

Fostering Co-existence with Snow Leopards:

Incentives and Lessons Learned from across its Range

Rodney Jackson, Snow Leopard Conservancy

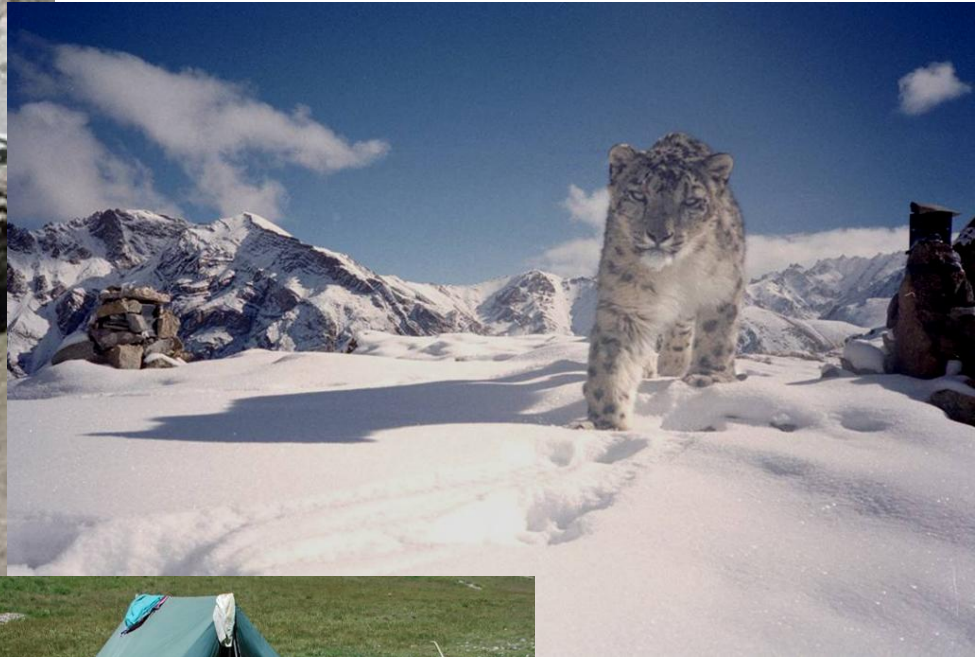




Photo: NGS





Vast range (1.2 - 1.6 million km²)

Fragmented habitat

Sparse distribution



Snow Leopard Habitat



Western Nepal



Tajikistan

Mongolia – South Gobi

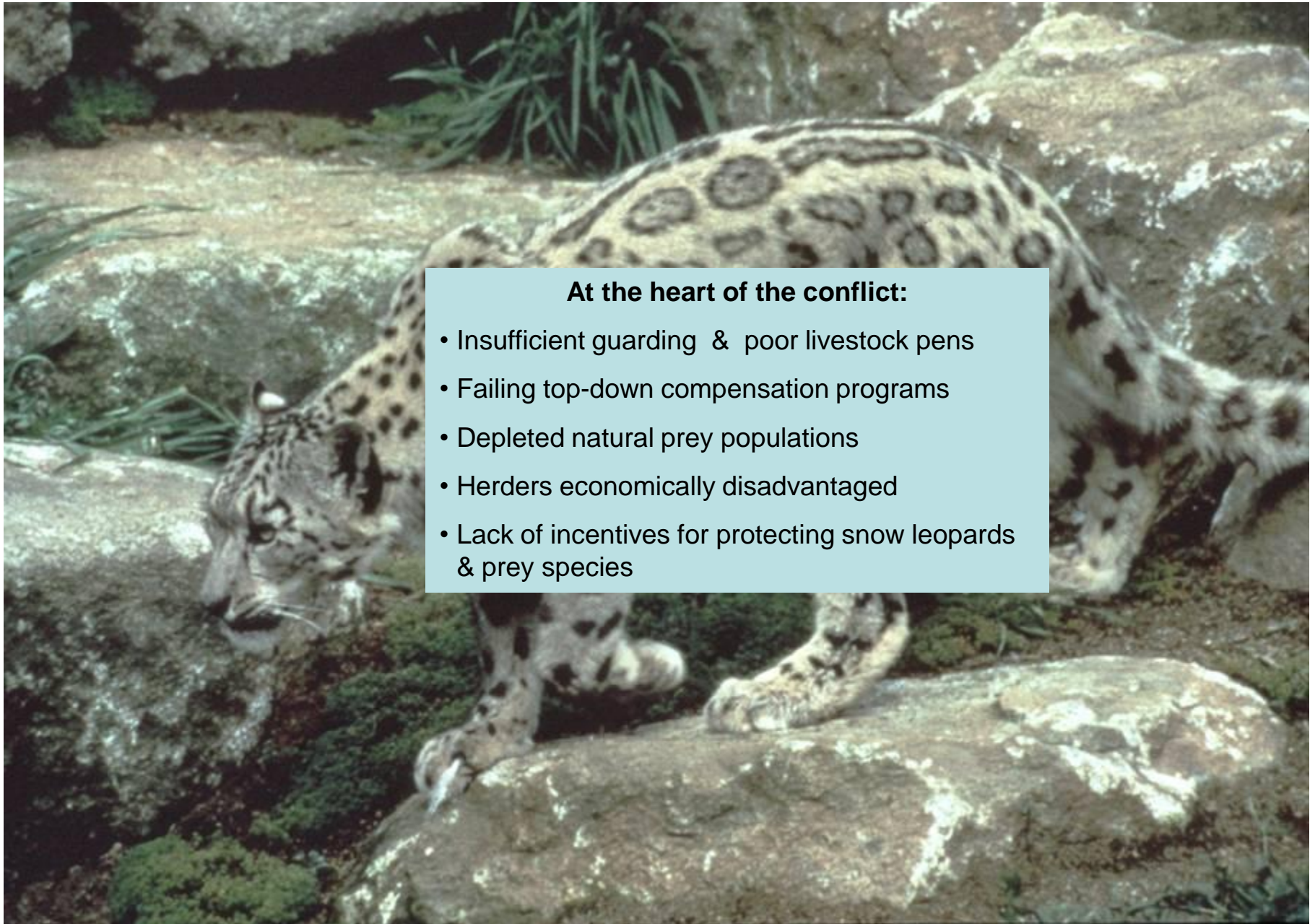


Addressing Local People's Needs: Key Challenges



- Rich in cultural assets, but with limited economic opportunities
- > 40% live below poverty level with annual income <\$400
- Subsistence agriculture & pastoralism
 - (livestock are their cash in the bank)
- Remoteness (few roads, little infrastructure)
- Limited government presence or programs





At the heart of the conflict:

- Insufficient guarding & poor livestock pens
- Failing top-down compensation programs
- Depleted natural prey populations
- Herders economically disadvantaged
- Lack of incentives for protecting snow leopards & prey species

Co-existing with snow leopards: *asset instead of a pest?*



1. Address human wildlife conflict

- Reduce catastrophic depredation losses to predators
- Improve herd condition & productivity

2. Provide Opportunities for Economic Advancement

- Sustainable income from environmentally friendly activities to offset economic impact of losses to predators
- Couple with education & conservation awareness

Examples of Community Conservation Programs



Predator proofing



Livestock insurance programs



Immunization against disease



Income generation

Predator proofing of livestock enclosures: *Example from Ladakh*

- Villagers collect local stones & mud provide labor to construct enclosure
- NGO provides skilled carpenter, wire mesh & poles for corral roof
- Cost: \$500- \$2000
- **After Improvement:** Loss reduced from 38% of total herd to 1% or less



Number of Corrals Predator Proofed

- ✓ India - 43 in nineteen villages
- ✓ Mustang, Nepal - 14 benefiting 245 households
- ✓ Pakistan – 15 in ten settlements



Steve Winter, NGS

"We herded our livestock into the new pen and walked back two miles to our home. In the morning there were tracks of a snow leopard all around the pen . . .



Community-managed Livestock Insurance Program

Example from Project Snow Leopard, Pakistan

Fund 1: managed by villagers
- holds insurance premiums

Fund 2: managed jointly with PSL
for co-financing losses with grants &
tourism revenues

Claims: examined by 2 verifiers and
approved Village Insurance Committee

Program started 1998 in Skoyo – now
in 7 settlements with 200 households
insuring 3,000 livestock

Program paid \$7,000 in claims to date



Base premium on actual or estimated
depredation rate

**Snow Leopard prey = 70% Livestock
by biomass** (scat content with species
ID verified by DNA analysis)

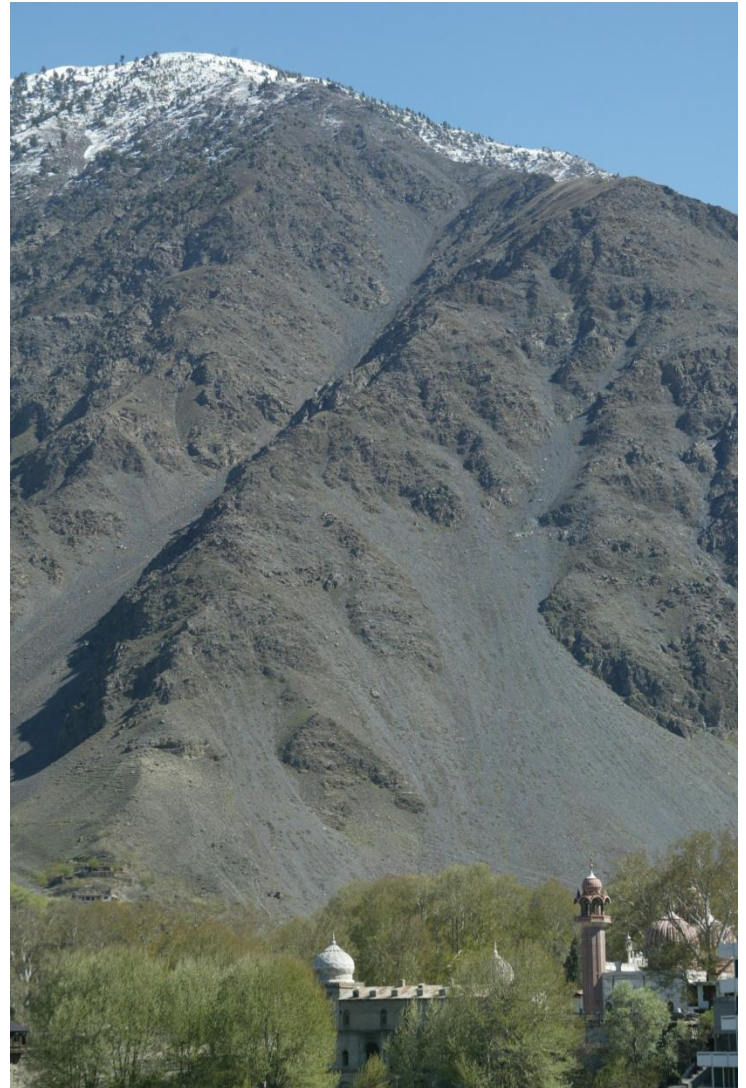
Challenges & Pitfalls

- *Compensation & Insurance Programs* -

- Suffer from insufficient fund capitalization (one exception is Nepal's KCA project \$60,000, but only serves 40 households)
- Verification & payment system (slow or lacking in transparency and clear rules or guidelines)
- Greater buy-in from community-managed insurance programs , but establishing sustainable premium rates acceptable to subscribers may be problematic
- Very difficult to scale up (unless under national insurance program)
- Root causes of depredation (poor guarding, insufficient prey base) not addressed

Improving Animal Husbandry Practices

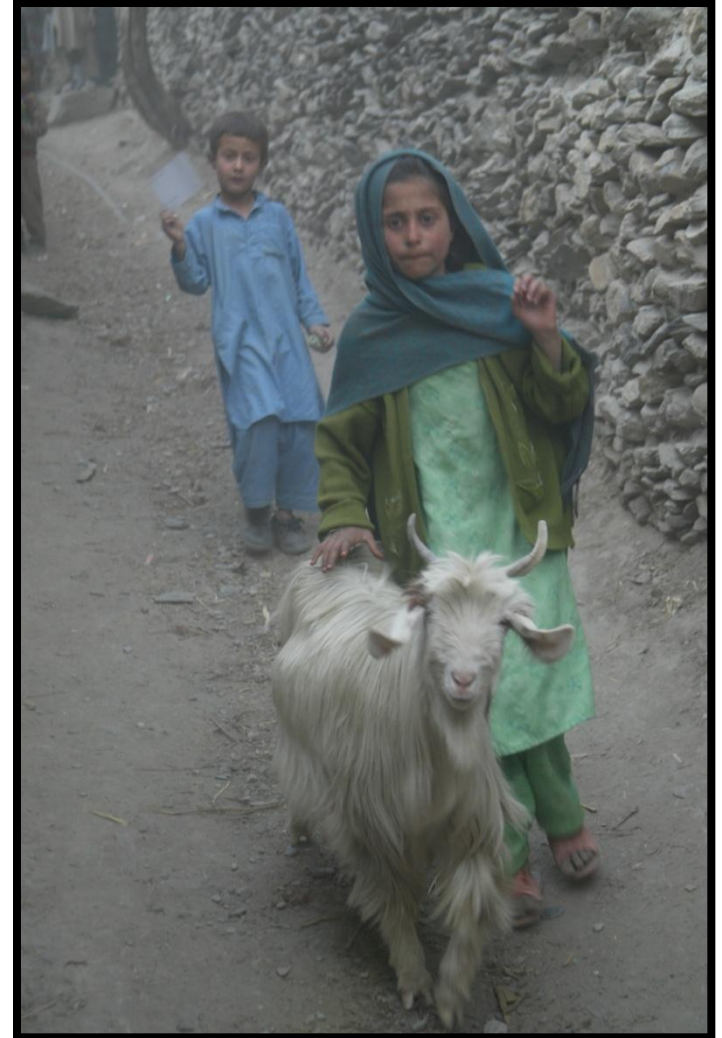
- Need to manage loss to predators on the open range
- *Loss of livestock to predators may be small compared to diseases (10 - 15% versus 1-3% for depredation)*
- Balance herd size & grazing pressure by focusing on productivity rather than numbers
- Cull surplus animals prior to winter & maximize market returns



Livestock Immunization Programs

Snow Leopard Trust, Pakistan

- **Vaccines** - *Over 19,700 animals immunized in 12 communities*
- **Marketing of livestock products:** *meat sales for national festivals; training in marketing*
- **Agreement signed** - *no poaching of snow leopards or key prey species & Cap on herd size*
- *SLT aims to end subsidies in 4 years*





























Grazing Free Reserves In India

Ladakh – restore isolated population of endangered Argali sheep



Spiti - 4 areas with over 200 blue sheep and ibex (3x increase in wild prey numbers)

Typical Planning Exercise: Ranking of Mortality Sources

	CAUSES OF LIVE STOCK MORTALITY							INFORMANTS.
	 SNOWLEAP + OTHERS	 DISEASE	 SNOWFALL	 POISONOUS PT.	 Temp change winter	 ACCIDENTS	 RAINFALL	
SNOWLEAP + OTHERS	X							1- Chhowang Rinchi Tongyik - Yegpu R/s Markha
DISEASE	X	X						2- SONAM Tsering Laglungpa R/s Kumbing
SNOWFALL	X	X	X					3- Tashi Tsephel Namkekpa R/s Markha
Poisonous pt.	X	X	X	X				4- Thakje Wangi Tongyik Yegpu R/s Markha
Temp change winter	X	X	X	X	X			5-
Accidents	X	X	X	X	X	X		
Rainfall	X	X	X	X	X	X	X	
RANK	6	4	3	1	2	0	5	

Visualizing Change in Animal Husbandry or Livelihoods

Contrasting communities - harmony or conflict?



Livestock
husbandry
poster
commissioned
in the
style of
traditional
Buddhist
monastery art



Poster shows different
scenarios & stimulates debate

Handicrafts & Cottage Industries



Snow Leopard Enterprises



How does this help women & their families?

Aigul's Income before..

16 kgs. camel wool = \$16

100 kgs. sheep wool = \$30

Total Income = \$46

..... And now

Product Sales = \$186

24 items from camel wool (\$90)

30 items from sheep wool (\$96)

Conservation Bonus = \$ 37

Remaining raw wool = \$ 32

Total Income = \$255

** Aigul's income increased from \$46 to \$255 with strong incentive to help stop poaching*

Snow Leopard Enterprises

254 households made over 15,000 fine wool products in 2010 for total of \$120,000 in sales



Conservation Connections

➤ Bonus

- ✦ 20% bonus to *ALL* producers in the village if the community abides by the contract.

➤ Contract Conditions

- ✦ *All* herders lose their bonus if *any* producer breaks the contract.

- ✦ Producers are expelled for one year if they poach a snow leopard or protected prey species.

➤ Monitoring

- ✦ If enforcement fails the program fails

- ✦ Partnering with rangers and community members



Challenges & Pitfalls

- *Cottage Industry Incentive Programs* -

- Substantial up-front investment with high or very high transaction costs (product design, marketing, training, local transport & airfreight to market-places in the USA)
- Must target niche or high-end markets (\$1 item in Mongolia sells for 5 to 10 times that in USA to cover transport & retail/wholesale market costs)
- Long-term sustainability hinges on NGO offering quality control, purchase & marketing of handicraft products
- International cottage industry highly competitive & volatile, faces challenges from mass-produced products & changing fashions/fads
- However, non-participating households & outsiders lacking in economic incentives to stop poaching (especially of prey species)

Profitable & Environmentally Friendly Parachute Cafés

encourage local people to protect & value wildlife



Solar-cooker for safe drinking water....saving scarce fuel wood



Himalayan Homestays

*Experience Traditional Life in a
Himalayan Village*



Rumbak Village
Hemis National Park, Ladakh



www.himalayan-homestays.com

Himalayan Homestays

- 100 families in 20 Ladakh-Zanskar communities earn \$12-15 per visitor night

Tourist Visitation

Year	Bed-nights
2001	37
2007	700
2008	854
2009	634

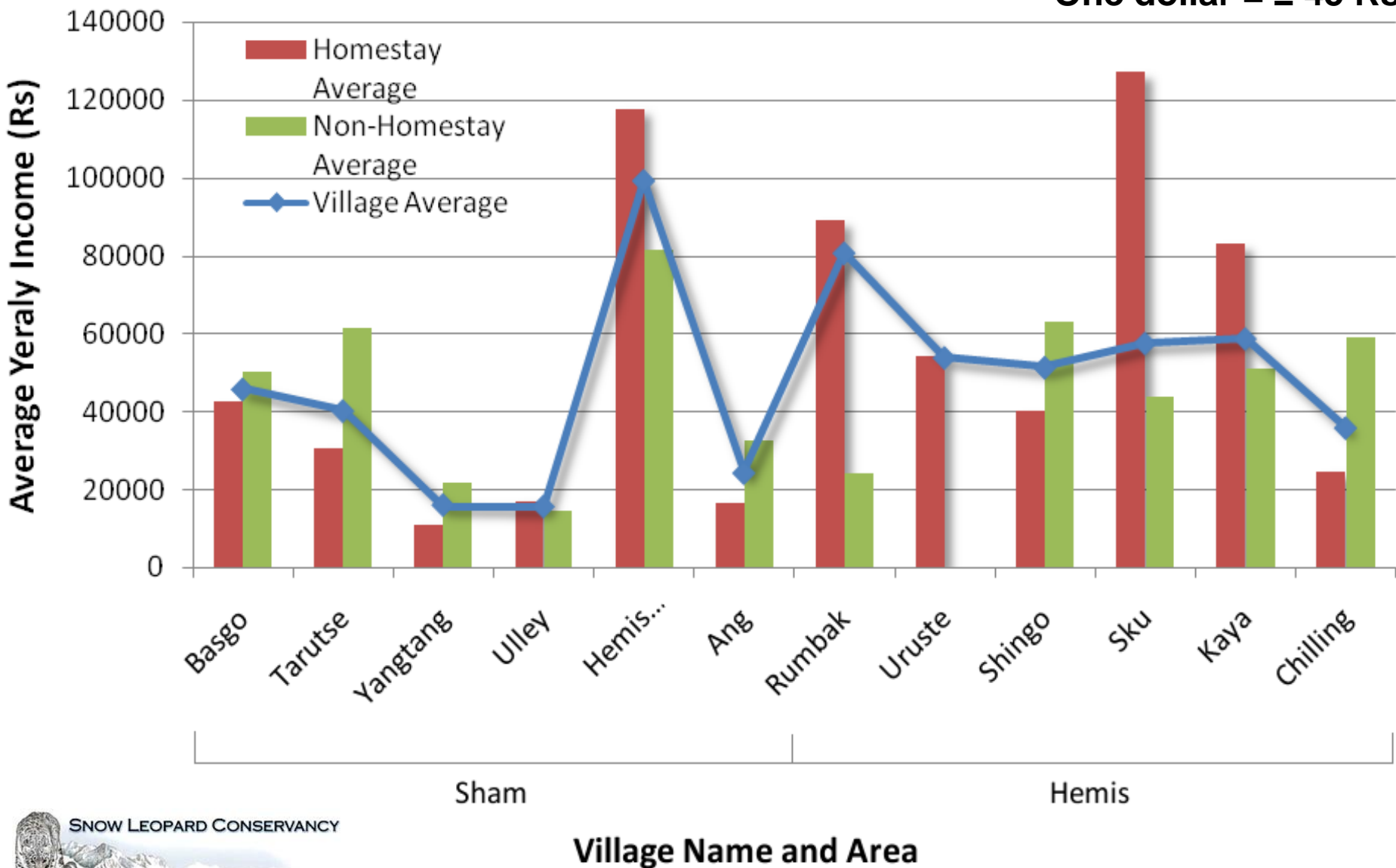
Avg Household Income Earned

Year	Sham	Hemis
2007	\$752	\$800
2008	\$988	\$1,518
2009	\$1,201	\$1,127

- \$400 in other sales from 8 tented cafes (shared among 4-8 families)
- Self managed and operating initiative once established

Average Homestay and Non-Homestay Household Income

One dollar = ± 45 Rs



How villagers use extra income from Homestays



- Send children to better schools
- Re-invest in Homestays & parachute cafes (furniture, solar showers, handicrafts)

- Plant trees & fodder to reduce grazing in wildlife areas
- Village clean-up campaign
- Establish Village Conservation Fund (10% revenues)



Challenges & Pitfalls

- *Rural Tourism Initiatives* -

- High leakage of revenues (international - outside travel agents etc)
- Feast or famine? Visitation rates vary year to year; budget travelers dominate, travel agents may limit homestays to maintain their profit margin higher
- Not all households capable of offering homestays
- Tourists have other interests, not just wildlife or culture
- Unanticipated negative environmental impacts of tourism
- Relatively high set-up cost (training, quality control, equitable access etc)

Cross-cutting Challenges

- Fallacy of “*Build it and they will come*”
 - *Be realistic – don’t raise expectations unduly*
 - *Base on realistic supply-demand projections*
 - *Ensure conservation action matches site specific conditions , capacity & skills set of stakeholders*
- Learn from others!
 - Refine rather than “re-inventing the wheel from scratch”*
- Beware of unintended consequences
 - (e.g., trophy hunting of prey species can put predators at risk)
- Scaling Up & Exit Strategy
 - *Simple & elegant project design others can adopt*
 - *Internally financed by local people through marketable enterprises*

Key Elements for Sustainability

- Ensure meaningful & equitable participation by all stakeholders from very onset (must be part of planning team)
- Promote environmentally & socially responsible interventions (impact assessment)
- Ensure Implicit conservation linkages – education and branding!
- Full transparency with clear stakeholder responsibilities
- Sustainable within the local economic context (phase out in 3-10 years)
- Ensure Co-Sharing of Costs (cash or in-kind labor & skills)
- On-going monitoring & refinement of activities (locally perceived verifiable indicators of success, e.g., snow leopard & prey population)

Transforming Snow Leopard conservation by ensuring the species holds greater value alive than dead



*Before, snow leopards were a despised predator
But now, thanks to SLC ...*

Snow leopards & other wildlife are like a necklace around our mountains.

Comment by villager to Rinchen Wangchuk, SLC India Director