



### Article Community-Based Conservation for the Sustainable Management of Conservation Conflicts: Learning from Practitioners

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**Abstract**: We explore the role of community-based conservation (CBC) in the sustainable management of conservation conflicts by examining the experiences of conservation practitioners trying to address conflicts between snow leopard conservation and pastoralism in Asian mountains. Practitioner experiences are examined through the lens of the PARTNERS principles for CBC (Presence, Aptness, Respect, Transparency, Negotiation, Empathy, Responsiveness, and Strategic Support) that represent an inclusive conservation framework for effective and ethical engagement with local communities. Case studies from India, Kyrgyzstan, Mongolia, and Pakistan show that resilient relationships arising from respectful engagement and negotiation with local communities can provide a strong platform for robust conflict management. We highlight the heuristic value of documenting practitioner experiences in on-the-ground conflict management and community-based conservation efforts.

**Keywords:** community-based conservation; snow leopards; participation; conflict; narratives; story-telling; conflict management

### 1. Introduction

Negative interactions between humans and wildlife, often termed as 'conflicts', represent a major conservation challenge [1–3]. Landscapes or habitats where people and large carnivores share space are often the sites of such interactions [4–6]. Both wildlife and human communities tend to be impacted by negative interactions such as wildlife-caused damage to property, crops, livestock, or even human lives in extreme situations [7].

Local pastoral communities can face heavy burdens of co-existing with wild carnivores due to livestock depredation, with subsequent impacts on livelihoods and wellbeing [8–11]. Carnivores suffer from retaliatory killing, illegal poaching and trade, fragmentation or damage to habitat, and displacement or shrinkage of prey species populations [12,13].



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Researchers increasingly highlight that there is, in principle, no direct 'conflict' between humans and carnivores, but rather a conflict between competing human interests, specifically those of stakeholder livelihoods and biodiversity conservation [1,3,14]. Redpath et al. [2] further suggest that solutions should go beyond addressing negative interactions and consider social and cultural factors such as power relations within or between communities, changing attitudes, and values amongst stakeholders. Based on research on conservation conflicts, many of the normative elements needed for the long-term resolution of conflicts have been discussed [15–17]. These include local stakeholders as the principal drivers of solutions [18,19], building trust between stakeholders [20–22], and tailoring interventions to social norms, context, and scale [23,24]. Community-based conservation has been put forward as an approach to include local communities in such conflict resolution efforts, leading to more long-term and sustainable conservation and social outcomes [25–27]. Such approaches have become increasingly common; however, they can vary in the degree of, and manner in which, local communities are involved. In addition, it is often difficult to evaluate these approaches in terms of their effectiveness due to a paucity of monitoring and evaluation, and difficulties in capturing some of the more intangible outcomes of community-based conservation.

The snow leopard's *Panthera uncia* distribution spans twelve countries in Asia [28]. The species' particularly large home ranges encompass extensive landscapes where they co-exist with human communities [29]. Across snow leopard habitats, pastoralism and agropastoralism are the predominant sources of community and household livelihood [30–33]. The mutual dependence of people and snow leopards on the same ecosystem services and resources implies a high risk of negative interactions [32,33]. For example, the rise in the number of livestock related to the growing demand for cashmere wool is leading to the degradation of habitats and depletion of the snow leopards prey populations [34]. In contrast, snow leopards are reported to kill single or multiple livestock in open pastures or corrals, thereby imposing a burden on affected households [3]. Furthermore, wildlife conservation approaches may not find themselves aligned with the interests of pastoral communities who are dependent on increasing their livestock numbers and improving their livelihoods [3,34].

The Snow Leopard Trust and their partner networks have championed communitybased conservation approaches across snow leopard range countries for nearly two decades [3]. The focus has been and remains on creating incentives for local communities to protect local wildlife and ecosystems, promoting positive interactions and mitigating risks of conflict [27]. This experience led to the development of the PARTNERS Principles for Community Based Conservation, which is a set of eight guiding principles to consider while working with communities to develop long-term conservation strategies and solutions [3,35]. These Principles were distilled from many years of presence and experience working with local communities [35]:

- Presence highlights the need to recognise the unique social-ecological contexts within which every community is based, and the benefit of immersion by conservation practitioners to gain a nuanced understanding of the community. It also stresses the importance of building mutual trust through long term engagement for sustainable conflict management;
- Aptness urges conservation practitioners to identify conservation threats which can help in identifying locally relevant interventions to address them. It encourages practitioners to consider the scale of implementation, socio-cultural aptness, and local capacity before finalising on any conservation intervention. It also encourages the adoption of a multi-pronged approach to managing the conflict;
- 3. Respect encourages setting up equal partnerships and cautions conservation practitioners against seeing local communities as recipients of aid;
- 4. Transparency encourages conservation practitioners to make communities part of the decision-making process while also providing them with the opportunity to

ask questions and make clarifications that may come up in the process of conflict management;

- 5. Negotiation reminds conservation practitioners of the situations they find themselves in when engaging with communities and the value in taking an integrative approach to benefit the community and conservation, rather than to take extreme positional or either-or stances in conflict management;
- 6. Empathy reiterates the point that conservation and conflict management may be one of several concerns within a community and to remain sensitive of this reality;
- 7. Responsiveness emphasises the importance of responding swiftly to any situation while recognising that the threats evolve over time and, hence, sustainable conflict management calls for close monitoring and a great deal of adaptability;
- 8. Strategic Support stresses the need for conservation practitioners to work closely with governments to promote community-based conservation through policy formulation and in catalysing multi-sectoral cooperation to facilitate sustainable conflict management.

Guided by this approach, the Snow Leopard Trust has worked with over 15,000 herder families across India, China, Kyrgyzstan, Mongolia, and Pakistan. Conservation interventions set up over the years have been jointly designed along with these communities to manage current and emerging threats. Such interventions range from damage prevention measures such as deployment of community rangers and predator-proofing of corrals, to risk mitigation measures such as setting up livestock vaccination and insurance programmes, to efforts to supplement livelihoods through conservation-linked enterprises [3,27,36–38].

In this paper, we use the PARTNERS Principles framework to reflect on a few case studies in conflict management across four countries where snow leopards occur. The aim is to use this as a framework against which conservation practitioners could assess and improve their efforts towards long term and sustainable solutions to wildlife-human conflict. We document six narratives, prepared by practitioners working with communities on conflict resolution, and appraise these narratives in light of the PARTNERS principles. Particular attention was given to capturing and presenting the views and experiences of conservation practitioners on the challenges and opportunities of long-term conflict management.

### 2. Methods

In 2019, we carried out a PARTNERS principles training workshop with 18 participants. The 18 participants included conservationists working across five snow leopard range countries (three from Kyrgyzstan, four from India, four from Pakistan, three from China, and four from Mongolia). Their profile included leaders of national NGOs (n = 4), community-based conservation staff (n = 14), and conservation researchers (n = 4). The aim of the workshop was training in PARTNERS principles for effective community engagement, with a focus on sharing experiences from practitioners and the challenges they had encountered during their conservation and conflict management efforts. Over the following 18 months, through online 'help solve my problem' sessions, we worked with participants on joint problem solving based on the PARTNERS principles. As preparation for a refresher course on the PARTNERS principles in June 2021, we asked each country's team who had attended the original training course to write one of their community-based conservation experiences as a narrative, in order to discuss it together and learn joint lessons that could be useful across countries and communities. The refresher course included 15 participants—all of which had participated in the PARTNERS principles training course-from four countries (Kyrgyzstan, India, Pakistan, and Mongolia). Due to a staff turnover in China which resulted in all the original Chinese contingent being replaced with new staff, we did not ask this new country team for a narrative, or inclusion in the refresher course.

Narratives have been defined in different ways, but there appears to be common elements across definitions, including chronology (discourses with a beginning, middle, and end), meaningfulness, and contextuality [39]. Whilst narratives are not used to uncover

a single 'truth', they are an approach that can help to see or understand a situation from the perspective of individuals involved. We used narratives as a way for practitioners involved in addressing conflicts around snow leopard conservation to tell their own story of a conflict situation, as well as their interpretation and organisation of events. Importantly, their narratives also included an element of causality, linking the events to outcomes and the factors they believed led to those outcomes [40,41]. The practitioners who wrote up their narratives were all familiar with the PARTNERS principles through the training course—and whilst some explicitly linked the process to these factors, this was not a requirement, and certain practitioners chose to be more flexible in their narratives. Our aim was to leave practitioners quite free in their mode of story-telling, in line with Mishler's [42] understanding of narratives as "... individuals' contextual understanding of their problems, in their own terms" [42] (p. 142). There is therefore an encouragement to see "people's narratives as they related them as an important complement to theorizing about what such narratives might mean" [43] (p. 9), whereby "narratives presented in the truth of their language and authenticity become texts of real peoples and not merely the results of theoretical manipulations" [43] (p. 9).

These narratives, written in the words of practitioners (though edited for clarity) working at the forefront of snow leopard conservation, form the basis of the paper. The narratives were then explored through the PARTNERS principles, and this was used as a basis for discussion during the refresher course in June 2021, where each country's team of practitioners was placed in a working group together with a facilitator, and was asked to a. review the way in which the elements had been explored through the lens of the PARTNERS principles and validate this; b. discuss what worked well with their program in terms of the PARTNERS principles (added in Table 1 in italics); and c. what needed to be strengthened to promote long term solutions in terms of the PARTNERS principles-(added in Table 1 in bold). These insights were presented in plenary afterwards, where participants also shared their perspectives on any wider conditions needed to support long term conservation/resolutions and conflict mitigation. Practitioners were requested to score the importance of each of the PARTNERS Principles in their case study in terms of what worked well, or what needed to be done to address the challenges, from a scale of 0 to 5 (0 denoting unimportant and 5 denoting very important). As such, practitioners were encouraged to reflect less on challenges, but move towards the identification of solutions [44]. These solutions and conditions needed to support conflict mitigation were compiled and are explored in the discussion.

**Table 1.** Analysis of the narratives according to the PARTNERS principles, with a review of the way in the which the elements had been explored through the lens of the PARTNERS; what worked well with their program in terms of the PARTNERS principles (added in Table 1 in italics); and what needed to be strengthened to promote long term solutions—(added in Table 1 in bold).

	Hisper Valley	<b>Tost-Rangers</b>	Tian Shan	Ladakh	Terich Valley	Gurvantes
			Presence			
Review (black) Worked well (green) Needs to be improved (blue)	Inadequate Presence of conservationists, including SLFP team, had prevented a trust-based and resilient relationship earlier. To promote Presence in the community two community members were hired as conservation staff.	Presence of researchers working in the area over many years helped build strong partnerships with the community and build the capacity of community members. Presence was strengthened through establishing community members as community rangers.	Long term Presence in the community was lacking which led to mis-communication and challenges in implementing the conservation program. Presence in the community through other conservation programs helped build trust and confidence.	Visiting the community regularly to improve Presence was prioritized, as a means to promote trust and communication. Having local people on the conservation team helped with trust building. <b>Presence in the</b> <b>community would help</b> <b>support conservation</b> <b>needs beyond crisis.</b>	Initial Presence in the community helped build an understanding of the context and community attitudes towards conservation. Presence worked well in building a relationship with the community as a whole and individual households; helped build trust and support for conservation. Long-term Presence from the beginning might have prevented the situation escalating to a conflict.	Presence in the community when negotiating a difficult situation was important to build rapport and understanding.
			Aptness			
Review (black) Worked well (green) Needs to be improved (blue)	Aptness was important as it helped improve the conservation program, adapting it based on the knowledge of wildlife and threats in the area. Aptness helped incorporate community needs and recommendations.	Aptness was important to adapt the conservation program to the skill set of the community and how it evolved over time. The conservation initiative was adapted to tackle ongoing and emerging threats to snow leopards and people's livelihoods. The aptness of the program helped build community ownership of the program and the landscape. Threats are constantly changing and the program will need to keep evolving based on the needs of people and wildlife.	Aptness was important to help improve and adapt the conservation program. A review of the program in 2010 allowed it to evolve and become more apt to the local context. Adapting the program to involve all members of the community helped increase reach of the program. The program is not Apt in reaching other community members including men.	Aptness allowed for the design of the conservation effort to remain locally relevant <i>Aptness helped build</i> <i>community participation</i> <i>and ownership in the</i> <i>program.</i>	Aptness of the program allowed the conservation team to tackle wider community needs and build community trust and support. Aptness of the program helped addressed community concerns about conservation.	Aptness allowed the team to work with the community in finding a solution. Aptness which was rooted in Empathy improved the negotiation process. Being open to evolving a program and improving ones skills of under- standing/negotiations is a skill and can be worked on.

	Hisper Valley	Tost-Rangers	Tian Shan	Ladakh	Terich Valley	Gurvantes
			Respect			
Review (black) Worked well (green) Needs to be improved (blue)	Lack of long-term Presence and Respect had led to a donor-recipient relationship between conservation agencies and the local community. Respect for the communities needs allowed the conservation interventions to be developed in partnership with community members.	Respect for communities' insights and their work has built stronger trust and understanding. Respect for local community decision making processes and the roles of the rangers helped build local ownership in the program. The conservation team will need to strengthen the principle of Respect for the rangers and the local community; this will build greater community involvement in conservation and improve relationships with other stakeholders.	Respect was important as it highlighted the need to include not only community participants but the wider community into the conservation program.	Respect for local capacity and skills helped adapt the program and build community ownership.	SLF Respected that the local community mis-trusted conservationists. Respect was an important foundation for any engagement or communication. <i>Respect was important to</i> find common ground and solutions. The building of mutual Respect was important for setting the foundation for ongoing dialogue.	Respect for the community's concerns was important for negotiating a solution.
			Transparency			
Review (black) Worked well (green) Needs to be improved (blue)	Transparency in terms of how the benefits of the conservation program were distributed amongst the community helped build trust. Transparency in sharing the results of the ecological surveys with the community helped build trust and long lasting relationships with the community.	Transparency of research findings built community ownership of program. Transparency in the status of wildlife built trust and improved the participation of the community in conservation actions. Transparency of research findings improved conservation communication activities and build support trust and support of the community.	Transparency of decision making process built trust in the process and allowed community members to provide feedback and inputs into the process; helped strengthen participation. In the future transparency on the terms of the community conservation fund is needed in order to encourage wider participation in the conservation program (allow non-participants to trust that they also have a say in the use of the funds).	Transparency in outlining the role of the conservation group was important as it helped manage community expectations and understanding. Transparency in what the conservation team could achieve in addressing the crisis was important as it improved communication and trust in the process.	Transparency in how the conservation program could be implemented was important to build community trust in the process. Transparency in the goals and objectives of the conservation program was important from the start in order to build confidence and trust.	Transparency worked well as the local community trusted the conservation group and reported the dead snow leopard. It highlighted that the community trusted the conservation group could support them in finding a solutior Transparency helped promote respect between stakeholders. <b>Transparency of</b> <b>conservationists and</b> <b>community members</b> <b>helps address sensitive</b> <b>situations involving</b> <b>illegal activity.</b>

Table 1. Cont.									
	Hisper Valley	Tost-Rangers	Tian Shan	Ladakh	Terich Valley	Gurvantes			
			Negotiation						
Review (black) Worked well (green) Needs to be improved (blue)	Negotiations that respected stakeholder needs played an important role in developing an apt conservation program. Negotiations with the community took time and helped promote respect and understanding between stakeholders.	Negotiations were founded on respecting the community's needs. Negotiations were rooted in communication and empathy. Being transparent helped the Negotiations and addresses any expectations.	Negotiations were a continual process throughout the implementation of the program and helped improve communication and trust.	Negotiations helped outline the role of the conservation group and the community and not raise expectations. The community was constantly involved through the Negotiation process which helped incorporate community needs and adapt the program accordingly.	Negotiations were not seen as a transactional process but about building trust and understanding for the conservation objectives. <i>Third-party negotiations</i> <i>were very powerful as it</i> <i>helped build consensus.</i> <i>Negotiations helped build</i> <i>collaborations between</i> <i>stakeholders.</i>	Negotiations worked wel as it involved hearing the concerns of the community and re-building their trust in the conservation actions Negotiations helped adapt the program to the new situation and start a new conservation program that addressed the community's needs.			
			Empathy						
Review (black) Worked well (green) Needs to be improved (blue)	Empathy to the community's needs helped build support for conservation. Empathy to other needs of the community and difficult situations supported the negotiations.	An appreciation of the harsh conditions that the rangers worked in and their skills as rangers helped build mutual respect. Empathy helped promote the exchange of information/communication and strengthened the long term partnership.	Recognition of the difficulty a community faces in identifying a relevant conservation activity to be linked the enterprise. <i>Empathy played an</i> <i>important role during a</i> <i>crisis (i.e., pandemic) and</i> <i>highlighted the needs of</i> <i>people and wildlife.</i>	Empathy helped the conservations understand the community's perspective and adapt the program accordingly. Empathy helped the team respond quickly to the situation and support the community during the crisis- which ultimately built trust.	Empathy helped the conservation team take time and understand that conservation takes time and understanding. Empathy helped build a better understanding of the root challenge for why the community did not support conservation.	Empathy helped build understanding for the local situation and supported long term collaborations with the local communities.			
			Responsiveness						
Review (black) Worked well (green) Needs to be improved (blue)	Responsiveness allowed the conservation organizations to respond quickly to reported threats such as poaching. <i>Conservation staff being</i> <i>present in the communities</i> <i>allowed for responding</i> <i>efficiently to the needs of the</i> <i>community or any reporting</i> <i>of poaching.</i>	Responsiveness allowed for the program to be adapted to the local area's threats and needs. <i>Responsiveness promoted</i> <i>exchange between</i> <i>stakeholders and helped</i> <i>identify the immediate needs</i> <i>of the community.</i> <b>Responding to the</b> <b>communities needs</b> <b>quickly built support</b> <b>and respect for the</b> <b>rangers work.</b>	Responsiveness worked well as the team adapted the program after an initial review so they could fulfil the conservation goals.	Responsiveness played an important role as it was done quickly during the pandemic responding to the community's needs- strengthening the communities trust and respect. Responsiveness to support future cases of livestock losses will be important to maintain momentum and confidence in the future.	Responding to the needs of individual households as well as the community was important to build support for conservation actions.	Responding quickly to the crisis was important to maintain the communities trust and support. Responsiveness helped adapt the conservation actions on the ground to the evolving context and situation.			

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	Hisper Valley	Tost-Rangers	Tian Shan	Ladakh	Terich Valley	Gurvantes
			Strategic Support			
Review (black) Worked well (green) Needs to be improved (blue)	Strategic support worked well in building regional support for the project.	Strategic support strengthened the conservation work on the ground and helped build collaborations between stakeholders. Strategic support strengthened community's ownership of the land and strengthened their conservation actions. Strategic support will be an important principle to maintain as it legitimizes and strengthens the conservation actions on the ground. Strategic support also helps build respect for the communities and their conservation work.		Strategic support was important to strengthen the long term commitment of the conservation work and build a supportive conservation environment. Strategic support helps build coalitions and maximize the use of conservation resources	Strategic support was important in the negotiation process so that a solution was agreed upon. Strategic support promoted wider conservation benefits across the landscape which strengthened a supportive environment for conservation.	Strategic support will be important to expand the program over a larger landscape.

Table 1. Cont.

### 3. Results

3.1. The Narratives

3.1.1. Conservation and Poaching in the Hisper Valley, Gilgit-Baltistan, Pakistan—Narrative by Staff of Snow Leopard Foundation, Pakistan

Community support for conservation efforts has had a patchy history in Hisper valley. The community had some history of work alongside conservation agencies in the past. However, once these projects ended, reports of illegal hunting of ibex became common. Community members complained of bureaucratic apathy after a person they reported for hunting illegally in 2010 was released without an enquiry.

The Snow Leopard Foundation Pakistan (SLF) started working with the Hisper valley community in 2012. Surveys carried out in this region indicated that it was an area of rich wildlife values. A 'snow leopard friendly' livestock vaccination program was initiated (Nawaz et al., 2016), and several other conservation interventions were also subsequently started here.

On 3 June 2020, the Parks and Wildlife Department, Gilgit-Baltistan's team received news of the sale of ibex meat in the market which was believed to have been brought from the Hisper valley. An investigation led to the identification of those involved in illegal hunting, who were found and jailed based on evidence gathered by the police. This was the first imprisonment of this kind and soon the community came together to help those involved.

Elders from the Hisper community met the Secretary Wildlife followed by the Provincial Minister of Wildlife and Forest, requesting a release of those accused. This did not help. The community then hired a lawyer to file a bail application in favour of those accused. However, they realised that legal proceedings were likely to take time to resolve. They approached the staff of SLF and IUCN with whom they had worked in the past, requesting their intervention to help resolve the matter. This request was shared again with the Secretary Wildlife who in turn requested that both SLF and IUCN work out an arrangement in the long-term interest of the conservation of wildlife of this region. This was followed by a joint meeting between the community members, SLF, and IUCN. It was agreed that the community would sign an agreement with Parks and Wildlife Department, Gilgit-Baltistan, ensuring no future hunting of wildlife in the region by community members. They also made a request to include Hisper valley for allotment of trophy hunting licenses so that the community could benefit from conservation efforts. The agreement was signed and those in prison were released after 15 days, the longest incident of its kind involving an individual from the valley. Following this incident, the numberdar or village head, has been proactively encouraging people against hunting of wildlife and reminding them of the consequences if these instructions are breached.

A recent survey carried out in the valley led to sightings of 334 ibex, including a single group of 60 ibex, reaffirming the presence of a healthy population. The Secretary Wildlife, who was apprised of this record, commended SLF for their effort in engaging the elders of the community in protecting wildlife. Two trophy hunting licenses were soon allotted for the first ever trophy hunt in Hisper valley. Following a successful trophy hunt, the Parks and Wildlife Department hired two wildlife wardens, which was another encouraging move that gained the community's willingness for sustained conservation of wildlife. SLF has also appointed community wildlife guards who support the community in combating illegal hunting.

The Secretary Wildlife reduced the fine for those caught for illegal hunting in June 2020 from 400,000 each to 30,000 PKRs each, and also pushed for a withdrawal of the case from the court. This has helped build trust between the community and the government, which we hope augurs well for long term conservation of wildlife in Hisper valley.

3.1.2. Local Herders Become Community Tangers in Tost, Mongolia—Narrative by Staff of Snow Leopard Conservation Foundation, Mongolia

Since 2008, staff from the Snow Leopard Conservation Foundation (SLCF), Mongolia, have been conducting camera trapping of snow leopards and ungulate surveys alongside international and national scientists under a Long-Term Ecological Study (LTES) of snow leopards in the Tost Mountains of South Gobi. Through this research initiative, our presence in the Tost mountains only became stronger, as we gained more information on the ecosystem and threats to snow leopards. As we intensified our research, we learned that retaliatory killing was not the biggest threat to snow leopards, but that mining was a new emerging threat. The entire Tost habitat was being given away under mining licenses. Not only did it threaten the whole ecosystem, mining would alter local livelihoods, and cause poaching and mismanagement of natural resources. The local people saw how mining development damaged their pasture. Though they expected more income opportunities at the beginning, their hopes were slowly eroding as they saw few benefits. The local people did not know how to safeguard their pasture land, which they depended on, and the wildlife they co-existed with. Along with mining as a threat, we also could not mitigate illegal hunting activities in Tost.

In 2010, SLCF engaged local people and government in the process of protecting the habitat from mining. Together with the local community, we held workshops and trainings on what rights and responsibilities they had according to the of laws of Mongolia and how to negotiate with the government. In 2015, SLCF assisted local herding families in becoming organized in seven conservation communities, each community having a clearly mapped out Community Responsible Area (CRA) where they would be responsible for conservation and protection. This was done with the approval of the local government. Each community member elected their community ranger to patrol their CRAs to prevent illegal activities such as poaching and mining. Our research program team has been training them in basic skills in monitoring and protection. We realized that we could bring community volunteer rangers into the research and monitoring program. Initially, we partnered with two-three of them for the ungulate monitoring surveys, and we noticed that there is a lot more potential to engage them in research. Today, the seven community rangers help conduct annual camera trapping for snow leopards and ungulate surveys over thousands of square kilometres, while patrolling their own CRAs, which is a huge support for the program. This provided a huge boost in support for the conservation program in the area; and was a key building block to address large threats such as mining.

In 2016, as a result of six years of effort by SLCF staff and local community partners, Tost mountains were declared a federal nature reserve (NR) of 8965 km<sup>2</sup>. Most of it overlaps with the seven community CRAs. The new national park administration has limited resources and capacity, with only three official rangers hired to patrol this huge area. Community rangers help patrol 7452 km<sup>2</sup> of the 8965 km<sup>2</sup> Tost Nature Reserve two times a month. Data collected during their regular patrols add to the NR data and the community rangers help the NR administration team in enforcing laws.

Since the establishment of Tost NR, SLCF staff started delivering training to the three official rangers and continued refresher training for community rangers. The training includes GPS and SMART (Spatial Monitoring and Reporting Tool) use to learn how to document their observations and locations while patrolling. The community rangers quickly picked up new skills and showed great interest and excitement. Many of them heard about transects for the first time, including the concept and logic behind them. Being naturally close to the environment and wildlife, having skills in spotting wildlife and a good spatial sense of their landscape and topography facilitated their learning. We can see how much they are proud of being rangers of their area, even though patrolling in the Tost mountains is an extremely challenging task. They are accustomed to harsh terrain, and extreme temperatures that can range from -35 °C in the winter to +35 °C in the Summer. To cover the vast, roadless areas of Tost, the community rangers used to use their own old motorcycles that sometimes broke down, often requiring hours of walking to get help. But

they love their job! More recently, each has been provided with a new motorcycle by SLCF. I remember one of them saying "this is my first time having an official title and job in my life. The more I learn about my land, the more I am proud of it".

# 3.1.3. The Snow *Leopard Enterprise Program in Tian Shan Mountains*—Narrative by Staff of Snow Leopard Foundation Kyrgyzstan

The Snow Leopard Foundation Kyrgyzstan (SLFK) has partnered with communities in the Tian Shan for over a decade. SLF started a program called Snow Leopard Enterprises (SLE) in 2003 with a few communities that share the landscape with the snow leopard. SLE is a program that offers an income generation opportunity for herding families sharing the mountains with snow leopards. The program helps build robust relationships and trust with the communities and, because it is run long-term, it has evolved strong partnerships.

Early on, when the program started, the SLF staff was based in Bishkek and they had few opportunities and resources to travel to the field and spend time with the communities. The community leaders were given the responsibility of managing the program. SLF staff did not need to travel to the community, as the community would arrange for the products to be sent to Bishkek and sold. The local leaders would make the decisions on the bonus, sales, and how the funds were distributed (community committees were not initially set up). This created many challenges for the program as there was little focus on building the link with conservation action in terms of including conservation contracts and delimiting the boundaries where the community was responsible for wildlife protection. The program was also controlled by local leaders and there was little oversight on how the funds were used or transparency in program finance.

We briefly paused the program in 2010 and conducted a review assessing the program's implementation and effectiveness. Our team visited the participants and nonparticipants of the community. We realized that the program had not been run very transparently. We decided to hire a staff member dedicated to running the program, and also to set up community committees (to support decision making) and devised conservation contracts with the communities. Initially, these contracts were rather complicated and included many species. Later, based on discussions with community members, it was decided to focus the contracts on the three priority species: ibex, argali, and snow leopard.

This review process helped adapt the program to have a greater conservation focus instead of being viewed locally only as an alternative livelihood program. We also decided to focus our efforts on two communities instead of spreading ourselves over five.

In the last ten years, there have been other challenges that our team has been addressing as and when they come up. These have pertained to quality of products, transporting materials and products to and fro between Bishkek and the field, and processing the products. Keeping the program's conservation linkages strong also continues to be a challenge. Our partner communities don't own the lands they use, but rent them out from other communities near Lake Issyk-kul who have ownership rights.

One major new challenge the team is facing relates to the use of the community conservation fund generated by the program. The community fund is created from the bonus amount provided each year to the community in addition to the purchase price to the participants provided there has been conservation compliance. The total bonus amount is 30% of the purchase price, with a third going to a community conservation fund and the remaining provided directly to SLE participants for SLE development. It has been a challenge for us to explain that, in our team's view, the community fund is intended to be linked to conservation by the community, while the SLE participant bonus payments are intended to support further SLE program development (buying better materials, creating better workspaces, etc.).

The community committee is responsible for making decisions on how funds are to be used and SLF is meant to help approve the decisions. However, sometimes, communities go ahead with their projects without consultation with us. For example, one community set up a Micro Finance Program with the conservation fund. If a community member needs money, they can borrow money from the fund with a credit (set at a high interest rate). The committee decided on a high interest rate to encourage borrowers to repay the money quickly. This helps community members pay for urgent needs such as petrol and travel to market. There is no limit to the community fund and it has now accumulated to around 700,000 Soums (8500US\$). Our team would have liked for it to be used by the community for furthering conservation goals, while the community members are not keen to do so.

We would like to encourage it to be used annually on conservation activities. However, few conservation activities are proposed by the community. The community members reported that they find it difficult to suggest conservation linked activities. For example, one woman from another community arrived asking to have access to the funds. It had to be explained that the decision on usage was based on the community committee decision. In another example, a community leader suggested buying a container to make more space for SLE participants to make products. However, other community members were concerned that it might be used as private property. The SLF staff visited the community so that they could vote on the decision. However, voting during a meeting is challenging as there is social pressure. People could not express their real desires. Our team subsequently received calls that many community members did not want the funds to be used for the container. There are differences within the community on how to use the funds.

To address this, we might encourage an anonymous voting process. We also hope to make a few suggestions on conservation linked activities that could be undertaken using the funds— such as garbage collection or water sanitation. We think that once the community sees the funds used for conservation activities, they will come up with further ideas on how it could be used. Our team will also discuss whether the community fund could also be used for efforts which could support conservation indirectly. This would benefit the community and encourage them to use the funds.

Another challenge related to the community fund is that, often, the non-participants do not realize that the community fund is also available for them. The SLE participants understandably feel more ownership over the community fund. It takes time for the non-participants to realize that they also have a say in its usage. The community meetings often include primarily the participants (that form a higher proportion of the community) and therefore it is hard to hear the voice of non-participants.

Personal reflection: "No money is a headache but having money is also a headache." Managing large amounts of funds gets complicated fast, and the team has to work closely with the community to effectively manage the program.

# 3.1.4. Building Corrals to Reduce Livestock Depredation in Ladakh, India—Narrative by Staff of Nature Conservation Foundation, India

In the winter of 2020, we learnt of several cases of livestock depredation by carnivores in the region of Eastern Ladakh—24 incidents of surplus livestock killing, of which 11 were reported from a single village. Having worked on setting up preventive measures to minimise surplus killing through collaborative predator-proofing of livestock corrals with the local communities, our team was keen to act. Guided by the local Department of Wildlife Protection, we reached out to the Sumdho TR community that had witnessed 11 attacks. A snow leopard had already been trapped and translocated from the area. The Sumdho TR community was comprised of nearly 60 herders, who reared Changra goats that produce pashmina (cashmere), and this was their primary source of income.

When our team first visited the community and expressed our interest to work with them, they were welcomed by the villagers. According to them, this was amongst the first few times they had been approached by a civil-society organisation. Expectations were high and it took us a few meetings to set the expectations on how we could help, but not without active participation of the community members. Being new in the area, our field team was also trying to ensure that we could build trust. After the initial few meetings, we mutually agreed to work on reinforcing the corrals. However, there were some differences of opinion over the design of the structure. Having worked in other parts of Ladakh, we were comfortable with a design that we had implemented over the last several years. However, the communities we had worked with in the past held fewer livestock (30–50 per

family). In this case, each family held 350–500 livestock and hence the corral size would have to be much larger, which would have design implications. Over multiple discussions, the community members explained the design elements that would suit the region and their requirement. They explained how the region was deficient in availability of stone, a basic raw material for construction, and how an altered design could help work around the issue. There were other aspects of design such as the need to ensure that the structure did not block the wind since, according to them, exposure to cold winds was essential for ensuring higher production of pashmina wool. All of these aspects were new to us, but were useful to understand while working on the design of the corrals. Based on these discussions, we developed a new design which was validated by structural experts and wildlife biologists.

We eventually decided to pilot seven new corrals based on the new design. The community chose seven families whose corrals would be rebuilt as part of the effort. They showed great interest in ensuring timely completion. Agreements were drawn up under which we took the responsibly to fabricate and transport material, while the community would ensure timely construction of the corrals as per their suggested design.

These corrals were built over the next of two-three months, with active participation from the community members. Our team participated in the construction to monitor the work. The structures were ready before the onset of winter and are currently in use. These corrals have not reported any new cases of livestock depredation over the three–five months that they have been in use. The herders are satisfied and are looking forward to building more corrals in the future.

# 3.1.5. From Conflicts to Collaboration: Terich Valley in Hindukush Landscape Region in Chitral, Pakistan—Narrative by Staff of Snow Leopard Foundation, Pakistan

Conservation of natural resources, especially wildlife, is one of the most challenging tasks in the Hindukush region of Chitral, Pakistan. This region is a critical area for globally threatened and endangered species, such as the Kashmir markhor and the charismatic snow leopard, as this landscape is blessed with dry temperate conifer forests, sub-alpine scrub, and alpine pasture. The community here is agropastoral and hence depends on natural resources for their livelihood. Conservation is often misinterpreted locally as an attempt by the government to take control of community forest lands. This fuels fears that people will lose their rights to access resources from areas that have been managed traditionally for generations. Sometimes such misconceptions are planted within the community by groups with vested interest, especially by individuals involved in illegal hunting of wildlife.

The local communities in Terich Valley in Chitral have held a negative attitude towards wildlife conservation agencies for several years. The government had initiated a Mountain Area Conservation Project (MACP) in the region in 2004. However, after lack of support from the community—including a physical assault on the project staff—the site for project implementation was changed. No follow up action took place against the members of the community involved in the physical assault. The local community continued to prevent other government and conservation agencies from working in the region until 2018. A probable reason for their stance was that they were being led to believe that such efforts would take away their traditional rights to access pastures by turning them into protected areas.

Our team first reached out to the communities in Terich Valley in 2018. We started discussions with those within the community who were more open to supporting conservation efforts. We did, however, receive threats from some members of the community. Mindful of the sensitive situation, we did not start conservation interventions, but ensured that we maintained contact with the community members and visited them frequently over the next two years. We also made contact with those members of the community who frequented Chitral (town), where one of SLF's field offices is located. Over the next two years, our team had built a good rapport among those in the community who were keen to support conservation efforts.

Around May 2020, our team visited Terich Valley to help plan a general meeting between the community and the government officials on request of the District Collector of Chitral (head of the region's bureaucracy). During this visit, a group of 17 community members physically assaulted our team members. Our team lodged a formal complaint of the incident, reporting the 17 community members to the police. This was done after much deliberation and considering that inaction would set a bad precedent, as well as possibly close the door for any future attempts at working with this community. Once the case was presented in court, the accused had to make frequent visits to Chitral. They had to personally bear the financial cost of litigation and received no support from those who had misled and instigated them to act in this manner.

While our team members did not visit the valley after this incident, we remained in contact with community members who visited Chitral and invited them to our office. Later last year, we also organised an exposure trip for some representatives of Terich Valley to visit some other field sites where our community-based conservation efforts were ongoing. Meetings with members of other established community committees (Village Conservation Committees) helped remove their apprehensions about losing access to their pastures. Seeing how other communities had benefited from joint efforts in their landscapes, members from Terich Valley were willing to engage.

Over the past few months, we have started community-led efforts in the valley including the hiring of community watchers, initiated efforts to restore degraded patches of grassland, and undertaken the installation of solar pumps for lifting water for irrigation. The community is coming forward to participate in all these efforts. Those who harbored a negative attitude towards conservation (and were likely involved in illegal hunting of wildlife) are stepping forward to participate in these efforts. The 17 people who had cases filed against them have also expressed interest in working with SLF, with a request to take back the complaints filed against them. All this has been possible only after the community was convinced that they would retain the rights they have traditionally held.

3.1.6. Gurvantes Livestock Insurance Program, Mongolia—Narrative by Staff of the Snow Leopard Conservation Foundation, Mongolia

The beginning of our livestock insurance program was the output of a challenging situation that happened in the Gobi. Every year, throughout Mongolia, we have a New Year Celebration in the second half of December. Our team was just coming back to the office after the holiday and we had gathered together on January 1st. The same day, we received disturbing news about one of the communities in the Gobi where we work, called Gurvantes. We received a phone call from our field staff member saying that one of our collared snow leopards that we had been tracking, Bayartai, was shot by a herder. When we heard about the incident, our team immediately travelled to Gurvantes.

It turned out that the herder had lost 26 goats over multiple nights. Each night, he had worried that something would come to take more livestock, and it had. He was elderly and he was fed up. Finally, he put out a trap to catch the predator in case it came back. That night, he caught the snow leopard in the trap. The snow leopard had managed to pull up the stake and was jumping around. The man must have been frightened—it was dark—and he grabbed a gun and shot the snow leopard. Then, he noticed that the snow leopard had a collar and he came over to our research station to inform our team and said that he shot the cat accidently. The good thing was that he reported it; he could have hidden it and never told.

We felt it was important to be there, in person, to better understand what really happened and to meet with the community. Every year during the first week of January, the herders have their big annual business meeting. We had not realized that this would be happening at the time we arrived. When we arrived there, our team was taken to a large herder meeting which was already in progress. The Soum Governor said to us, "You can explain your purpose for coming here", and we were ushered to the front.

There were around 300 people. They filled the entire Sport Hall. Even now I can remember the feeling—it was so scary. I was very young—it was 10 years ago. I remember

how angry people were and how it felt to me like they were blaming us. When we got there, a young person was saying "Oh the snow leopard people are here". He was related to the man who had shot Bayartai and he was taunting us. So many people were upset, supporting the man who shot the cat. People were bringing up old stories; saying things such as, "a snow leopard once attacked a person in the Gobi. What is more important to you: snow leopard or human?" Bayara, my Director, said, "human, of course." Another lady stood up and shouted, "If you want to protect your snow leopard, take it to the zoo. We don't need your snow leopard eating all the goats." I was feeling a bit angry. Again, I was young and had a bit of an ego. I wanted to say things such as "Why don't you just protect your livestock better." But I did not. I did try to explain things to them a few times, like how we are not wanting to raise snow leopards in captivity, we just want to protect them in their natural state. But, every time I tried to explain something to them it seemed to make them angrier.

I realized Bayara was not explaining things to them. She was just listening and saying things such as, "Oh I am so sorry about that!", "Oh no, I am really sorry for that". Everyone was shouting and asking why we were there. I wanted to answer, but Bayara was so humble and was saying she was so sorry this happened, and we kept listening. For more than an hour we just listened and encouraged them to keep talking about how they felt and what they thought. Bayara was just saying sorry. It was really difficult for me. After a long time, after letting them express themselves and saying sorry, Bayara finally said, "Do you think we can come up with any solutions together?" Then, some man said if you want to protect the snow leopard you need to compensate the losses. So, Bayara told them that, in Mongolia, we don't have a National compensation scheme, but in India we know about a project on livestock insurance. We described it a bit and the herders thought that could work. So, Bayara said, "Let's test it."

From then, we began working with the community on the program. Now the insurance program is over 10 years old. It went from one small group of six people to three groups of more than 55. This is how the program came to be–in this highly charged situation. It took negotiation, but not really the stereotypical bargaining. It took actively listening, working to understand and really hear the herders and their pain and frustration, patience, empathy, and negotiating by guiding toward a solution when they were ready, by asking them for their ideas. Working together toward a solution from their ideas.

#### 3.2. Analysis of the Narratives

The analysis of the narratives is outlined in Table 1. For each of the different narratives, we examined the role of each of the PARTNERS principles, reviewing the way the elements had been explored through the lens of the PARTNERS principles, validated by the authors of the narratives; what worked well with their program in terms of the PARTNERS principles (added in Table 1 in italics); and what needed to be strengthened to promote long term solutions in terms of the PARTNERS principles (added in Table 1 in italics); especially Presence, Respect, and Empathy as being very important (Table 2). Strategic support from governments was deemed less important from the perspectives of the case studies.

**Table 2.** Assessment of importance of each of the principles in the case study. Scale of 0 to 5 (0 being unimportant and 5 being very important).

Principle	Hisper Valley	Tost	Tian Shan	Ladakh	Terich Valley	Gurvantes	Total
Presence	5	5	5	4	5	5	29
Aptness	5	4	4	5	1	5	24
Respect	5	5	4	3	5	5	27
Transparency	5	3	5	4	4	3	24
Negotiation	5	1	5	3	3	5	22

Table 2. Cont.

Principle	Hisper Valley	Tost	Tian Shan	Ladakh	Terich Valley	Gurvantes	Total
Empathy	5	4	5	2	5	4	25
Responsiveness	5	5	3	4	2	5	24
Strategic Support	5	4	2	2	2	1	16

### 4. Discussion

Documenting the experiences of on-the-ground practitioners and conservationists is essential to better understand conditions needed for long-term conflict management [2,7,18]. However, the perspectives of these actors addressing acute conservation conflicts are rarely heard directly and through their own words as they relate them [43,45]. Their insights as determined by themselves, rather than through intermediaries such as researchers, are perhaps less well represented in the conservation conflict literature and run the risk of being filtered out or diluted. In this paper, we have brought together the direct narratives of practitioner teams across four Asian countries to better compare and assess some of the challenges faced in the context of snow leopard conservation. We then examined their narratives through the lens of the PARTNERS Principles [3] to draw general insights on what worked well and could be strengthened for long-term conservation.

The narratives are all different in terms of context and conflict situations. They range from the story of how relationships with communities were built (e.g., in the Terich Valley), to one of adaptation to changing events and settings (e.g., the illegal killing of a snow leopard in Gurvantes, poaching of ibex in the Hisper valley, and mass livestock depredation events in Ladakh). A further narrative explores the deepening of the relationship with communities through implementing new or on-going initiatives (e.g., Community Rangers in Tost, addressing poaching in the Hisper valley, and adapting the enterprise program in the Tian Shan). Despite the differences, similarities across cases were observed. Most notably, these similarities include a. the need to understand and engage with communities through the three PARTNERS principles of presence, respect, and empathy (scored highest when ranked by the narrative authors); b. designing tailored approaches based on aptness, responsiveness, and negotiation; c. the need for horizontal and vertical communication between stakeholders in order to increase transparency. Strategic support from governments was contextually important; however, not in all cases, and therefore scored relatively low. Each of these are explored in turn below.

In Terich Valley, a sustained presence of over two years was instrumental in building understanding and trust with a local community that had had negative experiences of conservation in the past and needed time and effort to rebuild a relationship with conservationists. Across all the case studies in situations where strong relationships already existed with communities, such as in Gurvantes, Ladakh, and Hisper, there was a constant need to respond rapidly to any incident or change in local circumstances. When a snow leopard was killed in Gurvantes, it required the conservation team to travel to the site and listen to the local community, showing respect and empathy, before reaching a moment where the co-development of a new initiative to protect livestock became acceptable to the local community. Respect and empathy were apparent in all case studies, most notably in the Gurvantes example, where the field team responded quickly and took the time, in a tense atmosphere, to hear the local community and empathise with the local people before asking them to think of solutions. Such respect works both ways: in Tian Shan, the community now confides in the conservationists—even with sensitive information such as illegal activities.

This understanding and engagement through presence, respect, and empathy is directly linked with the ability to achieve tailored approaches through apt and timely responses. In the Ladakh example, livestock predation events (of which the conservationists were aware of thanks to their presence) led to the rapid development of corrals designed and implemented by the local community. In Hisper, the news of the ibex poaching was gained through 'local champions', who had an in-depth knowledge of the area and of community elders, and initiated discussions over how to stop illegal poaching. Such need for contextualisation of responses has been highlighted in the literature [23,26]. It does however raise a paradox of ensuring contextual local responses along with the challenge of scaling up such conservation initiatives [24].

One of the lessons learned that cuts across all narratives, linked to understanding, engagement, and the need for closely tailored approaches, is the underlying requirement for ensuring a long-term conservation perspective. In the Hisper narrative, the reason for unsuccessful previous attempts to address illegal poaching was the short-term nature of these interventions: as soon as the short-term project ended, poaching started again. The other key lesson learned across the case studies is the centrality of local community empowerment for achieving conservation results. In Hisper, for example, one of the achievements was that local people, recommended by the local community, were hired as wildlife guards. This is a similar approach to that in Tost, where the rangers were elected by the community, rather than appointed by the conservation team. This thereby helped create transparency, enable effective negotiation, and highlighted respect towards the community for those decisions. The community rangers were further empowered by being invited to the training of the state rangers and being officially recognised by the provincial government and Tost Nature Reserve team.

There were, however, aspects of community-based conservation approaches that could be improved. These cut across narratives and are relevant to experiences of practitioners more broadly. One nexus that emerged is the need for long-term sustained strategic support—a challenge highlighted by other authors [46]. Whilst such support was apparent in some settings such as Hisper, Ladakh, and Terich, it was evident in the other narratives that this support could be strengthened. Such support requires time to be put into creating and maintaining links with decision-makers and the bureaucracy at the regional and national levels, with often a fine line between support and maintaining the ownership of conservation programmes by the local communities. This is well exemplified in Tost, where the work of the local rangers is independent, but has been acknowledged by the local government. All case studies also emphasized the role of presence as an ingredient of success for community conservation outcomes [3]. Presence as a crosscutting factor strengthened transparency, responsiveness, empathy, aptness, and respect. This was also an area where teams made suggestions for improvement while recognizing the challenge of deploying conservation staff on a full-time basis. The possibility of exploring other ways of ensuring presence through 'local champions' or hiring local staff were demonstrated in two case studies (Hisper Valley and Tost).

The framework of this paper and the application of the PARTNERS Principles as a tool for reflection and analysis of community conservation approaches proved to be valuable [35]. This suggests that community conservation approaches should be assessed on both processes and outcomes together. The framework allowed us to explore the elements of process in articulating what are often among the most challenging dimensions to measure success [15,17]. We recommend that community-based conservation programs apply such stakeholder engagement principles as part of their practice, and ways to track programs and improve learning [17].

#### 5. Conclusions

This paper, based on direct narratives from conservation practitioners, provides insights on some of the conditions needed for long-term conflict management. These include

a. the need to encompass the range of PARTNERS principles in community-based conservation efforts, as they work together as seen in the narratives: presence builds empathy and respect, and leads to greater responsiveness and aptness of solutions through negotiation of interventions that benefit from wider strategic support. Working on one without the others is misleading [3];

- b. the need to empower local communities as partners in conservation through their ownership of decisions and their implementation, with equitable sharing of costs and benefits of conservation [47];
- c. the need to work in the long-term to build and sustain resilient relationships with local communities.

Of course, such conditions require resources, and this can be a challenge when there is a mismatch between short-term funding and goals of funders and long-term engagement needed for effective conflict management. Potential solutions could include the need for increased dialogue with funders on the time needed to build relationships and trust that may form the backbone of effective conflict management. Such dialogue could potentially lead to reduced pressure for 'deliverables' and a greater focus on partnership building and on improved monitoring and evaluation that can be jointly developed with local communities and can include some of the more fundamental aspects of conflict management (perhaps basing them even on the PARTNERS principles). If these conditions for sustainable conflict management are put in place, these can allow for local communities to be more resilient in the face of wider forces, through multi-pronged long-term programs that actively and respectfully engage multiple stakeholders as partners in conservation in the long-term.

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