

Beyond borders

With Transfrontier Conservation Areas, wildlife, domestic animals and people are coming into unprecedented contact. The threat of transmissible disease must be urgently addressed, says the Animal Health for the Environment And Development (AHEAD) initiative.

Transfrontier Conservation Areas (TFCAs) which aim to re-establish the movement of wildlife within larger landscapes are a welcome concept for boosting economic development and biodiversity conservation. Yet the absence of formal policies on animal disease control could have negative impacts on public health, agriculture, commerce, even conservation itself.

With the recent rapid growth in global tourism, the transboundary management of natural resources, particularly wildlife, has become a major focus of attention in southern Africa. A key economic driver linking these conservation and development initiatives is nature-based tourism that seeks to maximize returns from marginal lands in a sector where this region enjoys a global comparative advantage.

However, the management of wildlife and livestock diseases including zoonoses—diseases like bovine tuberculosis and rabies that can be transmitted between animals and people—within larger landscapes remains unresolved and is an issue of major concern for livestock production, export markets and public health.

Whatever the potential of wildlife-based tourism to generate wealth in such areas, the current reality is that small-scale agro-pastoralists living in adjacent communal lands depend on livestock for their livelihoods. The need to balance their livelihoods and environmental security with the development of alternative land uses gives rise to a complex set of development issues. An integrated approach offers the most promising way to address these issues, one in which the well-being of wildlife and ecosystems, domestic animals and Africa's people are assessed holistically, through a 'One Health' lens.

One could argue that the extensive fencing that has separated wildlife and livestock since the late 1950s has in many ways been the simplest approach to minimizing disease problems. But this fencing has blocked key migratory pathways that wildlife have used for thousands of years in times of thirst and hunger. Conservationists are understandably excited about the possibility of more land for wildlife and the benefits linked to sound stewardship of biodiversity. This excitement, however, should be tempered by the fact that much remains unknown—TFCA proponents should proceed with caution in the face of ecosystems and processes that are not fully understood.

Wildlife corridors for instance, can serve not only as biological bridges for wildlife, but also for vectors and the pathogens they carry. Thorough assessments of disease risks should be

made before fences come down in areas that may have developed different types of pathogen or parasite loads over time. When it comes to animal health programmes and policies in transboundary landscapes where domestic as well as wild animals cross international borders, making the right decisions becomes even more critical.

With rapidly expanding trade through the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA) and rapid globalization, these issues will increasingly affect

the development paths of many African countries. Yet there is no formal policy on animal health and disease control for the transfrontier conservation areas being developed.

In response, the Wildlife Conservation Society, IUCN and other partners have tapped into some of the most innovative conservation and development thinking on the African continent in launching AHEAD—Animal Health for the Environment And Development. Through this initiative, veterinarians, ecologists, biologists,



social and economic scientists, agriculturists, wildlife managers, public health specialists and others from across East and southern Africa have been brought together to share ideas on how wildlife conservation and development can be mutually reinforcing.

The need for a holistic approach could not be more urgent. In parts of southern Africa, fences are already coming down, allowing wildlife and livestock access to areas and to each other for the first time in decades. While this represents a potential milestone for conservation and the nature-based tourism

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(photographic, hunting, etc.) revenues it supports, it also demands a closer look. What effects might these transfrontier areas have on the health and sustainability of wildlife, domestic animals and human communities?

The Great Limpopo TFCA is among the largest landscapes devoted to conservation on the planet, encompassing five national parks and spanning three countries: South Africa, Zimbabwe and Mozambique. Kilometres of fence are being removed and the subsequent reunion of long-separated wildlife populations, together with new opportunities for wildlife to come into contact with livestock, make addressing disease issues an urgent priority.

The multidisciplinary AHEAD Great Limpopo Transfrontier Conservation Area Working Group, focused on issues at the wildlife/domestic animal/human health interface, was established to consider how to ensure the TFCA succeeds as a viable, sustainable form of land use. The group is focusing on three key areas: animal health and disease; land-use, ecosystem goods and services, and animal health; and human health and livelihoods, animal health and ecosystem health. The Working Group functions to connect and support the wide range of stakeholders involved at local, national and regional levels. Land use/land tenure regimes within the Great Limpopo TFCA include national parks, neighbouring game reserves,

hunting areas, conservancies, irrigation agriculture and intervening areas of communal lands under traditional tenure.

Diseases such as malaria, anthrax and trypanosomiasis (*nagana*—sleeping sickness of cattle) play a significant role in the overall development of the Great Limpopo TFCA region. Foot and mouth disease continues to impact the livestock industry, with control measures having major secondary impacts on the wildlife industry in south eastern Zimbabwe and in north eastern South Africa adjacent to Kruger National Park. Increasing contact between populations of wildlife, domestic animals and people only increases the risks of the emergence or resurgence of diseases. The advent of HIV-AIDS and the spread of bovine tuberculosis pose more recent threats to human well-being, and development, across the region.

This is why the ‘One Health’ perspective is so critical—for sustainable resource management policies and land-use decisions not just in the Great Limpopo TFCA, but in other conservation landscapes across Africa. If those whose mandate is biodiversity conservation do not address the threats that the livestock sector associates, rightly or wrongly, with wildlife and disease, a vision for protected areas and TFCAs in many parts of the world is likely to fail.

Southern African TFCAs may provide excellent models within which to study and mitigate the political and social tensions between biodiversity conservation and livestock agriculture in the broader region. Doing so effectively will be critical to successful, sustained biodiversity conservation, public health and agri-biosecurity.

We must continue to learn from disciplines with which we may not have communicated well in the past and consciously work to break down sectoral barriers that technical language and vocabulary have historically helped to reinforce.

Whether we are looking at a large, complex international land-use matrix such as a TFCA or at a small, isolated protected area surrounded by human activities, these issues merit more attention than either the conservation or development communities have given them to date. With a healthy respect for the complex challenges facing the places and people we care about and adequate resources to fill the knowledge gaps, a successful ‘One Health’ approach in southern Africa and beyond is certainly within our grasp. ■

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AHEAD was launched at the IUCN World Parks Congress in Durban, South Africa in 2003. For more information, including the primer *As the Fences Come Down: Emerging Concerns in Transfrontier Conservation Areas* see www.wcs-ahead.org