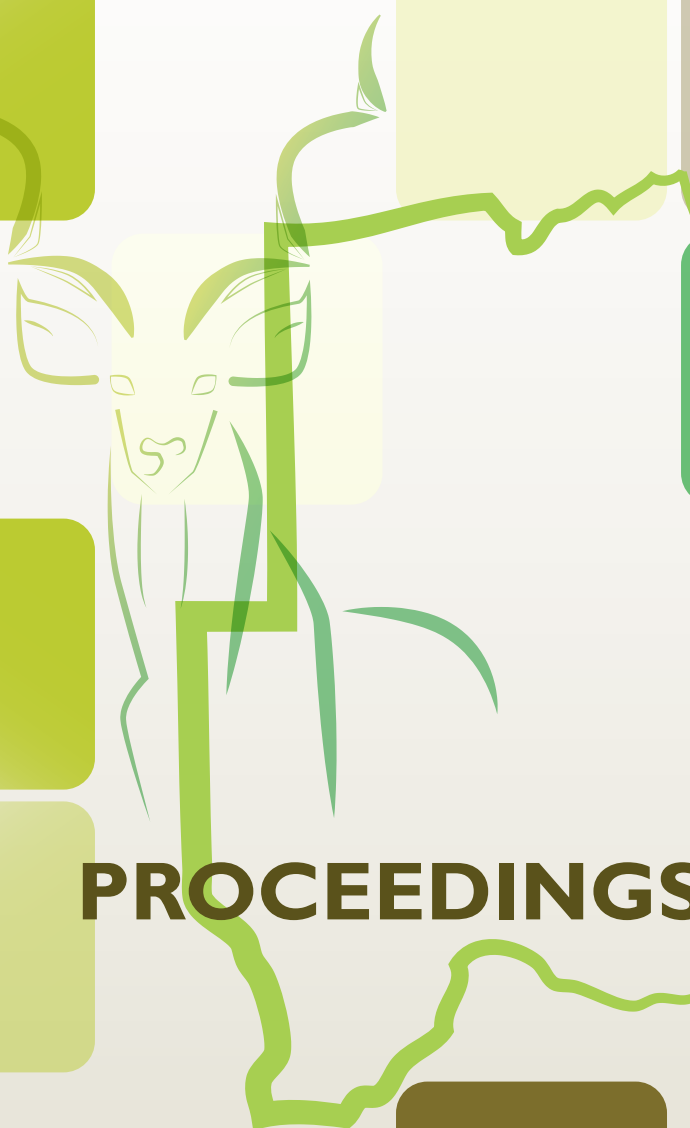


BOTSWANA WILDLIFE RESEARCH SYMPOSIUM

“Bridging the Gap between Conservation Science and Management”

Botswana Wildlife Training Institute, Maun, Botswana

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PROCEEDINGS



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The *AHEAD* programme, launched in 2003, aims to help resolve these issues and contribute to the conservation of biodiversity and the enhancement of livelihoods of the rural poor in KAZA. This would be accomplished by helping to create an enabling environment for enhanced cooperation among conservation, agriculture and human health experts and authorities within and between member countries, identifying mechanisms for controlling TADs without complete reliance on current fencing approaches, and informing and influencing cross-sectoral and transboundary policy responses that support both TFCAs and control of TADs.

Disease Burdens at the Wildlife-Livestock Interface in Two Protected Areas of Northern Botswana: the Okavango Delta and Chobe National Park

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Animals living in Transfrontier Conservation Areas (TFCAs) are particularly exposed to the introduction of pathogens from neighboring countries and to increased opportunities of transmission between wildlife, livestock and human populations. These pathogens can have serious impacts on the health of livestock, wildlife or people if they come across susceptible or naive populations in which they can amplify. Therefore, monitoring the circulation of pathogens at the interface of TFCAs appears particularly relevant from a sanitary, conservation and public health perspective. The goal of this work was to produce baseline reference data on the circulation of selected zoonotic or production limiting diseases at the wildlife-livestock interface of two main protected areas of northern Botswana, belonging to the KAZA TFCA. In this context, 500 cattle were sampled along the western boundary of the Okavango Delta (OD), while 450 cattle were sampled in the eastern and western borders of the Chobe National Park (CNP) in April 2010 and 2011 respectively. Cattle sampling in both areas was accompanied by the implementation of semi-structured questionnaire on cattle farming practices and potential contacts with wildlife. In addition, 85 buffalo were initially sampled in CNP and another 85 individuals in December 2010. Buffalo and cattle samples were screened for the presence of antibodies against brucellosis, bovine tuberculosis and Rift Valley fever (RVF). In addition, samples of buffalo were screened for various tick-borne diseases such as *Theileria*, *Anaplasma*, *Ehrlichia* and *Babesia* species. Brucellosis antibodies were detected in buffalo in both study areas, but very low levels were found in cattle from both areas. Antibodies against RVF virus were found at similar prevalence levels in buffalo and cattle, although no clinical disease has ever been reported for cattle in northern Botswana. Buffalo and cattle seroprevalence against RVF were significantly higher in Ngamiland than in the Chobe area ($p > 0.001$). Antibodies against *Mycobacterium bovis* were detected in a small proportion of livestock at the interface of CNP, but insignificant levels of antibodies were found in buffalo from both areas and in cattle at the interface of the OD. Significant levels of tick borne parasites being able to affect livestock production were identified in buffalo populations from OD and CNP. These findings provide baseline data on the circulation of diseases at the wildlife-livestock interface with possible environmental and public health implications. The baseline data was collected during the first year after the signature of the KAZA TFCA Treaty and the results obtained justify further comprehensive studies in future to monitor the dynamics.