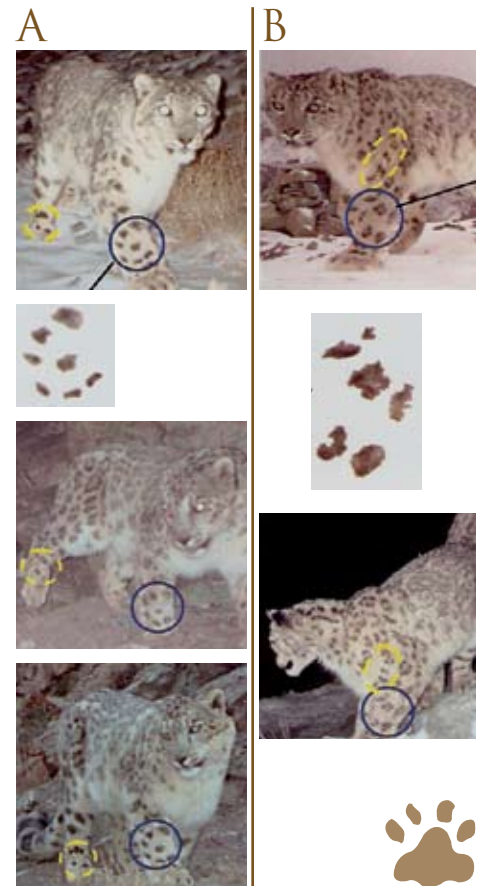
CONCLUSION

Although livestock depredation cannot be completely eliminated, the percentage of livestock killings in enclosures has greatly reduced. The introduction of predator-proof pens has been a turning point in relations between the big cat and local community. In villages where pens have been improved, no revenge killings have been recorded. There has also been a gradual change in herders' attitudes towards snow leopards. A board in Hemis National Park's Rumbak village proclaims "Welcome to the Snow Leopard Capital of the World".

*An Old Ladakhi Proverb sums up
SLC-IT's efforts since 2000*

**"Neither dies the lamb nor
goes the wolf hungry"**

The team identified several snow leopards based on their distinct pelage patterns. Below: Snow Leopard-A (3 pics) & Snow Leopard-B (2 pics). Solid blue lines indicate primary features; yellow lines indicate secondary features. All pictures were taken at different trap stations.



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