

# welcome to **AHEAD**

Animal & Human Health for the Environment And Development

January / February / March 2015

## **AHEAD Update- January/ February / March 2015**

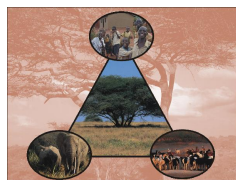
*Animal & Human Health for the Environment And Development*

### **What is AHEAD?**

Animal & Human Health for the Environment And Development was launched at the 2003 IUCN World Parks Congress in Durban, South Africa. By assembling a 'dream team' of veterinarians, ecologists, biologists, social and economic scientists, agriculturists, wildlife managers, public health specialists and others from across East and southern Africa, the Wildlife Conservation Society, IUCN, and a range of partners tapped into some of the most innovative conservation and development thinking on the African continent - and **AHEAD** was born. Since then, a range of programs addressing conservation, health, and concomitant

Dear **AHEAD** Colleagues:

\*Welcome to the first **AHEAD Update** of 2015. Please note that URL hotlinks for many of the organizations mentioned below can be found at <http://www.wcs-ahead.org/links.html>. If you would like to post an item in the next **AHEAD Update**, please just send it to us - thanks.



### **EXCLUSIVE AHEAD INTERVIEW WITH PEACE PARKS FOUNDATION CEO WERNER MYBURGH**

*"PPF have always regarded transboundary animal diseases as a potential show-stopper for the TFCA concept.... If, however, efforts such as Commodity Based Trade can become mainstream, there is no doubt in my mind that the KAZA TFCA will only develop and move from strength to strength in future."*

For this issue of the **AHEAD Update**, we are very pleased to share this interview with Werner Myburgh, CEO of the Peace Parks Foundation (PPF). Werner and I recently met in Washington, DC, reaffirmed that the missions of PPF and of the **AHEAD** Program exhibited significant convergence, and agreed that this interview would be a valuable way to highlight that.

**1. Q (Steve Osofsky) Werner, the new types of collaborative relationships at multiple scales and across sectors that transfrontier conservation in southern Africa depends upon are complex. Are you optimistic that the transfrontier conservation area (TFCA) movement can be sustained? What's not happening now that needs to happen to continue to build momentum for this bold approach to optimizing regional land-use planning?**

A (Werner Myburgh) I am very optimistic that TFCA initiatives can be sustained simply because it is entrenched as a pragmatic approach to deal with conservation challenges faced throughout

conservation development challenges have been launched with the support of a growing list of implementing partners and donors who see the intrinsic value of what WCS has called the One World, One Health™ approach. **AHEAD is a convening, facilitative mechanism, working to create enabling environments that allow different and often competing sectors to literally come to the same table and find collaborative ways forward to address challenges at the interface of wildlife health, livestock health, and human health and livelihoods. We convene stakeholders, help delineate conceptual frameworks to underpin planning, management and research, and provide technical support and resources for projects stakeholders identify as priorities. AHEAD recognizes the need to look at health and disease not in isolation but within a given region's environmental and socioeconomic context.**

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Africa and indeed the rest of the world, where ecosystems span artificial political divides. Without a high level of co-operation between partner countries many complex challenges, such as effectively managing veterinary diseases, animal migrations and movements, and more recently wildlife crime, can simply not be dealt with effectively and efficiently. An important element of the evolutionary process of TFCA development entails the implementation of practical conservation measures on a protected area to protected area level.

This devolution and embedding of the TFCA concept at the operational interface, by means of appropriate protocols, has significantly empowered conservationists at implementation level to make advances within ecosystems-based approaches to conservation and development.

With regards to optimising regional land-use planning, it is essential that national land-use planning is undertaken first. Only once clarity at a national level is attained can serious efforts to harmonise policies at a regional level be attained. TFCAs are excellent vehicles to facilitate such processes. However, the level of meaningful stakeholder consultation to ensure a shared vision at all levels can be improved significantly. This not only ensures a better outcome but is essential regarding the ownership of the TFCA initiatives.

**2. Q (Steve Osofsky) As you know, the genesis of the AHEAD Program was the recognition that the TFCA concept and current internationally accepted approaches to the management of transboundary animal diseases, particularly foot and mouth disease (FMD), are largely incompatible. The TFCA concept promotes free movement of wildlife over large geographic areas, whereas the present approach to the control of foot and mouth disease is to build vast fences between wildlife (the African buffalo being a natural reservoir of the foot and mouth virus) and livestock. 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 risk-diversification of land-use options and livelihood opportunities. Is this an area of engagement that PPF sees as fundamental to TFCA success? If the foot and mouth disease conundrum as it relates to fencing is not ultimately resolved, can there really be viable TFCAs like KAZA?**

A (Werner Myburgh) PPF have always regarded transboundary animal diseases as a potential show-stopper for the TFCA concept. Initiatives such as AHEAD and partnerships that PPF has with, for example, Onderstepoort at the University of Pretoria to pro-actively engage on this matter are essential. It is also for this reason that PPF supported the rehabilitation and re-opening of the Hans Hoheisen Wildlife Research Station operated by the University of Pretoria to study zoonotic diseases. We are also of the view that fences need not be the only intervention that will be applied in future in order for domestic cattle to be farmed within FMD areas and still contribute to beef production.

Recent work being undertaken by the Meat Board of Namibia and collaborators in Katimo Mulilo, as a pilot project, where meat from a FMD area is processed in such a manner that it can be sold outside the FMD area (commonly referred to as Commodity Based Trade) is encouraging and clearly part of the future strategy to work with the forces of nature instead of against them.

With regards to KAZA, some fencing has been removed in strategic locations to allow for the movement of animals across international boundaries from areas of abundance historically to depleted areas. If, however, efforts such as Commodity Based Trade can become mainstream, there is no doubt in my mind that the KAZA TFCA will only develop and move from strength to strength in future.

**3. Q (Steve Osofsky) Taking a step back, connectivity can obviously have potentially positive as well as potentially negative consequences. How does PPF see the extraordinary resurgence in poaching impacting enthusiasm for transfrontier conservation among heads of state and their governments in the SADC region? How has this impacted PPF's work?**

A (Werner Myburgh) Wildlife crime is often transnational by nature and transfrontier conservation areas offer an important platform to counter poaching in a much more pro-active manner. TFCAs provide an opportunity and mandate for the governments of the partner countries, conservation agencies and conservation practitioners to co-operate and develop joint solutions to a shared problem, in a structured and coordinated manner. Each TFCA partner country is therefore far more pro-active than reactive and, over time, robust relationships can be developed. In response to this extraordinary resurgence, PPF has launched a Combating Wildlife Crime Programme with a current focus on rhino protection, yet cognizant of other species requiring protection as well. It is a multi-pronged programme and designed to augment the efforts of conservation agencies in the protection of their rhino.

Essential to the success of this programme is the existence of institutional structures between the TFCA partner countries. By working through, and with, the TFCA structures, both within and between the partner countries, significant progress has been made in the efforts to stem the scourge of rhino poaching. The TFCA platform is a solid base from which collaborative programmes and projects can be launched, and the lessons shared across international boundaries.

**4. Q (Steve Osofsky) Transfrontier conservation is fundamentally a political exercise. Can you talk about successful models for navigating key international working relationships, as well as for engaging the critical stakeholders at the community level?**

A (*Werner Myburgh*) The political component of TFCA planning lays the foundation for all the other engagement between stakeholders, and once this support has been gained, the focus broadens to include technical, social and economic aspects of conservation. Within TFCAs such as the /Ai/Ais Richtersveld Transfrontier Park and the Kgalagadi Transfrontier Park, the current focus is on joint operational activities collectively undertaken by the partner countries. Reports are still, however, provided to the Ministerial Committees, via Joint Management Boards. This ensures that the institutional arrangements for TFCAs are functional and operational, supported by operational policies, and that the activities and initiatives undertaken within and by the conservation agencies and authorities, aimed at attaining the vision set for the TFCA, can get the necessary momentum to deliver tangible benefits to the region and its people. These institutional arrangements should include structures such as joint Park Management Committees, properly empowered to engage with communities that play host to the protected areas, as well as other stakeholders interested in or affected by the conservation initiatives.

The lessons that have been learnt at these TFCAs is guiding the development of new TFCAs, such as the Malawi-Zambia TFCA, where the political sphere, the senior government official sphere, and the operational spheres are working closely together. By having functional structures that focus on both the programmatic and project level interventions, interest from international collaborating partners has been garnered, and plans to collectively manage a vast landscape stretching from the Nyika Plateau to the Luangwa valley are being implemented, aimed at ensuring that the ecological connectivity within this ecosystem is sustained or restored.

Similarly, within the KAZA TFCA, projects are being implemented, not only at the strategic level but also at community level. The Simalaha Community Conservancy within Zambia for example is a crucial wildlife dispersal link between the Chobe National Park in Botswana and Kafue National Park in Zambia. Additionally, this initiative also completes the protection of the Eastern Zambezi floodplains, a wetland shared between Namibia and Zambia, essential for food security in the region.

The success of TFCAs definitely requires political support, yet also technical, operational and community support if the broad objectives regarding conservation within TFCAs are to be attained.

**5. Q (Steve Osofsky) Dr. Anton Rupert, PPF's founder, seemed to have had a soft spot for the veterinary sciences. Can you shed any historical light on his thinking regarding the role of veterinarians and animal health policy as it pertains to the success of the Peace Parks vision?**

A (*Werner Myburgh*) Dr. Rupert indeed identified veterinary sciences as an important contributor to finding solutions for Africa's unique conservation and development challenges. As a result, PPF in its formative years already entered into a strategic partnership with the University of Pretoria and have since been supporting its Veterinary Wildlife Programme. PPF has also partnered with Onderstepoort to operate and grow the Hans Hoheisen Wildlife Research Station. The idea with the partnership is to proactively support veterinary wildlife disease research and advancement by finding mitigation methods to offset the threat of diseases spreading at the interface between wildlife and domestic animals, while unlocking the inherent economic potential of these areas in a responsible manner. By merging these two diverse fields, solutions can be found in an Africa-appropriate manner. This is why the *AHEAD* programme is also such an important initiative as it addresses these same objectives.

**(Steve Osofsky) Werner, thank you so, so much for sharing your thoughts with the *AHEAD* audience. We have of course collaborated with our veterinary colleagues at Onderstepoort since *AHEAD*'s launch at the 2003 IUCN World Parks Congress in Durban, and I hope we are able to build upon those relationships, in collaboration with PPF, to further develop and pilot tangible ways to address the challenges facing SADC's vision for transfrontier conservation in the years to come.**

## NEW RESOURCES & PUBLICATIONS

**\*Proceedings now available from the Botswana Wildlife Research Symposium, held February 4-6, 2014, Maun, Botswana** - Organized by Botswana's Department of Wildlife and National Parks, the symposium aimed to bridge the gap between conservation science and management by bringing to the forefront research being done around Botswana by independent researchers, institutions and government departments. Thematic areas covered over the 3-day meeting included: wildlife monitoring, CBNRM, human-wildlife conflict, health and disease at the human-livestock-wildlife interface, transboundary conservation, and other critical conservation issues. The Government of Botswana, World Bank, WCS-*AHEAD*, USAID, UNDP, Okavango Research Institute, Wilderness Safaris, Tlhare Segolo Foundation, and others provided support for the symposium. The final combined Proceedings were emailed to those in attendance, and are also downloadable at

[http://www.wcs-ahead.org/kaza/kaza\\_additional\\_resources.html](http://www.wcs-ahead.org/kaza/kaza_additional_resources.html). For more information, please contact Dr. Michael Flyman at [mflyman@gov.bw](mailto:mflyman@gov.bw).

**\*New paper - Evaluation of the Sensitivity and Specificity of an Enzyme-linked Immunosorbent Assay for Diagnosing Brucellosis in African Buffalo (*Syncerus Caffer*) (2014), Gorsich EE, Bengis RG, Ezenwa VO and Jolles AE. *Journal of Wildlife Diseases, Ahead of Print*.** *Brucellosis is a disease of veterinary and public health importance worldwide. In sub-Saharan Africa, where the bacterium *Brucella abortus* has been identified in several free-ranging wildlife species, successful disease control may be dependent on accurate detection in wildlife reservoirs, including African buffalo (*Syncerus caffer*). We estimated the sensitivity and specificity of a commercial enzyme-linked immunosorbent assay (ELISA) (IDEXX Brucellosis Serum Ab test, IDEXX Laboratories, Westbrook, Maine, USA) for *B. abortus* based on a data set of 571 serum samples from 258 buffalo in the Kruger National Park, South Africa. We defined a pseudogold standard test result as those buffalo that were consistently positive or negative on two additional serologic tests, namely, the rose bengal test (RBT) and the complement fixation test (CFT). The ELISA's cutoff value was selected using receiver operating characteristics analysis, the pseudogold standard, and a threshold criterion that maximizes the total sensitivity and specificity. Then, we estimated the sensitivity and specificity of all three tests using Bayesian inference and latent class analysis. The ELISA had an estimated sensitivity of 0.928 (95% Bayesian posterior credibility interval [95% BCI]=0.869-0.974) and specificity of 0.870 (95% BCI=0.836-0.900). Compared with the ELISA, the RBT had a higher estimated sensitivity of 0.986 (95% BCI=0.928-0.999), and both the RBT and CFT had higher specificities, estimated to be 0.992 (95% BCI=0.971-0.996) and 0.998 (95% BCI=0.992-0.999), respectively. Therefore, no single serologic test perfectly detected the antibody. However, after adjustment of cutoff values for South African conditions, the IDEXX Brucellosis Serum Ab Test may be a valuable additional screening test for brucellosis in Kruger National Park's African buffalo. See <http://www.jwildlifedis.org/doi/abs/10.7589/2013-12-334>.*

**\*New paper - A Review of Tuberculosis at the Wildlife-Livestock-Human Interface in Zambia (2013), Malama S, Muma JB and Godfroid J. *Infectious Diseases of Poverty*, 2: 13.** *Zambia's estimated incidence of all forms of human tuberculosis (TB) is 707/100,000. High prevalence of bovine tuberculosis (BTB) - infection with *Mycobacterium bovis* - in cattle and the Kafue lechwe antelopes (*Kobus lechwe Kafuensis*) has been reported in the Kafue basin. Consumption of unpasteurised milk and meat products from infected animals poses a risk of transmitting zoonotic tuberculosis to people living at the human-animal interface. Despite the reported high prevalence of BTB in both livestock and wildlife, information on the proportion of human patients infected with *M. bovis* is unknown in Zambia. This paper reviews the available information in English on human, livestock and wildlife TB in Zambia with the purpose of assessing the burden of animal infections with *M. tuberculosis* complex and its public health implications. See <http://www.idpjournals.com/content/2/1/13>.*

**\*New paper - A New Approach for Monitoring Ebolavirus in Wild Great Apes (2014), Reed PE, Mulangu S, Cameron KN, Ondzie AU, Joly D, Bermejo M, Rouquet P, Fabozzi G, Bailey M, Shen Z, Keele BF, Hahn B, Karesh WB and Sullivan NJ. *PLoS Neglected Tropical Diseases* 8(9): e3143.** *Central Africa is a "hotspot" for emerging infectious diseases (EIDs) of global and local importance, and a current outbreak of Ebolavirus is affecting multiple countries simultaneously. Ebolavirus is suspected to have caused recent declines in resident great apes. While Ebolavirus vaccines have been proposed as an intervention to protect apes, their effectiveness would be improved if we could diagnostically confirm Ebola virus disease (EVD) as the cause of die-offs, establish Ebolavirus geographical distribution, identify immunologically naïve populations, and determine whether apes survive virus exposure. Our new approach will contribute to a strategy to protect apes from future Ebolavirus infections by early detection of increased incidence of exposure, by identifying immunologically naïve at-risk populations as potential targets for vaccination, and by providing a means to track vaccine efficacy if such intervention is deemed appropriate. Finally, since human EVD is linked to contact with infected wildlife carcasses, efforts aimed at identifying great ape outbreaks could have a profound impact on public health in local communities, where Ebolavirus causes case-fatality rates of up to 88%. See <http://www.plosntds.org/article/info:doi/10.1371/journal.pntd.0003143>.*

## RECENT FORA OF INTEREST

**\*SADC TFCAs Programme at the IUCN 6th World Parks Congress, held November 12 - 19, 2014 in Sydney, Australia -** Organized by the International Union for Conservation of Nature (IUCN) and hosted by the Australian and New South Wales Governments, the 6<sup>th</sup> World Parks Congress brought together more than 6,000 participants from over 170 countries. In a message released ahead of the Congress, the Southern African Development Community Transfrontier Conservation Areas (SADC-TFCAs) programme noted "*Transfrontier conservation was a driver for the 5<sup>th</sup> IUCN World Parks Congress, held in Durban, in 2003, and now - a decade on - TFCAs relate to a core of SADC interventions at the 6<sup>th</sup> World Parks Congress. Now in 2014, we want to celebrate how southern Africa, despite its geo-political and economic challenges, has succeeded through multi-country and multi-stakeholder partnership and collaboration to establish a variety of transboundary protected areas.*" With a team of thematic experts and policy makers drawn from across southern Africa, the SADC-TFCAs programme

contributed to the Congress through (i) numerous SADC TFCA presentations and e-posters in the various Congress streams, (ii) SADC TFCA side events, and (iii) an exhibition booth that showcased southern Africa's TFCAs. Together, these three initiatives allowed for the sharing of experiences and achievements of TFCAs in the region of relevance to the future of TFCAs globally. Thanks go to all the people who contributed to this success, with special thanks to Clara Bocchino, Roland Vorwerk, Janina Laurent and Martin Leineweber.

## UPCOMING MEETINGS / CALLS FOR PAPERS

**\*Policies for Competitive Smallholder Livestock Production Conference, Gaborone, Botswana, March 4 - 6, 2015** - The Botswana Institute for Development Policy Analysis (BIDPA), in collaboration with the International Livestock Research Institute (ILRI) and The Australian Centre for International Agricultural Research (ACIAR), will hold a conference with the theme "Policies for Competitive Smallholder Livestock Production." The conference aims to provide an opportunity for African and international scientists and broader stakeholder groups in the livestock production sector to discuss competitiveness in livestock production systems and improving the livelihoods of livestock farmers, especially smallholder farmers with emphasis on southern Africa. Themes include: (i) measures of competitiveness in smallholder livestock production and policy advocacy, (ii) market access and utilisation, (iii) role of collective action in enhancing competitiveness of smallholder livestock farmers, (iv) governments' role in the provision of livestock support services, and (v) economics of animal health and trade in the competitiveness of smallholder livestock production systems. For questions or more information, see [http://www.neat-network.eu/sites/neat-network.eu/files/Conference%20call\\_policies%20for%20smallholder%20competitiveness\\_2015.pdf](http://www.neat-network.eu/sites/neat-network.eu/files/Conference%20call_policies%20for%20smallholder%20competitiveness_2015.pdf).

**\*Updated Sessions & Late Breaker Abstracts - 3rd International One Health Congress (IOHC 2015), Amsterdam, Netherlands, March 15 - 18, 2015** - Prevention at the source is key in controlling (infectious) diseases that have a growing impact on humans, animals and their ecosystems. IOHC 2015 will therefore focus on how science can help in preventing emerging and re-emerging (infectious) diseases. In addition to the previously reported scientific program, a Special Ebola Session and several Satellite Symposia on MERS, rabies and other topics have been added. Abstract submissions will be open from December 1, 2014 until February 1, 2015 for *late breakers*. Late breaker abstracts present data of unquestionable immediate significance, gathered after the regular abstract submission deadline was closed. Early registration ends January 21, 2015. For more information, see <http://www.iohc2015.com/>.

Again, if you have items for the next **AHEAD Update**, please just let us know - thanks.

All the best,

Steve & Shirley

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