



## Policy Options for Biodiversity, Livelihoods & Transboundary Animal Disease Management in Southern Africa

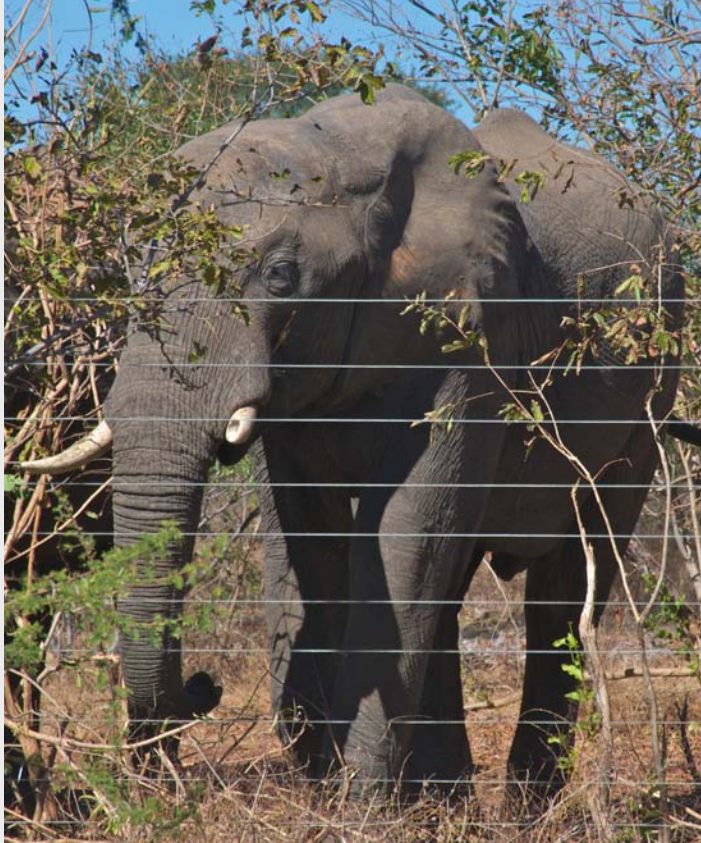
*One of the most ambitious and potentially significant conservation developments taking place in southern Africa today is the formation of transfrontier conservation areas (TFCAs). Incorporating national parks, game reserves, hunting areas and conservancies embedded within a matrix of land under traditional communal tenure, TFCAs provide extraordinary biodiversity conservation and sustainable development opportunities and are a top priority for SADC (the Southern African Development Community).*



The Wildlife Conservation Society's AHEAD (Animal & Human Health for the Environment And Development) Program is working to address problems facing biodiversity conservation and development in these large, transboundary landscapes by focusing on the critically important linkages among wildlife health, domestic animal health, and human health and livelihoods.

Through its "Beyond Fences" project, WCS is focusing efforts on southern Africa's Kavango Zambezi Transfrontier Conservation Area (KAZA TFCa), on the verge of becoming one of the world's largest conservation-oriented landscape. The importance of this TFCa to the region was reaffirmed in August 2011 when the Presidents of Angola, Botswana, Namibia, Zambia and Zimbabwe signed a binding Implementation Treaty formally and legally establishing a transboundary area spanning over 444,000 km<sup>2</sup>. The KAZA TFCa, located in the Okavango and Zambezi river basins includes, for example, the Caprivi Strip, Chobe National Park, the Okavango Delta (the largest Ramsar site in the world) and the Victoria Falls World Heritage Site.

KAZA is also home to many of the world's most charismatic megavertebrates, including the largest contiguous population of elephants (approximately 250,000) on the continent. A key economic driver behind TFCAs like KAZA is nature-based tourism, a sector in which southern Africa enjoys a global comparative advantage.



M. W. Atkinson/WCS

## Conservation Challenge: Animal Health Policy Precludes Connectivity

*The TFCA concept and current, internationally accepted approaches to the management of transboundary animal diseases (TADs) are largely incompatible.*

The TFCA concept promotes the free movement and re-establishment of migratory patterns of wildlife over large geographic areas and across international boundaries (nearly 90% of the region's burgeoning elephant population exists south of the Zambezi River while vast tracts of suitable habitat lie to the north).

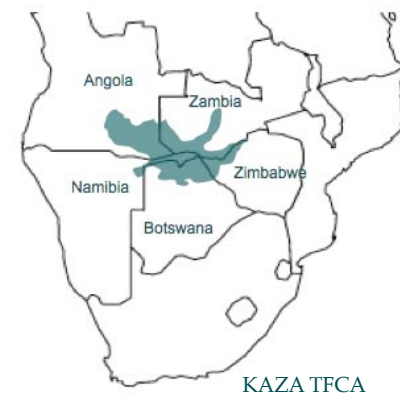
The present approach to the control of TADs, however, relies on the use of extensive cordon fences to prevent movement of susceptible animals between areas where TADs occur and areas where they do not, and to similarly restrict trade in commodities derived from these animals. In short, the incompatibility between **(a) current regulatory approaches for the control of diseases of agro-economic importance and (b) the vision of vast conservation landscapes with fewer major fences** represents one of the key challenges to transboundary conservation success and thus, risk-diversification of land-use options and livelihood opportunities - particularly important given the realities of regional climate change and ongoing food insecurity.

## Emerging Challenges, Emerging Solutions

The TFCA vision of re-establishing traditional wildlife movement patterns across vast landscapes is strengthened by the fact that tourism is the fastest growing industry in the world. In southern Africa, nature-based tourism is a significant contributor to gross domestic product. The spectacular KAZA transboundary landscape offers significant local and regional economic development opportunities.

Despite the potential for growth in wildlife-based tourism to stimulate economic development, livestock farming remains an important foundation of traditional livelihoods and culture, as well as a source of foreign exchange for beef exporting countries. The likelihood of domestic and wild animals coming into ever-more-intimate contact reinforces the need for better scientific knowledge and planning, to preclude consequences that can be detrimental on one or both sides of the proverbial fence. In fact, the management of wildlife and livestock diseases (including zoonoses - diseases transmissible between animals and people) within larger transboundary landscapes remains unresolved and an emerging policy issue of major concern to livestock production, associated access to export markets, and other sectors, including public health, in the

region. The prospect of removing some existing barriers (fences) to wildlife and livestock movement presents an escalating dilemma over how best to balance the needs of the livestock and wildlife conservation sectors.



KAZA TFCA

## Cross-Sectoral Approach Critical

WCS, through its AHEAD program, aims to address these complex issues by providing technical expertise and facilitating transparent, multidisciplinary policy dialogue and planning in the region. Specifically, we are working to bring key policy makers and relevant sectoral expertise to the table to explore new options for the management of transboundary animal diseases and for policy interventions that will support both conservation and rural development objectives.



Through its engagement with the KAZA Secretariat and key multilateral bodies such as SADC (Southern African Development Community), OIE (World Organization for Animal Health) and FAO (Food and Agricultural Organization), the AHEAD program has been working to enhance recognition of the critical cross-sectoral issues that pervade the nexus of wildlife health, livestock health and human health and livelihoods in southern Africa.



M. W. Atkinson / WCS

Ongoing discussions with member country government officials working in the livestock sector are helping to stimulate a desire to explore more collaborative, integrated approaches to rural development in KAZA. These include novel disease management alternatives such as commodity-based trade. The KAZA Technical Committee (TC) is comprised largely of wildlife and environment experts and government officials. As AHEAD has demonstrated elsewhere in the region, it is only when the wildlife and agriculture sectors are both at the negotiating table that meaningful dialogue on key land-use policies can be progressed - hence the importance of AHEAD's outreach to the KAZA TC, regional agricultural officials, SADC, OIE and FAO.

### Commodity-Based Trade

Market access for livestock and livestock products (LLP) from Africa is constrained by the prevalence of transboundary animal diseases such as foot and mouth disease (FMD). The developed world's fear of these diseases largely precludes large-scale LLP exports from Africa to potentially lucrative markets in the European Union, United States and Japan.

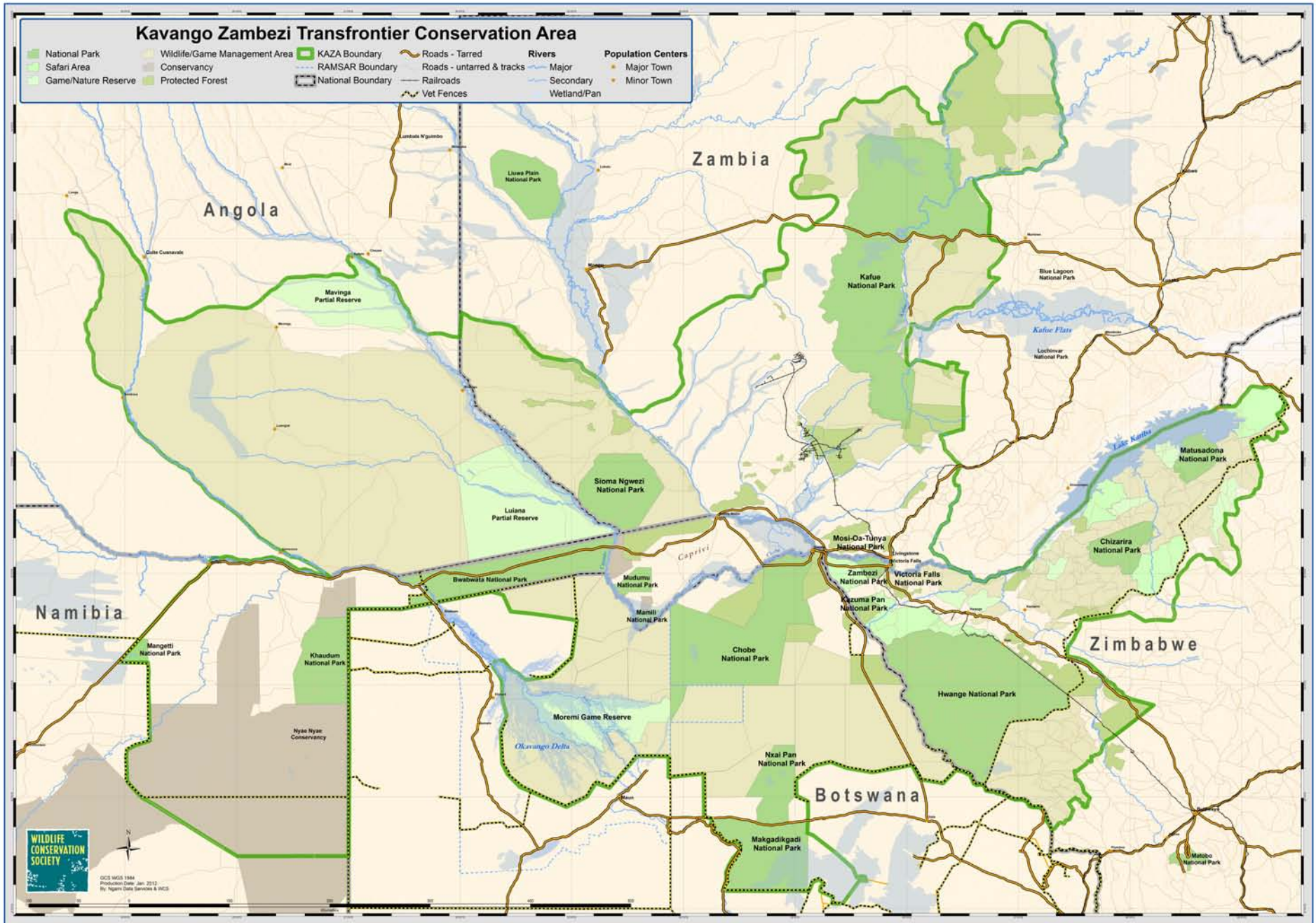
International trade practices for LLP have historically emphasized geographic or 'zonal' freedom from disease (relying on miles of cordon fencing separating wildlife and livestock). Recently, however, suitable alternate strategies have become available for managing significant disease hazards, strategies that offer more focused yet equally effective standards for risk management. For example, commodity-based, non-geographic approaches to trade focus on the *safety of the process* by which products are produced *rather than on their regional origin*, and in so doing offer the potential for developing countries to export meat products that are scientifically demonstrable as safe for importing countries while also precluding the need for impenetrable veterinary fencing that currently constrains SADC's vision for regional transboundary conservation.



M. W. Atkinson / WCS



KAVANGO ZAMBEZI TRANSFRONTIER CONSERVATION AREA



The material and geographical designations on the map do not imply the expression of any opinion whatsoever on the part of WCS concerning the legal status of any country, territory, or area, or concerning the delineation of its frontiers or boundaries or those of the TFCA.





M. W. Atkinson/WCS

## Disease Matters

*Recognizing and addressing issues emerging at an intensifying wildlife | livestock | human interface will be of critical importance to successful biodiversity conservation in this region. WCS is now uniquely positioned to respond to these “make or break” interface challenges in the region and help develop effective solutions.*

As a result of the great diversity of wild ungulate species with which many pathogens such as foot and mouth disease (FMD) virus have co-evolved, southern Africa is burdened with more economically significant TADs than any other part of the world. At the same time, there is a growing regional discomfort with the perspective that eliminating wildlife hosts may be the only feasible way to meet current international beef trade standards. Many SADC countries, recognizing the significant and growing contributions of the wildlife sector to GDP, are expressing a desire to revisit animal health policies that have been in place since the colonial era.

## What’s at Stake?

Improved livelihood options for millions of people, secured transboundary landscapes, and long-term protection for many important wildlife species in the region can be gained through animal health-related policy interventions and by enhancing the process of gathering, collating, analyzing and disseminating relevant disease management information. In order to build support among the international community for new, and perhaps uniquely African, approaches to transboundary animal disease management, additional and more relevant data on diseases of economic importance in southern Africa are critically needed. The perceived threat to livestock of trade-limiting diseases present in resident wildlife continues to hinder progress in the context of the livestock products trade with Europe (which dominos to drive land-use practices throughout the region, negatively impacting wildlife and poor rural pastoralists). Southern Africa as a whole needs to be better positioned scientifically to argue for alternatives to an animal disease management paradigm that has been entrenched since the colonial era, a time when wildlife had no voice and a negligible role in economic growth.



## Facilitating Conservation Success

Given the importance of both wildlife and livestock to KAZA, it is essential to rethink how to best manage risks from diseases like FMD in ways that help Africa's pastoralists and farmers, do not threaten free-ranging wildlife, and also provide confidence to beef importing countries that the products they buy pose minimal threats to their own agricultural sector. Animal health policy adjustments and regional harmonization will, however, require serious cross-sectoral dialogue and earnest stakeholder consultation to be comprehensive, inclusive and socially, environmentally and economically sustainable. As a leader in addressing health interface issues, the WCS AHEAD program is committed to creating an enabling environment that allows competing sectors to literally come to the same table and find collaborative ways forward.

Within this broad context, and in close collaboration with the KAZA Secretariat, we aim to:

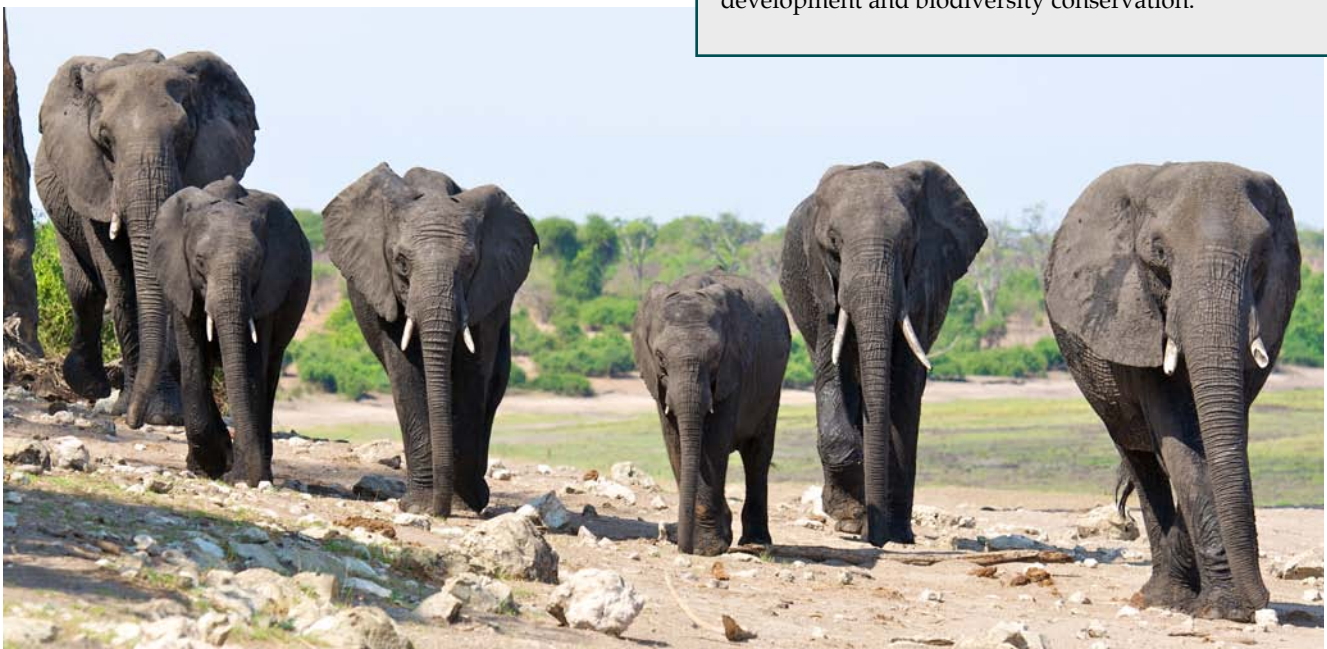
- ▶ Facilitate the building of local, regional and international partnerships through informal and formal consultations.
- ▶ Conduct regional workshops and meetings focused on identifying solutions for achieving compatibility between the TFCA concept and international standards for the management of Transboundary Animal Diseases.
- ▶ Collaborate with partners such as USAID, USDA, OIE and FAO on regional initiatives to assist SADC member states as they consider alternative disease management strategies such as commodity-based trade through mechanisms like the EAC/COMESA/SADC Tripartite Agreement.

## Adaptive Strategies for Climate Change

The KAZA TFCA falls almost entirely into a geographic zone in Africa considered to be most "at risk" from climate change. Conservation strategies that promote free movement of wildlife and enhanced connectivity across large landscapes like KAZA are considered crucial factors in biological adaptation to climate change.

Climatic change will likely affect natural ecosystems, human livelihoods and economies in KAZA. Increasing temperatures, coupled with major drying, are predicted to affect wildlife distributions and long-term population viability for a range of species. In the absence of future policy interventions, agricultural crop failures brought on by a shortened growing season are predicted to lead to increased rural household poverty and greater dependence on natural resources. This has significant implications for the environment and biodiversity. Thus, consideration of adaptive strategies in the development of the KAZA TFCA is critical.

Conservation and socioeconomic development initiatives that include wildlife- and livestock-based activities increase opportunities for resilience among rural communities. Alternatives to policies that rely on the separation of wildlife and livestock, approaches such as commodity-based trade, allow for diversified livelihood options and land-use choices, and are urgently needed in the interest of sustainable economic development and biodiversity conservation.



M. W. Atkinson / WCS



## Key Gaps: Funding Still Required

*The ability of SADC countries to effectively negotiate with beef importing nations in the developed world is constrained by a general lack of defensible surveillance data required for robust situational and disease risk analyses.*

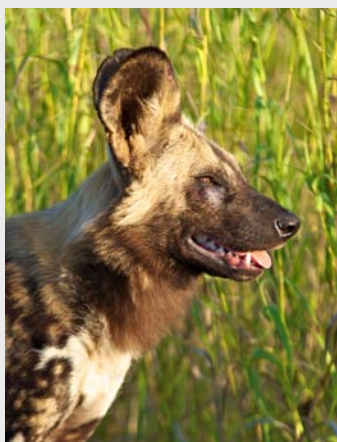
WCS can directly contribute to a successful outcome in the region by continuing to strengthen the regional knowledge base and:

- Providing financial and technical support to TFCA member countries to enable them to develop targeted wildlife disease surveillance programs.
- Establishing a veterinary epidemiology program in the KAZA TFCA to focus on key transboundary health issues at the livestock/wildlife/human interface and to coordinate regional disease surveillance in wildlife concordant with international standards.
- Conducting a comprehensive scenarios-based cross-sectoral economic analysis related to disease management options and projected development outcomes.



M. W. Atkinson/WCS

## Looking AHEAD



Full examination of opportunities that might enable the delinking of trade in livestock products from geographically defined animal disease status zonation is to be encouraged, as modern approaches to the management of transboundary animal diseases could potentially enable expanded international trade in livestock products from southern Africa to proceed safely while reducing the need for some of the disease control fences that currently preclude the connectivity required for transfrontier conservation success as currently envisioned by many SADC countries. Science-based shifts away from older disease management paradigms should result in an enabling environment for enhanced and diversified livelihood opportunities and regional economic growth related to benefits to and from both the livestock and environmental conservation sectors. Economic development that is based upon a diversified portfolio that includes both livestock-based and wildlife-related activities increases opportunities for resilience among southern African communities and nations subject to threats like food insecurity and climate change.

AHEAD strives to catalyze win-win opportunities related to food security, biodiversity conservation, poverty alleviation and enhanced livelihood diversification - all of which enhance resilience and thus the likelihood of sustainable development.

For more information, please visit the WCS AHEAD website at [www.wcs-ahead.org](http://www.wcs-ahead.org), or email:

Steve Ososky ([sosofsky@wcs.org](mailto:sosofsky@wcs.org)), Mark Atkinson ([matkinson@wcs.org](mailto:matkinson@wcs.org)), Shirley Atkinson ([satkinson@wcs.org](mailto:satkinson@wcs.org))

WCS would like to express sincere thanks to USAID, the Rockefeller Foundation, the USFWS, the KAZA Secretariat and Technical Committee, and our other partners. The contents of this overview are the responsibility of the authors, and do not necessarily reflect the views of the donor organizations supporting the program, or the views of our government partners.



© 2012 The Wildlife Conservation Society / AHEAD Program