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Building healthy relationships between rangers and communities in and around protected areas

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Abstract

Positive ranger–community relationships are vitally important to effective conservation in and around protected areas. In this paper we take a practical approach to identifying and examining the key issues and practices that affect the relationship, both where it is strained and where it is working well, and provide recommendations for action. The issues and the solutions are multi-layered, with embedded complexity based on history, cultural identity, and rights to access natural resources. Solutions require a deep understanding of and respect for the needs and aspirations of the community and its capacity to partner in conservation efforts. Similarly, rangers require effective support and training that enables alternative interactions with communities and greater professionalism. In general, the improvements will require building trustworthy relationships grounded in understanding and supported by strong collaborative management systems and governance. Essentially this means strengthening the social capital of conservation. Our problem analysis revealed that the internal and external factors affecting relationships can usefully be divided into six themes: law, policy, and safeguarding human rights; organizational systems and strategies; options for ranger–community interactions on-site; model systems and the role of communities in conservation and stewardship; and the role of both external supporters and disruptors. Our recommendations for action target conservation bodies at four levels—international, regional, national, and local. They are further clustered around four types of action grouped into: critical responses and crisis planning; establishing general guiding principles, systems, and management and governance; promoting the best models and practices; and strengthening of professional knowledge networks and support.

Introduction

The relationship between rangers and the communities they interact with in and around protected areas is often emotionally charged, both negatively and positively, although the latter is less often reported. Only recently we heard reports of the killing of 12 rangers and five civilians in the Democratic Republic of the Congo (DRC) at Virunga National Park, a UNESCO World Heritage Site, on 24 April 2020 (Sehmi 2020). In this case, civilians were being defended by rangers whose

regular duties are to protect wildlife, including the iconic mountain gorillas that face other mounting threats such as COVID-19, local insurgence, and poaching. In these areas, rangers often use strong enforcement methods to defend wildlife, but this military image can overshadow the positive story of rangers working as wildlife guardians (Courtois 2017) together with the local community or as community members themselves.

Elsewhere, there was elation in 2020 as the Australian Government nearly doubled its investment in the often unseen work of Indigenous rangers, who manage nearly 40% of Australia's national reserve system through Indigenous Protected Areas (IPAs; Bauman and Smyth 2007; SVA 2016). In these areas, rangers are viewed as guardians, linking cultural knowledge to local resource management on land and at sea through "Healthy Country Plans" (Miller and Woodside 2020).

Similarly, in Canada there was excitement as seven Indigenous nations and other groups announced a ground-breaking strategy for restoring caribou across 1.5 million square kilometers of Quebec, Labrador, and Nunavik, exercising their responsibilities for the future of the species (Courtois 2017). The local communities serve as both the custodians and "rangers-guardians," thus playing an appropriate and valuable role in conservation.

Indigenous community member, Brazil | MARIZILDA CRUPPE / WWF-UK

Rangers and communities vary in the kinds of places they live and work and their expectations of each other. Some rangers work in remote communities managing resources that migrate across land, in freshwater, or at sea, while others work in urban parklands, or on the fringe of urban areas, providing visitor services for millions of tourists visiting accessible natural and cultural assets. Some communities are homogeneous in culture or need and others are highly heterogeneous, multicultural mixes with varied demands. Though the issues or factors that influence ranger–community relationships may differ among sites, countries, and regions, some general principles are worth pursuing. This was one of the key issues targeted in the Chitwan Declaration, in which the participants at the 2019 World Ranger Congress called for strong institutional frameworks and appropriate training that facilitates collaboration, dialogue, and building trust between rangers and communities, especially Indigenous peoples and local communities (IPLCs).

The social dimension of conservation

Our current review of the issues affecting ranger–community relationships sits within the framework of the broader human dimension of conservation. This human dimension has three key attributes that we explore here: the personal elements (values, attitudes, motivations, history) of each party, social elements (norms, culture, behavior, shared history or varied histories) of each party, and institutional elements (governance, management systems, policies) that support or compromise workable relationships.

In some situations, for both rangers and IPLCs there may have been a history of disruption and discord in the personal, social and institutional elements. Rangers and IPLCs may be expected to work together while concerned about issues such as perceived risks and transaction costs, contestable rights, or who has the power in the decision-making process. It is possible they may have very different perceptions of the value of the protected area system (or local protected area) and its potential benefits or constraints (Stolton and

Dudley 2010; Cooney et al. 2018). It is possible that the rangers are not encouraged to form healthy working relationships with shared stewardship of the protected area, but rather are primarily managed as enforcers using paramilitary tactics (Massé et al. 2017).

The issues raised in this paper demonstrate that from several angles, institutional elements (i.e., governance, management systems, policies) provide the greatest opportunity to encourage the building of collaborative relationships and trust. The systems are most likely to do this if they are competent, reliable, show integrity, and provide for strong communication. On that basis, the parties can begin to build understanding of each other and their respective needs. There are many steps needed before overcoming any past grievances or building a relationship that delivers broad conservation outcomes, or helps in the management of specific issues such as illegal trade (Moreto et al. 2016; Cooney et al. 2018).

As mentioned earlier, the scope and attributes of rangers and communities vary from place to place and over time and they may overlap to varying degrees. Figure 1 captures this in a conceptual manner. In some cases there is complete overlap between rangers and communities, as with the "ranger-guardians" of caribou in parts of Canada (Courtois 2017) or the Indigenous rangers working in designated IPAs of Australia (Bauman and Smyth 2007).

The breadth of the communities considered in ranger–community relationships may need to be expanded to include other users of protected areas, such as tourism businesses, private conservation operators, or transients living in the local community but not historically connected to it. These roles may be fluid with community members moving in and out of these roles over time and each having a role to play in stewardship of the natural resources.

A review of the literature on ranger–community interactions was conducted by Wilson-Holt and Roe to support this white paper (Wilson-Holt and Roe 2020). They point out that it is hard to go past the long list of grievances and accusations

Figure 1. Schematic representation of the diversity and fluid roles of rangers and communities. They may overlap or be separate to varying degrees. Rangers may be members of these local communities (Indigenous or non-Indigenous) with deep-rooted knowledge and local responsibilities beyond their ranger work. They may be recruited because of their ties with these communities, which may include only IPLCs or other groups with wider connections to the protected area.
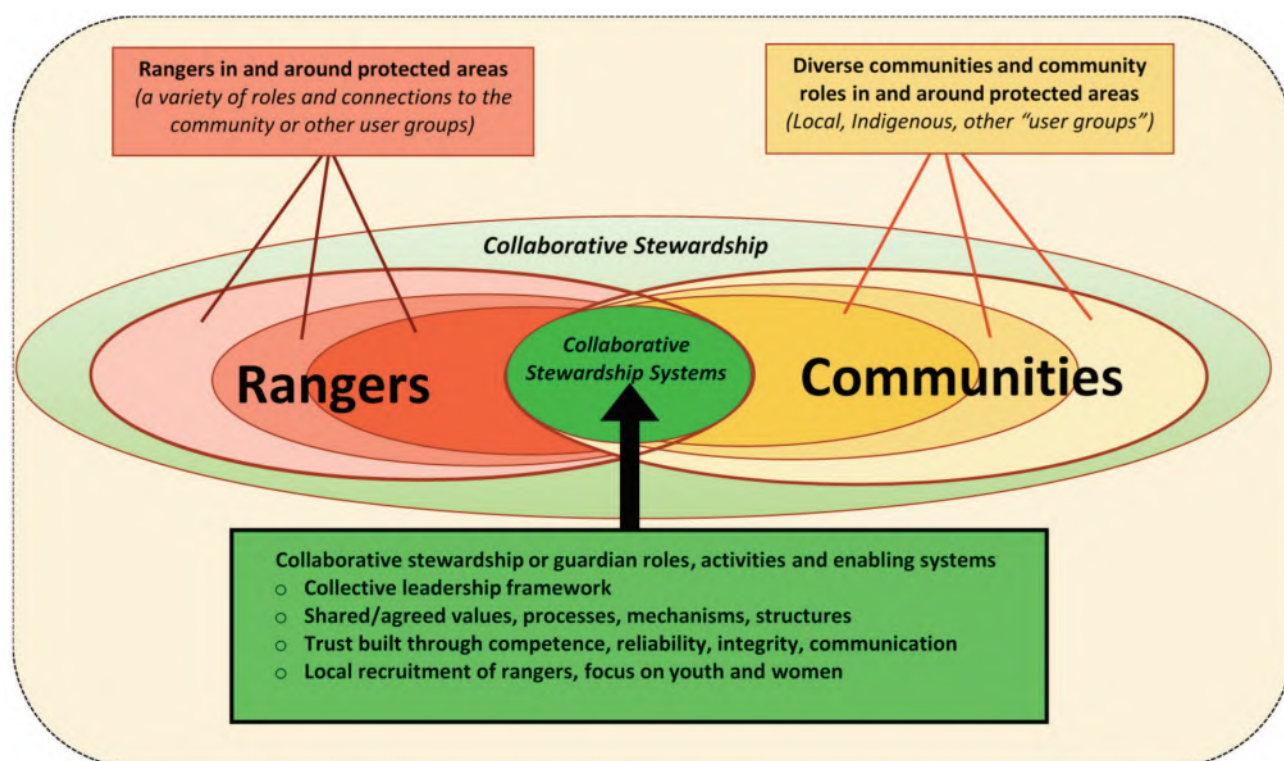
of human rights violations against rangers that have been reported internationally in the past two years and which now occupy much of the skeptical public discussion about how committed non-governmental organizations (NGOs) are to protecting human rights while delivering conservation outcomes. Allegations have been made of abuses in the context of conservation work and at the hands of paramilitary rangers in Cameroon, DRC, Central African Republic, Republic of Congo, Nepal, and Thailand (Corry 2017; Cascais 2019; Clifton 2019; Crezee 2019; OHCHR 2019). There have even been reports of "shoot to kill" orders.

In response to the recent crises, there have been high-level reviews of project management, ranger roles and wrong-doings, and responsibilities of all organizations involved (Löning-HTRB 2019). Subsequently, the lead organizations and donors involved have reinforced their early due diligence processes, improved safeguards in and governance of projects, and made funding conditional on better ranger performance on the ground. For example, WWF has prepared a Comprehensive Environmental and Social Safeguards Framework (WWF 2019). The Forest Peoples Programme (2019) prepared a summary of issues and solutions to redress some social injuries and protect rights. NGOs have heard the message that they are ultimately responsible for the conservation value chain that they fund, and that integrated approaches to conservation must be pursued.

However, it is governments that are directly responsible for the laws concerning the protection of nature and rights of people, and it is government policies that shape the way this is done on the ground. These policies are executed through protected area plans and programs and affect all kinds of protected areas (public, private, or community-based), and it is in these areas (and their surroundings) where the "rubber hits the road." Protected area management can create an enabling environment, be inclusive, provide training, and ensure rangers and communities receive support. The government and each

protected area are responsible for following best practice principles, ensuring appropriate governance, and delivering practical actions (Disko and Tugendhat 2014).

Problem analysis and targets for change

To prepare this white paper, we undertook an objective problem analysis relying on the input of international experts and practitioners in our working group. Using content analysis, we identified 230 issues and mapped them according to similarities and causal relationships. At the highest level, these issues separate into two distinct groups—internal factors (rules, systems, and people) and external factors (enablers and disruptors).

The internal factors divide into three groups—laws and policies, organizational systems and strategies (including effective accountability systems), and rangers and communities. The next level of the analysis itemizes areas within each that require constructive inputs, such as development of laws that safeguard human rights, or policies that enable more inclusive protected area management, a better-trained ranger workforce, and better joint management systems. As expected, these are not perfect groupings and some issues could be cross-linked but for simplicity they are grouped by the primary intent of the source as we understood it.

The external factors include models and best practices (lessons from elsewhere), external influencers and supporters (international agencies and donors, NGOs, professional associations and networks, other investors) and disrupting forces and crises (climate change, pandemics, economic recession, and natural disasters such as fire, flood, earthquakes). This group of issues highlights the opportunities and risks that affect the broader system and the need for preparedness.

We identified a suite of targets for change and a proposal for a vision to guide that change (Table 1). There were also a number of issues that emerged as common and important to be addressed more specifically:

PROPOSED VISION
"A constructive and resilient relationship between rangers, communities and managers of protected areas (and other conservation areas) that exemplifies the best local stewardship model for conservation and engenders confidence and commitment from communities, governments, visitors and businesses."

TARGETS FOR CHANGE EMERGING FROM THE PROBLEM ANALYSIS
How rangers and communities interact
- Aim to build trust with trustworthy systems and procedural fairness
- Understand who constitutes the community and accommodate fluidity of roles
- Fully address cultural connections, Indigenous knowledge, special rights and needs

Organizational systems and frameworks
- Law and policy—ensure international human rights obligations, sociocultural safeguards, and procedural fairness, all balanced for socioenvironmental goals
- International human rights standards implemented in institutional frameworks through policies, standard operating procedures, codes of ethics and conduct—ensure training and accountability
- Management and governance systems—robust, transparent, fair (hearing all voices), accountable, sanctions for non-compliance
- Tools to self-audit relationships and build capacity for better relationships
- Training and capacity building for both rangers and communities
- Conservation planning—inclusive, integrated approach to conservation and development (ICD)
- Joint stewardship models—use to shape supporting organization systems and frameworks for protected areas and conservation areas in all settings (urban, rural, remote)
- Conflict and crisis response incorporated in all protected area and conservation area plans—anticipate, plan, ensure support systems

Supporting systems and change agents
- Leadership—support emerging leaders, establish collective leadership systems
- Engage youth and more women as change agents—educate, train, employ, and adapt ranger employment programs
- Knowledge networks and communities of practice and learning—exchange management ideas and practices, Indigenous knowledge
- Innovative investment schemes and social enterprise—improve self-reliance, business systems, accountability, and return on investment
- Value proposition for community stewardship and ranger contributions to conservation—share stories and celebrate
- International NGOs and agencies (e.g., United Nations [UN] and Red Cross) to share standards and safeguards (possible leadership charter), use collective influence to improve systems used by some governments and protected areas
- Mentor change, drive integrated conservation and development programs (ICDPs), ensure accountability, share best models and guidelines, share knowledge

- Perceptions of, and by, each of the players;
- Clarifying who constitutes the community and why that is important;
- Indigenous stewardship and community-based conservation as they challenge the simplistic concept of rangers and communities as separate and often opposing players;
- Collaboration, leadership and the importance of building trust in relationships and as part of the social capital for local communities; and
- Crises responses—for example, the impact of COVID-19 as an example of externalities that can fully disrupt the entire conservation equation.

Key issue #1: Perceptions are only part of the picture

There is considerable reporting on community perceptions of rangers (Bennett and Dearden 2013), rangers' perception of communities (Moreto 2019; Anagnostou et al. 2020), rangers' perception of their jobs (Moreto 2015; Ogunjinmi et al. 2008), and community perceptions about protected areas (Infield and Namara 2001; Mutanga et al. 2017). In some cases, this has provided great insights into the role and performance of rangers and led to some useful management shifts (Mutanga et al. 2015, 2016; Moreto et al. 2017).

Allendorf (2020) reviewed local residents' attitudes towards protected areas as reported by 83 studies covering 132 areas in Africa, Latin America, Asia, and Europe. The author found attitudes to be largely positive, but noted that they are only one variable in a long chain of factors affecting people's behavior towards protected areas or conservation in general. The benefits need to outweigh the costs and any restrictions need to be understood in the context of a greater or common good.

Awareness of perceptions that can help improve local management or understand localized interactions with communities is valuable, but generalization can be dangerous and of limited value. Perceptions are not necessarily the same as attitudes nor an expression of values or willingness to participate in conservation activities (Infield and Namara 2001; Nilsson et al. 2015; Moreto et al. 2017).

Key issue #2: Who constitutes the community?

In this study, we faced the challenge of addressing relationships that span all types of protected areas and conservation areas, from large, remote IPAs in Australia with one major culture uniting the community, to national parks near urban centers with complex and multicultural communities (e.g., Sydney, New York, London), to national parks in Asia with many local ethnic groups living in and around them. Some parks are inclusive of settlements and their cultural and historical assets are featured (e.g., in the United Kingdom) while others are exclusive so that all human activity is through controlled access. The range of community interactions with conservation areas is very large when considering that this discussion should address relationships that apply across land, sea, and freshwater systems. Clearly, we cannot do them all justice in one study except to recognize the range of possibilities and focus on principles and adaptable solutions.

However, at a very general level, communities can be defined by some common attributes: place, values, history, interactions, and cultural bonds. The nature and intensity of these bonds forms the social capital of that community—its social wealth and well-being—and is the glue that facilitates cooperation, exchange, and innovation and creates norms and expectations of others (Bourdieu 1986; Bowles and Gintis 2002). This means that rangers and managers of protected areas need to fully understand the sociocultural context of the local community in order to form strong working relationships.

Developing a meaningful understanding of sociocultural and local contexts requires navigating complex and interconnected components of social–ecological systems. Biocultural approaches that "explicitly start with and build on place-based cultural perspective—encompassing values, knowledges, and needs—and recognize feedbacks between ecological state and human wellbeing" (Sterling et al. 2017a: 1800) can be a meaningful tool to achieve these goals, and are especially valuable when used in combination with interdisciplinary methods and processes that

acknowledge multiple sources of evidence (Sterling et al. 2017a). Such an approach is also likely to support resource managers, decisionmakers, and policymakers in developing management strategies and actions that are in alignment with local culture and values (Sterling et al. 2017b).

In Figure 2, we try to illustrate the breadth of the communities that rangers need to consider in their daily work and with whom they need to develop appropriate relationships. From the rangers' perspective, IPLCs are a key part of the picture and hold a special role in planning and management of the protected area and its governance. Rangers have professional communities to serve and engage with. They may interact with visitors, businesses and communities beyond the protected area system, including transboundary communities. They need to interact with their government or private employers, NGOs, community service organizations (CSOs), and protected area management and other government agencies.

Key issue #3: Indigenous and local stewardship and the role of rangers

Local conservation efforts, including Indigenous stewardship models, have been shown to be both very effective in terms of social and environmental outcomes and particularly efficient in leveraging local interests, knowledge, and resources (Altman et al. 2007; Ross et al. 2009; IUCN 2010; Cooney et al. 2018). The potential contributions to conservation by IPLC management of natural resources in general and protected areas in particular might exceed those from other governance models, and there is evidence that formal protected areas will not be sufficient to stem the current threats to biodiversity (Corrigan et al. 2018). All approaches are needed (Borrini-Feyerabend et al. 2004).

The governance and leadership that is applied to these models is critical to their effectiveness and the quality of the co-benefits they aim to produce (Borrini-Feyerabend et al. 2013), whether

Figure 2. Rangers interact with or affect many communities of interest, including their own professional community of practice. To address ranger–community relations requires mapping all communities of interest and having systems for communication and clear understanding of mutual responsibilities. (Acronyms used: NGO—non-governmental organization; CSO—community service organization)
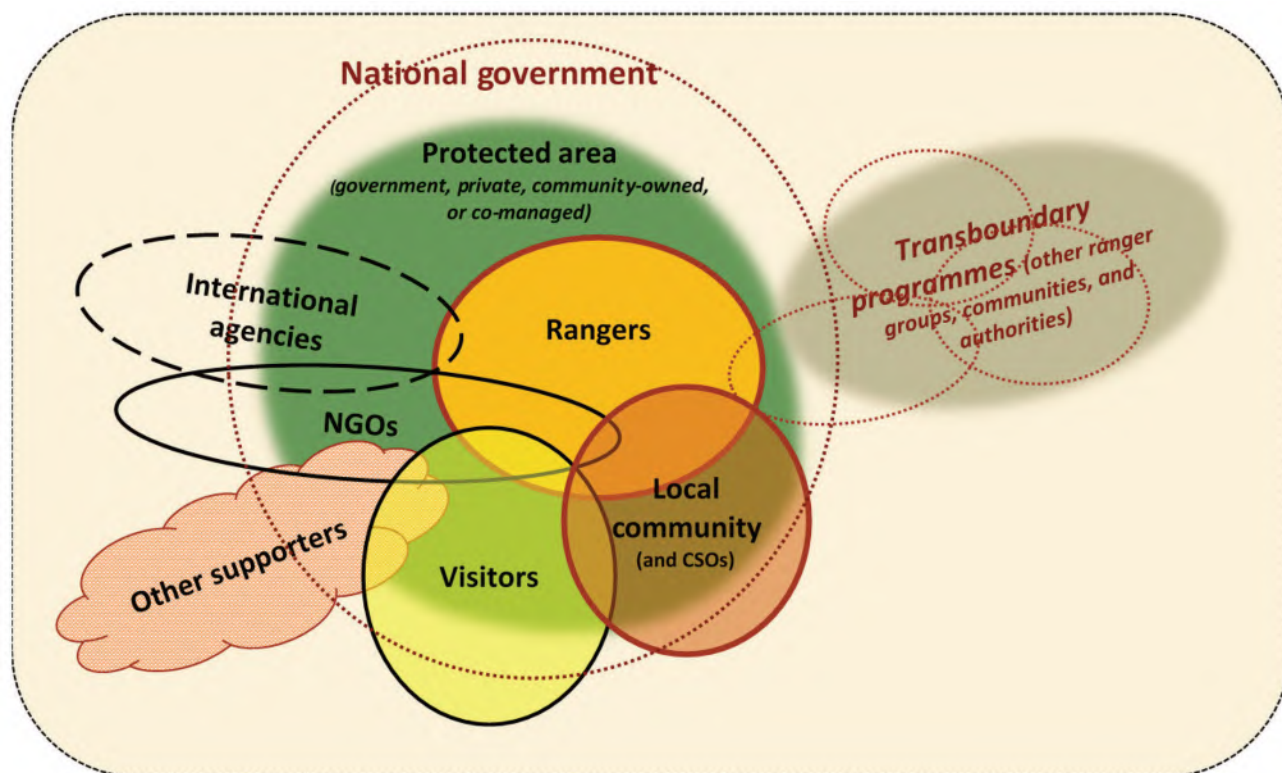
Kenya Community–ranger interaction, Kenya | AMI VITALE / WWF UK

stewardship is conducted in one place (i.e., within a state-run protected area or other conservation area) or applied to a mobile or migratory species across a variety of land and water tenures. There are many successful examples of this, such as with salmon in western Canada (FOC-Pac 2019) and migratory birds in Australia (Bauman and Smyth 2007), demonstrating the ways in which Indigenous and local knowledge can be applied to management of natural resources and where Indigenous and local rangers are effectively engaged to conduct ecological monitoring and restoration within a bigger conservation program (Sheil et al. 2015).

Regardless of the model that is being applied to the conservation project, it is critical to recognize the rights of IPLCs and the specifics of their community land ownership systems (RRI 2015), and for locals to conduct much of the day-to-day management. IPLCs can be involved in management of conservation areas and resources that are state-managed, community-owned,

privately owned, or some combination of these. Garnett et al. (2018) reviewed the conditions that maximize the contribution of biodiversity conservation by IPLCs and concluded that, if well supported, community-based conservation can out-perform state-run protected area management.

It is interesting that there is a growing role of rangers in each of the governance models—whether state-run, community-managed, privately owned, or some combination of these (see the variety of approaches to African conservancies in Athanas 2019). The baseline skills of rangers and their professionalism will need to grow, as will the "diplomacy" aspects of their work in many jurisdictions. Rangers will need to be skilled in understanding and engaging with Indigenous and local knowledge and understanding and working with the rights of local stewards. Rangers will play a variety of roles—ranging from educator to enforcer to researcher to visitor manager—and will need to move skillfully within or between communities that manage conservation assets. Added to this,

rangers will need to be skilled in working with broader community service groups, as discussed earlier (Sterling et al. 2017c; see also Figure 2).

For this paper, we reviewed a number of models of best practice for IPLC engagement in conservation, and highlighted work in Canada, Australia, Kenya, and Latin America, and across boreal forests. It is clear from those models that full community engagement brings with it meaningful long-term employment, cultural renewal, knowledge sharing, opportunities for youth and women, and an economic boost for communities that has a regional multiplier effect (Figure 3; Ross et al. 2009; Epstein et al. 2014; Courtois 2020). In Kenya, work by the Maasai Wilderness Conservation Trust also demonstrates the value of integrating with established schemes such as REDD+ (the UN program for reducing carbon emissions from deforestation and forest degradation) for financial innovation, and demonstrates how a community can take an entrepreneurial approach to forest management, grassland productivity, and

environmental services such as water supply for urban populations (see http://maasaiwilderness.org).

Key issue #4: Mechanisms to ensure rangers can protect human rights including IPLC rights

The task of promoting and protecting human rights is primarily a national one. It is the responsibility of each state to ensure institutional frameworks and processes (e.g., legislation, judiciary, policies, management, monitoring, and reporting) adequately respect human rights to the highest international standards and norms (Olhagen, in press).

It is essential that rangers working on the ground, either as law enforcement officers or working with communities (directly or indirectly) in some other capacity, observe both the rights of the individuals they encounter, including visitors or any others operating within their area of management, and the collective rights of the community. To do this, all rangers need policies and procedures that clarify

Figure 3. Ranger–community relationships as represented in an ideal stewardship model that works in and around protected areas. Such model systems should be reliable and competent, show integrity, and be well communicated. In addition, they should be sustainable (regarding environment, culture, community, and finance), responsive, resilient in the face of disruption, and inclusive (preferably building on mutual respect and shared values and goals).
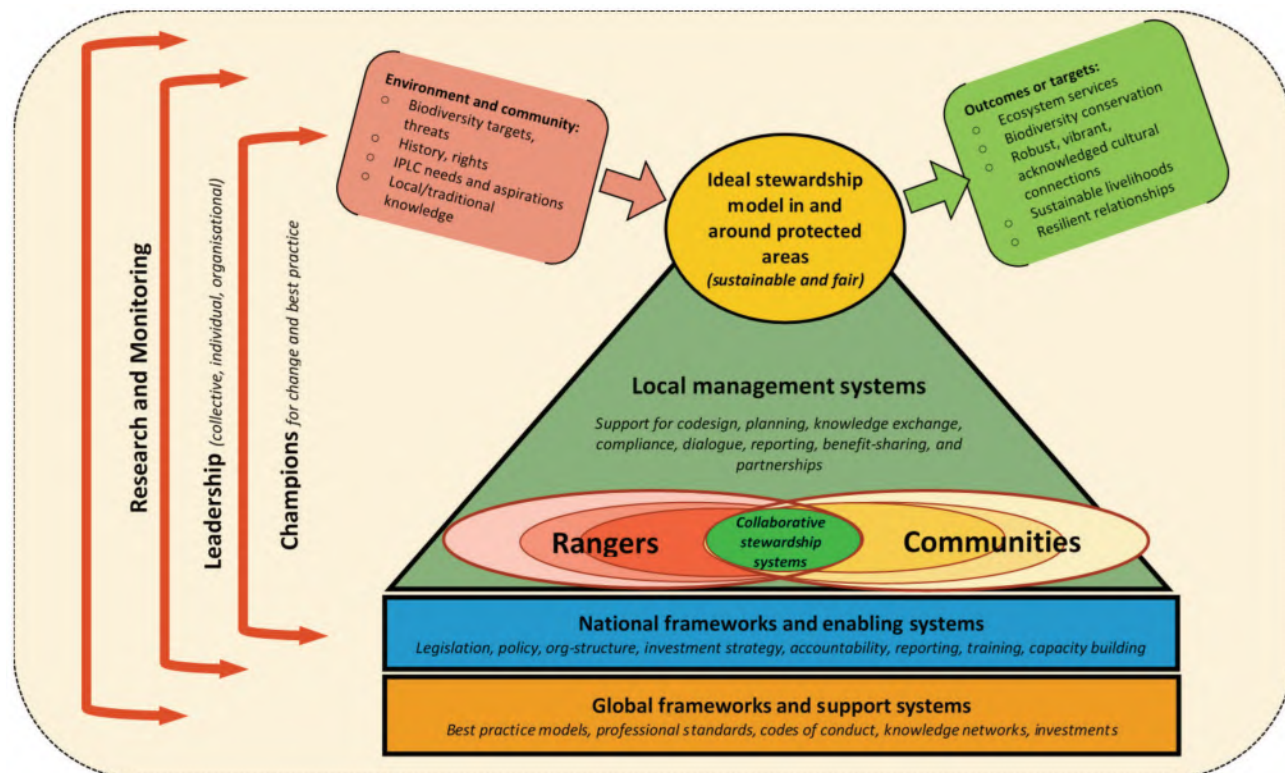
their professional obligations to uphold human rights of individuals and the knowledge and skills to respect the rights of a whole community. The ranger should be adequately trained to work with people and supervised effectively.

It is good practice to codify the work of individual rangers through standard operating procedures (SoPs), codes of conduct (CoCs), and codes of ethics (CoEs). This will enable rangers to be held accountable for performance individually and collectively. In the long run it is up to the organization that employs the rangers to ensure all its employees deliver due care to both the environmental and human dimensions of their jobs.

For the system to be fully accountable for human rights (including rights of IPLCs), it must have effective mechanisms in place at several different levels:

- State-level accountability mechanisms—all branches, including executive, judicial, and parliamentary, ensure appropriate legislation, oversight, strategies, and policies
- A strong internal system that continuously monitors ranger conduct and has capacity to address both individual and organizational issues
- Independent oversight, including an ombudsperson and complaints bodies— independent, appropriate membership, and adequately funded
- Public oversight mechanisms through public defenders, civil service organizations, and media
- External exposure and accountability through the international community, including human rights NGOs (e.g., Red Cross, Amnesty International, Human Rights Watch, Transparency International, International Crisis Group), environmental NGOs, UN organizations (OHCHR, the Office of the United Nations High Commissioner for Human Rights; UNDP, the UN Development Program; UNICEF, the United Nations Children's Fund; UNHCR, the UN High Commissioner for Refugees; UNODC, the UN Office on Drugs and Crime; UN Women) and diplomatic missions or the International Criminal Court.

Key issue #5: Collaboration, trust, and motivation to engage

Relationships between rangers and communities, set against the conservation model in which they operate, offer a variety of opportunities to understand and support the essential elements of effective collaboration and trust building. To share the tasks of protecting and managing essential resources, it is important to build sufficient trust to feel motivated and engage in new conservation behaviors (Roe 2015; Cooney et al. 2018).

Issues around trust and collaboration are not unique to conservation but are particularly evident in the relationship some rangers have with their communities and fellow rangers (Moreto 2015; Moreto et al. 2016; Moreto and Charlton 2019). By way of comparison, these are issues that also play out in boardrooms and businesses everywhere and can make the difference between success or failure of a business (Bachmann and Inkpen 2011). Such corporate case studies may be useful in addressing conservation challenges, such as social equity, ethical processes, enabling policies, adaptive management systems, or change theory (Minteer and Miller 2011; Nilsson et al. 2015).

It seems that when it comes to addressing human-centered problems associated with conservation, legislators tend to overestimate the effects of laws; scientists, the effect of research; ecologists, the effect of applying systems thinking; planners, the effect of plans; educators, the effect of knowledge; communicators, the effect of messages; and so on. Often referred to as "heroic agent bias," this phenomenon can be summed up by the phrase "to a hammer every problem looks like a nail" (Robinson 2013). The better option is to take a multidisciplinary approach to analyzing and solving problems (Brechin et al. 2002) and to set up easy-to-use guidelines for managers that address a range of challenging scenarios.

Key issue #6: Crisis response and planning

Much of the concern around ranger–community relationships centers on conflicts, military-style responses, and the general warfare that has emerged in the name of protecting wildlife. We suggest that some of this strained interaction reflects a general state of stress in society, which may affect either party and arises from other causes. Perhaps the stress is elevated due to a lack of skill in managing conflict or lack of support in searching for solutions.

Some conflict arises when there is a mismatch between the international pressures to save wildlife and the local, historical use of resources and their ownership. This is worsened by poverty, which is a major driver of poaching and other illegal trade (Cooney et al. 2018).

Adding to this are many other crises, such as economic downturns, direct and indirect impacts of climate change, environmental pollution, disease, displacement etc. The current COVID-19 pandemic is an example of an extreme stress that affects most conservation areas and communities as it exacerbates differences in income and access to health services, and disrupts the continuity of management of conservation areas. These issues set the stage for further conflict, create a need for heightened enforcement, or, at the very least, a reduce collaboration between rangers and communities.

The biggest, most pervasive, and most persistent crisis is climate change, which can exacerbate social inequality, thus driving a vicious cycle of disaffection.

The environmental pressures and crises that affect humans are likely to be affecting wildlife on land and at sea as well. The recent catastrophic wildfires in Australia burned over 18 million hectares of bushland in three months (Tiernan and O'Mallon 2020), killing over a billion wild animals (Harvey 2020). The consequence of this is a wildlife management crisis, potential extinctions, and permanent alteration of landscapes. Drought, fire, and disease are the "trifecta" affecting many

wildlife populations that have already endured habitat fragmentation and simplification due to other activities (WWF-Australia 2020).

In addition, there is a need to plan ahead to manage the impacts of other kinds of disruptors, such as a global pandemic (e.g., COVID-19, SARS) or regional disease outbreaks (e.g., Ebola), that may have insidious and pervasive impacts on the conservation area itself, income generation in local communities, and wildlife management. For example, with respect to the current COVID-19 pandemic we need to consider its ecological impacts (Corlett et al. 2020) on protected areas, social impacts due to closures to tourists (Mikomangwa 2020), social impacts on IPLCs (Phillips 2020b), and economic fallout (Phillips 2020a) At the same time, the pandemic offers new opportunities to rethink environmental policy and international collaboration in and around protected areas (Borneo Project 2020). The direct impacts of crises on the frontline workers (rangers and other staff) and communities are clear, as are the impacts on the systems that sustain protected areas and local economies (e.g., tourism and its multiplier effect).

Observations and lessons learned

In this section we have gathered a collection of the takeaway messages we gained during the consultations leading up to this white paper by listening to expert practitioners, scanning the literature, and undertaking a problem analysis based on input from the working group members. While all the issues raised in the previous section are important, these are the ones that need to guide any future action plan prepared by the Universal Ranger Support Alliance (described elsewhere in this collection of *Parks Stewardship Forum* articles).

About rangers
- Rangers are ambassadors of their operating system, not separate entities. They are the frontline representatives of their employers, their employers' rules (laws, systems), and the quality of their leadership.
- Effective ranger teams are positive

ambassadors for change. They will inspire young locals to become future guardians and will encourage women to bring their skills and knowledge to the role. In return rangers will bring financial benefits and pride to community.

About ranger–community relationships

- Ranger–community relationships reflect the complexity of the human dimension of conservation. In order to optimize this dimension, it is important to address the personal elements (values, motivation, attitude), the social elements (past and present) and the institutional elements (organizational system, laws and policies)— well-designed and adaptively managed.
- The relationship between rangers and communities is only as good as the system that supports them (institutional arrangements and policies, governance model for the protected area) and the shared values and aspirations that bind them.
- There is a need to look beyond perception surveys to understand attitudes, motivation and values that will drive sustainable relationships and conservation models. This deeper understanding requires interdisciplinary research and multiple sources of evidence.
- It is important to develop an understanding of complex and interconnected aspects of social–cultural–ecological systems. Understanding the fundamental link between ecological state and human well- being will help design management plans that are aligned with local culture and values.
- The ranger–community relationship is dynamic and changes depending on the conservation model being used and the socio-cultural context. For the ranger, some core wildlife management skills may remain the same, but there may be differences in how they are applied and how the community is engaged.

About wildlife and protected areas

- The ecological imperatives that serve as the rationale for protected areas and their

structure need to be understood by all players to sustain engagement. The costs and benefits to the relevant parts of community need to be transparent in order that the roles of rangers are understood, and the responsibilities of the community are accepted.
- Ecological imperatives must be seen as only part of the story with the custodial role of communities (Indigenous or non-Indigenous) being in the forefront of protected area design, operating rules, employment of ranger-guardians and ongoing measures of success and impact.

About the community

- The "face" of the community is a reflection of its social capital (i.e. social wealth and cohesion expressed through trust, cultural bonds, reciprocity, values, and shared history). Communities are self-defined by their common story, needs and aspirations. Well-organized and well-led communities will design innovative guardianship models, given the opportunity. Some will do this even while working to restore their identity and connections to country (both land and sea).
- There can be no lasting collaborative conservation efforts without the recognition of rights of all key communities and players, or acknowledgement of all voices, supported by clear rules of engagement, procedural fairness, and transparency.

About supporting systems and frameworks

- International human rights standards must be upheld and embedded in national laws institutional frameworks, standard operating procedures, and codes of ethics and conduct for rangers and their managers.
- Trust is essential both as a form of social contract between rangers and communities and an outcome of intention to build trust step by step. The systems need to support a shared purpose, focused action and reciprocity.
- Systems supporting conservation should provide clear rules, norms and procedural fairness, and these should be reflected in protected area plans at a local level. The

structure may vary but a good system will reduce risk by demonstrating competence, integrity, reliability and strong communication.

About leadership, collaboration, and the investor mindset

- Leadership skills (individual, organizational, and collective) are essential. The best models and best practices demonstrate this (e.g. see Sterling et al. 2017c).
- Collaboration is a "muscle" that can be strengthened through practice. The skills gained and systems created during small collaborative projects (i.e. picking the "low-hanging fruit") are transferrable to the bigger challenges. Hence, "vicarious collaboration" (i.e. working on low-risk projects) offers an early step for change.
- International NGOs and other international organizations and donors have a responsibility to show strategic leadership, effect due diligence on all projects, act transparently, provide environmental and social safeguards, and address human rights. They have the collective power to drive change, to enable best practice and share knowledge (Figure 4). Agreed standards for internal and external accountability must apply.
- Treating the work of rangers and role of communities in conservation as "conservation-business investments" will enable useful reviews of the return on investments (ROI) across all values. This provides important insights for governments and donors and to monitor and evaluate the impact of a conservation project.

Recommendations

We suggest a mixture of long-term strategic changes, operational-level improvements, and critical responses (Table 2). The recommendations reflect on the targets for changes identified in Table 1. Implementation should be adaptive considering the variability across ranger roles and capacity, the spectrum of cultures and governing systems and the wide range of local conservation frameworks in which they operate. There is also variation in the willingness and state of readiness

Figure 4. Some of the organizations that can influence the relationships between rangers and communities. They operate at international, regional, national, and local levels (PA, IRF, CSO, NGO, ICCP, ESSP).

Table 2. Recommended actions and the organizations that could be responsible or take the lead.

Actions	Organizations
Critical response and crisis planning	
a. Development of a response plan for crises and conflicts with associated training, as part of protected area plan. This would address natural disasters, human conflict, disease, and climate risks, and ensure human and animal rights are included in all planning. Ensure plan is audited during funding reviews by government and external donors.	UNDP/UNEP, INGOs, GCC, national governments
b. Prepare guidelines for protected area planners and managers and ranger forces to incorporate strategic response to crises and long-term disruptors (e.g., disease, drought, fire, persistent conflict, climate change, recession). Ensure incorporation into protected area plans and budgets.	IUCN Primer for Gov 2014 updated UNDP/UNEP, INGOs, national governments
c. Commission a high-level review of the impacts of current pandemic on rangers, communities, and wildlife. Review current state of readiness.	UNDP/UNEP, IUCN, IPBES
d. Emergency support fund for supplies and temporary wages of rangers and protected area managers, and to assist resolution process if in conflict areas.	GCC-RF to review with Reg RFs
e. Prepare crisis response template for protected area managers and ranger coordinators with advice for tailoring and local approval. Provide online training.	IUCN, GCC-IRF
f. Post-crisis, encourage development of small collaborative projects to build rapport and trust locally.	INGOs, local NGOs and CSOs
Development of guiding principles, systems and tools	
a. Prepare toolkit for protected area management and rangers (based on IUCN Best Practice Guidelines series). Distribute through governments, conferences and regional IRF members.	IUCN, IRF, Reg RFs
b. Prepare self-audit systems for protected areas and ranger forces to review conditions, performance, structure, organizational systems, relationships with communities.	IUCN, UNDP, INGOs, GCC-IRF, Reg RFs
c. Governments and protected area management to develop and strengthen internal and external accountability systems.	national governments, INGOs, UNDP/EP
d. Prepare summary of benefits of different protected area governance systems and ranger management systems. Use return on investment to demonstrate returns to all players and demonstrate the valuable roles of rangers and communities in the conservation value chain.	IUCN with IRF
e. Update protected area guidelines for governments, including co-governance options, due diligence, transparency, and reporting.	IUCN, INGOs, GCC
f. Ranger institutions prepare and strengthen standard operating procedures to explicitly protect human rights. All international organizations working with them must ensure these procedures are strong as part of their due diligence and monitoring.	UNDP, GCC-IRF, Reg RFs, INGOs, UNHCR
g. Prepare stakeholder engagement toolkit and templates for communications with communities for protected area managers and rangers. Focus on Indigenous Peoples and Local Communities. Provide online, in-country, and regional	INGOs, GCC-IRF, IUCN, UNDP

training regarding collaboration with community stakeholders.	
h. Develop guidelines for engaging women rangers and women community leaders including necessary adjustments to working conditions. Establish pilots or test cases (see paper, this issue, on gender).	UNDP, WCPA, IRF, Reg RFs
i. Encourage multidisciplinary comparative research into ranger–community relationship dynamics in different management regimes. Consolidate all existing resources with systematic review of peer-reviewed literature.	IUCN, IPBES, INGOs
Highlighting models and better practices (case studies)	
a. Encourage key organizations to "scout" for best practices and compile a library of case studies or repository of resources to share. The proposed global ranger body (possibly part of IRF) to monitor, collect feedback and share information on new programmes.	IUCN, UNDP-Equator Initiative, IRF
b. Celebrate and share models at all relevant stewardship, ranger, and/or sustainable livelihood forums. Expand outreach, bolster financial support.	IUCN-SULi, UNDP-Equator Initiative, IRF
c. Encourage development of knowledge-sharing forums and communities of practice and learning. Establish session at conferences for exchange.	GCC-IRF, IUCN
d. Provide positive stories and imagery of rangers to be published at local, national, and international levels.	IRF
e. Establish a peer mentoring program involving successful community groups working with others. Enhance existing exchange programs.	UNDP/UNEP, INGOs, CSOs
Provision of global network services	
a. Code of Conduct (CoC) and/or Code of Ethics (CoE) for rangers. Prepare with a suite of core principles as well as some terms that can be tailored to local needs. Membership in ranger associations to be conditional on CoC/CoE with local training, mentoring. Provide support for development of standard operating procedures, including human rights (see above). Conduct pilots and monitor change. Monitor broader take-up.	GCC-IRF, Reg RFs
b. Conservation Leadership Charter to be developed and adopted by INGOs and CSOs. This will effectively be the CoC for international bodies. Build on existing momentum to adopt environmental and social safeguards frameworks but extend the idea to include other best practices, clarity of roles on the ground, and collectively, leadership and modernization of protected area systems. Safeguards frameworks are already being adopted by some environmental NGOs, bilateral development agencies, international development organizations, development banks, multilateral banks, UN agencies, and environmental funds.	WB, UNDP, GEF, IUCN, INGOs, GCC (URSA)
c. Professionalization of rangers: design central organization for longer-term, harmonizing naming and expectations for ranger roles, identify competences, standardize core training, develop assessment system (see paper, this issue, on professionalization).	GCC-IRF, INGOs
d. Provide training online, regionally at all levels. Accessibility for entry-level rangers needs to be addressed (see paper, this issue, on ranger capacity).	IRF, INGOs, national governments

e. Compile register of training programs for all levels of ranger and protected area management (as per paper, this issue, on ranger capacity).	IRF, INGOs
f. Provide guidelines and training for communities of all kinds to be involved in conservation.	IUCN, INGOs, CSOs, national governments, local NGOs

Acronyms and abbreviations: CSOs—community service organizations; GCC—Global Conservation Coalition, now called URSA; INGOs—international non-governmental organizations; IRF—International Ranger Federation; IPBES—Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services; IUCN—International Union for Conservation of Nature; SULi—Sustainable Livelihoods program of IUCN; Reg RFs—regional ranger federations; OHCHR—Office of the UN High Commissioner for Human Rights; UNDP—United Nations Development Program; UNEP—United Nations Environment Program; UNHCR - United Nations High Commissioner for Refugees; URSA—Universal Ranger Support Alliance; WB—World Bank; WCPA—IUCN World Commission of Protected Areas.

and/or capacity of some organizational systems to make change at different levels—hence the need for some responses to be multi-layered and highly strategic where others are operational.

All of the recommendations listed in Table 2 are considered priorities, but those most likely to deliver immediate outcomes or have greatest impact are:

1. Development of a *global code of conduct and/or ethics* for rangers through the only global ranger organization, the International Ranger Federation (IRF). This needs to be written with core principle as well as some terms that can be tailored to local needs. *Standard operating procedures* should be used to operationalize the codes and ensure that each ranger organization has embedded the desired practices and supported them with training, accountability measures, monitoring and transparent reporting.

2. *Professionalization of rangers* beginning with planning, harmonizing of designation of roles, identifying competences, standardizing core training, and developing an assessment system. This will be managed in a stepwise manner and will require a consolidated organizational structure in the longer term.

3. Improving skills and knowledge of rangers as

a critical lever of change for an organization from the "inside-out." *Online training* using international standards and systems can be ramped up with regional ranger organizations taking a lead to implement. Accessibility for entry-level rangers needs to be addressed.

4. *Self-audit systems, standardized reviews and guidelines* that will help recalcitrant or resistant organizations see the benefit of change. Collaboration among international NGOs, with implementing assistance by national and local NGOs and CSOs, donors and other international organizations, will be essential in applying pressure and building capacity in support of effective protected area management and biodiversity conservation.

5. A *process that leads to higher internal accountability and external exposure* developed with collaboration of international agencies, NGOs and donors (see Chitwan Declaration)—this will help ensure rangers observe human rights in all their ranger roles including law enforcement and that their state organizations and protected areas have appropriate policies and systems in place.

6. Provision of *training, education and guidelines for communities* of all kinds to be involved in conservation. Collaboration among international NGOs and distribution by national and local NGOs and CSOs are

required. A peer mentoring program involving successful community groups and protected areas can be supported by international agency programmes and international NGOs.

7. Provision of an updated *register of positive models for change* with case study summaries. Collaboration among international NGOs, online publishers, regional ranger organizations and CSOs.

8. *Updating the image and positive stories of rangers* published at local, national, and international levels. IRF could take the lead on this.

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