



SCALING UP CONSERVATION SUCCESS WITH SCAPES

A Program of the Wildlife Conservation Society Supported by the
USAID/ EGAT SCAPES Program

BEYOND FENCES: POLICY OPTIONS FOR BIODIVERSITY, LIVELIHOODS AND TRANSBOUNDARY DISEASE MANAGEMENT IN SOUTHERN AFRICA

Year 4 Implementation Plan (FY 2013)

October 2012 – September 2013

As has been the case in previous years, this Year-4 implementation plan should be viewed as a living document as we utilize on-going USAID support to thoroughly consult regional experts in an iterative, adaptive management fashion. We wish any regional stakeholders who review this implementation plan to *know that we know* it has not yet benefited from a thorough regional vetting, and is thus subject to modification.

A. OVERVIEW

PROGRAMMATIC APPROACH

The principal goal of the WCS SCAPES program is to conserve biodiversity and to secure the livelihoods of the rural poor through targeted site-based and policy initiatives at globally important sites for biodiversity conservation. WCS is building on USAID's Global Conservation Program (GCP) decade-long tenure which enabled partners to explore landscape-scale conservation approaches that consider complex and integrated social, economic and ecological factors.

SCAPES support enables us to adapt and extend our efforts to scale-up across boundaries where it makes most sense for wildlife, and to capitalize on our accumulated learning to focus on the interrelated needs to develop and sustain enabling conditions for adequate governance mechanisms, policies in key areas, and efficient markets to finance conservation and facilitate development.

Taking action to abate threats that risk the loss of biodiversity, depletion of ecosystem goods and services and increased impoverishment of marginalized, resource-dependent communities is central to WCS's mission of saving wildlife and wild places. WCS is mobilizing expertise and resources to address four global conservation challenges: adaptation to climate change; sustainable extractive industries; secure human livelihoods; and healthy wildlife, people and ecosystems. Implementation of our SCAPES activities will help us address many of these challenges, as well as give us the opportunity to extend effective conservation to new people and places, and their related institutions and organizations, thereby increasing chances of ecological, social and financial sustainability of our conservation actions.

The USAID SCAPES elements – a threats-based approach, sustainability, adaptive management, and scaling-up – are essential, interdependent components of successful conservation efforts. Each is critical to a positive and sustainable long-term impact on biodiversity conservation at a landscape or seascape scale and to secure local livelihoods. These elements are integrated into the activities presented below.

The SCAPES program at WCS is designed to ensure biodiversity conservation in three areas of global importance. We do this by identifying actions to conserve landscape species, and by increasing the capacity of local and national organizations to implement such actions. The three areas of global biodiversity importance for WCS involvement and USAID activity are currently:

- Daurian Steppe (Mongolia, Russia and China)
- Madidi-Tambopata Landscape (Bolivia and Perú)
- Kavango Zambezi Transfrontier Conservation Area (Angola, Botswana, Namibia, Zambia and Zimbabwe)

PROJECT GOAL AND APPROACH

The WCS 'Beyond Fences' program aims to address problems facing biodiversity conservation and development in large, transboundary landscapes by focusing on the critically important linkages among wildlife health, domestic animal health, and human health and livelihoods. The immediate target area of focus is one of southern Africa's major transfrontier conservation areas, the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA). The development of TFCAs to further the conservation of biodiversity and sustainable development through the harmonization of transboundary natural resource management is a priority for SADC (the Southern African Development Community) and the five countries that encompass the KAZA TFCA: Angola, Botswana, Namibia, Zambia and Zimbabwe.

Nature-based tourism (photographic safaris, trophy hunting, etc.), the primary economic driver of TFCA development, now contributes about as much to the GDP of southern Africa as agriculture, forestry, and fisheries combined – a remarkable and relatively recent development documented by the Millennium Ecosystem Assessment. However, the management of wildlife and livestock diseases (including zoonoses – diseases transmissible between animals and people) within TFCAs like KAZA presents a range of emerging policy issues of major concern to livestock production, associated access to export markets, public health, and rural development in the region. Livestock farming is, of course, an important traditional way for communities in sub-Saharan Africa to build and maintain wealth, not to mention attain food security.

Transboundary animal diseases (TADs) are “animal diseases that are of significant economic, trade and/or food security importance, which can easily spread beyond national borders and have potential to reach epidemic proportions and their control and management, including exclusion, requires coordinated efforts in more than one country” (Food and Agricultural Organization, FAO). Globally, foot and mouth disease (FMD) is considered one of the most important TADs because of its significant economic/trade impacts. In livestock, morbidity associated with infection can be extremely high but mortality is usually low and affected cattle tend to recover completely.

Essentially, the TFCA concept and current internationally accepted approaches to the management of transboundary animal diseases (TADs) are largely incompatible. The TFCA concept promotes free movement of wildlife over large geographic areas, whereas the present approach to the control of TADs (especially in respect to directly transmitted infections like FMD) is 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 animals on the same basis. 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 without major fences* represents one of the key threats to transboundary conservation success and thus to risk-diversification of land-use options and livelihood opportunities.

Since 2003, WCS has been focusing on this suite of issues through the Animal & Human Health for the Environment And Development (AHEAD) program, which has worked to facilitate transparent, multidisciplinary policy dialogue and planning at various scales in the region. Using this approach, the 'Beyond Fences' initiative is working to bring key policy makers and relevant sectoral expertise to the table to explore new options for the management of TADs and for policy interventions that will support both transfrontier conservation and rural development objectives.

Through our engagement with the KAZA Secretariat and key multilateral bodies such as SADC, AU-IBAR (African Union Interafrican Bureau for Animal Resources), OIE (World Organisation for Animal Health), and FAO (Food and Agricultural Organization of the United Nations), AHEAD is 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. We are focusing efforts on discussions with member country government officials working in the livestock sector to help facilitate collaborative, integrated approaches to rural development in KAZA, including disease management alternatives such as commodity-based trade (Box 1).

Box 1: Commodity-Based Trade*

Market access for livestock and livestock products (LLP) from Africa is constrained by the prevalence of endemic highly contagious transboundary animal diseases such as foot and mouth disease (FMD). These diseases have been mostly eradicated in the developed world, but the fear of their re-entry from endemic reservoirs in the developing world largely precludes large-scale LLP exports from Africa to lucrative markets in the European Union, United States and Japan.

International trade practices for LLP have historically emphasized geographic or 'zonal' freedom from disease (i.e. 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.

**While there is no single accepted definition of commodity-based trade (CBT) it can be considered to represent an array of alternatives that can be used to ensure the production and processing of a particular commodity or product are managed so that identified food safety and animal health hazards are reduced to appropriate risk levels. OIE Terrestrial Animal Health Code guidelines (Article 8.5.25) now recognize a disease management scenario under which commodity-based trade could be effectively implemented.*

As AHEAD has demonstrated elsewhere in the region, it is only when the wildlife conservation / environment and agricultural sectors are both at the negotiating table that meaningful dialogue on key land-use policies can progress – hence the importance of AHEAD's outreach to the KAZA Secretariat and Technical Committee, regional agricultural officials, SADC, AU-IBAR, OIE and FAO.

Southern African governments that have agreed to work together to create TFCAs will only continue to invest in this complex type of effort if the economics behind TFCAs make sound development sense. Much of the 'Beyond Fences' policy focus relates to that same objective, as we believe there will be no sustainable conservation success without concomitant diversification and improvements of local incomes.

THREATS AND PROGRAM RESPONSE

A key strategy for biodiversity conservation in southern Africa is the securing of biological connectivity across larger landscapes, e.g. through TFCAs. The region's core protected areas increasingly are facing the threat of becoming isolated ecological islands in agricultural landscapes, with the loss of connectivity so important to maintaining genetic diversity and the viability of globally endangered wildlife populations (e.g. African wild dog, black rhino). Enhanced connectivity across large landscapes will also be a crucial factor in biological adaptation to climate change in the region – and one of the greatest threats to such connectivity is the disease-control game fencing that crisscrosses much of the region. Loss of habitat corridors through land-use restrictions driven by disease control requirements is a further factor contributing to habitat fragmentation and the loss of migratory and dispersal routes.

PROGRAM STRATEGY - OVERVIEW OF OBJECTIVES AND ACTIVITIES

Through this policy-based initiative, WCS is contributing to the overall SCAPES goal of conserving biodiversity and securing the livelihoods of the rural poor by working to meet the following objectives:

1. Help create an enabling environment for enhanced cooperation among conservation, agriculture and human health experts and authorities (within and between participating countries), anchored through a series of (informal and formal) consultative meetings.
2. Identify mechanisms for controlling transboundary animal diseases (TADs) without complete reliance on current fencing approaches, using expert groups to analyze potential scenarios involving alternative tools and policies.
3. Inform and influence cross-sectoral and transboundary policy responses which support both TFCAs and control of TADs.

Our work involves reviewing key livestock/wildlife interface issues with an emphasis on management of TADs, particularly those diseases that hinder livestock producers' access to regional and international markets. This will enable exploration of new options for resolving the currently conflicting objectives of establishing TFCAs and controlling TADs. We continue to explore alternatives to reliance on extensive cordon fencing, and new approaches to controlling disease that consider a broader economic development framework.

The success of this approach depends on engagement of multiple experts, sectors and nations. Authorities from the Ministries of Environment and Agriculture are critical. Efforts in Year-4 will continue to include engagement with the major multilateral bodies such as SADC, OIE and FAO, all of which have endorsed the AHEAD program. Both OIE and FAO have a critical presence in the southern African region and are headquartered in Europe (the favored market for many of southern Africa's animal-derived export products).

In addition, AHEAD continues to engage the various TFCA governing bodies, especially those responsible for overseeing animal health issues, to ensure we offer the most targeted support in terms of the needs and goals TFCA member countries have themselves outlined. For example, we engaged with the KAZA TFCA Secretariat and convened and participated in the first meeting of the Animal Health sub-Working Group during Year-2. No meetings of this group were convened during Year-3, however we look forward to working closely with the KAZA Secretariat in Year-4 and beyond.

B. OBJECTIVES AND ACTIVITIES

The overall framework for the project as summarized in the Objectives Tree (Figure 1) illustrates the long-term and short-term goals of the project, its specific outputs/objectives, and the major activities that will be required to reach those objectives. This implementation plan is primarily concerned with addressing the full range of activities identified for Objectives #1 and #2, and furthering the process of developing recommendations for cross-sectoral policy responses to transboundary animal health conflicts where appropriate, as identified under Objective #3.

Recognized as critically important in the initial phases of the project, the process of relationship-building will remain a strong focus in Year-4. We see our role as, first and foremost, supportive to relevant official regional mechanisms already in place. Identifying key actors in this multi-national landscape, and building resilient, trusted relationships amongst all parties must continue to be an important role of the 'Beyond Fences' Coordinator (i.e. AHEAD Senior Policy Advisor, Dr. Mark Atkinson). Given the continued need to engage key stakeholders, our implementation plan in Year-4 remains an iterative process that may leave some meetings or workshops or analyses unspecified as of this writing. This iterative planning process will help us secure the input of the primary constituents across the region to inform how best to mesh our collective goals. While AHEAD has had a presence in southern Africa for nine years now and is well recognized as a key conservation and development partner, and USAID's support of health, environmental and rural development-related programs is widely recognized throughout the region, the 'Beyond Fences' project itself is still understandably viewed as a relatively new initiative, necessitating substantial on-going investment in building productive and trusting relationships with and among key actors across the landscape in Year-4, and beyond.

Figure 1. Objectives Tree (*italics* indicate activities completed; all other activities are currently underway)

YEAR-5 GOAL New approaches for reconciling management of transboundary animal diseases with needs for TFCA connectivity identified, and recommendations for policy modifications developed in collaboration with TFCA partner countries

YEAR-4 GOAL Build on past successes and lessons learned to help create an enabling environment to inform and resolve conflicts between the creation of TFCAs and current approaches to the control of transboundary animal diseases

<p>Objective #1: Facilitate an enabling environment for enhanced cooperation between conservation, agriculture and health experts and agencies in TFCAs</p>	<p>Objective #2: Identify and promote mechanisms for controlling TADs without complete reliance on cordon fencing</p>	<p>Objective #3: Influence cross-sectoral policy responses that support TFCAs while controlling TADs</p>
<p>Activities:</p> <p>1.1 Continue ‘institutional mapping’ study establishing key actors and agencies involved in (a) conservation and development of the TFCA, (b) agriculture, livestock development and disease management, and (c) human health and livelihoods</p> <p>1.2 Work with key actors and stakeholders and solidify a foundation of trust among them, and with the AHEAD program, through frequent meetings and information sharing; identify key, influential people and champions of various causes related to TFCA development and the control of TADs, and explore links with them as potential partners</p> <p>1.3 Convene multi-disciplinary workshops, colloquia, & other meetings to explore and define ecological, social and political dynamics and specific ways to address challenges identified at the interface between conservation and TADs</p> <p>1.4 Assemble the legal and policy frameworks and regulations relating to conservation and diseases and their control within the five countries / SADC as well as those relating to international controls of TADs</p>	<p>Activities:</p> <p>2.1 Assemble information on the status of TADs and current control measures for TADs in the SADC region focusing on the five KAZA member states; support SADC member states integration of One Health approaches to TADs and zoonoses management and control</p> <p>2.2 Explore alternative options and outcomes for the control of TADs in relation to TFCAs, including those related to commodity-based trade, using scenarios with key stakeholders at regional, national and local levels</p> <p>2.3 Conduct comprehensive socioeconomic analysis of disease management alternatives and projected development outcomes in the KAZA region</p> <p>2.4 Research and analyze key constraints to conservation and development success at the wildlife/livestock/human interface across the southern African subregion</p>	<p>Activities:</p> <p>3.1 Produce and disseminate policy briefs and reports based on activities carried out under Objectives 1 & 2 through informal and formal mechanisms</p> <p>3.2 Establish awareness, visibility and outreach channels (website, e-updates) for the program (initiated via Objective 1)</p> <p>3.3 Attend conferences and meetings and present project ideas, results and approaches to selected audiences</p> <p>3.4 Liaise with appropriate national, regional and international agencies to foster implementation of identified ‘win-win’ conservation and disease management policy options and opportunities</p> <p>In collaboration with KAZA Secretariat, identify opportunities for funding support (e.g. Rockefeller Foundation, GEF) that promote cross-sectoral policy review and appropriate TFCA-related animal disease management</p>

OBJECTIVE 1: Help facilitate an enabling environment for enhanced cooperation among conservation and agriculture, as well as human health experts and authorities (within and between TFCA member countries), anchored through a series of (informal and formal) consultative fora

WCS has demonstrated the value of health as an entry point for facilitating more transparent and robust cross-sectoral governance and land-use planning. As a direct result of the 'Beyond Fences' initiative, there is now enhanced cooperation between conservation and agriculture sectors at the Working Group level in KAZA as well as at the broader regional level in SADC and internationally (OIE, FAO). We continue to build on this to support and enhance communication and cooperation among the conservation, veterinary, agriculture and human health authorities within and between countries, as well as between governmental and non-governmental entities within the region, including universities. Larger meetings with sectoral (wildlife conservation, agriculture, public health) leaders from TFCA member countries, and smaller consultative fora with individual agencies, will be vehicles for facilitating this dialogue. In Year-4, the 'Beyond Fences' Coordinator will continue to spend a significant portion of his time meeting informally and formally with key decision-makers and other stakeholders across the region.

Activity 1.1: Continue 'institutional mapping' study establishing current key actors and agencies in southern Africa involved in (a) conservation and KAZA TFCA development, (b) agriculture, livestock development and disease, and (c) human health and livelihoods

In addition to government agencies and multilateral organizations, there are several donor agencies and international and local NGOs involved in conservation, rural development, and both human and animal health programs active in the five KAZA member states. A broad analysis of the actors and agents involved at the interface between conservation and animal and human health in the region is referred to here as 'institutional mapping' and is an important ongoing process that contributes to understanding institutional dynamics in the region and facilitating an enabling environment for enhanced cooperation among stakeholders. Based on the framework established during compilation of the Zimbabwe institutional map undertaken in Year-2, a comprehensive Botswana country overview was completed during Year-3, as was an updated institutional review of new structures within the KAZA TFCA (following signing of the Implementation Treaty in 2011); the remaining three reports (those covering Namibia, Zambia and Angola) will be completed during Year-4 and Year-5. Information will be gleaned from country site visits, formal and informal meetings with relevant stakeholders and online searches.

Zoonotic disease remains a significant health threat to rural communities living in or near the KAZA TFCA, and it is hoped that in developing a relationship with the newly established Institute for Food, Nutrition and Wellbeing (IFNuW) at the University of Pretoria, we will find new avenues for engaging the public health sector.

RESULTS/OUTPUTS:

- Institutional mapping overview / report for Namibia and Zambia completed
- Institutional mapping overview / report for Angola initiated
- Reports disseminated to relevant country participants and partners

Activity 1.2: Networking and relationship building. Work with key actors and stakeholders and solidify a foundation of trust among them, and with the AHEAD program, through frequent meetings and information sharing; continue to identify key, influential people and champions of various causes related to TFCA development and the control of TADs, and explore links with them as potential partners

As a result of ongoing support from member state governments, establishment of a permanent well-staffed KAZA Secretariat, and financial backing from international partners - as well as a progressive strengthening of the professional relationship between AHEAD and the Secretariat - the KAZA Technical Committee is now better positioned to address core cross-sectoral issues of critical importance to the long-term viability of the TFCA. Strong professional relationships between AHEAD and regional entities such as SADC, AU-IBAR, FAO, and OIE have also been established since project inception.

These developments have allowed for the progressive, cross-sectoral dialog and action needed to advance innovative TADs management and control initiatives in the region. The results of such networking and relationship building during the past three years clearly illustrate the importance of continuing this activity. While perhaps at a slightly reduced level compared to the first three years of the project, the 'Beyond Fences' Coordinator will continue to dedicate significant effort to meeting key, influential people and champions of various causes related to development of the KAZA TFCA and the control of TADs, and will continue to explore links with them as potential partners.

RESULTS/OUTPUTS:

- Key influential people and potential champions identified
- Potential partners in further development of the program identified; strategic partnerships explored, developed and expanded

Activity 1.3: Convene and attend multi-disciplinary workshops, colloquia, and meetings to explore and define ecological, social, and political dynamics, and specific ways to address the challenges identified at the interface between conservation and TADs

In 2008, the SADC Foot and Mouth Disease (FMD) Project in conjunction with regional partners, including AHEAD, and with funding support from USAID, convened a meeting in Kasane, Botswana entitled 'Achieving Compatibility Between the Transfrontier Conservation Area Concept and International Standards for the Management of Transboundary Animal Diseases' (http://www.wcs-ahead.org/sadc_forum.html). The meeting began the process of examining areas of conflict between biodiversity conservation and trade in products derived from livestock, and explored potential solutions such as commodity-based trade. The meeting participants identified several priority issues and actions, highlighted the importance of the AHEAD process, and developed a set of 100-day deliverables. These were not followed-up on, however, as the SADC FMD project was unexpectedly terminated shortly after the meeting concluded, and momentum was lost. AHEAD played an integral role in the development of the defined priorities which included: capacity building, garnering regional and international support for examining approaches like commodity-based trade, information-sharing and cross-sectoral dialog as promoted by the AHEAD process, planning for investment in TFCAs, developing and refining disease control strategies for wildlife and livestock, and enhancing disease prevention and control through appropriate and effective vaccination strategies. Many of these issues remain important to the 'Beyond Fences' initiative.

Further, the establishment of a commodity-based trade pilot study in Namibia, promotion of commodity-based trade through the SADC/COMESA/EAC Tripartite Agreement, and SADC's recent adoption of OIE Terrestrial Animal Health Code (TAHC) Article 8.5.25 (which allows for CBT) as a regional standard all clearly illustrate the perceived importance of non-geographic TADs management alternatives in the region. In addition, a series of recent economically devastating FMD outbreaks in the region suggest currently employed management techniques (including veterinary cordon fencing, animal movement controls, and vaccination) aimed at maintaining disease-free zones and eradicating such TADs are failing. In short, the time is right to convene a workshop that revisits some of the priority issues identified at the 2008 Kasane meeting: using new, current information will facilitate the development of a clear blueprint for an innovative regional approach to TADs management and control.

Our activities in the early part of Year-4 will therefore focus on building substantively on the foundation established by the 2008 Kasane meeting and maintaining the momentum required to maximize opportunities for successful delivery on a set of important cross-sectoral objectives. Our efforts will focus on convening a successful high-profile regional workshop that revisits priority issues, brings together current subject matter experts, and builds the momentum behind the concept of the commodity-based trade approach as a solution to the current incompatibility that exists between current regulatory approaches to the control of TADs and the vision of vast transboundary conservation landscapes in southern Africa.

SADC, through its TADs Project and with the support of the African Development Bank, and AHEAD, with support from USAID and the Rockefeller Foundation, have recently agreed to co-convene a workshop entitled 'Reconciling Livestock Health and Wildlife Conservation Goals in Southern Africa: Strategies for Sustainable Economic Development.' The workshop is scheduled to take place in Gaborone, Botswana during November 2012. 'Beyond Fences' staff will also dedicate time in Year-4 to disseminating workshop findings, and facilitating ongoing dialogue between key stakeholders to translate workshop deliverables into cross-sectoral policy responses which support both TFCAs and the control of TADs.

Other 'Beyond Fences' meeting / workshop themes will, in large part, be driven by the needs of the KAZA Secretariat and TFCA Working Groups. In Year-2, AHEAD successfully convened and participated in the inaugural meeting of the KAZA TFCA Animal Health sub-Working Group in Calai, Angola. It is anticipated that continued AHEAD 'Beyond Fences' support would be requested to convene future meetings in Year-4.

As evidence of our strengthening relationship with regional multilateral bodies, in Year-4, following an invitation from the SADC Secretariat, AHEAD will continue to participate in regular meetings of the SADC Livestock Technical Committee. We also plan to continue exploring commonalities in approaches to related disease issues in the Daurian Steppe SCAPE.

RESULTS/OUTPUTS:

- 'Reconciling Livestock Health and Wildlife Conservation Goals in Southern Africa: Strategies for Sustainable Economic Development' Workshop convened in partnership with SADC TADs Project
- Comprehensive report and other relevant workshop materials produced, disseminated to participants and partners as appropriate, and posted on the AHEAD website
- Technical and financial support provided to convene cross-sectoral TFCA Animal Health sub-Working Group if / as requested by KAZA Secretariat

OBJECTIVE 2: Identify mechanisms for controlling transboundary animal diseases (TADs) without complete reliance on current fencing approaches, using expert groups to analyze potential scenarios involving alternative tools and policies

Activities to achieve this objective will build on work carried out during the past three years during which time we began gathering information related to potential alternative approaches for managing TADs that could potentially meet international trade requirements (e.g. commodity-based trade). In Year-4 we will explore innovative alternatives that build on these foundations (e.g. integrated food safety and sanitary risk management along value chains) and present additional and regionally appropriate options for the control of TADs relevant to KAZA member countries and their neighbors.

Activity 2.1: Assemble information on the status of TADs and current control measures for TADs in the SADC region focusing on the five KAZA member states. Support SADC Member States' integration of One Health approaches to TADs and zoonoses management and control.

During Year-3 the AHEAD team, in close collaboration with subject matter experts and regional partners, completed the process of assembling information on the status of TADs and current control measures for TADs in the SADC region. This report has been shared with the KAZA Secretariat, is posted on the AHEAD website and will be given to each delegate at the upcoming 'Reconciling Livestock Health and Wildlife Conservation Goals in Southern Africa' workshop in Gaborone (see Activity 1.3 above). We will also work closely with regional experts to develop a presentation on the topic for the November workshop.

Both the SADC Livestock Technical Committee and the KAZA TFCA Technical Committee are strongly supportive of harmonizing veterinary and disease management policy across the region. In Year-4, the 'Beyond Fences' Coordinator will further develop his relationship with SADC and KAZA, encouraging the integration of holistic, One Health approaches to TADs management in the SADC region.

Results/Outputs:

- Copies of TADs Status report produced and presented to the approximately 100 delegates expected to attend November 'Reconciling Livestock Health and Wildlife Conservation Goals in Southern Africa' workshop; presentation on subject given at November workshop
- Options for adopting holistic One Health approaches to the management of interface issues in TFCAs discussed with KAZA and SADC partners

Activity 2.2: Explore alternative options and outcomes for the control of TADs in relation to TFCAs, including those related to commodity-based trade, using scenarios with key stakeholders at regional, national and local levels

Initiated in Year-3 and due for completion in Year-4, this Activity will allow us to further explore suitable alternative options and outcomes for the management and control of TADs in southern Africa (FMD in particular). This exercise will help identify international animal disease management/trade standards that could impact the long-term success of TFCAs in southern Africa. (Importing nations in the EU for example, require southern African countries to meet a disease management standard that significantly exceeds the international standards set by the OIE. Existing systems / abattoirs in the KAZA region are unlikely to have the capacity to meet these 'extra' standards- especially as they pertain to the control of FMD. As a result, communal livestock farmers will likely need to focus on regional and alternative international markets if proposed alternative approaches like commodity-based trade prove successful).

The process and primary product of Activity 2.1, completed in Year-3, led to the drafting of two separate manuscripts intended for submission to the scientific journal 'Transboundary and Emerging Diseases.' The first paper, entitled '*International trade in commodities and products derived from animals: the need for a system that integrates food safety and animal disease risk management*' will make the case for integrating management of food safety and animal disease risk along value chains, thereby offering a commodity-based alternative to currently favored geographic or 'zonal' management systems. The second paper entitled '*Balancing profitable livestock production and wildlife conservation in and around southern Africa's transfrontier conservation areas*' builds on these principles, describes the key challenges to practical implementation of such systems and offers a mechanism for making progress in achieving balanced rural development in southern Africa. These two papers will be completed in Year-4 and we feel they will help disseminate the message to a much wider audience than otherwise possible through other outlets; they are also expected to form the basis of a recommended 'way forward' for southern African countries looking to implement non-geographic disease risk management methods. Once published, these papers will be shared with KAZA and SADC partners, posted on the AHEAD website and archived in the Zotero online bibliographic database.

During Year-4, the 'Beyond Fences' Coordinator will continue to participate in the groundbreaking 'Development of Export Opportunities for Beef Products in the Caprivi' pilot study initiated by a consortium of government and non-government partners during Year-2 and funded by the Millennium Challenge Account - Namibia. This project was put on-hold in Year-3 due to closure of the export abattoir in Katima Mulilo by the Namibian Directorate of Veterinary Services in response to an outbreak of FMD. Project partners have recently resumed work on the pilot study however, and anticipate completing the first phase of the program during Year-4 and Dr. Atkinson will continue to provide technical assistance related to conservation, wildlife ecology and health/disease, and participate in regular field site visits. Due in large part to the SCAPES 'Beyond Fences' and partner initiatives, the importance of such non-geographic disease management approaches is becoming increasingly recognized in the region. The 'Beyond Fences' Coordinator will continue to engage new partners and projects as appropriate and where feasible.

RESULTS/OUTPUTS:

- '*International trade in commodities and products derived from animals: the need for a system that integrates food safety and animal disease risk management*' - manuscript completed and submitted to 'Transboundary and Emerging Disease' journal for publication
- '*Balancing profitable livestock production and wildlife conservation in and around southern Africa's transfrontier conservation areas*' – manuscript completed and submitted to 'Transboundary and Emerging Diseases' journal for publication
- Reports compiled and disseminated to KAZA TFCA Secretariat, Working Groups and other key stakeholders as appropriate, and posted online
- Relevant proceedings, scientific papers, published reports and policy documents added to the Zotero online document library

Activity 2.3: Conduct comprehensive scenarios-based cross-sectoral economic analysis related to disease management options and projected development outcomes in the context of the KAZA TFCA

Scientifically accepted alternatives to current animal disease management practices exist (including for example, creation of export zones with vaccination, compartmentalization, commodity-based trade, and management of TADs for local trade), however the overall cross-sectoral socioeconomic impacts of staying with current approaches ('business as usual') versus adopting such alternatives have actually not been determined. As a result, decision-makers in KAZA TFCA member countries and the broader

SADC region do not have the information required to inform sound animal health policy choices - information needed to determine whether particular approaches or investments in the livestock and/or natural resource management sectors will be economically, ecologically and/or socially sustainable in the long-term.

Beginning in Year-3, working with subject matter experts and regional partners, the AHEAD team began the process of analyzing how different sectors (with an emphasis on rural communities) in the KAZA TFCA might fare under a range of animal health policy regimes. In collaboration with our partners we began to plan for a financial and economic appraisal of wildlife conservation and livestock initiatives within the Caprivi region of Namibia to be conducted using cost-benefit analyses and resource-use models. The goal of the quantitative study is to define policy approaches that will positively influence market access and optimize land-use choices in the KAZA region to sustainably enhance livelihoods while minimizing cross-sectoral conflicts.

Due to the scope of this undertaking, this assessment will form a major component of the 'Beyond Fences' activities in Year-4. In partnership with WWF-Namibia and regional subject matter experts, we will conduct and complete a comprehensive financial and economic cost-benefit analysis of policy options related to the possible introduction of non-geographic approaches to disease management in Caprivi. The objectives of the project include:

1. Examine impacts, in terms of costs and benefits, of policy options on land-use choices as they relate to local-level livelihoods and national economies
2. Make recommendations on the most technically feasible, and most socially, environmentally and economically beneficial strategies for disease control, land use allocation, and overall development for the Caprivi as part of KAZA
3. Develop a pilot cost/benefit model as a tool for future analysis of livestock and wildlife development options in Caprivi and the wider KAZA TFCA

The study will focus on Namibia's Caprivi because it forms the core of the KAZA TFCA, has a suitable range of ecosystems and land uses, has representative market development for multi-species systems, has a representative policy environment, has incidence of animal disease including FMD, and has reasonably good data, in large part because of long-term investment by USAID in the LIFE project and follow-on activities. Depending on the outcomes, work may be extended to other parts of KAZA. The data collection and analysis requires the services of an economist (already identified and contracted as per below) with a sound knowledge of the natural resource values involved in the study, and the Namibian economy. The project will also require the active support and involvement of one or more ecologists, one or more Veterinary/CBT specialists, a CBNRM (Community-Based Natural Resource Management) specialist, a meat-marketing specialist, and a meat-processing specialist. A core team of consultant experts is currently being assembled to conduct the study. Windhoek-based AHEAD socioeconomic consultant Dr. Jon Barnes has been contracted to lead this study and will present his preliminary findings at the 'Reconciling Livestock Health and Wildlife Conservation Goals in Southern Africa' workshop in November.

In order to set the scene for this complex and detailed analysis, a two-day 'scenarios development' workshop will be held in Windhoek, Namibia in September. The workshop will be convened by AHEAD in partnership with WWF-Namibia; all contracted consultants and partners will participate. Scenarios developed and explored during the workshop will determine how livestock- and wildlife-based activities, and human livelihoods, might be impacted by different regulatory approaches in Caprivi. Changes to land uses and spatial land use allocation, animal disease management, finishing, product processing, market access, product pricing, input pricing, and different levels of risk will all be

considered. Results of this together with other project analyses will be used as building blocks for a broader analysis of the costs and benefits of animal disease management policy change.

An additional but complementary component of the study may involve parallel multi-criteria decision analysis (MCDA). This will be conducted in partnership with USDA colleagues working on SPS issues. USDA FAS will fund this portion of the study but AHEAD consultants will provide the necessary animal health expertise. At the time of writing, a decision regarding inclusion of this analytical tool in the Caprivi socioeconomic study had not been finalized.

RESULTS/OUTPUTS:

- Individual consultancies developed and contracts executed for contributing specialists
- Two-day 'scenarios development' workshop held in Windhoek, Namibia
- Preliminary findings presented at November workshop in Gaborone, Botswana
- Comprehensive scenarios-based cross-sectoral socioeconomic analysis based on review of current and alternative animal health policy options completed
- Complementary MCDA analysis completed via USDA FAS
- Interim and final reports compiled, provided to TFCA Secretariat and Working Groups, and to other regional stakeholders and decision-makers, as appropriate, and posted online
- Relevant scientific papers, published reports and policy documents added to Zotero library

OBJECTIVE 3: To inform and influence cross-sectoral policy responses which support both TFCAs and control of TADs

The incompatibility between (a) *current regulatory approaches for the control of diseases of agro-economic importance* and (b) *SADC's vision of vast conservation landscapes without major fences* represents one of the key threats to transboundary conservation success and thus to risk-diversification of land-use options and livelihood opportunities. The 'Beyond Fences' program is iteratively building on the knowledge gained through the first two objectives thereby providing a basis for animal health and disease control policy recommendations. As the program progresses, we anticipate engaging more frequently in high-level discussions and briefings, and where appropriate, with ministerial representatives from KAZA member states.

Activity 3.1: Produce and disseminate policy briefs and reports based on activities carried out under Objectives 1 & 2 through informal and formal mechanisms

Policy analyses, papers, and other relevant findings that result from studies undertaken under Objectives 1 and 2 will assist in informing policy recommendations for governing animal health and disease control strategies in TFCAs like KAZA. The AHEAD team makes significant efforts to disseminate the results of such analyses, and in Year-4, as in previous years, reports will be made available through the AHEAD website, via AHEAD Update e-newsletters (see Activity 3.2), and in some cases distributed as hard copies to stakeholders and partners.

RESULTS/OUTPUTS:

- Key reports compiled and provided to select audiences at regional working group meetings and conferences (such as of the KAZA TFCA Secretariat and SADC)

Activity 3.2: Establish awareness, visibility and outreach channels (website, e-updates) for the program (initiated via Objective 1 & 2)

Establishing awareness and visibility of the 'Beyond Fences' program is being achieved through various media channels. A section of the AHEAD website devoted to the Kavango Zambezi TFCA was developed in Year-2 (http://www.wcs-ahead.org/workinggrps_kaza.html). In Year-4, new policy briefs and other relevant resources will be added to the site on a regular basis. As in previous years, reports will be flagged in the AHEAD Update (e-newsletter) and posted in the Kavango-Zambezi TFCA section of the AHEAD website (http://www.wcs-ahead.org/workinggrps_kaza.html). The AHEAD Update is now distributed to more than 2,000 natural resources managers, agriculture experts, health professionals, development specialists, policy-makers and other interested parties around the world.

During Year-2, a map of the KAZA TFCA was developed by the 'Beyond Fences' program that includes population centers, national parks, protected areas, and veterinary cordon fencing. This was revised in Year-3 to include updated fence lines and recently modified TFCA boundaries. The Integrated Development Plans (IDP) for some KAZA member states have not yet been completed; as a result, additional edits to the map may be required in Year-4. We will also continue to work on translating key documents (like this map) into Portuguese for the benefit of our Angolan partners.

RESULTS/OUTPUTS:

- AHEAD Update (e-newsletter) produced and emailed to 2,000+ subscribers 3 to 5 times per year
- Following approval by USAID, Year-4 implementation plan translated into Portuguese, both versions being made available on AHEAD website; draft implementation plan distributed to KAZA Secretariat for review
- KAZA TFCA map updated
- KAZA section of AHEAD website expanded to include new and updated resources
- AHEAD resource library (Zotero) expanded to include new documents and policy reports

Activity 3.3: Attend conferences and meetings and present project ideas, results and approaches to selected audiences

AHEAD and partners are building a unique and rapidly growing knowledge base to draw upon when evaluating alternative approaches to reconcile the management of TADs in the context of TFCAs. To facilitate broad dissemination of ideas, results and approaches to select audiences, AHEAD will attend relevant conferences and meetings during Year-4 and use these opportunities to highlight animal health policy challenges, objectives and developments in the region. As previously mentioned, the implementation plan is an iterative process that may leave some meetings and conferences unspecified at the time of writing. An annotated list of conferences and meetings will be included in future USAID reports.

RESULTS/OUTPUTS:

- Anticipated participation in the following conferences and meetings:
 - *'Reconciling Livestock Health and Wildlife Conservation Goals in Southern Africa: Strategies for Sustainable Economic Development'* Workshop (Gaborone, Botswana, November 12 – 16, 2012) High level workshop to be co-convened by AHEAD and SADC

- *'Broadening Access to International and Regional and Markets for Southern Africa's Livestock Producers'* (Pretoria, South Africa, November 25 – 28, 2012). This consultative workshop is being co-convened by the University of Pretoria's Institute for Food, Nutrition and Wellbeing (IFNuW) and Instituto 'G. Caporale' an OIE Collaborating Center based in Italy.
- *Prince Mahidol Award 2013 One Health Conference* (Bangkok, Thailand, January 29 – Feb 03, 2013). The theme of the Conference is 'A World United against Infectious Diseases: Cross-sectoral Solutions.' An abstract entitled 'The multi-sectoral impacts of FMD and its control in southern Africa: implications for development and environmental conservation outcomes' has been submitted by the AHEAD team and regional partners.
- *KAZA TFCA Animal Health sub-Working Group* (Location and date TBD, 2013)
- *GLTP Veterinary Committee* (Location and date TBD, 2013)
- *12th Meeting of the AHEAD-GLTFCA Working Group* (Location and date TBD, 2013)
- *62nd International Conference of the Wildlife Disease Association* (Knoxville, TN, July 28 – Aug 2, 2013)

Activity 3.4: Liaise with appropriate national, regional and international agencies to foster implementation of identified 'win-win' conservation and disease management policy options and opportunities

A number of extremely important policy milestones were reached during Year-3 of the 'Beyond Fences' program: the World Organization for Animal Health (OIE) specifically addressed wildlife issues and the unique southern African health and conservation concerns in its Global Strategy for the Control of Foot and Mouth Disease; the Southern African Development Community's (SADC) Livestock Technical Committee (LTC) voted to adopt Article 8.5.25 of the Terrestrial Animal Health Code (which allows for commodity-based trade) as a regional standard; and SADC member states enthusiastically endorsed the application of non-geographic management approaches for important transboundary animal diseases (TADs) in the region. These provide an opportunity for SADC and our other partners to rethink the region's approach to the management of diseases like FMD, in the interest of enhancing opportunities for trade in beef among SADC countries, while simultaneously facilitating wildlife conservation initiatives like TFCAs.

During Year-4, 'Beyond Fences' will continue efforts to foster close ties with national, regional and international organizations including SADC, OIE, FAO, and AU-IBAR. To achieve this, the 'Beyond Fences' Coordinator expects, for example, to attend official SADC LTC meetings and further engage regional officials in the agricultural sector. He will continue his efforts to present sound policy alternatives at these and other fora. The WCS Director of Wildlife Health Policy will continue liaising with officials in KAZA-country governments, the KAZA Secretariat as needed, multilateral organizations, as well as with relevant USG officials in Washington and overseas.

The 'Beyond Fences' Coordinator will also liaise closely with the KAZA Secretariat regarding animal health policy issues relevant to TFCA development, and will work to identify specific opportunities to support field-based KAZA TFCA health initiatives (e.g. targeted, regionally focused wildlife disease surveillance programs). In addition, he will work closely with the newly formed Institute for Food, Nutrition and Wellbeing (IFNuW) and other University of Pretoria partners who have expressed a desire to develop a strong regional policy program with AHEAD's input, working toward effective, integrated food safety and animal disease management systems.

The AHEAD team will provide regional United Nations Development Programme (UNDP) representatives with information regarding biodiversity conservation and animal health-related efforts in the region, and convey how they relate to, for example, SADC and KAZA TFCA-related sustainable land-use management initiatives over the long-term.

Ongoing discussions with decision-makers in government and results of the major regional meeting as described under Activity 1.3 (Gaborone workshop), will over time serve to further evaluate and highlight potential alternative options such as commodity-based trade, inform key stakeholders at regional, national and local levels, and provide an opportunity to build on existing regional support of the AHEAD process and the 'Beyond Fences' program in southern African TFCAs.

RESULTS/OUTPUTS:

- Ongoing collaboration, partnership and dialogue with representatives of SADC, OIE, FAO, AU-IBAR etc.
- Briefings and/or courtesy visits to KAZA member state government officials, USAID Missions and US Embassies, UNDP and other regional representatives, as appropriate.