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Creating Coexistence between Humans and Wildlife: Global Perspectives on Local Efforts to Address Human–Wildlife Conflict

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Introduction

Every 10 years, the IUCN World Parks Congress (WPC) brings together conservation experts from around the world to share information and ideas, and set a global policy agenda for protected areas. The 5th IUCN World Parks Congress was held in Durban, South Africa from September 8–17, 2004, and was attended by approximately 3,000 protected area experts, practitioners, and decision makers.

The 5th WPC brought human–wildlife conflict (HWC) to the global stage as part of an effort to address current challenges facing protected area management and conservation. The HWC recommendation (included in this issue) was informed by a technical workshop that was part of the WPC proceedings. The workshop entitled "Creating Coexistence Between Humans and Wildlife: Global Perspectives on Local Efforts to Address Human-Wildlife Conflict" combined vigorous debate on human–wildlife conflict issues with a technical focus on useful outputs for those working in the profession. The workshop created "a unique opportunity to take stock [of the issues] … provide an honest appraisal of progress and setbacks; and chart the course for protected areas over the next decade and beyond" (IUCN, 2003).

This article summarizes recommendations from the workshop and introduces the other articles in this special issue of *Human Dimensions of Wildlife*. The articles that follow are written by presenters and participants of the "Creating

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Coexistence" workshop, helping to demonstrate the depth and breadth of the knowledge and diversity of experiences of those present in Durban.

Workshop Proceedings

The "Creating Coexistence" workshop included approximately 30 practitioners and professionals from a variety of institutions, disciplines, and geographic regions. To begin, eight case studies of specific efforts to address HWC involving a variety of species and settings were presented. Panelists then offered "lessons learned" for group discussion. Participants also worked as a group to explore specific challenges in the HWC area, including the potential for creating a "toolbox" of best practices, the identification of critical needs and gaps that characterize the HWC field, and the identification of the types of baseline data that need to be assessed in order to design effective strategies for preventing or mitigating HWC. Finally, workshop participants considered what, if any, steps were needed for global cooperation on HWC and drafted a recommendation that was approved.

A collective vision emerged for how conservationists, biologists, social scientists, practitioners, and researchers should address human–wildlife conflict. Workshop participants also identified gaps and needs in the field of HWC prevention and mitigation, including those related to capacity, tools, research, management, policies, and action. In addition, the workshop produced a formal recommendation included as WPC Rec 5.20 in the official 5th WPC Durban outputs (included in this issue). Perhaps most important, the group defined "next steps" for global work on HWC and made a commitment to move forward as a unified body to create a framework to develop and apply tools for preventing and mitigating HWC.

The Problem of Human–Wildlife Conflict

"Human-wildlife conflict occurs when the needs and behavior of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact the needs of wildlife. These conflicts may result when wildlife damage crops, injure or kill domestic animals, threaten or kill people" (WPC Recommendation, this issue). Such conflict may occur because a lion has attacked someone's livestock or a gorilla has raided a person's crops. The conflict also occurs when a person or community seeks to kill the lion or gorilla, or when a person retaliates against the authorities that are in charge of conserving wildlife and its habitat.

HWC escalates when local people feel that the needs or values of wildlife are given priority over their own needs, or when local institutions and people are inadequately empowered to deal with the conflict. If protected area authorities fail to address the needs of the local people or to work with them to address such conflict adequately, the conflict intensifies, becoming not only conflict between

humans and wildlife, but also *between* humans *about* wildlife. Frequently, wildlife conservation initiatives suffer, the economic and social well-being of local people is impaired, local support for conservation declines, and conservation and development efforts meant to offset more general "costs" of living near a protected area may be impeded.

Human–wildlife conflict is increasing in both frequency and severity worldwide and will likely continue to escalate. Protected areas are increasingly becoming islands of habitat surrounded by seas of cultivation and development. Wildlife and humans increasingly compete for space, resources, and places to call home. Although ecosystem-based approaches (including the development of corridors between protected areas) offer improved long-term protection for many species from a biological perspective, they also involve extensive regional opportunities for interaction and conflict between local people and wildlife. Without properly addressing HWC in the effort to conserve wildlife and their habitat, conservation efforts will lose stability and progress, as well as the support of local communities.

Human–wildlife conflict, as we understand it today, is not always inevitable and has not been the norm in all cultures and communities. In some communities and cultures, evidence of human–wildlife co-evolution and cultural tolerance to wildlife may offer clues as to how coexistence can be achieved elsewhere.

Rationale for a Global Consultation on HWC

Numerous factors, including biological, geographic, political, economic, social, institutional, financial, cultural, and historical features, make each conflict or coexistence situation unique. Analysis of conflict cases around the world, however, suggests that HWC situations involve many similar causes and effects, as well as trends and challenges. Consequently, there are guiding principles, processes, tools, and techniques that can be drawn on and adapted for application across a variety of conflict situations. Local efforts, however, may waste scarce resources by reinventing solutions that others have already developed successfully elsewhere or have identified as liable to failure in similar situations. Moreover, local stakeholders may lack the knowledge or other resources to look beyond their local situation for effective solutions to HWC. In other cases, they may lack resources needed to find a solution that lies close to home, within their culture, or in their own past. Compounding the problem, the expertise or knowledge that does exist is often possessed by those who are already so committed to their specific projects that they lack the time, energy, and resources to share their experiences with others struggling with similar problems.

The "Creating Coexistence" workshop allowed experts and practitioners (who largely work in isolation from each other), as well as protected area stakeholders struggling with HWC issues in their specific region, to begin this process of improved exchange and enhanced action.

Lessons Learned and Guiding Principles

Workshop participants agreed on a number of lessons learned including those that dispel common misconceptions. Several of these are described in this section.

Lesson 1: Human–Wildlife Conflict Often Involves Human–Human Conflict

The misconceptions and lessons begin with the very definition of HWC. In the simplest and most concrete sense, HWC is exemplified by a cow killed by a hungry or habituated tiger, or a tiger killed by an angry herdsman who just lost his cow. Human–wildlife conflict, however, frequently involves an equally important conflict between people who have different goals, attitudes, values, feelings, levels of empowerment, and wealth. Conflict with wildlife may be rooted in struggles among people over empowerment and access to resources or needs for survival. The conflict may also stem from people who have different needs or levels of need, different perspectives on the world in which they live, and questions of who should have access to resources or control over them. The conflict about wildlife is between people with historical wounds, cultural misunderstandings, socioeconomic needs, as well as gaps in trust and communication over how to conserve wildlife and ensure the well being of people at the same time. This is a richer, fuller, and more detailed and accurate explanation of the conflict that has developed.

Lesson 2: Biology is Part of the Solution but not Sufficient in Itself

Biological science alone does not provide a complete understanding of or solutions to the conflict. In reality, half of the challenge of addressing the conflict is in understanding the human dimension with its social, cultural, political, economic, and legal complexities. Perhaps the common report often heard from local communities—that the government cares more for wildlife than the people—is an indication of the misconception that conservation is purely a matter of biological science. Time and effort invested in achieving a fuller understanding of a particular wildlife species is often undercut by a less than full understanding of the motives, beliefs, and values of the humans involved.

Lesson 3: Perceptions of Conflict Matter and Solutions Must Address Them

Often, the level of public outcry is not in direct proportion to actual crop, livestock, or property loss. Rather, public outcry often has much more to do with perceptions of potential risk, as well as a lack of control over addressing the problem. Neighboring herds of cows or dens of rodents may cause more crop damage in a year than a single elephant that wanders through the region once each year. Yet, the

elephant's intrusion or threat of intrusion may excite greater public outcry because people feel that they have less ability to control or influence the threat and the threat of extreme harm is greater. In addition, the elephant, unlike the cow or rodent, serves as a reminder that the people have no control over the elephant because of government laws. There are ways that people can deal with their neighbor's intruding cow or a pesky rat, but people often have no satisfactory or legitimate recourse for dealing with elephants, lions, tigers, or gorillas that are protected by law, but present a greater potential for personal or economic damage. Even when actual damage is less than perceived, the conflict still exists and we need to take the necessary steps to address the roots of the problem.

Lesson 4: Balancing Global Insights and Local Variability

Two interesting contradictory misconceptions seem to exist simultaneously. On one hand, many conservationists believe that "their" species or protected area is unique such that "lessons learned" from elsewhere or widely held principles of how to assess, address, process, and evaluate conflict do not apply. This notion applies to specific taxonomic species or to regions of the world (e.g., North-South or Asia versus South America or one protected area compared to another). In discussions at the workshop, however, most participants sensed that lessons learned in HWC with one species or in one area offer value and insights into how to address conflict situations elsewhere, even those involving different species or distant regions. Certainly, there are taxonomic, cultural, and site-specific differences, but there are similarities from which local stakeholders can learn and glean knowledge and expertise for their site-specific work.

On the other hand, it is a mistake to think that a one-size-fits-all, standardized prescription for mitigation can be applied successfully across the wide spectrum of specific conflict situations. Each conflict situation brings with it a unique combination of social, cultural, economic, political, historical, biological, and geographic complexities.

Between these two extremes is a more balanced truth. Widely held global principles and lessons learned, as well as valuable tools and techniques for mitigating conflict, can and should be shared across a wide spectrum. They must, however, be put into perspective with an understanding of the unique, local context of any conflict. This fully integrated view—complete with a full understanding of the similarities across a wider spectrum, as well as the local distinctions—is critical in successfully designing and implementing any conflict mitigation program.

Lesson 5: Successful Responses Require the Use of Multiple and Adaptive Tools

Any given tool, technique, or approach is more likely to succeed if it is incorporated into a full arsenal of conflict mitigation strategies and applications with

flexibility to change as conditions change. In the context of designing physical barriers, for example, species such as gorillas, wolves, and elephants will typically learn about and find ways around any single barrier. Similarly, compensation schemes that are not tied to preventive measures and changes in behavior are more likely to fail than ones that are tied to community participation and good livestock husbandry. Multiple tactics need to be applied together to ensure success. At a more general level and in the context of overall conflict mitigation strategies, complex and multifaceted solutions are needed to address the complex and multifaceted reality of HWC situations. Rarely, if ever, can a single tactic address the full range of social, economic, biological, and other aspects of a conflict scenario. By combining a number of tactics, tools, and techniques, we can strengthen and improve the chances of overall success in mitigation efforts.

Lesson 6: Demonstrating Genuine Effort Is a Valuable First Step

Fostering communication and trust, demonstrating effort and a willingness to address the issue, and following through will often have a positive effect on the attitudes and actions of people in conflict with wildlife. This, in part, reflects the fact that perceptions are major influences on HWC. Genuine willingness and effort may be an effective short-term means for reducing conflict as longer-term measures are tried, tested, and implemented.

Needs, Gaps, and Next Steps

Numerous needs, gaps, and next steps were identified in the workshop. From global to national to local and from international conservation organizations to local community groups to governments to research institutions, a collective capacity is still sorely lacking due to an enormous list of gaps and needs that are faced daily.

Training and Capacity Building

Training and capacity building are needed for individuals and institutions at all levels dealing with all aspects of HWC, including the development and implementation of institutional procedures and principles, site-specific programs and processes, and governing laws and policies. Training programs need to occur at all levels, but especially local and national levels, to ensure the effective use of facilitation techniques and increased awareness of resources, best practices, tools, processes, and approaches for effective mitigation. Training should target: (1) government protected area officials who may deal with HWC in several protected areas in a region or country; (2) conservation organization staff who may be managing a conservation program for a protected area or region, but do not have a complete set of skills or expertise to address the complex, multidisciplinary nature

of HWC; and (3) non–governmental organizations (NGOs), community leaders, and other groups and institutions who require the skills to address HWC. In addition, more opportunities are needed to share experiences and lessons learned to enhance and refine the approach and incorporate more "out of the box" thinking and application in the work.

Adaptive Management and Applied Research

Management of human–wildlife interactions needs to be informed by a more systematic understanding, use, and application of biological, social, and cultural knowledge and norms. Adaptive management of HWC needs to be more responsive to conflict; more proactive in using research, best practices, and other resources; and more assertive in learning about, developing, and implementing solutions. Assessments of the conflict should include social, cultural, historical, biological, ecological, political, historical, economic, and geographical components and should be made and reviewed, along with any action plans, by all stakeholders. Training, expert facilitation, and applied research focused on HWC causes, effects, and solutions will improve overall management efforts. More effective monitoring and evaluation of all aspects of the conflict needs to occur and be fed back into management and research plans.

Parks can be agents for communities to access information, resources, and solutions, however, communities need to have an equal stake and ownership in whatever solutions are derived from this process. As communities tend to outlast individual park managers and conservation agents and researchers, all stakeholders have an interest in ensuring that the local communities have responsibility over and ownership of the information about the conflict's history, plans, research, and actions.

Applied research is also needed in both the biological sciences and social sciences, as well as in technical solutions. Research is needed to understand and address the levels and complexities of human–human conflicts that are an integral part of and exacerbate human–wildlife conflicts. The results of this research should inform management decisions. In fact, more research effort needs to be practically focused and tied to adaptive management of the conflict. Researchers, managers, communities, and practitioners need to exchange ideas and innovations more regularly and in a timely fashion.

Communication and Information Exchange

HWC situations are typically characterized by inadequate or inappropriate information exchange and communication, often resulting locally in low levels of productivity or success and high levels of distrust between stakeholders. The natural complexity of HWC situations, the multitude of stakeholders involved, and the historical, social, and political roots of the conflict all contribute to these challenges. As a result, HWC in its entirety is often not fully understood or appreciated, even by

those closest to the issue, not to mention individuals and institutions far away who may be able to influence the programs designed to address the conflict, but who do not deal with the conflict every day. Current communication and education efforts lack the formal and informal structures and channels needed to ensure accurate and appropriate sharing of information and satisfactory levels of trust and empowerment.

Relevant and timely exchanges of information about all aspects of HWC need to be developed and implemented, and resources need to be made available. This information needs to be used by local managers and communities, as well as funding agencies, practitioners, and facilitators to ensure that best practices are being understood, adopted, improved on, and shared across the spectrum of HWC practitioners. Some processes and precedents exist that could help others address the challenges of improving communication, facilitating information exchange, and building trust. Most of this knowledge, however, is specific to sites, disciplines, or species and is not widely or easily accessed by practitioners and stakeholders. Yet, these techniques often have greater applicability across a wider spectrum.

To improve local efforts, professionals, practitioners, and stakeholders dealing with HWC need to: (1) build up and tap into a formal global network that will foster the exchange of ideas and information; (2) create resource linkages and partnerships with relevant agencies and individuals; (3) establish, update, and share the current state of knowledge on HWC; (4) empower local practitioners and affected stakeholders with needed resources, skills, and information; (5) gather, disseminate, test, and improve best practices; and (6) identify additional gaps, needs, and lessons learned in the field.

Information exchange is critical at the local level to ensure full understanding of the conflict, empowerment of stakeholders, and effectiveness in communication and education. Systematic and effective monitoring, record keeping, and quick responses are needed to ensure the conflict from both wildlife and human perspectives is being tracked, understood, and sufficiently addressed. Appropriate new, existing, or traditional systems and institutions need to be developed or empowered locally to ensure good management. Better communication and education could occur through more systematic and documented exchanges, written agreements about roles and responsibilities, consistent opportunities for formal and informal information exchange and engagement, traditional and non-traditional means of educating and sharing information, and through efforts to balance the power dynamics among stakeholders.

Strengthen Resources

Institutional, individual, technical, and financial resources to support HWC practitioners and programs need to be identified, developed, and strengthened. For example, resources are needed to support better facilitation of the conflict mitigation process at local sites. Additionally, information that is currently dispersed, but

not easily accessed or applied in the field should be collected and analyzed to turn relevant work into easily digestible guidance materials and training programs to ensure that these complex issues are dealt with as directly and confidently as possible. With this in mind, criteria and processes need to be developed or improved on in how managers and stakeholders select the tools and approaches that they will use to address conflict and evaluate their options in the selection of the many tools available.

Create Equitable, Effective Structures and Processes

Considering the variety of structures and processes that guide stakeholders locally in developing HWC mitigation programs, nationally in maintaining legal frameworks that dictate acceptability and feasibility of local options, and globally in accruing a wealth of information and resources with few opportunities for local synthesis and adaptation, it needs to be ensured that local, national, and global structures and processes are better designed to maximize effectiveness, help meet goals, and ensure equitability in the process. It needs to be ensured that the structures and processes created are intentional and appropriate for all, not simply accidental or convenient for a few. They need to be designed to foster dialogue; facilitate informed, equitable decisions; enhance the benefits of and opportunities derived from wildlife for all stakeholders; ensure social and cultural appropriateness, as well as overall equity, transparency, and trust; and ensure that HWC laws, policies, and programs are designed to empower and invigorate local authorities and stakeholders, are informed by local realities, and are responsive to both the people involved and the challenges of the situation.

Third Party Facilitation

Certain types of expertise, especially facilitation, are not often locally available, or when available, may not be appropriate given certain characteristics of the conflict situation. Third party facilitation and other forms of expertise are often needed to ensure that stakeholders feel willing and able to work through a process that will lead to effective mitigation, allow stakeholders to draw from a wider body of resources and knowledge that may not be available locally, as well as to help trouble-shoot problems along the way. Facilitation is particularly advisable in cases where: (1) HWC mitigation expertise is not locally available, (2) conflict is particularly adversarial and characterized by mistrust among stakeholders, (3) the situation is extremely complex, or (4) communication between stakeholders has broken down.

Funding

Funding needs to be tied to the conflict itself, not just to a place or to a species. Funding is needed at local, national, and global levels. Local funding is essential

to ensure that "best practices" are being developed and implemented soundly and effectively, and that multidisciplinary, multi-tactic, and comprehensive programs are given adequate support to ensure the best chance of success. At the global level, funding is needed to ensure that the progress and lessons learned locally are appropriately made available to the wider community. Globally informed and developed resources, exchanges, innovations, and efforts require funding to ensure that local efforts continue to act with state-of-the-art knowledge and practice.

Create a Global Toolbox

Taken together, these resources, sources of information, lessons learned, principles, and processes would comprise a dynamic, innovative, and readily available "toolbox" for practitioners and stakeholders. The success of this toolbox will lie in its ability to be dynamic, adaptable, accessible, and updateable to reflect changing needs, gaps, challenges, and site-specific conditions. The toolbox will also succeed if it offers guidance on process and assessment, information on lessons learned through case studies, and comparative evaluation of techniques and tools. This will ultimately leave the user with a rich source of resources that he or she can adapt and apply more specifically to his or her local situation. Above all, the toolbox will be geared toward helping managers, conservationists, and stakeholders through a *process* of engaging stakeholders; resolving conflict; and offering options, lessons learned, wisdom, ideas, and innovations. Thus far, the next steps identified here and the designation of a global task force represent the beginnings of a framework and process that will pull together the ideas, actions, experiences, results, and lessons learned into a host of products and services comprising a much needed HWC "toolbox" to improve overall effectiveness and efficiency of conflict identification, prevention, and mitigation.

Improve Recognition of HWC

HWC should be recognized as one of the most critical conservation challenges facing protected areas today. HWC is too often sidelined by other conservation initiatives, perhaps because HWC is such a complex, poorly understood, and difficult issue. Yet, if overall conservation efforts do not directly address HWC in their programs, these efforts will likely fail in the face of unresolved conflict between humans and wildlife. In other words, if the costs of conservation and wildlife are not addressed first, the benefits will not be appreciated. Thus, recognition needs to come in the form of greater awareness, prioritization, and action by conservation authorities, governments, and funding institutions. These entities need to recognize that if conservation is to succeed, HWC (a continuously growing problem globally and intensifying problem locally) must be addressed boldly and confidently.

Overall Recommendations to IUCN, WPC, and the Global Community

The WPC HWC recommendation, published in this issue, highlights the main points made by the workshop to improve HWC capacity, cooperation, recognition, and funding. It also includes a call for the establishment of an international forum on HWC. Based on workshop discussions and individual and collective HWC experience, the large majority of participants felt strongly that an international forum or task force to address human–wildlife conflict issues needed to be established. In fact, they decided to take the first step to create this forum by creating a task force with an agenda to: (1) address the aforementioned needs, gaps, and next steps; (2) further the discussion, analysis, and actions on HWC; and (3) for taking action to fulfill the recommendation made in Durban.

Conclusion

The "Creating Coexistence between Humans and Wildlife" workshop at the 5th IUCN World Parks Congress provided a deeper and broader understanding about how human–wildlife coexistence can and should be fostered both conceptually and practically. The workshop offered HWC practitioners and experts a much-needed venue to discuss, debate, and discover the means to address the multifaceted complexities of this growing and intensifying conservation challenge. The results of this collaborative effort set the stage for further global coordination and action to improve local efforts toward coexistence. The conservation community is offered a challenge to work together to address human–wildlife conflict more effectively at the local level by drawing from a global pool of wisdom and lessons accrued in specific situations around the world across the taxonomic, regional, and disciplinary spectrums. The outputs of the 5th World Parks Congress "empower protected area managers and policy makers around the world. With the Durban Accord and the Recommendations in hand, they can start a process with their governments, institutions, and organizations to make the vision set in Durban a reality" (IUCN, 2003). Partnership and support is encouraged in developing and implementing this global task force and to responding with immediate action to the recommendations and actions outlined in Durban and in this article. Through collaboration, innovation, and integrated action, the effectiveness of the efforts to mitigate and prevent conflict will be greatly improved.

Reference

IUCN (2003). *World parks congress press release.* Retrieved September 17, 2003, from the IUCN website: <www.iucn.org>.