

Building Trust with Rangers and Communities

A scoping report for URSA by Sue Stolton,
Hannah L. Timmins and Nigel Dudley

VOLUME 2: Case Studies



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ABOUT THE UNIVERSAL RANGER SUPPORT ALLIANCE (URSA)

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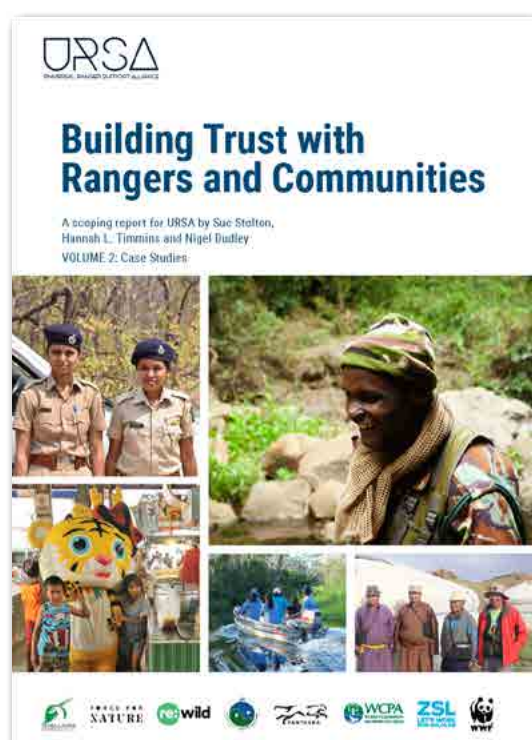
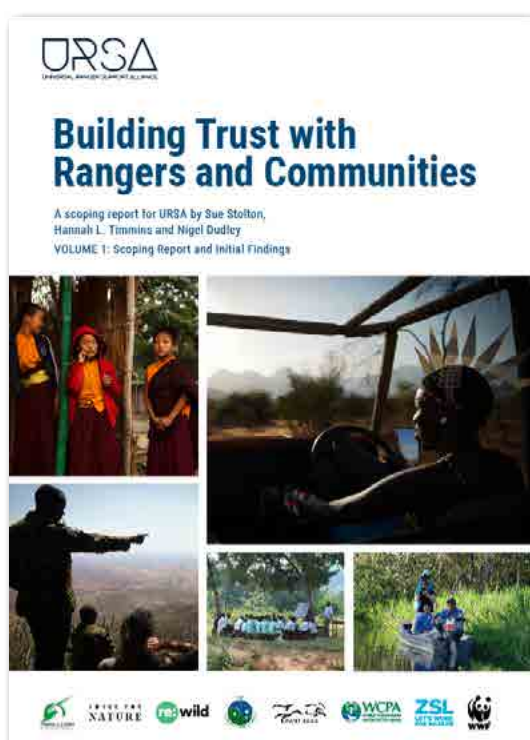
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Introduction

This document is the second volume of the “Building Trust with Rangers and Communities” scoping document.¹ The first volume includes an introduction to the project and an initial framework and set of good practices for helping build trust between rangers, Indigenous peoples and local communities.

This second volume includes a combination of full case studies developed from projects worldwide and shorter “stories”, usually from individuals actively involved in initiatives to build trust between rangers and communities. The case study material has also been summarized in volume 1.



Case study 1: Tackling wildlife crime through community conservation in Uganda

This case study draws on a long-term project to develop community engagement in protected areas in Uganda² and in-depth ranger interviews carried out in Queen Elizabeth National Park.

Lessons learned

- Changing conservation policy is a long-term process.
- Policies and legislation, however, rarely solve issues on their own but need to be accompanied by ground-level actions; exemplified here by the long-term involvement of a group of local and international NGOs.
- Developing more trusting relationships has been focused on policies to reduce and more effectively deal with wildlife crime and dealing with human-wildlife conflict.

Transitioning conservation policy

Uganda epitomizes many of the challenges facing conservation in the 21st century: a last stronghold of endangered species, a growing human population, competing pressures on natural resources and a conservation approach developed during colonial times with no thought for the social consequences of protection. History cannot be rewritten, so the future of conservation here, and in many other parts of the world, must maintain and enhance biodiversity, while finding ways to reconcile the past and reinterpret conservation with both social and ecological goals.

There are no quick fixes to these challenges, but a determination to re-envision conservation and to adapt management is beginning to change how conservation and communities interact in Uganda. Uganda was an early pioneer in the field of “integrated conservation and development”, recognizing the need to develop community support for conservation and for protected areas as early as the 1980s. As George Owoyesigire,

Director of Community Conservation in the Uganda Wildlife Authority (UWA), notes of the 1980s: *“The then government realised that it needed to involve the people of Uganda in the conservation and management of wildlife – not only to protect species but to give local people a fair share of benefits from conservation initiatives.”*³

Education and outreach programmes and park revenue-sharing initiatives became formalized in the UWA policy on community conservation in 2004. Policies then became law in the [Uganda Wildlife Act of 2019](#); a major achievement that could be replicated in other countries with outdated colonial approaches. The law provides for community involvement in wildlife conservation through establishment of Community Wildlife Committees, education and awareness and benefit-sharing programmes. Complemented by the [National Environment Act, 2019](#) (which promotes, among other things, the creation of community wildlife conservation areas and community conservation areas outside protected areas), these two acts provide the framework for a new type of conservation approach.⁴

Of equal importance is the slowly changing relationship between government and Indigenous peoples. In 2021, the Ugandan Constitutional Court made a [landmark judgement](#) ordering the government of Uganda to take responsibility for its illegal evictions of the Batwa, including in protected areas. As Dusabe Jeremiah, the chairperson of the Batwa’s own organization, UOBDU, noted: *“I dearly hope this case serves as a wake-up call for the Government of Uganda to finally recognise that the Batwa are their best friends and allies in the continued conservation of Bwindi, Mgahinga and Echuya forests.”*⁵

Policies and legislation, however, rarely solve issues on their own. Problems persisted with incursions of local people into protected areas, limited effectiveness of benefit-sharing programmes, increasing human-wildlife conflict (HWC) and inadequate internal understanding and capacity to fully implement policies within UWA. As a result, the relationship between UWA and local communities was often poor, with significant distrust on both sides. To try to address some of these challenges a new Community Conservation Policy was agreed in 2020. The policy aims to more actively involve

communities, as well as address their aspirations, concerns and interests, to secure their support for wildlife conservation while also ensuring they benefit from conservation. A key to this is understanding the root causes of problems faced by communities and how they are managed by UWA. As George Owoyesigire notes, the policy: “... *also emphasises the need to restructure, streamline and strengthen UWA’s flagship community benefit-sharing and awareness programmes in order to achieve long-term impact on wildlife conservation and community livelihoods. Examples included planned development and effective implementation of community-led conservation action plans and livelihood enterprises to enhance rural incomes and mitigate poaching.*”⁶

The policy is implemented by a team of community conservation wardens and rangers across the country, and aims to strengthen interdepartmental collaboration within UWA, especially between law enforcement and community conservation teams.⁷ Even with this new policy, however, implementation remains incomplete. As of 2022, for example, HWC compensation structures mentioned in the Uganda Wildlife Act (2019) are still not in place.⁸

Preventing wildlife crime

Much of UWA’s Community Conservation Policy focuses on preventing wildlife crime and human-wildlife conflict, as lack of income-earning opportunities have led to major issues with retaliatory killing.⁹ Although rangers have multiple roles, law enforcement is the role which most often influences relationships with communities. Wildlife crime has detrimental impacts on all involved; when trusting relationships with rangers and local communities exist they can work together to reduce crime.¹⁰ The 2020 policy is thus focused on lessons learned on collaboration with local people, aiming to:

1. Develop and implement community-based Wildlife Crime Prevention Action Plans.
2. Develop and implement joint intelligence and law enforcement programmes with communities.
3. Reduce wildlife crime driven by human-wildlife conflict.
4. Develop a reporting and record-keeping mechanism on wildlife crime intelligence received from communities and UWA departments.
5. Establish incentives for communities that report and contribute toward preventing wildlife crime.
6. Design education and awareness programmes based on wildlife crime incidences and intelligence.¹¹

Queen Elizabeth National Park

Queen Elizabeth National Park (QENP) protects diverse ecosystems of savannah, forests, lakes and wetlands, and is home to a wide variety of species including ten primates and over 600 bird species. Its protection has been the cause of community conflict for over 100 years.¹² In 2012, 60 years after its formal protection as a national park, an in-depth investigation of community-ranger relations¹³ from the viewpoint of law enforcement rangers and their supervisors highlighted many of the good practices outlined in volume 1 and the efforts, and challenges, of the community conservation policies being put in place by UWA. Although this research did not have an accompanying community perspective on community-ranger relations (see below for community focused research), the research did provide useful insights from a ranger perspective of developing better community relations.

Foremost, was the observation of positive changes to community-ranger relationships following the development of the community conservation department, which increased community sensitization, and initiated community-centred programmes and initiatives. However, from the law enforcement ranger’s perspective, this also resulted in an inadvertent “good ranger” (community conservation), “bad ranger” (law enforcement) scenario.¹⁴

Revenue sharing programmes and responding to problem animals were recounted as the major contributors to bridging the gap between rangers and communities. In addition, the engagement of law enforcement rangers with communities over resource use issues helped lead to mutually agreed MOUs, and thus positive ranger-community interactions. However, the lack of truly equitable revenue sharing was also a cause of conflict – a recurring issue across Uganda.¹⁵

One underlying issue, which impacts community-ranger relations worldwide, is that the villagers no longer felt any ownership of the park or its resources. They felt the park and wildlife belong to UWA, and thus rangers should be held accountable for HWC. They held rangers to blame if they were slow to respond to conflicts or if compensation claims took a long time to process. This ownership issue can have far reaching consequences; one ranger recounted difficulties in obtaining food from villagers, “*Even when you’re buying meat, because now they say, ‘Why are you buying our goat meat? Why couldn’t you go and eat your kob [a type of antelope]?’*” Other rangers feared being poisoned from food or water bought locally. The rangers were clear that there was a

need to establish a sense of ownership among the communities regarding the park; they highlighted community ownership as a critical step toward developing conservation awareness and compliance and informal social regulation as opposed to relying solely on conservation law enforcement.¹⁶

Education, community outreach and capacity building were seen as vital by the rangers: *"I really pray, you know, that management puts a lot of effort [so that] the community really understand their role."* Rangers explained that the elderly and those with limited education in particular may be unaware of park regulations and available alternatives (e.g., such as resource use MOUs) and need more effort in capacity development. When making arrests one noted: *"Being a security person, I first sensitize after getting (arresting) someone. Most of these guys (suspects), they find they are in the wrong. So instead of reacting, they ask me to give them advice ... They need awareness and if they are sensitized, they do appreciate conservation and protection of these wild animals and national parks within their region."* Another noted: *"You can also interact with the community to know their views. Because if you interact with them, then definitely, you will also know their side of the story ... You know, when you interact with them. You create a kind of relationship. And that relationship sometimes is your work. Because in a situation where you don't meet with the community, then definitely life becomes very difficult."* Where possible rangers were helping ex-poachers with employment in the park to increase understanding of the park's role and provide much needed cash.¹⁷

Murchison Falls National Park

UWA's work to implement the new conservation policies was aided by a joint project (by International Institute for Environment and Development (IIED), Village Enterprise, Wildlife Conservation Society, Uganda Conservation Foundation and other local NGOs) in and around Murchison Falls, Uganda's largest national park. The project aimed to increase community engagement in tackling wildlife crime by implementing park-level action plans. Based on previous study findings,¹⁸ actions were focused on mitigating HWC, supporting community-based wildlife scouts (community volunteers who help protect farms from crop raiding by wild animals), and establishing wildlife-friendly enterprises as a source of income. The results of the project have been written-up in detail;¹⁹ but overall over 85 per cent of people surveyed reported they were either happy or very happy about having wildlife scouts in their village to help tackle HWC.²⁰

As important as the immediate project impacts, were the long-term changes in attitude to conservation and protected area staff. There was widespread appreciation among both direct beneficiaries and the general population for both the wildlife scouts and microenterprise programmes. The results of a general population survey and the interviews with rangers confirmed that this had helped bridge some of the gap in trust between UWA and local communities. As a result, people reported that they were more likely to ask rangers for help in responding to incidents of HWC and provide them with information about illegal activities. 80 per cent of people surveyed reported that their attitude toward the rangers had become either more positive or much more positive. This was attributed to a number of factors but included the improved responsiveness of rangers as a result of working with the wildlife scouts and appreciation that the rangers had trained and support the scouts.

Rangers reported a reduction in HWC in the project villages which they attributed to the presence of the scouts and improved relationships with local communities. They noted that the scouts play a pivotal role in communicating instances of HWC to the rangers, which allows them to better respond and improves cooperation with the wider community. This interaction has helped rangers to demonstrate that they want to help the local communities. The scouts were very motivated and training and equipment helped them deal with problem animals and illegal activities rapidly. Rangers also report increased information about illegal activities being provided by both wildlife scouts and the populations of project villages, which they again attributed to the improved levels of mutual trust. However, although illegal hunting reduced, in 2020 illegal entry into the park and collection of wood for firewood and charcoal production increased. This was attributed to the Covid-19 pandemic, which has left people in need of alternative sources of income. The reduced levels of hunting were attributed to the presence of the scouts.²¹

In terms of building trusting relationships between communities and local people, the following lessons were noted in the Murchison Falls project:

- The rangers' ability to foster trust and collaboration largely depends on their professionalism, ability to empathize with the specific local situation, and their ability to choose and implement conflict management strategies.²²

- Training of rangers in issues such as conflict resolution and community engagement helped build their social skills and sense of pride and professionalism and improve their interactions with local communities.
- Livelihood opportunities designed to benefit both the community and scouts improved community cohesion.
- Wildlife scouts training community members skills in controlling wild animals that stray from the park with different interventions. This has helped to improve community relations with UWA.
- Wildlife scouts were taught the behaviours of wild animals with knowledge transferred to the community members. This has helped improve the tactics of communities in chasing away the animals without causing them harm, thus decreasing conflicts and accidents.
- Park visits exposed community members to different areas of the park and surrounding area and widened their understanding of conservation.²³
- Building capacity of local people helped them understand their roles in the project development and management and helped communities own the project.²⁴
- First aid training equipped wildlife scouts with knowledge to handle problems such as fractures and sprains.²⁵

Learning resources

As a result of the project, IIED has shared [eight training modules](#) (introduction to community conservation; effective communication; community mobilization; facilitating community meetings; undertaking gender assessments for conservation; planning a community conservation intervention; conflict management; and monitoring and evaluation reporting) designed for UWA Community Conservation Wardens but broadly applicable to other conservation practitioners. The modules aim to enhance skills for engaging local people living around protected areas and can be used as stand-alone training units or together as part of a comprehensive learning package.²⁶ Of particular importance here, the conflict management module covers building trust and respect as key aspects of conflict management as well as working with communities to address illegal activities. The module focuses on appreciating the importance of building trust and respect with communities in order to enlist their support for conservation, and stresses the importance of using appropriate communication and facilitation skills to build trust among local communities to resolve conflicts.²⁷

Conclusions

UWA has put considerable efforts into improving the legacy of conflict and disenfranchisement surrounding its national park systems. George Owoyesigire, Director of Community Conservation for UWA, sees their work as a catalyst for change in the region: *"The community-centric policies we're implementing in Uganda could offer important lessons for other East African countries especially in the management of transboundary protected areas. There's real opportunity to leverage this treaty and influence countries from the region to make communities part of their conservation efforts."* However, Covid-19 has derailed much of this work. *"The community conservation work involves regular meetings and consultations with community members. But the lockdown and social distancing measures prevent us from such gatherings, so our work is brought to a standstill. Many communities benefit from tourism while supporting conservation. Last year alone, we gave out over UGX 10 billion (around US\$2 million) to local communities under the revenue sharing programme for development projects around several parks including Bwindi, Murchison Falls, Kibale and Lake Mburo. Tourism ... is of course taking a huge hit. On average, UWA is losing around UGX 7bn (US\$1.8 million) per month due to the outbreak and subsequent lockdown."*²⁸

The results of these efforts are illustrated by a recent assessment using the Social Assessment for Protected and Conserved Areas (SAPA) methodology. SAPA helps stakeholders assess positive and negative social impacts of area-based conservation, map out the underlying causes of problems related to governance and identify actions that could improve the situation. Over 1,000 households around three national parks in Uganda were surveyed. Although, HWC was assessed as having a major negative social impact, UWA's efforts to reduce conflict were reported as positive impacts of high importance by the households, and quick response time to incidences of human-wildlife conflict were appreciated. One key element of the assessment is the focus on power relationships and the inclusion of communities in conservation decision-making and actions. The results from this wide-ranging survey of households around protected areas showed the positive contribution of the community conservation unit in each park, and the impacts on improving park-community relationships as a result.²⁹

Case Study 2: Pakke Tiger Reserve, India changing perspective toward conservation

This case study has been drawn from existing literature as well as the personal knowledge and experiences of Bunty Tao who is currently the State Ranger (Range Forest Officer) of Tale Valley Wildlife Sanctuary in the Hapoli Forest Division, Arunachal Pradesh, India. Bunty has worked with the Arunachal Forest Department for 30 years. He belongs to Nyishi Indigenous tribe,³⁰ the largest Indigenous tribal community in Arunachal Pradesh.

Lessons learned

- Managers should have confidence in tribals, respecting the cultural aspects without militarizing the area. This has been made easier in Pakke due to the high number of staff employed from the Nyishi community.
- Economically empower the tribals and make them feel proud owners of the forests and wildlife.
- Local people neighbouring the Pakke Tiger Reserve are benefiting from conservation and have become local caretakers of nature.
- Local people are proud to be part of conservation while maintaining their culture.
- The introduction of artificial hornbill beaks made of glass fibre and later artificial feathers has dramatically switched the mentality of local people from hunters to conservers, as the need to hunt hornbills for decorative material has been replaced by the need to conserve an endangered species.

Introduction

The government-managed Pakke Tiger Reserve protects 862km² of forest in southwestern Arunachal Pradesh in northeast India and is home to the Nyishi, the largest tribe in the area. The reserve was initially constituted as Pakhui Reserve Forest in 1966, declared a game reserve in 1977, renamed Pakhui Wildlife Sanctuary in 2001 and then Pakke Tiger Reserve in 2002. Part of the Eastern

Himalayas Endemic Bird Area, Pakke is important for four species of hornbills whose populations have been threatened due to habitat loss³¹ and traditional hunting for meat and fat for use in traditional treatment for joint pains and arthritis. The great hornbill (*Buceros bicornis*) has been hunted specifically for its beak, feathers and casque (the helmet-like structure on the bird's head) which are used as decorative elements in the traditional ceremonial headgear known as Bopya, a type of cane woven hat.³² Traditionally hunting was sustainable, with conservation aspects ingrained. But the introduction of sophisticated long-range arms and ammunition led to increased hunting, this was coupled with a sudden population rise and a movement to revive the Nyishi culture. This led to an increasing commercialization of beaks and feathers sold for traditional use, which could fetch from INR.10,000 to 20,000 (US\$130-260) per beak.

Twenty years ago, the Nature Conservation Foundation, a wildlife conservation and research NGO based in Karnataka, India, started a nest and roost monitoring programme in the area; they found that the nesting trees outside Pakke were usually abandoned due to human disturbances.³³ An interview-based survey across Arunachal Pradesh further indicated that the species had been lost from five out of 16 known sites in recent decades.³⁴

A conservation partnership was thus started to stop this commercialization of nature and to provide financial support to the community, with the aim of creating a sustainable economy from hornbill, and other species, conservation. The challenge was to find strategies to protect the hornbill while ensuring the culture and traditions of the local community were preserved and maintained. The response has been a cooperative effort between the Forest Department, who manage Pakke reserve, NGOs and, most importantly, the local Nyishi communities around Pakke in changing attitudes and practices toward conservation.³⁵ Changing perceptions around hornbill use has just been one of many projects³⁶ which have helped build a trusting relationship between all those working and living in and around Pakke.

It takes champions

As a first step in protecting the great hornbill, Chuku Loma, the then Divisional Forest Officer of Pakke (a position akin to park manager), and rangers (including Bunty Tao) initially came up with the idea of fabricating fibreglass replica beaks in 2000; this was followed in 2003-2004 by a hornbill conservation programme started by Arunachal Forest Department in collaboration with the Wildlife Trust of India to pay for the manufacture and distribution of fibreglass hornbill beaks to the Nyishi people.³⁷ Bunty alone distributed 100 artificial hornbill beaks in collaboration with the Forest Department and local District administration.

Following the initiative of Chuku Loma and colleagues, Tana Tapi, also the Divisional Forest Officer, formed a local NGO, the Ghora Aabhe (which means village father in an Arunachali dialect), in 2007. Ghora Aabhe reflects the administrative and traditional practices already in place at the local level, where the Gaon Burrahs, the local community leaders, play a major role in the governance of the area and are institutionalized by the park authorities to settle disputes.

These two initiatives have been central to the conservation successes in Pakke. With the underlying reason being firmly associated with the fact that Chuku, Tana and, of course, Bunty are all from the Nyishi tribe, bringing a deep understanding of the need for conservation success and local cultural survival.

Developing local responsibility for conservation

The Nyishis have not always recognized the ethos of wildlife conservation and convincing the Gaon Burrahs to be partners was not easy. Tana Tapi recalled how people would insist that hunting was their tradition. It was customary for Gaon Burrahs to own licensed 12 bore single or double-barrel guns for hunting. Tana Tapi had many meetings with the Gaon Burrahs from villages bordering the park, slowly building their trust and discussing conservation actions. The aim was to persuade the Gaon Burrahs of their responsibilities for the conservation of the area that they depend on for their livelihoods, including activities such as intelligence gathering, reprimanding offenders and reporting offences to the Forest Department.³⁸

Conservation results

Although initially not all the Gaon Burrahs agreed to support conservation actions,³⁹ hunting declined and in 2006, 16 villages passed a resolution listing various social penalties for wildlife violations and villagers began to take an active part in protecting the reserve.⁴⁰

The wearing of the Bopya, the traditional headgear, is seen as a traditional cum cultural necessity for the Nyishi. But attitudes toward hunting hornbills for headgear have changed. A survey of local people a decade ago found most people (44 per cent) expressed an interest in the conservation of the hornbill, 26 per cent noted that hunting the species in the forest had become very challenging due to the low sighting rate, 17.5 per cent preferred artificial beak due to durability and 12.5 per cent were unable to afford the traditional headgear due to the high price.⁴¹ As well as fibreglass replacements, the Nyishi are also making headgear from wood, which is more sustainable and available within the community. By 2019, between one and five artisans per village were involved in making the alternative headgear from wood.⁴²

Creating a national conservation movement

In 2011, hornbill conservation was taken a step further with a three-way partnership between Ghora Aabhe, the Forest Department and the Nature Conservation Foundation to develop a community-run Hornbill Nest Adoption Programme.⁴³ Nest protectors are paid a salary and are provided with training and field equipment to find, monitor and protect nests of the four endangered hornbill species. Training covers nest observations and data recording,⁴⁴ and protectors also record breeding behaviour in order to enhance the research base. Equipment provided includes binoculars, shoes, leech socks, backpacks, field notebooks, pens, caps and raincoats. All nest protectors signed a formal agreement on their participation in the programme in the presence of their respective village heads. They also agree on their job responsibilities. Protectors work in groups of two (with the experienced people helping the younger ones) and work for eight months of the year (January to August), which covers the entire hornbill breeding season.⁴⁵

The funding is based on the concept of bringing local and urban people together through a common wish to conserve hornbills. The local community contributes by searching for, monitoring and protecting nests in the forests around their villages, while the urban



The Nyishi community wearing the Bopya, the traditional woven hat © Bunty Tao

community contributes by supporting the programme financially and assisting as volunteers and visiting the areas.⁴⁶ As of 2019, there were 11 Nyishi community representatives from eight villages engaged in protecting hornbill nests and roosts. The protectors have located several new nests every year with an 80 per cent successful nesting rate and have monitored and protected approximately 40 hornbill nests and helped 138 hornbill chicks of three hornbill species fledge successfully (2012-2019).⁴⁷

In addition, the Forest Department has recently initiated an airgun surrender programme; this is a voluntary programme actually started by the Nyishi tribes who are surrendering their airguns to the department with the assurance that they will not hunt again in order to conserve wildlife. This campaign has drawn the attention of the government of India and is seen as a great shift of tribal people from hunter gatherers to conservationists.

Conclusions

Probably the most important lesson from this long-term development of building trusting pro-conservation relationships between the managers and rangers of Pakke and the Indigenous community around the park has been that cultural traditions have been respected and conservation actions have been focused on aligning conservation and community objectives rather than trying to change or prohibit cultural activities. This has been possible because of the high number of rangers coming from the Nyishi tribe, who understood the importance of the cultural values being maintained. This alignment has gone hand in hand with creating awareness on the values of conservation, and in particular in employing local people in monitoring hornbill populations. Being able to adapt the all-important ceremonial headgear is, of course, a fairly unique situation to this area, but the process of engagement in problem solving, setting up local conservation management that works with local governance structures and ensuring economic benefits as well are all lessons which are globally applicable.

Case study 3: Mae Wong and Khlong Lan National Parks, Thailand reaching hearts and minds through music and dance

This case study has been drawn from existing literature as well as the personal knowledge and experiences of Dr Rungnapa (Rung) Phoonjampa. Rung is WWF-Thailand's project manager for the country's Mae Wong and Khlong Lan National Parks. Here, local people who legally do not live or utilize natural resources within the park borders have lost touch with their natural heritage – rangers are helping to reverse this.

Lessons learned

- Local people may be unfamiliar with the wonderful nature on their doorstep – empower them with information about their natural heritage and engender a sense of pride and protectiveness: why this nature is so important and why their support is so needed.
- Music, dancing and enthusiasm are always a direct route to people's hearts – look for the creative skills rangers can offer (such as playing musical instruments) and encourage them to use these skills to reach the hearts and minds of local people.
- Teachers and schools can be your greatest allies – support teachers to develop curriculums around nature conservation to engage students who will then relay facts and stories to their families and elders.

Introduction

The adjacent Mae Wong and Khlong Lan National Parks are one of the strongholds for Thailand's remaining tigers. The Mae Wong and Khlong Lan (MWKL) area provides important habitat for both the tigers and their main prey base of sambar and muntjac deer. These two national parks are under the Department of National Parks, Wildlife and Plant Conservation (DNP), of Thailand's Ministry of Natural Resources and Environment. WWF-Thailand has

been working with the DNP on tiger research and conservation in MWKL National Parks since 2012.⁴⁸

More than 50 per cent of MWKL rangers are from the surrounding communities, employed by the DNP in permanent (through the DNP central office) and temporary (through the protected area superintendent) positions. Rangers are expected to work for five years in temporary positions before they graduate to permanent positions. While patrolling and wildlife monitoring take up much of the MWKL rangers' time, community outreach is also a major responsibility – in particular, raising awareness around the importance of tigers and their protection.

As per Thailand's regulatory framework, there are no people living within the national parks.^{49,50} However, there are 30 villages served by 35 schools within 5km of the park boundaries, and these are the target of the MWKL rangers' community outreach. The conservation challenges in this area are not human-wildlife conflict or poaching, although some bushmeat hunting has been known in the buffers. The issues have been a lack of awareness and support from local people.

Initially schoolchildren had very little knowledge of their local nature – when asked about nature, most kids talked about lions and giraffes and the other African wildlife they had seen on television documentaries. Few knew of tapirs, Asian elephants or that within just a few kilometres, their own forests provided a home for another "king of the jungle", the world's largest cat, the tiger. The rangers here have been working on creative solutions to build this awareness and pride in the people's local wildlife and wild spaces, and engage local people as part of the solution to protect wildlife.

The rangers have been particularly creative with ideas for awareness raising campaigns; namely the

Big Cat Band and the Tiger Learning Center, through which they aim to increase the students' and villagers' knowledge and gain their support for tiger and wildlife conservation.

The Big Cat Band and wildlife mascots: exhibitions at markets and schools

The Big Cat Band was formed by ten MWKL rangers with support from WWF-Thailand – the band engages people, particularly young people, through the medium of music. They perform popular hits but have also written their own songs about conservation and wildlife. For example, one of their songs is about Khlong Lan waterfall – its importance for water management and also how beautiful it is, encouraging people to visit the park and the waterfall for themselves, appreciate their natural heritage and support its protection.

The ten rangers of Big Cat Band play guitar, bass, drums, etc. Some of the rangers already played instruments before joining Big Cat Band but some learned on the job. Others that are less musically inclined join the fun by dressing up as animal mascots and dancing. Mascots dress as tigers but also the main prey of tigers and the muntjac.

Twice a month,⁵¹ the Big Cat Band and mascots visit and perform at the Tiger Conservation Network of 35 schools and on market days of the 30 communities within 5km of the MWKL borders. They host exhibitions on MWKL, the importance of tigers and their prey species, the relationship between people, wildlife and the ecosystem, the roles of the rangers and what the rangers learn about MWKL's nature. They pass out brochures on these topics and speak with people in the street.

People love the Big Cat Band, they dance to the music and sing their favourite songs along with the mascots. People perceive the rangers to have a similar role to the police – protecting people and nature. They have developed friendships with the rangers through these musical interactions.

The Tiger Learning Centre

On 15 October 2020, a new Tiger Learning Centre called “*Sor Seua Witthaya*” (meaning “tiger knowledge”) was officially opened for local communities and children studying at the Tiger Conservation Network schools. The centre aims to raise awareness on tigers and wildlife conservation among young students,



Rangers raising awareness of biodiversity around Mae Wong and Khlong Lan National Parks, Thailand © WWF Thailand

emphasizing the importance of conservation efforts, but also developing a strong sense of empathy and compassion toward wild animals.

Here, rangers host conservation exhibitions and lectures in Thai and English for local people and school classes,⁵² and also help local teachers to develop curriculums on conservation for their students.⁵³ They run presentations of camera-trap footage on the television and show images of wildlife signs and prints – powerful tools for connecting with people that were previously unfamiliar with tigers or didn't believe they existed in their forest. Teachers assign students homework and projects on wildlife conservation, tigers and the MWKL ecosystem.

"We are planning to set up another tiger learning center near Mae Wong National Park and other national parks in the near future in order to expand conservation networks," says Dr Rungnapa, WWF-Thailand MWKL project manager. "This center will also be used to organize additional curriculum activities on natural resource conservation, as well as integrate conservation into other subjects in the school curriculum following the government's policy of 'Study Less and Learn More'."

Dr Rungnapa continues, *"The children and communities that have developed a better understanding of their local tigers and wildlife are so proud that their forest is the home to such an endangered species – an apex carnivore at the top of the ecosystem impacting other species below, they are delighted to be a part of the tiger conservation campaign and to work together to conserve them."*

Conclusions

The Big Cat Band is a truly innovative approach to building trust. It helps create trust through a range of processes including education, fun, sharing experiences, seeing rangers outside of their day job, building friendships and much more.

The Tiger Learning Center supports this through providing more formal extra-curricular activities which will help students realize the importance of wildlife in their area, as well as understanding how to protect it. The knowledge and information learned from the activities can then be shared with their families and communities to further the understanding of the conservation of MWKL.



The Big Cat Band entertaining school children © WWF Thailand

Case study 4: Park rangers and community volunteers in Oaxaca, Mexico

This case study has been developed with the aid of Pavel Palacios, Director of Benito Juárez National Park, CONANP and CONANP rangers and community volunteers from the state of Oaxaca.

Lessons learned

- Work with internal community structures rather than developing new structures that have nothing to do with the community. This also helps both state and community rangers (known as “vigilantes comunitarios”) to participate regularly in community decision-making bodies, such as local assemblies

Introduction

Oaxaca is considered the most biodiverse state in Mexico, with ecosystems that are home to more than 12,500 species of flora and fauna. The state of Oaxaca is located in the southeastern region of the Mexican Pacific. It has an area of 95,364km², equivalent to 4.8 per cent of the country’s total land area. Of the 22,350 plant species known in Mexico, 8,400 are found here. It has a total of 1,431 species of terrestrial vertebrates (including birds, mammals, reptiles and amphibians), which is equivalent to 50 per cent of the species present in the country. It is also the tenth most populated state in Mexico (3,801,962 inhabitants) and the state with the largest Indigenous population in the country (14.5 per cent of the country’s Indigenous population).

Oaxaca has only eight Federal Natural Protected Areas, largely because more than 80 per cent of land ownership in the state of Oaxaca is social property/ socially owned. However, the state has 371 Areas Voluntarily Designated for Conservation (ADVC, Áreas Destinadas Voluntariamente a la Conservación), the largest number of protected areas under this designation in the country covering over 1,655km². The ADVCS are areas of great conservation value owned by Indigenous peoples, social organizations

and individuals or legal entities that have voluntarily dedicated them to environmental conservation; they are a formal part of the National System of Natural Protected Areas (Sistema Nacional de Áreas Naturales Protegidas).

The number of park rangers from the National Commission of Natural Protected Areas (CONANP) in the state of Oaxaca is quite low. Their main role is to build the capacity of the local communities in conservation management and in particular work with community rangers (known as “vigilantes comunitarios”), who are members of the local communities accredited by the Federal Attorney General’s Office for Environmental Protection (PROFEPA) to carry out park ranger functions in their territories. Thus, the CONANP rangers help strengthen the communities’ capacities in terms of land management, vigilance and monitoring. Given that most of the ADVCS are developed on land that is, or has been, agricultural, the park rangers participate through the agrarian structures of land ownership, called “Comisariados de bienes comunales y ejidales” and link with the state’s agrarian bodies.

What works in building trust?

The important thing in terms of building trust between the local communities and CONANP rangers has been for the CONANP rangers to work with the internal organizational structures of the communities, and from there strengthen capacity for territory management, vigilance and monitoring. This has been a far more effective approach than inventing internal structures that have nothing to do with the community and employing people who do not know the territory. CONANP rangers thus participate on a daily basis in community decision-making bodies, such as local assemblies. CONANP rangers also help the communities in the process of creating and establishing the ADVCS, and have direct contact with the community by supporting the implementation of specific CONANP projects, which also helps build trust.

Box 1: Background to private conservation in Mexico

This box is drawn from the case study by Juan E. Bezaury-Creel in the IUCN WCPA publication, *The Futures of Privately Protected Areas* by Sue Stolton, Kent H. Redford and Nigel Dudley.⁵⁴

Mexico's current rural land tenure structure is a mixture of the country's pre-Hispanic heritage, its 19th century struggle to incorporate land into a "new" market-based economy, and the results of the land redistribution process that was carried out as a consequence of the early 20th century agrarian revolution. The compulsory breaking up of pre-revolution large land holdings also resulted in the establishment of strict limits on the size that small private property landholdings could attain according to different uses. Limits of between 1 and 0.6km² for agricultural lands, 0.8km² for forestry lands, and the land necessary to sustain 500 head of large livestock or their equivalent for small livestock are established as the maximum amount of land that one landowner can possess as a "small landholding". Up to 25 small landholdings can be combined as a commercial or civil enterprise, as long as the same number of small landholders participate in it. This sets an upper limit on the size an individual PPA can attain. Conservation is still currently not explicitly considered by the Agrarian Law as a valid rural land use as it only recognizes agriculture, livestock and forestry lands.

Currently two types of private and community land conservation efforts are legally recognized by the General Environmental Protection Law which states that Indigenous peoples, public or private social organizations and other interested persons may request the establishment of a governmental protected area upon property they own or upon which they hold encumbrance rights. These areas should be used for preservation, protection or restoration of biodiversity. Even if they actually become permanent governmental protected areas through this process,

management responsibility is retained by the owners. The second type of private and community land conservation indicates that Indigenous peoples, social organizations, public or private legal entities or other interested persons may request Federal certification of property they own as an ADVC. These areas are considered as a special kind of Federal protected area that are established, administered and managed by their owners. ADVC are created for a limited period: a minimum of 15 and a maximum of 99 years. Around half of Mexico's states include this type of private and community protected areas in their local legislation, although not all states have implemented the legislation. Mexico's first ADVC was certified in 2002.

A "management strategy", which is equivalent to a basic management plan, has to be developed by the owner and approved and stipulated by the CONANP within each individual ADVC certificate. Many ADVCs include limited natural resources harvest within their boundaries such as lumber and useful plants. Others include management for sustainable cattle activities, while some protect the large trees that form the forest canopy and intermediate forest strata while allowing for growing coffee plants in the understorey. Others focus on developing nature tourism activities or environmental education and some are dedicated to only conservation or research purposes. ADVCs receive limited incentives due to their official status. The Mexican Payment for Environmental Services Program is investing in conservation of forest cover in priority areas mainly for the enhancement of hydrological resources and provides financial compensation to owners of forest lands in order to maintain conditions that favour environmental services production. CONANP also provides limited support to PPAs through the PET (Temporary Employment) and PROCODES (Conservation for Sustainable Development) programmes.

Achievements

CONANP staff and local communities work together to extend the conservation estate by generating conservation corridors and strengthening agreements for private conservation initiatives, including through ADVCs. Some communities express interest in developing ADVCs and in other areas CONANP rangers seek to work with landowners to include areas because of their ecological importance. Some communities have a commissioner on duty, who appoints flora and fauna committees that implement these actions.

A great achievement is that rangers now have a permanent presence in the territory to reduce illegal activities such as hunting and poaching, as community rangers ensure a greater presence within the territory and help reduce these illegal activities. This has led to a greater appreciation of the territory's natural values by the rural communities and also made them more vigilant of threats. However, enforcement is still an issue. Community guards are not armed and do not have many other powers to stop the threat from hunters. Communities are thus seeking more powers within their legal statutes, such as sanctions, so that



CONANP ranger talking with local community © CONANP

they can issue penalties for poaching. So far, only a few communities have established these systems.

Conclusions

Systems of privately protected areas are likely to be expanded as global targets for protection of nature are increased. By recognizing ADVs as protected areas in legislation, Mexico is advanced in terms of including privately protected areas in its conservation estate. Combining state and local community rangers across a landscape and building trusting relationships can, as shown here, not only secure existing protected areas but help expand the system into new areas of high conservation value.

This case study was developed in Spanish and translated with www.DeepL.com/Translator (free version). The edited translation was checked by an IRF member in the region.

Case study 5: Kaziranga National Park, a work in progress

This case study has been developed with Dr Jimmy Borah and Ms Ivy Farheen Hussain from the NGO Aaranyak based on their work in and around Kaziranga.

Lessons learned

- Parks with violent histories due to devastating poaching and resulting protection policies will need long-term changes in strategies toward local people to rebuild trusting relationships.
- Community outreach and development and increased involvement in park management are a first step in this long process.

Introduction

The valley of the Brahmaputra River covers some 60 per cent of the state of Assam in northeastern India. The forests, grasslands, floodplains and lakes provide ideal habitat for a wide variety of wildlife. Many of these habitats are threatened due to numerous anthropogenic stresses. Conservation habitat is limited to protected areas within the state – one of the most notable being Kaziranga National Park (KNP). Preliminary notification of Kaziranga as a forest reserve was given in 1905, making it one of the oldest protected areas in the world. The park was designated as a natural World Heritage site in 1985.⁵⁵

There are numerous ethnic communities in the neighbouring villages to KNP, including Assamese, Bodo, Rabha, Mising, Deori, Adivasi, Dimasa, Sonowal, Karbi, Tiwa, Hajong, Khasi, Garo and Ahom. This case study does not focus on any particular community but focuses on the overall relationships between rangers and communities, the issues and ongoing solutions.

The Ministry of Environment and Forests and Climate Change of the government of Assam manages Kaziranga at the state level, which is headed by the Field Director of the park, who usually is of the rank of Chief Conservator of Forests (Wildlife) at the divisional level. The Field Director along with the Divisional Forest Officer and the range officers are mainly responsible for the administration and management of KNP. KNP

is funded from the budgets of central government and state government. Most of this funding is used in paying staff wages and salaries and in anti-poaching measures, along with the maintenance of the park, e.g., maintenance of the camps, roads, patrolling trails, etc. There are some 800 personnel, which include game watchers, a forest protection force, temporary staff and 200 forest guards who guard the park around the clock. All are employees of the park authorities and report to the concerned authorities employed by the state government. Range officers are qualified by the Assam Forest Service under the Assam Public Service Commission. Other frontline staff like forest guards and the special protection team are recruited by written exam, interviews and then undergo physical fitness training. Other casual labourers and local NGO representatives in anti-poaching forest camps and mobile patrol teams are hired directly by park management. In spite of the funding from the government, the park faces a shortage of funds. The park receives some support from various regional, national and international NGOs. Every year an Annual Operating Plan is prepared based on the funding available and funding required.

KNP has a strict protection regime which has been successful in conservation (see below) but has had many consequences for local communities. The major impacts on local people include human-wildlife conflict, and the declaration of additional protected areas to accommodate the growing numbers of high-value species has led to subsequent evictions. In 2017, the National Alliance of People's Movements expressed its solidarity with the struggle of the scheduled tribes, forest and park dwellers living near KNP. It challenged the Forest Department of Assam and criticized the silence of the government of India in the name of conservation. This was also highlighted in the BBC documentary "Killing for Conservation", which the Indian government banned bringing even more criticism. Cases of evictions of both illegal settlements and the extension of KNP have been opposed by many local communities in the neighbouring villages. Local leaders continue to express their opposition to the displacements carried out in the name of conservation.

Anthropogenic stresses identified by the park management include unplanned tourism structures, highway traffic (NH 37 runs parallel to the park boundary), illegal fishing and grazing. Natural threats to the habitat and species include seasonal flooding, spread of invasive species, river erosion and siltation and other climate change related factors.

Rhino conservation and poaching pressures

Kaziranga is in the eyes of many a conservation success, particularly for the greater one-horned rhino (*Rhinoceros unicornis*), an IUCN Red Listed species.⁵⁶ Rhinos were once widespread across Asia but, due to hunting and habitat loss, by the early 1900s numbers had dwindled to fewer than 200. The protection of Kaziranga and a few other protected areas in India and Nepal, along with concerted action against poaching, has saved the species from likely extinction. The rhino population in KNP has increased steadily since protection. It doubled between 1990 and 2010 (from 1,164 in 1993 to 2,401 in 2013)⁵⁷ and is at more than 2,600 today, representing nearly 70 per cent of all remaining one-horned rhino in the wild.⁵⁸

Kaziranga is a paradise for animals and a target for poachers. The response to the poaching threat has been the focus of considerable criticism over Human Rights violations,⁵⁹ and it is clear that the situation is complex.⁶⁰ Between 1980 and 2005, the park lost around 567 rhinoceros to poachers which is about 23 animals per year with established links between the sale of rhino horns and the income being used to fund militant and insurgent groups. A single horn smuggled and sold on the international black market (the international rhino horn trade was banned in 1977 by the Convention on International Trade in Endangered Species of Wild Fauna and Flora) can be worth around US\$120,000 per kilo.⁶¹

KNP authorities faced pressures to significantly increase protection efforts. The conservation result has been the decline in poaching losses from 23 rhinos a year in the early 2000s to one a year in 2021. However, the anti-poaching tactics have received international attention and much criticism, with violent conflict remaining an issue in the park. There are also reports of accidental injuries and deaths of local people not associated with poaching.⁶² Rangers were also frequently threatened by violent poachers.

In 1974, Kaziranga became a protected area under the Wildlife (Protection) Act of 1972. Communities

bordering the park were no longer permitted to extract natural resources that were traditionally vital for their livelihoods and some traditionally dwelling communities were evicted from their lands, with inadequate compensation and little consultation, to extend the area protected.⁶³ Furthermore, compensation mechanisms for human-wildlife conflict have been consistently criticized.⁶⁴ Over a century since establishment, the Human Rights approach to conservation is still lacking. The impacts on the local community have been widely reported.⁶⁵

Trying to build trust

This legacy has left the park management with a difficult and long process to try to modify the stressful relationships between enforcement officials and local communities.

A series of joint initiatives between state government, local NGOs, park managers, rangers, local communities and the civil administration are being set up to improve relationships. The development of ecotourism aided by the state government and local NGOs has helped people develop a positive relationship between tourism and conservation. Local people are being employed in all the resorts, hotels and hostels around KNP. Many are registered under the Kaziranga Jeep Safari Association and provide nature drives and safaris for tourists inside the park. Others are employed as nature guides and wildlife experts. Local women are hired for their local ethnic cuisine and sell locally handwoven clothes and handicrafts. Many villages host evening entertainments in the form of performing traditional local dances and songs. They have also found independent livelihoods through ecotourism, such as developing local weaving workshops by organizing themselves into Self Help Groups and providing homestay facilities, etc. The park authorities also hire local people for construction and maintenance of roads and bridges in the park and also as security guards, ticket collectors, etc.

Park managers have been successful in setting up a very cohesive intelligence system throughout the neighbouring villages of the park; informants in every village have made the tracking of offenders much easier. Intelligence and information sharing from civil administration like the police also plays a crucial part in the network of park management. Construction of anti-poaching camps and employment of local people has also bridged the animosity by making the locals a part of conservation efforts. The park also provides free veterinary care and vaccination to the livestock





Kaziranga National Park © Equilibrium Research

of the communities in neighbouring villages and pays compensation to villagers who face damage to crops and even threat to life from wild animals. Formation of crop protection committees, construction of vigilance camps, fencing and eco-development communities have been instrumental to increase communication with villagers and to establish a healthy environment of conservation and coexistence.

The formation of specialized ranger teams, the State Rhino Protection Force, made up of men and women from various ethnicities and local tribal groups has led to both a greater representation and diversity in protection and enforcement. Set up in July 2019, the Rhino Protection Force comprises 74 men and eight women.⁶⁶ Apart from working as permanent forest staff in State Rhino Protection Force, women also work as Range Officers and in numerous temporary positions like Service Providers, hired seasonally by the park management. A slow start for equality but one which follows an increase in women working in associated enforcement, management and administrative positions in protected areas and more broadly across India in the police and army. The government and Forest

Department of Kaziranga National Park has been crucial to building this system.⁶⁷

Results

Changing the focus of park management to a more Human Rights approach is a challenging process for many park authorities and staff, and building trusting relationships between local communities and park staff including rangers in protected areas such as Kaziranga with long histories of discord with local people, rangers and wildlife will be long-term and fraught with challenges. These challenges have yet to be fully resolved in Kaziranga, and tensions with local communities and KNP management remain an underlying problem in the conservation efforts of the government. Nevertheless, many neighbouring villages have embraced these endeavours by the government and are continuing to work together.

Story 1: Trust-building between park rangers in an Amazonian protected area and the local community

This short story is from rangers employed by the state in a government-managed protected area in the Amazon. They did not want to be named as the situation in the area remains volatile. On the borders of the park there are cocaine plantations and laboratories and trafficking. But the story below shows how rangers took a potentially life-threatening situation and turned it around; they risked everything in the trust-building process. They said they do it because it is important for rangers, the area and the community.

The challenge

The main conservation challenge in this protected area is to conserve the water sources from the impacts of gold mining in the area's buffer zone.

The root of the problem is that the process of designation excluded the local community and Indigenous peoples, who suddenly could no longer access the park. This generated resentment from the community. In addition to this inherited problem, relations between the community and the protected area's administration broke down because there was no clear communication. The final straw in the breakdown of trust was when the protected area's administration denounced the local community because some members of the community were participating, out of necessity, in gold mining in the reserve's buffer zone. As a result, an operation was ordered to burn any machinery used to extract gold. This resulted in threats, including death threats, to park rangers and community members. The situation generated a lot of fear and tension between the community and the rangers.

How do you build trust with the communities?

The most important element is constant dialogue with the communities, talking and listening to them. When the administration of the protected area changed a few years ago, the priority was to improve the relationship between the area's personnel and the local community, especially as both were in danger. A joint solution was

sought between the community and rangers to find a way for communities to gain benefits from the area's resources and for the protected area administration to regain trust with the community. The result was a negotiated agreement to allow 15 days of artisanal gold extraction a year. It was mutually agreed that the community would seek additional and alternative economic activities that were not harmful to nature to make up their income. This agreement worked and was developed with full involvement of both parties.

The rangers stress that when danger is involved, it is necessary to negotiate and make difficult decisions – to make trade-offs. They say that what helped is that everything was very clear from the beginning and what was agreed with the community was fulfilled. It has been a gradual process, they still do not have full trust, but the relationship has improved significantly. It has been a long task; it was achieved through visiting people and talking with the people. Now local communities and rangers undertake collaborative activities; sowing plants together or sharing lunch strengthens the relationship.

Conclusions

This is a clear example of a problem that was inherited by the park managers and rangers and had to be solved for the safety of all involved. This was an initiative of the protected area's personnel to improve the situation. The result is positive because no one lost their lives, the water resources are protected and the community stopped the damaging levels of gold extraction but can still generate some economic income and have developed alternative incomes that do not damage their environment. At the same time, the park rangers' confidence in the community improved considerably.

An indicator of this growing trust can be seen in a recent situation when the park rangers' boat was damaged. It was the leader of the Indigenous community himself who helped transport the rangers down the river so that they could do their work. The leader also works with students entering the protected



The Amazon © Equilibrium Research

area to conduct research studies because of his love for the protected area and because he believes in the reserve's objectives. This is the best demonstration of the community's trust in the park ranger team.

Although each situation is unique, this process to build trust can be replicated. The most important element is dialogue and actively listening to the communities. Little by little this is changing the mentality of the community and the park guards themselves.

This case study was developed in Spanish and translated with www.DeepL.com/Translator (free version). The edited translation was checked by an IRF member in the region.

Story 2: Demarcating boundaries, an example of the basics of good relations in the Democratic Republic of Congo

Dalley-Divin Kambale Saa-Sita is a primate researcher based in the Democratic Republic of Congo. He is associated with the University of Kinshasa, President and Co-founder of [Paradis des Primates](#) and Executive Director (Chairperson) of the Congo Biotropical Institute. The latter is an organization focused on the protection and conservation of nature with the involvement of local communities and Indigenous peoples in order to equip them with the necessary tools that can help in the conservation and sustainable management of natural resources. Since 2012, he has been working in conservation activities in the Congo including management of biodiversity conservation projects, ranger training in anti-poaching methods, working with communities to increase understanding of nature conservation and management of ranger and tracker teams for primate monitoring activities. He works with both protected area staff and community rangers. When carrying out projects in community lands, Paradis des Primates recruits rangers from the community, and trains and employs them in implementing conservation activities.

Introduction

In the Democratic Republic of the Congo, in the province of North Kivu, the biggest problem and source of conflicts between rangers and local communities and Indigenous peoples relates to the boundaries between protected areas and the neighbouring fields and forests of local people. The problem is historical, as conflicts between wildlife and people have not been adequately addressed. This is a missed opportunity as owners of community forests and local people living near the protected areas all want to be associated with biodiversity conservation activities; whether related to protected areas or community forests, they all have the same desire.

Some personal reflections

I have worked with local communities and Indigenous peoples in two nature conservation projects. The aim is not to give jobs to all the people, but rather to recruit some local community members to participate in conservation activities in their areas. These people should be the link between the managers of protected areas and populations living around the protected areas. They can report on conservation actions so that the local community knows what is happening. This should increase the level of trust between local people and protected area managers and rangers. Consideration should always be given to promoting community conservation actions and managers should seek to resolve conflicts in a peaceful manner without going to the courts.

Most often conflicts are related to the boundaries between the crop fields of local people and the protected areas. These kinds of conflicts, if not well managed, lead to angry demonstrations by local people which end up creating resistance and/or self-defence movements against rangers who are often attacked and killed while doing their job. The boundaries of even the oldest protected areas should be agreed in a participatory manner, i.e., local people and Indigenous peoples should participate in marking the boundaries of protected areas together with the protected area managers. This should reduce conflicts over boundaries.

In some areas where I have worked, hunting is not prohibited and local communities can hunt and eat wild meat. These communities recognize that some species may not be hunted, including okapi, gorillas and chimpanzees, yet the list of endangered species is very long, and more species should be protected. So, more often than not, park rangers are sent on missions outside the protected areas to meet with local people who have no idea about protecting endangered species,

but who are then told not to hunt specific species. In such situations, local people feel unfairly treated because in their areas hunting may be allowed but the list of protected species is not known. This leads to violence between local people and park rangers. The government and the managers of protected areas should work to maintain a high level of awareness, popularize the law on the protection of wild species by all possible means (radio, television, telephone communication network, groupings of associations, posting of printed material, schools, etc.) so that everyone can be made conservation aware.

This text was translated from French using www.DeepL.com/Translator (free version) and then edited for readability and checked by the author.



Photos (from top to bottom): Community rangers © Paradis des Primates

Story 3: Community rangers in Tost Tosonbumba Nature Reserve, Mongolia

Bayarjargal (Bayara) Agvaantseren is Mongolia Programme Director for Snow Leopard Trust.⁶⁸ She founded one of the first community-based snow leopard conservation programmes in Mongolia, Snow Leopard Enterprises, and the local NGO, the Snow Leopard Conservation Foundation (SLCF), to further help rural women improve their income through handicrafts and to link this to snow leopard conservation. She and her experienced team campaigned successfully to get the Mongolian parliament to declare the Tost Mountains a protected area. Bayara and the SLCF specialists have worked closely with rangers and communities, and here she relates how good relationships have been built.

Introduction

Tost Tosonbumba Nature Reserve (NR) is situated in the Gurvantes soum (county), South Gobi Province, Mongolia. The NR borders the Great Gobi Strictly Protected Area “A” to the southwest and the Gobi Gurvan Saikhan National Park to the north, forming an important corridor for wildlife. Combined, these three protected areas make up millions of hectares of desert landscape.

Tost was declared a State Nature Reserve in April 2016 by the Parliament of Mongolia, and covers an area of 8,965km². Under Mongolia’s Law of Special Protected Areas, the nature reserve’s management falls under the local administration, not the federal government, which presents challenges as well as opportunities. Being a relatively new protected area, extensive capacity building is needed for its management.

The NR is home to 22-24 threatened snow leopards; one of the highest concentrations of the cats not only in Mongolia but also globally. It is also home to about 90 herder households whose semi-nomadic life depends on pastureland. They raise livestock such as goats, sheep, horses and camels and move around the mountains on a seasonal basis for pasture.

Since 2008, the Snow Leopard Conservation Foundation (SLCF), Mongolia, has 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. Through this research initiative, our presence in the Tost Mountains 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 for livestock loss was not the biggest threat to snow leopards, but that mining was a new emerging threat and a greater danger. The entire Tost habitat was being given away under mining licences. Not only did this threaten the whole ecosystem, but mining would alter local livelihoods and result in poaching and mismanagement of natural resources. The local people knew that mining development would damage their pasture, but they expected more income opportunities. However, their hopes were slowly eroded as they saw few benefits materialize. The local people did not know how to safeguard their pastureland, which they depended on and the wildlife they co-existed with. Along with mining, illegal hunting activities also increased in the area.

Rangers in Tost

Realizing this threat, SLCF helped the local communities to safeguard their territory against mining. In 2015, SLCF assisted local herding families to organize into seven conservation communities, each community having a clearly mapped out Community Responsible Area (CRA) in the NR where they would be responsible for conservation and protection. The CRAs are delineated and mapped with the participation of communities, based on traditional resource use and grazing patterns, and are approved by the local government. The Environmental Law of Mongolia (article 3; 2-8) defines conservation communities as “a group of people who is provided by rights to conserve natural resources, sustainably use and to restore natural resources where utilization is managed in a collective, democratic and transparent manner with equal share

of benefits". A CRA is defined as a protected area under local community governance, e.g., an area of land dedicated to the protection, maintenance and sustainable use of natural resources, and managed through local communities with legal entities.⁶⁹

Community rangers were then elected by their fellow herder community members; rangers were chosen because of their known interest in, and knowledge of, nature and their physical ability to conduct the work. All of them are men, probably because of the culture of men usually being responsible for outdoor work away from the home and women taking care of inside household duties and livestock work closer to the family ger (home). At each community meeting, which is held twice a year, the community rangers report on their work to their community members and to the NR administration. The seven community rangers patrol their CRAs on a monthly basis to conduct wildlife monitoring surveys, as well as to check any illegal activities taking place. The average yearly patrolling is about 10,494km by motorcycle, totalling about 1,080 hours of patrol, with 184 days spent in the field.

Building trust

What we have found to work in building trust between community rangers and local people is enabling communities to elect their own rangers in their own way, which then becomes the bridge between the park and conservation organizations. Our long-term experience shows that the presence on the ground through research and conservation programmes helps to create trust and good relationships with local people, especially engaging with local champions, in particular the local community rangers. Communities tend to elect trustworthy individuals to be rangers to protect nature and support patrolling for wildlife in their CRA, which facilitates trust building between rangers and communities. No doubt they informally discuss their patrols and what they encounter with community members on a more regular basis. As a result, local communities have gained confidence and trust in their rangers and willingly helped them. Although the area is now protected and the threat of large-scale mining has been removed, rangers still report cases of illegal small-scale mining, commonly known here as "ninja" mining, as these are usually hand dug mines by just a few people. There is regular interaction with fellow community members, so news of any illegal activity becomes known. Enforcement might just be asking the ninja miners to leave the area and then informing the soum (county) and park authorities.

The rangers have influenced their fellow herders in gaining a better understanding of wildlife ecology in addition to their traditional knowledge on protecting nature and wildlife. Local people generally believe snow leopards should not be disturbed; they carry a mystique. Locals say that anyone foolish enough to hurt or kill a snow leopard will suffer from the "black footprint" curse — meaning a dark spot is imprinted on the soul, giving the victim and his family great misfortune. There is good collaboration taking place within the communities sharing information both of suspicious/illegal activities in the area from other local people and the rangers look out for lost livestock during their patrols and report back to community members who may be looking for their animals. To date, there has not been much illegal wildlife-related activity registered by community members. If any wildlife is killed, predator or prey, the whole community is penalized monetarily through the snow leopard enforcement programme. This affects all participating households and has been a positive deterrent against illegal hunting, especially when it affects the income of the women of the community. A livestock insurance programme has been successful in mitigating any problems related to retaliatory killing of predators.

Results: effective conservation

We realized that as well as involving community rangers in conservation activities we could also bring community rangers into the research and monitoring programme. Initially, we partnered with half of them for ungulate monitoring surveys, but 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 NR.

Since the community rangers have been carrying out regular patrols, we've seen decreased illegal mining activities and increased capacity of local rangers' performance on wildlife monitoring taught by SLCF's lead biologist Purevjav (Puji). At the same time, local communities' environmental awareness has greatly increased thanks to the regular updates by the community rangers. The confidence exhibited by these rangers themselves is evident, given the new standing they have in the community as they've gained new knowledge through training on conservation and modern approaches, such as the use of the SMART system and devices used for data collection and the monitoring of camera traps. It makes them feel useful

to their communities and to the nature reserve itself. Davaa D., one of the community rangers, said, *“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.”*

Partnership principles

SLCF is guided by the “Partners Principles”⁷⁰ on how to engage local communities with conservation. These principles are distilled from the many years of experience of conservation practitioners. They outline eight principles, which include, presence, aptness, respect, negotiation, empathy, responsiveness, transparency and strategic support. The story of these rangers has been included in a recently published paper in the journal *Sustainability* as an example of good practices in terms of engaging local people in conservation and conflict management.⁷¹

Conclusion

Appointing local herders as community rangers in their CRAs has been vital to mainstream the concept of collaborative management and engaging local people in conservation. The approach is replicable throughout the CRAs in Mongolia to help local people to protect their land and collaborate with national parks. Bayara’s key lessons learned are:

- The presence of conservation organizations at the site carrying out research and conservation programmes helps build trust and interest in conservation, and from this local champions for conservation.
- These local champions are appointed community rangers; it is important to let communities develop their own appointment processes.
- Community rangers can be trained to carry out research and monitoring; it may take a little longer to build capacity but it will be worth it in the end.
- While implementing the approach, we have learned that more time is required to train local people in wildlife monitoring as well as obtaining their self-reliance, but it is doable and must be undertaken as a long-term approach.

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Story 4: Costa Rica where conservation is everyone's responsibility

This story is largely based on an interview with Rebeca Quirós, president of the Association of Naturalist Guides of Drake Bay (AGUINADRA) in Costa Rica, on the El Colectivo 506 website, a bilingual new site focusing on Costa Rican rural tourism.⁷²

Introduction

Covering an area of around 1,800km² on the southern Pacific coast of Costa Rica, the Osa Peninsula's location and geological history make it a unique biodiversity hotspot. Protected by two government-managed protected areas: Corcovado National Park⁷³ and Osa Conservation Area,⁷⁴ the area is reputed to be home to 2.5 per cent of the world's biodiversity. This concentration of nature has led to a thriving ecotourism industry and a large part of the peninsula's inhabitants depends on tourist activity. The Covid-19 pandemic has hit the area hard. With restrictions in place and tourism in decline, environmental crime has increased. Most ministries have suffered budget cuts and the Ministry of Environment and Energy (MINAE) is no exception.⁷⁵

Natural Resources Surveillance Committees

In early 2021, at the height of the Covid-19 pandemic, Rebeca Quirós, local resident and president of the Association of Naturalist Guides of Drake Bay (AGUINADRA) in Costa Rica, reported planned illegal hunting trips in the Osa Conservation Area (ACOSA). Frustrated by the slow response of the protected area management in dealing with the problem, she came up with an effective solution. After a frustrating lack of attention from local and regional protected areas managers, she contacted the Environment Minister and told him, *"We have a problem, and I offer you a possible solution: the Natural Resources Surveillance Committees, COVIRENAS."*

Rebeca picks up the story. COVIRENAS was a volunteer nature guard project that we had tried to start in 2018, and it was cast aside within ACOSA. It never went anywhere. I explained the concept to the minister,

and everything moved very fast. They brought us the trainings, they mobilized us in their cars. We managed to form the groups. As of today, there are already six committees and more than 70 voluntary certified inspectors in Alto Laguna, Pejeverro, Puerto Jiménez, Rancho Quemado, the Térraba-Sierpe Wetland, and Drake Bay, where I live.

What have we achieved? Where I work, in Drake Bay, we have encouraged people to report. Before, people were not encouraged. Now we are receiving audios and private messages all the time. They tell us, "Look, so-and-so is in this area. They are going to hunt; this or that is happening." Before, that information didn't reach us. People are now also using official reporting channels.⁷⁶ Before they did not know how to report, but we have run some campaigns on it, and we have seen a change. Also, community members recognize and respect the COVIRENAS guards. Hoteliers and other property owners are allowing us to patrol their properties because they know that it is free surveillance. They have even offered us room and board. Several people and organizations have donated money, and with that we have bought equipment, t-shirts, insurance, food and transportation. All the positive comments we've received on social media have been a huge motivator.

I feel that the greatest achievement is the change in community mentality. Now, part of the local population feels that the responsibility does not rest solely with the MINAE. I know they are paid to do that job, and they have not done it well. But natural resources provide food and work for all of us, so it is everyone's responsibility to take care of them. Our impact has been that people in the communities are waking up. They are understanding that MINAE cannot do it alone.

Obviously, we need financial resources, but we are going step by step. It has been a very enriching experience for me and, I think, for all my colleagues. We do it with a lot of motivation. We love to go to the mountains, get wet and dirty, and get bitten by mosquitoes. Also, most of us COVIRENAS, at least in Drake, are women. I

Box 2: COVIRENA: Natural Resources Surveillance Committees

Qualifications and status of the COVIRENAS are set out on the [website of the protected area agency \(SINAC\)](#) in Costa Rica. A translation is given below for reference.

COVIRENAS are groups of people from civil society who have organized themselves to assist in the surveillance and protection of natural resources. These committees are registered with the Ministry of Environment and Energy (Ministerio de Ambiente y Energía) (MINAE) Environmental Controller. COVIRENAS are appointed and accredited voluntary environmental inspectors, in accordance with the requirements, powers and responsibilities contained in Executive Decree No. 39833-MINAE, published on 16 September 2016, and based on Articles 15 of the Wildlife Conservation Law No. 7317, of 30 October 1992, and 37 of the Forestry Law No. 7575 of 13 February 1996.

Requirements for registration of COVIRENAS committees and appointment of voluntary inspectors:

- You must be a citizen of legal age (national or resident foreigner).
- Provide proof of not having a criminal record (criminal record).
- Recent passport size photograph.
- Identity document (identity card or resident card).
- Proof of having received and passed an induction course as voluntary environmental inspector. This training is coordinated by COVIRENAS committees registered with the regional officials of SINAC or the Department of Prevention, Protection and Control of the Executive Secretariat of SINAC.
- Proof of insurance policy payment.

love seeing more people join us every day, whether as volunteers or because they want to be COVIRENAS, too.

Conclusion

Involving communities increases the understanding of conservation challenges. Now local people are taking part in park surveillance, they understand that the park management authority cannot take full responsibility for the area's protection. Local communities feel that conservation is everyone's responsibility if we want to continue relying on nature, which in Osa brings in tourists and generates local income

Story 5: Every park is different, every local community unique: experiences from Colombia

Julia Miranda Londoño was the director of the Parques Nacionales Naturales de Colombia (Colombian National Park Authority) for 17 years. Here she reflects on some of the key lessons from across the national protected area network.⁷⁷

Introduction

In 2020, the Parques Nacionales Naturales de Colombia turned 60 years old and I'm proud to say that in the 17 years that I was in charge, we declared 10 new protected natural parks and three new management districts. The country's total protected area also doubled. In addition, we managed to increase the budget to conserve these areas by 345 per cent. We also made great progress in agreements with local communities. In 17 years, we have celebrated around 40 agreements with Indigenous authorities and farming communities.

The geography and its position on the equator allow Colombia to have an extraordinary and diverse number of ecosystems, landscapes and oceans. The altitude also influences all of this: from the depths of the oceans to the perpetual snow in the glaciers, Colombia has many altitude-driven ecological variations. Flying over the Amazon for the first time was shocking to me because of its size, but walking through it felt overwhelming, intimidating. As director of the Parks Authority, I have had the privilege of having direct contact with the inhabitants of these territories and seeing how their traditions and culture have contributed to conserving the Amazon rainforest until today. This region is unique on the planet and is fundamental for our future.

Protected area experiences

In my experience, the involvement of Indigenous and local communities in conservation activities in the parks in Colombia is part of the work for everyone. There are so many examples, I mention just a few cases below.

Galeras Sanctuary of Fauna and Flora: Declared in 1985 in Nariño in the south of Colombia, the sanctuary had a complicated situation with the local communities. Located at an altitude of 3000 metres above sea level, the main ecosystems of the Sanctuary are cloud forest and paramo. A major feature is the Galeras Volcano, one of the most active in Colombia. Local communities were very poor, but they were the owners of their land. They used the area to hunt, take wood, graze domestic animals, make fires; but these activities were not sustainable and were causing significant damage to the park. Thanks to a project financed by FAO, the rangers started a programme to explain to the 950 families involved about the environmental services of the park, and one by one taught them how to use their land to become self-sufficient in every aspect (even producing energy). The results were enough food to feed their families plus surplus to sell. They became a community and they exchanged their products. As a result, their quality of life improved significantly. 260 private reserves were created and inscribed. They also have tourism in their homes and teach other communities what they do in their tiny but productive lands. They are the best allies to protect the park and recognize the work of the rangers and the importance of the park.

Sierra Nevada de Santa Marta National Park: Created in 1964, these emblematic mountains are in the Caribbean region of Colombia and are the ancestral territory of four Indigenous groups: Koguis, Wiwas, Arhuacos and Kankuamos. They are the owners of their land and political authorities. But they also live in a national park. They recognize Parques Nacionales de Colombia's environmental authority and work together with the rangers to protect this territory that has many

threats. Six years ago, for the first time, they wrote the Management Plan together with the park rangers for La Sierra and Tayrona, two parks which are part of the same ecosystem in their territory. This helped formalize the explicit and active co-management of the two parks.

Cahuinari National Park: Created in 1986 in the Amazon region of Colombia, is the territory of Indigenous groups Bora, Miraña, Andoque, Nonuya-Muinane and Huitoto. Some park rangers belong to the community and work with the institution to protect the park and protect the ancestral culture of their people. They work together to maintain their traditions and take care of the fauna and flora of the park. They decide together, for instance, how many Dantas (tapir) they can eat each year, and how many turtles and their eggs. They protect the sacred places in the zoning of the Management Plan, and develop strategies to teach the uses of nature and their culture to the young people. The role of women is

fundamental to teaching about food and medicine. The park is very well preserved thanks to the interaction of the communities with the park rangers.

Conclusions

Julia's primary good practices are:

- There is no single right approach, you need to develop different management strategies depending on the area, the local communities and/or Indigenous people involved.
- Environmental education, coupled with active extension programmes, are vital, particularly in areas where poverty is a major issue.
- Effective joint management planning reinforces co-management arrangements.
- Actively maintain local traditions through sustainable subsistence resource use established by the local community.



Julia Miranda (top left) with park staff © Equilibrium Research

Acronyms and Abbreviations

ACOSA	Osa Conservation Area, Costa Rica
ADVC	Areas Voluntarily Designated for Conservation, Mexico (Áreas Destinadas Voluntariamente a la Conservación)
AGUINADRA	Association of Naturalist Guides of Drake Bay
COL	Ya'axché's Community Outreach and Livelihoods programme, Belize
CONANP	National Commission of Natural Protected Areas, Mexico
COVIRENAS	Natural Resources Surveillance Committees, Costa Rica
CRA	Community Responsible Area, Mongolia
DNP	Department of National Parks, Wildlife and Plant Conservation, Thailand
FAO	United Nation's Food and Agriculture Organization
HWC	Human-wildlife conflict
IIED	International Institute for Environment and Development
IUCN	International Union for Conservation of Nature
KNP	Kaziranga National Park
LTES	Long-Term Ecological Study
MGL	Maya Golden Landscape, Belize
MINAE	Costa Rica's Ministry of Environment and Energy
MOU	Memorandum of Understanding
MWKL	Mae Wong and Khlong Lan National Parks, Thailand
NGO	Non-Government Organization
NR	Nature Reserve
PET	Mexico's national temporary employment programme
PPA	Privately protected area
PROCODES	Mexico's conservation for sustainable development programme
PROFEPA	Mexico's Federal Attorney General's Office for Environmental Protection
QENP	Queen Elizabeth National Park, Uganda
SAPA	Social Assessment for Protected and Conserved Areas
SINAC	Costa Rica's protected area agency
SLCF	Snow Leopard Conservation Foundation, Mongolia
SMART	Spatial Monitoring and Reporting Tool
TFCG	Indigenous Mayan Trio Farmers Cacao Growers, Belize
UOBDU	Ugandan Batwa organization
URSA	Universal Ranger Support Alliance
UWA	Uganda Wildlife Authority
WCPA	World Commission on Protected Areas
WWF	World Wide Fund for Nature

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