Assessing & Addressing Community Conflict Arising in Conservation Planning & Management
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Abstract

As the world’s largest global environmental network, and with its mission “to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable”, it is essential for the International Union for the Conservation of Nature (IUCN) to integrate and implement approaches for constructively preventing, managing, and addressing conflicts that arise in communities in conjunction with its conservation activities. This research examined a range of conflicts arising in conservation and resource management, particularly with respect to resident/local or indigenous communities, and/or where conservation plans or programmes have adverse impacts on these communities. We know from experience that conservation conflicts arise in communities in many contexts: among others, over wildlife, protected areas and their designation and management, other natural resources such as forests, water, minerals and their development and management, and major infrastructure projects. Through an initial survey of the literature focusing on the social and human dimensions of conservation, and conflict analysis and resolution, a review of IUCN’s website and publications related to conflict and conflict resolution, and an analysis of the conflicts arising in these contexts, this research identifies the sources of conflict, its parties, main issues, and the roles and influences of others, and examines how the conflicts have unfolded over time. The benefits of such an analysis will enable conservation proponents and managers to recognise not only key patterns in conservation and resource conflicts, but also safeguards that will help to forestall conflict and the measures most likely to promote addressing conflicts constructively when they arise. These insights are also intended to stimulate ideas for anticipating and proposing policies and practices that will benefit both the natural resources targeted for conservation and the communities where they occur.
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1. Introduction

It is essential for IUCN to understand the nature of the conflicts arising in conservation and recognise the most constructive ways to assess and address them in order to ensure it achieves its desired conservation outcomes. Conservation researchers and practitioners know from their work that conflicts arise when identifying, designating and managing protected areas, as a result of problem encounters with wildlife, and in the development and management of natural resources such as forests, water, minerals and the related infrastructure around these resources. The research for this paper surveyed the literature related to the human dimensions of natural resource and wildlife conservation and conflict analysis and resolution — including IUCN’s website for publications related to conflict and conflict resolution — to identify the types of community conflicts that arise in conjunction with conservation practices and resource development in four categories that IUCN most often encounters: (1) protected area designation and management, (2) human-wildlife conservation and conflict, (3) mining and minerals extraction and development, and (4) water and other infrastructure development.

This review paper begins by describing a range of definitions for conflicts, in general, and in particular, how they may relate to conflicts arising in conservation. It focuses principally on conflicts related to protected area designation and management and problem human-wildlife encounters. Recognising the types of conflict that can arise is an important first step toward making decisions about the type and appropriateness of a potential intervention. Is it a conflict about scarce resources (distributive), basic human needs (such as livelihoods or food security), identity, values, or structural sources (such as laws, policies, or practices), for instance? Next, the review describes potential frameworks for assessing conflicts. The framework(s) one uses to assess a conflict situation is an important consideration because it/they will determine the path for identifying not only who is considered a party, but also what issues are in conflict as well as the potential approaches that might be taken to address them.

In the next section, the paper reviews the literature and discusses the most salient features or patterns of conflicts arising under the four situations or categories previously noted (protected areas, human-wildlife conservation and conflict, mining, and water and other infrastructure development). These patterns help to create a typology of conflict in conservation. Among the patterns noted are structural sources of conflict (such as extinguishing customary or land tenure, or customs or laws that exclude women), failure to acknowledge and engage all interested parties (such as women, indigenous peoples and local resident communities) in conservation and resource development planning activities, and resettlement and displacement that is disruptive to a community and its livelihoods, and the failure to adequately compensate those displaced.

The final sections discuss the approaches IUCN has taken to safeguard against conflict developing, the approaches it has used in conflict situations, and criteria for evaluating conflict resolution processes. The paper concludes with recommendations for assessing and addressing conflicts arising in communities. Most of these recommendations are meant to create a more global presence for conflict analysis and resolution resources organisationally and within IUCN’s conservation communities, and for embracing conflict, when it occurs, as an opportunity to learn more about local customs and practices for managing resources, and addressing problems within local spheres. These recommendations are also intended to create greater
collaboration between conservation decision makers and local/resident communities and increased opportunities for advancing conservation outcomes that reflect IUCN’s vision and mission of promoting a just world in which the integrity and diversity of nature is conserved and the use of natural resources is equitable and sustainable.

2. The Nature of Conflict – and Conflict in Nature

Defining Conflict
Numerous authors (Deutsch, 1973; Mitchell, 1981; J. Z. Rubin, Pruitt, Dean G., Kim, Sung Hee, 1994) have variously described and defined conflict, and common among these definitions is a perceived or real incompatibility or interference between two or more parties in achieving their goals. The incompatibility may occur between individuals, groups, organisations or nations, and includes differences in social values or structures for achieving a desired outcome or goal. Others might involve value incompatibilities about the use or distribution of resources, or about social or political structures, or behaviours or beliefs. Yet others can include situations of scarcity where values influence the desire to possess or use the same resources.

Conflicts in conservation areas occur when “a group or groups . . . interests are in opposition to those of the protected area.” (Lewis, 1997) Lewis (1997) believes that conflicts arising in conservation areas have two primary causes: (1) failure to involve local people and other interested parties in the planning, decision-making, and management of the area, and (2) when the needs of nearby communities conflict with conservation objectives much like situations of scarcity described above. The failure to involve local people and others in a conservation planning or management process means that communities lack the opportunity to, among other things, identify and describe traditional or land tenure rights, which can also create real or perceived feelings of alienation that colour all future interactions.

The definitions and terms used to describe and discuss problem encounters with wildlife are extensive and include human-wildlife co-existence, human-human conflict, and conservation conflicts (Hill, 2015). While these variations in terms and definitions are discussed more fully below in a review of wildlife conservation and conflicts, it is fair to say that these situations are typically triggered by an encounter involving some animal species in which the observer or affected party perceives the situation to be a problem.

Frameworks for Assessing Conflicts
For any conflict analysis and resolution process, it is important to realize that there are multiple options and frameworks for assessing conflict, and each should be considered for their appropriateness to the setting. The framework one selects for assessing a conflict will, in turn, influence the type and design of any intervention that follows. Three different approaches are often mentioned and used to assess conflict: the Harvard Approach, Human Needs Theory, and Conflict Transformation (Mason and Rychard, 2005).

The Harvard Approach (or interest-based, principle-based) emphasises the difference between positions (or what people say they want) and interests (why people want what they say) (Fisher,
Ury and Patton, 1991). It argues that conflicts are best resolved by parties focusing on interests rather than positions to develop mutually agreeable criteria for addressing their differences.

Human Needs Theory posits that conflict arises from a failure to satisfy basic “universal” needs. These needs include as well as surpass Maslow’s hierarchical pyramid of food, safety, shelter (first), safety and security (second), belonging or love (third), self-esteem (fourth) and personal fulfillment (fifth). Burton and others believe human needs emerge differently in conflict situations; that they are sought simultaneously rather than hierarchically. Essential needs in this view emphasise safety and security, sense of belonging, identity, cultural security, freedom, distributive justice, and participation (Marker, 2003). “Needs” theorists also recognise and differentiate that needs, unlike interests, are not negotiable. Designing a process to address conflict with a human needs approach might use a problem-solving workshop where parties collaboratively examine the roots of conflict, while keeping a focus on developing acceptable ways to meet the needs of all parties. Situations where conflicts are long-standing or intractable, such as those involving indigenous peoples in protected areas, suggest that at some level there are parties in the community with unmet needs.

A Conflict Transformation approach views conflicts and addressing them as constructive or destructive interactions – depending on how conflicts are viewed and addressed. It emphasizes different perceptions and the social and cultural contexts in which they are constructed. Its goals are to empower parties and support ways to recognise the differences between them. Conflict is viewed as normal in life, and an opportunity to explore and inspire possibilities for constructive change. Adopting a transformational approach means that conflict is viewed positively, or as an opportunity, and there is a willingness to embrace the conflict to create constructive change or growth (Lederach, 2003). The framework used to assess conflict using a transformational approach has three elements: the presenting situation, the horizon of preferred future, and developing change processes that link the two (Lederach, 2003). The presenting situation in conflict transformation acknowledges both the episodic expressions of conflict and the historical and relational patterns at the root of the conflict. The horizon of the future is intended to inspire parties in conflict to visualize their ideal future place. For Lederach this process is both linear and cyclical in that it sets in motion a process for long-term change. Developing change processes emphasises the connectedness of needs, relationships and patterns, and that change processes must address both immediate problems and long-term relational and structural patterns. Such an approach works toward changes for short-term solution and laying the foundation for long-term social change.

As Lederach and others acknowledge, in complex situations there are often multiple issues and dimensions of the conflict, so limiting oneself to a single framework for analysis can prevent understanding and addressing the full scope and depth of the conflict and the situations in which it presents. And, while this discussion focused on three frameworks stemming from conflict analysis theory and practice one might use in assessing a conflict situation, there are numerous others that can help in identifying and understanding the interpersonal, intergroup, and intra- and international issues that may be at work in perpetuating a problem situation. For example, examining legal and political frameworks in a conflict situation might identify the existence of laws and/or policies that extinguish land or tenure rights or restrict access to natural resources. Therefore, only considering the interests and needs of affected communities in assessing a
conflict and designing an intervention process could otherwise leave a structural source of conflict in place that will continue to fuel future dissent and conflict.

As one identifies frameworks for assessing a conflict arising in conservation, it is important to recognise that the conservation action itself may be exacerbating existing situations in a community. Brechin et al. (2002) view conservation actions as a social and political process requiring the need to acknowledge and attend to these dimensions as one is working out the means and ends of a conservation decision. Existing poverty levels, insecure land tenure, insecure or unstable political systems, or histories of state-sponsored repression are among situations that a conservation action might exacerbate and must be considered as part of any assessment. In the conservation literature, Brechin offers yet another framework suggesting six key elements to integrate and consider in conservation; by extension those elements may be intrinsically embedded in any conflict that arises. These elements include considerations for (1) human dignity (Who benefits?), (2) legitimacy (appropriate and just for those affected?), (3) governance (Who decides? participates? and at what level?), (4) accountability (How responsible are parties to their commitments?), (5) adaptation and learning (Systems available to integrate what’s learned?), and (6) nonlocal forces (What is the relationship between outsider goals and local practices?). Hence, according to Brechin, a conservation action that is not ecologically sound, socially and politically feasible, and morally just is bound to result in growing levels of resistance and conflict.

Many of the frameworks often known and used to assess conflict have their origins in what is commonly referred to as the North American Model. The Harvard Approach is a good example of this model in its focus on interest-based bargaining, and is often used in situations where the parties have tangible, divisible goals as the outcome and the third party intervenor is an impartial outsider. Interest-based approaches and practices work well where there are strong systems of governance and well established rule of law with legitimate mechanisms for resolving disputes. These systems, however, are either lacking or fragile in many of the parts of the world where IUCN works – so the prospects of using interest-based methods to assess conflicts and negotiate positive outcomes under these circumstances are hopeful at best.

For these reasons, IUCN should assess at an early stage of its project development the stability of the locations where conservation conflicts occur and use approaches more suited for these stable social and legal conditions. Addressing conservation conflicts occurring in environments where they are complicated by or being driven as expressions of armed or violent conflict is beyond the scope of this analysis and paper, and these situations are of such a different kind relative to more “normal” competition and disputed access or control that they require early recognition and acknowledgement when embarking on an assessment. These conditions will seriously affect selection or application of appropriate (or inappropriate) intervention strategies.

Addressing Natural Resource Conflicts in a Changing World
According to the Living Planet Index, we need 1.5 Earths to meet the demands we currently place on nature (Living Planet Report, 2014). Past trends in addressing wildlife and natural resource conflicts have most often focused on technical solutions such as developing better ways to deter wildlife from unwanted situations or distribute a limited resource such as water, arable
land, fish and wood. But it has become increasingly evident that using technical solutions alone to deal with these situations does not fully address or solve problems arising in wildlife encounters (Redpath, 2015; Hill, 2015, Hoare, 2015) or using, conserving or distributing water, arable land, fish and wood.

Examining both the ecological and social risk factors that instigate and exacerbate conflict can broaden the possibilities for addressing conflict in more holistic ways (Dickman, 2010). Social risks can manifest in both micro and macro social systems and might include differing beliefs, values and perceptions, distrust and animosity, competition over increasingly scarce resources, poor governance of natural resources, and through pressures and dynamics and pressures related to transboundary natural resources (UNEP, 2012). Growing pressures on ecological systems are likely, in turn, to exacerbate social interactions and include current and projected worldwide population growth (Manfredo, 2015), the increasing importance of establishing and maintaining protected areas, global deforestation, changes in climate, and expanding extractive industries and commercial growth. Competition for natural resources, especially water and land, but also in order to protect biodiversity, is predictable. Most of the remaining range of threatened large carnivores is outside of protected areas in human-dominated landscapes. i.e., people inhabit 90% of the range for jaguar and snow leopards, and more than 76% for tigers (Harihar, 128, 2015). As people and wildlife increasingly share the same space, it will not be enough to simply deter animals. Understanding the full social and ecological attributes of the predictable problem encounters as competition for space intensifies can help contribute to higher levels of tolerance for these conflicts and create greater possibilities for peaceful mutual co-existence.

3. Community Conflicts Arising in Conservation and Natural Resource Management

Introduction
This section discusses four classes or categories of natural resource and wildlife conflicts where conflict arises in communities through conservation, management, or development. These situations involve conflicts in communities related to protected areas and their management, including the use of resources within or adjacent to protected areas, human-wildlife conflicts, and conflicts over major infrastructure developments. (Personal Communication, Oviedo, October 2015). Although not exhaustive, this review discusses and illustrates some of the most salient characteristics of the types of conservation–community conflicts that arise in these four classes or categories, many of which IUCN has encountered or encounters in its work.

Protected Areas
Conflicts arising in the process of establishing and managing protected areas encompass both structural and socio-cultural dimensions. Shafer (2015) examines the history and background of creating the contending policies for conservation and poverty alleviation in IUCN’s Categories V and VI, which resulted in peopled protected areas, including buffers and connecting corridors (Shafer, 2015). Category V, previously designated as a protected landscape, and Category VI, a Managed Resource Protected Area (or a multi-use management area), were officially approved in 1994. Category V emphasises the interaction between people and nature in lived-in working landscapes “that have been extensively modified by people over time” (Phillips & Editor, 2002). Category VI emphasises sustainable use of natural systems including a flow of goods and
services for community needs. Protected areas in these two categories are challenged with the dual roles of conservation and multiple use and consequently tend to be the locations where conflicts most often arise. In view of what are considered acceptable practices in these areas, the categories appear to have been created as a compromise between the adherents of strict Yellowstone Model-type conservation and those who saw a need to accommodate local inhabitants while providing a transition or buffer adjacent to core conservation areas. Shafer believes a key problem with Categories V and VI areas is the absence of statutory limits on resource use and exploitation. As a result the creation of these categories also engenders consternation among conservation biologists more focused on conserving nonhuman life (Terborgh, 2004; Soule, 2013).

The conservation literature, especially those journals focusing on the social and human dimensions, reflects the consequent challenges of managing protected areas that are peopled landscapes and the conflicts that arise in these situations. One particular ongoing and key source of conflict stems from having designated protected areas where indigenous peoples and other peoples and communities are longtime inhabitants. Buergin refers to these situations as examples of ‘coercing conservationism’ in which indigenous peoples, such as the Karen peoples of Thailand, have been silenced, evicted, and increasingly marginalized and deprived of their traditional and cultural practices (Peluso, 1993, Buergin, 2003). For the Karen peoples, these difficulties began most prominently when their traditional lands in Thung Yai Naresuan Wildlife Sanctuary and adjoining Huai Kha Khaeng Wildlife Sanctuary were declared a UNESCO World Heritage site in 1991. During the 1970s and 1980s, and prior to the UNESCO designation, numerous Karen and Hmong villages were removed from both Huai Kha Khaeng and Thung Yai Naresuan following the establishment of the wildlife sanctuaries and the construction of the Sri Nakarin Dam. Management plans for the sanctuaries stipulated resettlement of the remaining villages, which began in the early 1990s. While the Royal Forest Department (RFD) increasingly pressured the remaining Karen peoples to resettle, public opposition grew. Despite a stay on outright evictions the RFD, with military assistance, renewed efforts to “persuade” the Karen peoples to vacate by destroying property and making it increasingly difficult for them to sustain their livelihoods. These violations of human rights have since been acknowledged and the Karen peoples recognised through the passage of numerous national and international laws and declarations intended to right these wrongs. The Karen peoples and other indigenous communities are now protected from the immediate threats of forced evictions, but there is still a great need to more fully put the principles of these laws and declarations into practice (Colchester, 2014).

Another significant source of conflict in protected areas involves access to and use of resources – notably fuelwood – either within or adjacent to protected areas. Jaiswal studied local peoples’ dependence on fuelwood in and adjacent to the Suhelwa Wildlife Sanctuary in Uttar Pradesh, India (Jaiswal & Bhattacharya, 2013). Through 1636 household surveys in 55 villages he found that almost all households (98.5%) used fuelwood for cooking chiefly because of its cheap and easy access and the lack of cost-effective alternatives. Moreover, nearly 87% of the households obtained their fuelwood from the forest versus from home gardens or agricultural waste. Conflicts between those managing protected areas and local peoples and threats to forest biodiversity will likely continue unabated absent the availability of feasible alternatives and a
more nuanced understanding of the roles of and needs for fuelwood in these heavily-dependent households and villages.

Women have been especially vulnerable when access to forest resources is restricted or prohibited following the establishment of protected areas (Badola, 2003). Confounded by sociocultural taboos that prevent a woman’s education and land ownership, and in light of their chief roles in supplying fuelwood and fodder, women perceive the restrictions placed on access as infringing on their basic abilities to survive. These relationships with protected area managers are especially contentious because women, like indigenous peoples, have been excluded from the planning and processes to establish and manage protected areas leaving them simply to react to a situation for which they have no understanding or appreciation, and which affects them at the most basic levels of human needs. While Badola describes one instance of how conflicts arise and affect women especially when they are excluded protected area planning processes, the larger structural source of conflict stems from the ways that gender structures resource access and control, and plays out across various cultures and settings.

Local inhabitants also encounter problems with wildlife in their efforts to access resources in or adjacent to protected areas or the buffer zones around them. The conflicts that arise in these situations and their implications are discussed more fully in the following section that discusses wildlife conservation and conflicts.

**Human-Wildlife Conflicts & Conservation**

The term “human-wildlife conflict” is used widely, but the problems that arise leading to such conflict are quite diverse. For that reason, it is important to distinguish among the kinds of conflicts that arise from problem encounters with wildlife. Conover (2002) described problem encounters with wildlife as those ‘situations occurring when an action by either humans or wildlife has an adverse effect on the other’ (Conover, 2002). The IUCN describes human-wildlife conflicts as situations ‘when wildlife requirements encroach on those of human populations, with costs both to residents and wild animals’ (IUCN, 2005). Most recently, Redpath et al. examined 100 case studies published over the last five years focusing on human-wildlife conflict (Redpath, Bhatia, & Young, 2015). They found nearly all (97) cases studies involved species with a conservation focus, and half involved predators (54%), or large herbivores (42%). Of these one hundred case studies, most conflicts arose while implementing conservation objectives and livelihood (65%) or human safety (15%). The remaining cases discussed conflicts involving conservation and recreation (8%), development and infrastructure (4%), animal welfare (3%), and human well-being (2%). Redpath makes these distinctions to emphasise the importance of how human-wildlife conflicts are framed. His review supports the idea that although conflicts are typically considered a problem between people and wildlife, they most often involve differences between individuals or organizations supporting wildlife conservation and those with alternate viewpoints or needs. Redpath and other wildlife scholars suggest a definition that acknowledges these distinctions to include ‘situations that arise when two or more parties have strongly held views [about conservation objectives] and one of those parties is attempting to assert its interests at the expense of the other’. Acknowledging these distinctions means that the scope of possibilities for addressing these situations grows beyond a search for technical solutions (such as hazing wildlife) to address problem wildlife encounters to include the role of people (or the human dimensions) in these encounters as conflicts arise.
In its work, the IUCN is most typically pressed to address human-wildlife conflicts in four different situations where wildlife is: (1) considered a pest, (2) a predator that preys on domestic animals, (3) a predator that poses threats to people or, (4) when competition arises from a need for habitat to provide for large wildlife ranges or corridors (Personal Communication, Oviedo, October, 2015). Lamarque et al. describe a similar typology of human-wildlife conflict that involves situations where human death or injury occurs, crops are destroyed, domestic animals are attacked, diseases are transmitted to livestock or people, or there are adverse interactions with other valuable species, such as game or trophy animals (Lamarque, 2009).

Despite Redpath’s call for distinguishing between human-wildlife impacts and human-human conflict, his literature review found that studies continue to frame problem human-wildlife situations as conflicts between people and wildlife (elephants, tigers, bears) where the impacts involve loss of food security, livelihood and sometimes life (Redpath, 2015; Zimmermann, 2009). These conflicts occur in conjunction with both wildlife conservation itself and in areas adjacent to or within protected areas, such as national parks, conservation preserves, and wildlife sanctuaries, and are both latent and overt. Conservation goals are threatened as members of affected communities kill individual animals deemed the culprit in livestock, agricultural or human losses (Inskip et al., 2013) (Motaleb, 2011) (Zimmerman, 2009) (Distefano, 2005), or as payback when they have not been consulted as access to resources in protected areas is limited (Torri, 2011, Pohja-Mykrä, 2016). While the literature and most analyses continue to depict these problem situations as conflicts between people and some animal species, conflicts also arise between indigenous communities and the administrators responsible for either the natural resource and/or wildlife conservation. These situations involve sorting out access to resources within wildlife preserves by indigenous communities for subsistence and to generate income from non-timber forest products such as honey, rope fibre, and silk moths (Mahapatra, Tewari, & Baboo, 2015), or fishing, crab, or shrimp fry (Inskip et al., 2013).

As researchers move to understand and articulate the social and human dimensions of human-wildlife conflict a number of themes emerge in the literature. These include: how conflicts present, tools for analysis, and tools for addressing and managing conflict. Barua (2010) examined Indian and international media to assess the ways that human-elephant conflicts (HECs) are portrayed (Barua, 2010). He set out to understand (1) how the public and policy sphere comprehends proximate and ultimate causes of HECs, (2) the emergent frames used to talk about HECs and the influence of the actors, and (3) how media analysis can help create a more nuanced conservation practice. He found media frames included: information (most in regional), demonization (none in local media), mitigation (most prominent overall), coexistence (most prominent in regional), and animal rights (only in international).

Among the tools for analysis are participatory risk mapping (PRM) (Inskip, 2013), income diversification indices (DI) (Mahapatra, 2015), choice experiments (Harihar, Very’ssimo, & MacMillan, 2015), and in-depth ethnographic studies. Inskip (2013) used PRM to illustrate how poverty risk factors exacerbate tolerances of risk. Knowing these factors and how they relate to risk perception can help in identifying measures to manage that risk, and as a result the killing behaviour it would otherwise induce, when unmitigated. Mahapatra (2015) used DI to measure the diversification of livelihoods as communities are displaced from conservation areas.
Comparisons between displaced and non-displaced communities are possible using this tool. This study did not support most claims that displacement results in lost income, further impoverishment and social fragmentation. Harihar (2015) used choice experiments to gauge the tradeoffs a pastoralist community is willing to make toward either coexisting with or resettling for tiger conservation. Human choice experiments can help in designing socio-ecological systems that benefit both large carnivores and people. Ethnographic studies examined patterns of conflict, tolerances, and the sorts of mitigation measures taken (Karanth, Naughton-Treves, DeFries, & Gopalaswamy, 2013), and measured attitudes toward human-wildlife conflict (Ogra, 2009). Ogra (2009) found that gender, especially, and literacy and relative wealth significantly affected attitudes. Gender in this study area was especially important given the role women play in households as the primary forest worker/gatherer and producer of foods from agriculture and husbandry.

The tools for analysis, in turn, helped to identify ways to address and manage conflicts that arose when conserving wildlife affected local, indigenous communities. While resettlement was the unstated, but preferred outcome, Mahapatra (2015) recommended livelihood planning, skills development and training programmes for those resettled to learn new ways to earn income and support displaced communities because cash or houses alone were not enough. He moreover, recommended inclusive approaches to help acknowledge and balance local livelihood needs with conservation objectives. Harihar (2015) added that successful resettlement needs to recognise and secure property rights, construct acceptable housing, and include opportunities to continue preferred livelihoods. Indeed, the failure to fully address these issues is a likely source of continuing conflict.

Other strategies include distinguishing between measures to prevent conflict situations versus those to mitigate conflicts once they’ve occurred (Distefano, 2005), and toolkits developed for the local farmers and communities most directly affected (LeBel, 2010). Distefano’s (2005) preventive measures include physical and biological barriers, guarding, alternative deterrents such as motion-activated devices and aversive conditioning, good waste management to avoid creating attractants, and relocation and resettlement of local communities. To mitigate losses already incurred, Distefano mentions compensation (monetary or other rights to hunt and gather resources within a protected area), insurance programmes (livestock and crop), incentive programmes (subsidies to offset the costs of conservation to villagers), and community-based natural resource management (supporting wildlife-related local economies that support conservation). Regulated hunting and translocation, while not without its problems, are also considered as more expedient approaches. Le Bel (2010) and Zimmerman (2009) respectively describe community-based approaches for a toolkit and elephant monitoring. These approaches engage the communities in both developing and implementing approaches for reducing the impacts of problem wildlife encounters. The human-wildlife conflict toolkit provides resources to identify control options in five categories: awareness raising, access prevention, translocation, diverting animals, and lethal control as a last resort (Le Bel, 2010). The Assam Haathi Project for Human-Elephant Conflict Mitigation (Zimmerman, 2009) trained and engaged community members as field monitors to track incidents and elephant herd locations. These data were then used to conduct a spatial analysis of incidents that can then inform possibilities for interventions. In this case, among early warning systems, barriers, and deterrents, Zimmerman et al. (2009) found spotlights used in conjunction with other deterrents (chilli smoke, noise) and fencing.
worked best. Using field monitors worked well because it was easily expandable, low-cost, built capacity in the communities, encouraged leadership, and provided indirect education about elephants and conservation.

While considering the human dimensions of wildlife conflicts continues to grow, both peer-reviewed and grey literature mainly discuss approaches to address or mitigate encounters between people and wildlife. As Redpath points out, technical solutions can help, but if we want them to take hold, it is imperative to also understand and address the underlying conflicts. They vary by human, ecological, and legal-political contexts, and historical situations. These approaches must include ways to form true – power sharing partnerships in conservation with indigenous and local communities by understanding more about their social, cultural and ecological practices and the way these practices have sustained the habitat and wildlife populations targeted for conservation.

In a recent special issue of the Human Dimensions of Wildlife, Manfredo invited attendees of a “Creating Coexistence Between Humans and Wildlife” workshop at the 2003 World Parks Congress to reflect on what had changed in the intervening ten years (Manfredo, 2015). Numerous attendee/ authors who’d contributed to an earlier special issue on the workshop offered their thoughts. Ogada (2015) offered his insights and experiences with compensation programmes in Kenya noting that they are neither an effective nor sustainable conservation tool (Ogada, 2015). Direct effects have included demands for compensation, or retaliatory killings for the loss of a single animal that would otherwise be tolerated as an acceptable loss while indirect effects have included leaving animals in the bush overnight knowing the compensation would be greater than traveling many kilometers to bring the animal to market. He believes that through compensation, communities have come to view conservation as a ‘short route to profit’ creating a ‘cycle of dependency and entitlement’ rather than engendering a sense for community conservation. Hoare (2015) believes much has been learned about human elephant conflicts emphasising the biological, physical and governance dimensions (Hoare, 2015). He concludes that the brightest outlook rests with increasingly replacing ‘short-term measures against animals . . with longer-term strategies that involve working with people’. Examples of “commandments” he offers for the future include: recognizing that most problems arise from a few animals (not every one encountered), that problem encounters will continue so find ways to reduce them to acceptable levels, prioritizing working with people rather than against animals, and that individual costs borne through losses can be replaced community-wide through community-based natural resource management. Finally, Hill (2015) urges us to recognise that narratives that convey intention (crop “raiding”), aggression, or blame toward wildlife mask other potential sources of difficulties with neighbors, agencies, or conservationists. Developing a sensitivity to the symbolic meanings attributed to certain animals will also contribute to our understanding of how troubles with wildlife start and are perpetuated.

Mining

The impacts related to mining are varied and depend on the type of mining operations such as open-pit, quarrying, strip mining and mountaintop removal. Open-pit mining is one of the most disruptive to the landscape, to resident communities, and the local resources on which these communities depend. Conflicts arising from these activities are numerous and include those related to predictable impacts such as the loss of forests, topsoil, and water, and less obvious
ones such as the loss of freedom of movement, loss of fishing or hunting grounds, relocation or settlement, or disrespect for traditions. Conflicts might also involve disputes between competing industries such as between mining and agriculture or forestry, or between large- and small-scale operators. Conflicts also arise from surprises such as accidents involving breaches of waste storage facilities or chemical leakage. The potential and real impacts of mining operations are felt most deeply in the rural environments and communities where these operations most often occur (Hilson, 2002).

Parties to mining conflicts are similarly diverse and far from homogenous. While communities often uniformly oppose the prospects of developing a mine, support changes over time as they are able to leverage compensation or other benefits such as jobs as operations begin (Coumans, 2011). But systems of land tenure (Horowitz, 2002) and assignment of indigenous land rights (Akiwumi, 2012) further complicate the types of conflicts that arise as they are manifested in the social structure of the indigenous communities. For instance, as chiefs allocate farmland and control labor through kinship obligations, new classes of parties are created that can include both indigene and “strangers” (in-migrants without any kinship land rights), and legal and illegal diamond miners (Akiwumi, 2012).

Mining companies, in their efforts to minimize social and reputational risk, engage numerous intervenors to secure a social license that will enable their operations to continue and avoid costly delays or lose the project itself (Coumans, 2011). These intervenors, however, do not always facilitate positive influences on the conflicts from the perspectives of the local communities, and as such are also potential parties to the conflicts. Embedded anthropologists working under contract to mining companies may impede the agency of indigenous communities by withholding information deemed proprietary by the mining companies, for instance. Coumans (2011) also describes social responsibility investor companies working with mining companies as symbiotic because the number of real actions potentially taken through shareholder resolutions is narrowed by a company’s stipulations of reducing risk from regulators while maintaining profits.

In a recent exploration of how conflicts in mining communities might be addressed in more constructive ways, Bond evaluates the potential for including a “sustainable, positive peace” approach by corporate social responsibility (CSR) practitioners who have been assisting mining companies for some time (Bond, 2014), (Coumans, 2011). Using such an approach means that as a conflict situation presents itself, it is viewed as an opportunity for constructive change, or conflict transformation. This more constructive approach to conflict promotes improved communication and building trust among the parties. It contrasts with more adversarial and destructive approaches where parties harden their positions, creating the potential for increasingly confrontational interactions. Bond asserts that mining companies will be sufficiently motivated to consider this approach for it contributes to the triple bottom line of sustainable development that includes economic, social and environmental pillars. In interviews with CSR practitioners, Bond found and illustrated positive outcomes for all three pillars. Disputes over water availability resulted in building a dam that benefited both parties’ temporal increased needs (environmental). Mine closure and compensation issues were addressed by expanding the timeline for compensation to include a longer term community development and planning process to embrace the post-closure community’s future (social). And recurring
relocation and resettlement costs were addressed and community resentment diffused through
top open and steady communication with the community and tribal leaders to permanently
relocate the disrupted village (economic). Positive peace approaches therefore foster and support
the conditions for creating and sustaining improved interactions as new conflict situations arise.

Water and Other Infrastructure Development
Conflicts centering on water and infrastructure development are largely framed as a distributive
competition, often as a fixed pie. This framing means there will be winners and losers. The
challenge, of course, is to explore the host of alternatives that can transform a fixed or decreasing
amount of water into incentives for finding new ways to meet water needs.

Among the challenges faced in creating and managing water supplies are the objectives of
sharing water across state and international boundaries and developing infrastructure to provide
more predictable and timely delivery. Mark Twain has often been quoted as saying, “Whiskey’s
for drinkin’; water’s for fighting over.” And so this basic human need engenders disputes,
conflicts, and some say potential wars to secure water supplies. One such example that illustrates
interstate challenges is seen in the long history of the Nile River management (Kagwanja, 2007).
These management schemes illustrate the long running impacts that colonialism can still have on
water access and use today. Dating to the 1929 Nile Water Agreement, it ensured Egypt’s water
supply would remain unchanged at the expense of the eight riparian states/countries, which
include the source and headwaters in Lake Victoria, and Lake Tana in Ethiopia. Realizing the
roles of drought and food insecurity, among others, in destabilizing a region where water could
trigger violent conflict, three East African states formed the East African Community and
worked regionally to establish numerous initiatives, especially the Nile Basin Initiative, which
includes all ten riparian states to as Kagwanja (2007) puts it, build confidence and cooperation in
a “shared vision of a sustainable exploitation of the Nile waters and its resources”. Still, some
believe the potential for conflict in northeast Africa over water remains real (Rahman, 2013).

Like mining projects, large dam development projects exact a similar toll on the landscape and
its indigenous communities. In Southeast Asia, and Malaysia in particular, overt conflict has
been successfully quelled through the systematic marginalization of already vulnerable
indigenous communities. Aiken et al. (2015) examined the development of four dams in
peninsular and Eastern Malaysia and their impacts on the indigenous communities where they
were sited (Aiken & Leigh, 2015). Aiken believes indigenous communities bear the social and
environmental brunt of these developments because they live in the best locations for dam sites,
have little or no tenure security through their customary (undocumented) land rights, and are
politically weak or powerless. Among the impacts to the landscape from dams and their
reservoirs are the destruction or loss of species-rich tropical rainforests, habitat or wildlife
corridors, and fragmentation of remaining forest cover. Large reservoirs in tropical
environments also emit appreciable greenhouse gases. The social impacts to indigenous
communities include, besides the loss of their customary lands, loss of cultivated and subsistence
lands, including hunting and foraging grounds, and loss of important historical and cultural sites
such as burial grounds. Upstream and downstream communities suffer losses as well, which
have also included damaged and depleted fish stocks, compromised water quantity and quality,
and restricted access to the watershed/catchment areas. Resettlement, moreover, contributed to
fragmented families and communities, and forced assimilation into cash economies to which
many indigenes were not accustomed. Women especially suffered as their roles in their new communities did not allow them to make the same contributions to the family and household, and as a consequence they became increasingly dependent on men for support. Overall, Aiken found indigenous communities evicted and resettled from their customary lands are not adequately compensated, recognised or permitted to participate or comment on the planning of the project or their resettlement, and are ultimately further impoverished in their new communities.

Magombeyi and others (Lankford & Watson, 2007) attempt to transform water’s continuing role as a supply to be distributed in the river basin games they promote (Magombeyi, Rollin, & Lankford, 2008). By creating a water board that mirrors a catchment (or watershed) area and engaging its users in a range of alternatives for allowing water to flow through its system of channels, they have facilitated role reversals, and imparted lessons for community self-governance. Players in the game belonged to one of three subgroups representing their location in the catchment: upper, middle, and lower. These locations were obtained following a signal to start and race to claim their preferred position on the board. Some players were winners, while others were left with less-favored locations in the basin. Participants then played the game mimicking two stages (wet and dry seasons) and three strategies (individual water-seeking (selfish), individual money-seeking (best plots on the board), and community-based (water fairly shared and considering others). Disadvantaged positioned players later swapped roles with advantaged players to facilitate role reversal and understanding what it was to be like in both positions. Each round included time for discussions and feedback, and focused especially on identifying concerns and offering possible solutions. In a final debriefing of the game, each subgroup and its players identified and ranked with three votes the most pressing problems and their proposed solutions for addressing them, and posted this information to share with all other players. These subgroups represented gender, community leadership, and student and experts. Players/ farmers learned that sharing water reduced community conflicts and created opportunities for breaking poverty cycles by knowing that water would be available for everyone’s use. Participating in the game also built community by helping farmers realize they could meet, negotiate among themselves and speak as one in times of shortages. Finally the board game itself enabled participants to visualize and understand the connectedness of how water affects others as it moves through the catchment as a whole. Using a tool like the river basin game offers real potential for transforming water distribution scenarios from one of winners and losers to situations of equitable sharing and problem-solving that incorporates more holistic and ground-based approaches for allocating and sharing water.

4. Addressing Community Conflict in a Variety of Natural Resource Settings

A review of IUCN’s website identified a variety of documents related to conflict resolution, but no single location that assembles its efforts toward understanding conflict and approaches for addressing it or its resolution. These documents included a variety of resolutions and recommendations, several resource-related documents discussing specific types of conflicts, documents intended to forestall conflict by outlining approaches and prescriptions for protected area planning, two earlier documents that discuss conflict resolution approaches, and a more recent multi-stakeholder process for assessing and ensuring that conservation policies and practices respect the rights of indigenous peoples and local communities (Whakatane
Mechanism). The website also describes an environmental and social impact analysis process, which is intended to forestall or prevent conflict. The Environmental and Social Management System (ESMS) provides guidelines and tools for (1) screening projects for potentially adverse environmental and social impacts, (2) avoiding, minimizing and compensating for the impacts, and (3) maximizing the positive impacts. The ESMS also includes a semi-formal grievance mechanism that enables communities to raise concerns about adverse project impacts. A discussion of these documents follows with some thoughts on what has worked well, and might help more as IUCN faces problem situations in the future.

Resolutions & Recommendations
While the list of resolutions and recommendations identified in this paper is in no way complete, it begins to illustrate IUCN’s commitments to cooperation and attention to preventing and addressing conflict’s effects on natural systems. They included resolutions to assist and collaborate with indigenous peoples to recognise and conserve resources and sacred natural sites in protected areas, to acknowledge the damaging impacts of war and violent conflict on the environment and create the means to monitor, report and support those affected, and to promote cooperation through collaborative, information-sharing and community-based approaches. (See Appendix 1)

Resource-related Documents Discussing Conflict & its Prevention/ Resolution
Resource-related documents discussing conflict [and its resolution] focused on wildlife conflict (great apes and elephants), conflicts related to natural resources, their protection and management, and the impacts to resources in violent conflict and its protection. Several of these documents were available for review, except those pertaining to armed or violent conflict (See Appendix 2).

Two documents published around the same time discuss wildlife conflict and each focus largely on the technical issues related to problem encounters (Hockings, 2009; Motaleb, 2011). The earlier document (2009) is a resource and best practices guide for those addressing great ape conflicts (HGACs). It provides background and considerations for assessing HGACs, including the exploration of perceptions and attitudes along with cautions about their sources and reliability, and discusses and evaluates a menu of options available for deterring and intervening in problem situations. While it acknowledges the importance of understanding attitudes toward wildlife, and is clear that education will not eliminate conflict, it supports the possibilities for creating new understandings, an appreciation for great ape conservation and perhaps even greater tolerances. It is not a document that promotes any sort of conflict intervention processes between people, but does support and provide suggestions for understanding the social, economic and cultural dimensions of how conflicts might arise. The newer document (Motaleb, 2011) is largely a technical/ resource study intended to provide information on the biology and status of Asian elephants, and to map elephant routes, corridors, and areas of conflict, crop damage and sightings. This study castes villagers as the unfortunate obstacle to elephant conservation and proposes “train[ing] local people to deal with HEC effectively”, “train[ing] to live with the problem”, or simply educating future generations to appreciate the significance of elephant conservation. While the document states very clearly its technical focus, it is unfortunate that the basic human needs of the villagers are not acknowledged and more fully
addressed in the context of habitat destruction, for this sort of framing of the problem is unlikely to capture the human and social elements that might help to break this cycle of conflict.

Documents addressing natural resources focus on forest resources and transboundary peace parks. The scope of these documents ranges from assessment, to guidance, to tools and techniques to use in conflict settings. Penny assesses forest dependency of villagers adjacent to Mt. Elgon. He conducts this assessment as a prelude and mechanism to help transform a history of conflict to collaboration (Penny, 1998). Through interviews at the household, village, and parish level he examines people-forest connections and details the great importance and roles they play culturally and economically through the descriptions of the locals’ extensive and intensive use. The roles of wealth, gender, and proximity to the forest also help to create an understanding that can inform an administrative transition (from Forest Department to National Park) and lay the foundation for improved relations. Sandwith provides a resource in the form of guidance and best practices for the Parks to Peace initiative (Sandwith, 2001). Parks for Peace are defined as transboundary protected areas that are formally dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and to the promotion of peace and cooperation. The guidance promotes nine goals. Among them are: identifying and promoting common values, involving and benefiting local people, especially indigenous peoples, measures for coordinating planning and decision-making, administrative guidelines and resources for addressing and developing sustainable funding, cooperative agreements, and processes for monitoring and assessments, and indicators for anticipating and responding to situations of tension or armed conflict. Wilson surveys and examines company-led approaches and tools for addressing conflict in forests (Wilson, 2009). She found respondents used two main approaches: rights-based approaches favored by non-industry parties, and stakeholder management approaches favored by companies. Rights-based tools included participatory mapping, “rights-based” approaches such as certification of companies, and indigenous peoples providing or withholding their free, prior and informed consent (FPIC) to proposed operations. Stakeholder engagement/management practices include environmental impact assessments, stakeholder identification and analysis, multi-stakeholder dialogue, integrating conflict management into management systems, and framework tools or integrated “toolkits”. The survey also identified the use of company grievance mechanisms, and partnerships for shared ownership and benefits. While an interest and desire for company- or industry-wide standards exists, Wilson confirmed, as in most cases, that individual, context-specific processes to address local settings and needs makes standardizing conflict management approaches a challenge.

Processes for Forestalling or Addressing Conflict

Processes to anticipate and forestall conflict were discussed in the Environmental and Social Management System, and a marine protected area planning document while processes to address conflicts were discussed in three documents related to protected areas.

*The Environmental and Social Management System (ESMS)*
The ESMS outlines a framework and process intended to anticipate and prevent conflicts that may arise in conservation projects by evaluating the potential environmental and social impacts related to the proposed projects. This process mirrors other similar environmental impact
analyses processes such as the National Environmental Policy Act of 1969, and is a standard practice used in international financing (such as the World Bank) and more recently other environmental and development institutions such as the UN Environment Programme, Conservation International, and World Wildlife Fund. The system also provides for relief through an integrated grievance mechanism.

The ESMS is articulated through an overarching policy framework, the Environmental and Social Management Framework (EMSF), and implemented through four practices outlined in a manual that prescribes the procedures and measures for operationalizing the policies and principles embodied in the framework. The EMSF principles reflect IUCN’s goals to address social and human rights issues in conservation actions (IUCN, April, 2015). They include:

1. taking a rights-based approach,
2. working to build resilience, promote equity and address the needs of vulnerable groups,
3. engaging and acknowledging stakeholders concerns over the life of the project including their right to withhold free, prior, and informed consent (FPIC) to a project,
4. taking a gender-responsive approach that works to overcome historical gender biases,
5. applying the precautionary principle to assess risks and reject or redesign those projects posing unacceptable adverse impacts,
6. meeting or exceeding (when IUCN standards are greater) laws and requirements of host countries, and
7. including measures of accountability for full public disclosure of project impacts, including a process for accepting, addressing and resolving project concerns or complaints.

The ESMS Manual includes procedures and measures for: screening for environmental and social project impacts, scoping and assessing the impacts, developing an environmental management plan that mitigates project impacts and monitors mitigation measures, and monitoring and reviewing the projects for progress and evidence of unanticipated impacts and the need for making changes (IUCN, March, 2015).

The IUCN Project Grievance Mechanism
The ESMS also includes a project grievance mechanism. It is a semi-formal process available to complainants regarding the implementation of IUCN projects. The scope of the complaints heard include those that are said to deviate from IUCN policies and procedures with respect to safeguards, human rights, community participation and gender mainstreaming. It provides an avenue for aggrieved parties to bring their complaints, in which an IUCN investigator independent of the project requests and reviews plans for addressing the concerns raised. These plans are the basis for the implementing agency to work with the complainants and other relevant parties to develop remedial actions, which include describing the agreed upon corrective actions and a timetable. It does not include any obvious means for evaluation and monitoring of these outcomes, however.

The Stakeholder Participation Toolkit (2013) outlines the “nuts and bolts” for identifying and engaging interested and important parties in the identification, designation and management of marine protected areas (Stakeholder participation toolkit for identification, designation and
management of Marine Protected Areas, 2013). It is especially helpful in the way it methodically outlines how to identify important parties, and tools to use for considering the various dimensions at work within interested people and systems or frameworks within which decisions will need to made. It offers two tools (SWOT and PESTLE) to begin and conduct the analyses for identifying, planning, creating and managing a marine protected area. SWOT emphasises examining the Strengths, Weaknesses, Opportunities, and Threats of a topic, business, or organisation, while PESTLE complements a SWOT analysis with its focus on the Political, Economic, Social, Technological, and Environmental dimensions of a strategic plan. These starting points are then supported with more tips and tools in annexes that provide resources for participatory processes, holding effective meetings, among others. It is a practical guide with many helpful tips, tools, and resources to promote constructive, inclusive planning processes for establishing a marine protected area.

Lewis discusses and provides practical tools for managing conflicts in protected areas in two documents. The first document, Managing Conflicts in Protected Areas, provides, in Lewis’ words, a simple framework along with some strategies for addressing different kinds of conflicts that arise in protected areas (Lewis, 1996). Case studies (29) illustrate how these strategies have been used in a numerous situations. She refers users to additional resources in the bibliography which include standard and now classic tomes for assessing and addressing natural resource conflicts. Lewis believes three general principles can apply when assessing and addressing protected area conflicts: (1) Focus on the Underlying Interests, (2) Involve All Significantly Affected Stakeholders in a Fair and Respectful Process, and (3) Understand the Power That Various Stakeholders Have, and Take that into Account When Trying to Resolve a Conflict. These are all good principles, but as pointed out earlier, the frameworks one uses will determine the scope of an assessment, and consequently the breadth of the intervention one designs. In this case, she emphasises the Harvard Approach (i.e., focus on interests, not positions) at the exclusion of some other possibilities. Lewis next operationalizes these principles through a framework that includes: (1) Getting started/ Determining Roles, (2) Assessment, (3) Involving All Stakeholders, and (4) Implementation and Evaluation. Her treatment and recommendations for involving stakeholders is well developed and includes multiple dimensions to consider as well as numerous strategies to illustrate possibilities for users of this guide. Among the considerations she recommends are: dealing with large numbers of stakeholders, building trust, dealing with important stakeholders who do not want to participate, and involving less powerful stakeholders. Other considerations include: reaching a satisfactory resolution, dealing with factors outside the protected area, incomplete or contradictory information, and finding resources to pay for conflict resolution. Beyond the basic framework she outlines, she alerts users to some other important considerations, and once again provides strategies and illustrations for handling these situations. She includes: providing benefits to local people, enforcement considerations, education and public relations, conflicts involving indigenous peoples, armed conflicts, and the roles that NGOs can take in these processes. In all, this guidebook stands the test of time quite well. The exceptions relate primarily to the growth and practice of environmental conflict resolution and how this document could benefit from an update to reflect the lessons and improvements that time has provided.

A second document, Beyond Fences: Seeking Social Sustainability in Conservation includes two contributions related to conflict and addressing it. The document, in general, is an extensive
resource book that includes a compendium of participatory tools and processes, and like Lewis’ case studies in the earlier guide, topical illustrations of examples from the field. Lewis contributes a concept paper addressing conflicts in conservation (Lewis, 1997). She notes several important characteristics of conflicts arising in conservation areas. They can include (1) a large and diverse number of stakeholders ranging from local inhabitants to regional and national governments and international NGOs, (2) measures beyond the scope and jurisdiction of the conservation area including institutional, legal, political and economic influences, (3) both scientific and sociocultural dimensions, and (4) limited financial resources. In addition to these characteristics, Lewis offers lessons, and highlights and reiterates points made in her earlier guide, especially, to address conflicts in ways that acknowledge and are appropriate to the local customs, culture, and situations, involve NGOs as appropriate, and support the process with enforcement measures. A second conflict management section discusses processes, principles, and resources for negotiation and mediation. It emphasises three possible approaches: negotiation, mediation and arbitration and reiterates, once again, the general principles highlighted in Lewis’ earlier (1996) document, i.e., the Harvard Approach, or principled, interest-based negotiation/mediation. It also calls attention to conditions that will influence the success of a process. Among them are: the parties’ willingness to participate, ripeness, sense of urgency, interdependency among the parties, and the authority to make decisions. Finally, it provides a checklist of steps to follow in a mediation or negotiation. While these steps outline a sequential process for the uninitiated to follow, it lacks the depth that might help with especially difficult dynamics or history between the parties. For instance, in step three each party is asked to explain their “positions” (what they want and why). Dynamically this places a party in a defensive mode from the start in that they are explaining “why” and doing such in fixed “positions.” A process conducted using this distributive framework may reach decisions, but is unlikely to settle the disputes simmering beneath the surface.

The Whakatane Mechanism is a pilot instrument and process borne following a meeting (in Whakatane, New Zealand) to develop approaches to help address and reconcile issues arising in protected areas related to indigenous peoples and their rights. The mechanism was proposed to provide a framework for assessing the progress of implementing resolutions related to indigenous peoples adopted in 2008 at the World Conservation Congress in Barcelona. The assessments are intended to: (1) identify and assess problematic areas in protected or proposed protected areas where indigenous rights are violated, (2) propose solutions, including measures to monitor implementation, (3) recommend the means to address gaps between current practices and those embraced by the spirit of the resolutions, and (4) identify, support and celebrate successful projects and practices. Among the areas the assessments are intended to investigate are: land and resource rights and tenure, indigenous representation, self-determination, livelihoods, resettlement and displacement, the management role for indigenous peoples, benefit sharing and compensation, cultural and religious ceremonies and practices, awareness of these policies within the circle of stakeholders, and gender inclusivity (Concept Note for Pilot Whakatane Assessments). Two pilot assessments have occurred thus far (in 2011 and 2012) with the Ogiek people of Mount Elgon National Park in Kenya and Karen and Hmong peoples of Ob Luang National Park in Thailand. Colchester believes the Whakatane Mechanism is an important, if modest, step to recognizing and redressing long-time violations of indigenous peoples rights, and calls for a far wider implementation beyond these two pilots (Colchester, 2014).
5. Evaluating Conflict Resolution Processes

As IUCN seeks to build its conflict analysis and resolution capabilities it will also be important to include processes for evaluating the effectiveness of its efforts, including feedback on how things might work better. Emerson considered the types of information that are necessary to measure the effectiveness of both the conflict resolution effort and its impact on the ground (Emerson, O'Leary, & Bingham, 2004). She recommends building that knowledge by creating uniform systems for evaluation that includes data collection that is consistent, electronic, routine, decentralized, longitudinal, and continuous and includes multidisciplinary teams.

d’Estree et.al developed and assessed the applicability of six criteria for measuring the success of an environmental conflict resolution effort (d’Estree, 2004). See Table 1. These criteria include: (1) whether an outcome was reached, and in particular whether it was unanimous or by consensus, there were verifiable terms, it was ratified, and there was a public acknowledgement of the outcome; (2) the process quality, especially that it was procedurally just, accessible and inclusive; (3) the outcome quality, including the cost effectiveness of implementing the agreement, the financial, cultural and environmental sustainability, the outcome clarity, and the public acceptability of the outcome; (4) the relationship of the parties to the outcome such as how the parties feel about the outcome (Are the terms fair and just?), the flexibility and durability of the outcome, and compliance with it over time; (5) evidence of change in the way parties relate to one another are measured by examining the ability of the parties to resolve future disputes, whether there is a reduction in conflict and hostility, cognitive shifts in the way parties view one another, and a transformation or change in the old ways of doing things spanning from as close as to individuals and as far as in social institutions and relations; and (6) social capital considered through the enhanced individual capacity to draw on collective resources, or things that have come from a building a wider network of communication and trust. It also includes and considers a resident community’s increased capacity to handle future challenges together (Do they share information? Jointly gather information?). When social system transformation has occurred one sees more resilient responses of diverse groups to crises, increased civic discourse, and evidence of a new learning system in which the community uses the approaches independently. While these criteria were developed to evaluate the success efforts to address water conflicts in the American West, many of these criteria capture the important dimensions of developing and implementing any process that is inclusive, just, and facilitates a change in the way the parties relate to one another.

6. Conclusions & Recommendations for Assessing and Addressing Community Conflict in Natural Resource Settings

Conclusions

Creating a Typology of Community Conflict in Natural Resource Settings
This review confirmed earlier descriptions of the types of conflicts typically arising in conservation (Lewis, 1996). They include those related to landscapes involving resident
communities, including those living within or using natural resources under protected area status either by indigenous or other types of peoples, or their buffers and connecting corridors that overlap with local villages or communities. Extreme problems have arisen from designating protected areas which displaced entire communities or permitted them to remain but did not include any meaningful involvement of local communities in the planning processes, especially where communities are dependent on the resources of the area for their livelihoods. Problem encounters and conflicts have also arisen between communities and wildlife as their subsistence as well as market activities have overlapped with, or attracted, target conservation species. These include problem encounters with herbivores, carnivores, and threats to the habitat/homelands of both wildlife and the human communities.

This review of conflicts arising in wildlife conservation also found a history of the conservationist’s voice and desires dominating the dialogue, often at the exclusion of the resident communities that occupy habitat desired for species preservation and conservation. What is important to note is that the overt conflict which presents itself is that of problem interactions between subsistence community members and some wildlife species. However, the latent conflict, not acknowledged, relates to a decision already made by people outside the communities to conserve indigenous lands, which has in the past often required the inhabitants to vacate, sometimes consulting them; sometimes not (Buergin, 2003).

Recommendations

Based on the conflicts found to arise in communities related to conservation and resource development/management, this review concludes with recommendations for ways to recognise the antecedents of conflict. To the extent these measures are not already in place, this review recommends integrating the following approaches to support conflict resolution efforts and to address and forestall further escalation.

Planning

The planning documents this review identified provide a variety of frameworks, resources, and processes to help identify, acknowledge and address beforehand the issues that are likely to arise in identifying, designating, and managing protected areas. These relate primarily to identifying those concerned and affected by the proposed changes in land use that will occur with a designation. As the Environmental and Social Management System is increasingly implemented in IUCN projects and practices, it is essential to incorporate monitoring and feedback mechanisms for the system itself to identify opportunities for capturing and addressing any shortfalls or weaknesses found through practice. If measures do not already exist, consider providing opportunities for local communities and indigenous peoples to identify and initiate conservation/protected areas planning processes as well.

Measures to Foreastall and Address Conflict

General

1. Create a place on IUCN’s website that collects information related to IUCN’s efforts to address conflict. These resources will be more readily available to IUCN staff and partners, and hopefully used to a greater extent.
2. Lewis, *Managing Conflicts in Protected Areas* suggests that updates and addenda to this process might be available. Link any of these updates to this document on IUCN’s website.

**Expanding Conflict Analysis and Resolution Capabilities**

3. Conflict is a normal part of everyday life and every culture has its own ways of addressing problems. Learn more about and embrace local problem-solving approaches in and near IUCN protected areas and integrate these approaches into IUCN planning and problem-solving processes to enhance whatever North American models for conflict resolution are used. More specifically:

4. Broaden approaches for assessing conflicts to include multiple frameworks. These frameworks should include analyses to deepen the understanding of the historical, social, cultural and institutional influences that lie beneath the presenting conflict.

5. Learn more about the indigenous systems that have supported biodiversity and are in use in locations that are desirable destinations for protected areas conservation.

6. Broaden the understanding of indigenous and local communities’ interactions with wildlife to learn more about (1) what constitutes a problem from their perspective, (2) what sorts of measures they take to prevent such problems, (3) how they might prevent these problems from recurring.
Table 1: Criteria for Evaluating the Effectiveness of Environmental Conflict Resolution

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
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<tbody>
<tr>
<td>Process Quality</td>
<td>Procedurally Just Procedurally Accessible &amp; Inclusive</td>
</tr>
<tr>
<td>Outcome Quality</td>
<td>Environmental Sustainability Cultural Sustainability/ Community Self-Determination Financial Sustainability/ Feasibility</td>
</tr>
<tr>
<td>Relationship of the Parties to Outcome</td>
<td>Outcome Satisfaction/ Fairness Stability/ Durability over Time Flexibility</td>
</tr>
<tr>
<td>Relationship Between Parties</td>
<td>Reduction of Conflict &amp; Hostility Improved Relations/ Trust Ability to Resolve Future Disputes</td>
</tr>
<tr>
<td>Social Capital</td>
<td>Enhanced Citizen Capacity to Draw on Collective Resources Increased Community Capacity for Environmental Decision-making Social System Transformation</td>
</tr>
</tbody>
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Appendix 1

Resolutions & Recommendations

Protected Areas
Community Conserved Areas (Res 3.049)
Recognition and conservation of sacred natural sites in protected areas (4.038)

Armed Conflict
Resource-based conflicts in Darfur, Sudan (Res. 3.043)
Conservation in regions in violent conflict of West Asia—strengthening IUCN’s presence to protect the natural and human environment (Res. 3.046)
Liability and Compensation mechanisms for environmental crimes during armed conflict (4.097)

Cooperation
Collaborative Management for Conservation (Rec. 1.42)
The Importance of Community-based Approaches (Res. 19.23)
Principles of knowledge sharing of the Conservation Commons (Rec 3.085)
Appendix 2
Resource-Related Documents Discussing Conflict & its Resolution

Wildlife-Related
Best Practice Guidelines for the Prevention and Mitigation of Conflict Between Humans and Great Apes (Hockings and Humle, 2009).
The Asian elephants and associated human-elephant conflict in south-eastern Bangladesh (Motaleb, et. al, 2011)

Natural Resource-Related
Company-led approaches to conflict resolution in the forest sector (Wilson, 2009)
Transboundary natural resources conflict management in southern Africa (2002)
Conflict resolution and mediation in natural resource management in Nepal (Oli, 1998)
From conflict to collaboration: people and forests at Mount Elgon, Uganda (Penny, 1998)

Resource Impacts in Violent Conflict
Conserving the Peace: Resources, Livelihoods and Security, Joint IISD & IUCN (Matthew, et. al, 2002)
Nature in war: biodiversity conservation during conflicts (Blom, et. al., 2000)
7. References


