



Kavango Zambezi Transfrontier Conservation Area

Animal Health Sub Working Group

Meeting Notes

**12-13 June, 2019
Victoria Falls, Zimbabwe**

CHAIR: COORDINATING COUNTRY - BOTSWANA

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Abbreviations

AHEAD	Animal & Human Health for the Environment And Development
AHSWG	Animal Health Sub Working Group
CBPP	Contagious Bovine Pleuropneumonia
CBT	Commodity-Based Trade
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DVS	Department of Veterinary Services
FMD	Foot and Mouth Disease
H4H	Herding for Health
HPAI	Highly Pathogenic Avian Influenza
KAZA TFCA	Kavango Zambezi Transfrontier Conservation Area
LTC	Livestock Technical Committee
NCA	Northern Communal Areas (of Namibia)
NGO	Non-Governmental Organisation
OIE	World Organisation for Animal Health
PPR	Peste des Petits Ruminants
PS	Partner State
SADC	Southern African Development Community
SC	Steering Committee
SOP	Standard Operating Procedure
TAD	Transboundary Animal Disease
TBD	To Be Determined
ToR	Terms of Reference
VFWT	Victoria Falls Wildlife Trust
WDA	Wildlife Dispersal Area
WG	Working Group
WWF	World Wildlife Fund

1. Introduction

The following is a summary of the AHSWG meeting held 12-13 June 2019 in Victoria Falls, Zimbabwe. Meeting materials are also available online at <http://www.wcs-ahead.org/kaza-ahswg/kaza-ahswg.html>. Note that the Steering Committee (SC) of the AHSWG met June 10-11 to prepare for the main meeting.

2. Opening & welcome remarks

The meeting was chaired by Botswana as the current Coordinating Country of the KAZA TFCA. During welcoming remarks Dr Wigganson Matandiko (Senior Veterinary Officer, DVS, Botswana) noted that this was the third meeting of AHSWG – the first, back in 2011, was held in Cali, Angola; the second in Maun, Botswana in 2018.

He pointed out that throughout life, we go through three levels of maturity: (i) dependence on parents, (ii) independence from parents, and then (iii) at some point we recognise the importance of interdependence. That is, we recognise that we may be experts on some issues; while others we aren't. If mature enough, we are able to recognise this and partner with others. And that is what commodity-based trade (CBT) is about – leaning on each other to make things work. He reiterated that the DVS Director for Botswana noted last year that CBT coordination needs to be improved. Working in isolation will be difficult but success is multiplicative – and in a group we can achieve far more than we can in isolation.

3. Participant introductions

A full participant list can be found in Annex 1. All five KAZA Partner States (PS) were represented, including a host of diverse stakeholders e.g. from NGOs and international organisations. KAZA Secretariat were unable to attend due to other commitments but asked the group to continue with the meeting.

4. Feedback of meeting of Steering Committee (SC)

Dr Comfort Nkgowe, as chair of the SC, noted that the SC was created by AHSWG members themselves at the August 2018 meeting. At the 2018 meeting, two breakout groups developed a list of priority animal health issues. The SC has collated those into a master list for consideration by the larger group in today's meeting. Over the course of the next two days, the working group (WG) will review the list, identify and prioritize these, and identify who can undertake which activities.

5. Presentation & adoption of the agenda

The agenda (Annex 2) was presented by the facilitator and adopted by participants.

6. Review & adoption of previous meeting notes

The meeting notes were reviewed and proposed for adoption as a true reflection of the 2018 meeting by Dr Chris Foggini and seconded by Professor Andrew Nambota, with minor amendments:

- Page 5 – Columbas name misspelt
- Page 8 – Columbas' name added to steering committee
- Page 9 – Breakout groups table, Botswana land use planning should read NG 1-4 not NG14.

7. Presentations by Partner States – updates on key KAZA livestock & wildlife health challenges, activities, and gaps

All Power Points are available in PDF at <http://www.wcs-ahead.org/kaza-ahswg/agenda-2019.html>. Thus, the presentation summaries below are brief.

7.1 Angola

A joint presentation by Dr Iacelma Machado (Wildlife Veterinarian, Department of Animal Health) and Dr Paulo Afonso (Head, Department of Animal Registration and Identification) was delivered by Dr Machado. She flagged a number of gaps that currently exist, some of which could be addressed through this forum including insufficient wildlife data within Angola's component of KAZA, lack of epidemiological surveillance of wildlife, absence of wildlife disease diagnostics, irregular animal vaccination campaigns, and conflict at the wildlife-livestock-human interface. She went on to identify a number of challenges that need to be considered in the context of KAZA, including:

- sensitizing the Government of Angola on the need to ratify the KAZA Treaty
- strengthening of institutional capacity of veterinary services
- determining the zoonosanitary status of wildlife
- tackling poaching, and
- implementing actions to mitigate human-wildlife-livestock conflict.

The following points were raised during discussion:

- i. It was confirmed that Dr Iacelma Machado is the OIE wildlife focal point.
- ii. Angola's biggest challenge in ratifying the KAZA Treaty is in the wording of "sharing resources" as this would also relate to diamonds. Botswana's Minister (as coordinating country) has travelled to Angola to discuss these challenges, but it's unclear what the outcomes were.
- iii. There is only one ministry in Angola, the Ministry of Agriculture and Forestry, that houses wildlife veterinary practitioners. However, there are other practitioners in the private sector.

7.2 Botswana

The presentation was made by Dr Wigganson Matandiko, Senior Veterinary Officer, Department of Veterinary Services, Botswana. Within southern Africa there are a number of livestock diseases of economic importance – the so-called Transboundary Animal Diseases (TADs). Several of these are of regular concern to Botswana, namely: foot and mouth disease (FMD), peste des petits ruminants (PPR), contagious bovine pleuropneumonia (CBPP), rabies, Newcastle disease, avian influenza, bluetongue and brucellosis. In 2018, of the 17 disease reporting stations across the country, rabies was reported by the largest number of stations (n=15), with the highest number of cases being reported in Maun, followed by Gaborone. He noted that disease threats are real and should not be overlooked; regular surveillance is needed for early detection of disease; and reporting and control measures need to be sustained.

The following points were raised during discussion:

- i. In understanding livestock health, there is a need to consider additional threats including nutritional status, fence impacts and road kills.
- ii. Rabies cases were reported primarily in dogs and goats, with 1-2 cases in humans. There is a need to investigate why so many cases are being found in cities/towns/urban areas - some within KAZA (Maun across to Kasane), others outside. Zimbabwe noted that it too is experiencing high rabies incidence in urban/peri-urban areas. There the garbage situation in local municipalities has collapsed and food/waste is present. Botswana may need to review waste management operations in areas with high incidence too. High numbers of semi-stray &/or roaming dogs in towns can also lead to increased rabies cases.
- iii. To manage rabies an annual vaccination rate of 70% is required in dogs.
- iv. There is a need to enforce by-laws, otherwise it will be hard to manage this. Printed copies of by-laws need to be distributed to people.

7.3 Namibia

The presentation was made by Dr Ludgerus Amushila, State Veterinarian for Kavango Regions, Directorate of Veterinary Services. The legislation relating to the control of animal diseases is embodied in the Animal Health Act (Act 1 of 2011). Most of the emphasis is on prevention, detection and control of animal disease. In addition, policy focuses on eradication of TADs (FMD and CBPP) in the Northern Communal Areas (NCA). More specifically, within the Kavango Zambezi, disease control measures focus on (i) reduction of susceptible animals through vaccination campaigns and (ii) reduction in the rate of direct contact with potentially infected animals via strict movement control, traceability, surveillance and zonation. Challenges include contact between wildlife and livestock and outbreaks of FMD and anthrax which threaten Namibia's meat export industry.

The following points were raised during discussion:

- i. Past FMD outbreaks appear to be limited to small areas close to the Zambezi-Chobe area. They are not spreading out.
- ii. Although the Botswana/Namibia border fence has been the topic of discussion for possible realignment or even decommissioning of select portions, little progress appears to be made. One stumbling block has been the presence of livestock within Bwabwata National Park. While a decision has been made by Cabinet in Namibia to remove these livestock, this has not yet been implemented.
- iii. Construction of a new cordon fence is being undertaken. This North-South fence is being constructed west of Mohembo with the aim of extending the FMD infected zone 50 km westwards due to continuous incursions of wildlife into the FMD protection zone. Challenges from traditional authorities exist as it divides the territory of the Chief. The fence, however, should not conflict with any future decommissioning of the Caprivi border fence.
- iv. If and when decisions are made between governments to decommission fences, resources need to be found to roll up fences (many of which are down in places anyway) as cattle and wildlife are being killed through entrapment.
- v. Until recently, most of the meat supplied to prisons, schools, and hospitals in the NCA was supplied from the south. Through Cabinet directive this has now changed and beef is locally sourced thereby creating a market for NCA farmers. The Government of Namibia has also invested heavily in the construction of abattoirs – N\$ 110 million has been invested in a new abattoir Rundu. The Katima Mulilo abattoir is also being renovated, to be operated by local cooperatives (not MeatCo). The same issues are coming up in Ngamiland in terms of red zone entities purchasing beef from the FMD free green zones (versus red zone). It was noted that it was good to see Namibia addressing this.
- vi. The transit of CBT beef from Botswana through Namibia's Zambezi Region is still not taking place. However, it was pointed out that this is more likely due to internal issues within Namibia. If Namibia allows beef to transit from the Zambezi Region to NCA, government will run into issues with Zambezi Region farmers wishing to market their cattle in the NCA. Regardless of the underlying issue, transit needs to be addressed at the SADC level as moving CBT beef (that OIE agrees is safe) and transit issues are limiting SADC countries options as they seek non-EU markets.
- vii. Some PPR surveillance took place in 2017 in the Kavango area. Last year, DVS faced challenges with field work due to vehicles.
- viii. Rabies has been recorded in the KAZA component of Namibia. A rabies eradication programme was implemented in 2016 which has been met with success. Most pet owners are school-going kids so vaccination campaigns were timed to coincide with during school holidays. This has worked well. In urban areas, teams were set up to administer the campaigns and now cases are only seen occasionally.

7.4 Zambia

Dr Jackson Katampi, Senior Wildlife Veterinary Officer, Department of National Parks and Wildlife, Zambia, gave the presentation. Between 2018 and 2019, Zambia has recorded several disease outbreaks and a case of poisoning:

- Buffaloes sampled in Kafue and Mosi-oa-tunya National Park tested positive for FMD.
- An outbreak of anthrax in zebras was confirmed in Western Province, which is likely the first time this has been recorded in wildlife in this region.
- African swine fever has been isolated in warthogs in Kafue National Park and from ticks in Mosi-oa-tunya National Park.
- An increase in the mortality of Egyptian geese between Livingstone and Kazungula was recorded, which is suspected to have resulted from poisoning.

Dr Katampi went on to identify a number of challenges that need to be considered in the KAZA context, including:

- Timely disease diagnoses in protected areas. CVRI and UNZA being the main labs being used;
- Investment in regional information gathering & interpretation for early warning
- Harmonization of animal disease control policies, legislation and programs for major animal diseases in KAZA; and
- Limited capacity and resources directed towards wildlife health, with most investment going into law enforcement.

The following points were raised during discussion:

- i. Based on the epidemiology of FMD, one would expect to see those areas closest to wildlife as locations that experience the greatest number of FMD outbreaks, but this is not the case. It needs to be recognised that FMD viruses are being maintained in cattle.
- ii. It is likely the recent chemical poisoning of Egyptian geese in the Livingstone-Victoria Falls area was due to ingestion of a crop pesticide (organophosphate), and that they were most likely poisoned purposely.

7.5 Zimbabwe

The presentation was made by Dr George Hanyire, Acting Head of Wildlife Unit, DVS, Zimbabwe. In Zimbabwe, veterinary services undertake a number of activities including (i) disease surveillance, (ii) inspections and registrations, (iii) translocations, (iv) social programmes, (v) research, and (vi) strategy formulation and implementation. Some of the gaps and challenges identified include:

- Declining budgetary support for livestock health programmes, i.e. preventive vaccination (anthrax, rabies), infrastructure;
- Logistical support for field inspections, surveys/diagnostic sampling and testing;
- Weak diagnostic, surveillance networks;
- Low producer prices for livestock in areas with wildlife (FMD);
- Poachers and cyanide poisonings
- Conflict between livestock and conservation objectives and resources;
- Zoonotic disease threats from anthrax, rabies, TB, brucellosis.

The following points were raised during discussion:

- i. Cyanide is commonly used in gold mining and used by wildlife crime syndicates.
- ii. Highly pathogenic avian influenza (HPAI) is under control now. Brucellosis is suspected in the Hwange area, but it has not been confirmed yet. For all diseases, Zimbabwe has an efficient epidemiological unit. Once diseases are confirmed, they are reported to the OIE.
- iii. Seroprevalence of brucellosis varies across country. In the south east it is high – around 20-25%.

8. Presentations by cooperating partners and stakeholders

A series of presentations were made by the World Organisation for Animal Health (OIE); the Animal & Human Health for the Environment And Development (AHEAD) programme of Cornell University; the Herding for Health (H4H) programme being jointly implemented by Conservation International and Peace Parks Foundation; Victoria Falls Wildlife Trust (VFWT); and World Wildlife Fund, Namibia (WWF-Namibia).

The following are the main discussion points that emerged from the session:

- i. The OIE General Session in 2019 acknowledged the importance of the impacts of (a) climate change, and (b) international trade – and the importance of reporting and transparency were highlighted. OIE standards can and should be changed if they are shown to be outdated, but this will require relevant research to back it up.
- ii. TFCAs by their very nature demand a transdisciplinary One Health approach. It is therefore important to not only focus on livestock health issues but also wildlife and human health.
- iii. On issues related to CBT, it's important to note that CBT is not a system for managing disease like FMD; it is a system for managing the risk of a pathogen being present in the commodity. CBT is however enhanced if FMD control is improved e.g. related to the standstill issue during outbreaks. Thus, the aim should be trade in safe products but in conjunction with an official disease control programme. It is import in this instance that standards are well and equally applied.
- iv. The requirement for pre-slaughter quarantine can lead to a bottleneck. Small mobile quarantine facilities linked to mobile abattoirs could provide a mechanism for increasing market access for cattle producers living in areas far from existing abattoirs/quarantine stations. However, a feasibility study would be needed as no guidelines currently exist.
- v. In many locations, farmers have difficulty complying with FMD risk mitigation measures such as herding and kraaling their cattle. Skilled/professional herders can play a vital role in enabling farmer compliance. However, there is a need to determine the long-term sustainability of paying herdsman wages. At existing pilot sites this is entirely NGO supported, paying BWP 2,500 per month salary in Seronga (Botswana). There is also a need to better present the concept of the Conservation Agreement as right now it raises alarm bells, i.e. the model as presented appears to say “we will pay you if you stop poaching”.
- vi. The movement of samples within KAZA to referral testing facilities or labs is currently constrained by several factors including restricted movement between veterinary zones of differing animal health status. CITES permit requirements (related to Appendix 1 & 2 listed species) are also a barrier to wildlife sample analysis. As a first step, AHSWG members should sensitize their own countries to support the upcoming CITES CoP18 Doc.56 resolution dealing with movement of diagnostic and forensic samples. See: <https://cites.org/sites/default/files/eng/cop/18/doc/E-CoP18-056.pdf>
- vii. In terms of veterinary cordon fences, in the past there was considerable support from the EU & governments. But at present KAZA countries don't have the necessary funding to maintain these fences. Cost-benefit analysis work completed about 10 years ago showed that, at best, investment in fences to ensure access to European markets resulted in a breakeven situation, but not a cost-effective one. Within Botswana, the cost of fence maintenance is a government cost, and one provided more as a social responsibility. Destruction of fences by elephants is however an ongoing challenge within Botswana and fences are costly. Maintenance is estimated to cost around BWP 25,000 per km –

- something that is unlikely to be sustainable. In many cases, fences are abandoned due to the cost, especially where there are elephants.
- viii. KAZA’s Integrated Development Plan recognizes the need to support discussions between PSs on decommissioning of some boundary fences. While there is a need for Namibia and Botswana to meet and discuss border fence issues, the timing might not be right. Botswana has just reinstated its National Committee on Cordon Fences and wants to “get their house in order” first (i.e. reach consensus internally) before engaging with colleagues from Namibia. Farmers from the green zones/FMD free zones also need to be reassured that they won’t be negatively impacted by any decommissioning of fences.

9. Prioritization of identified animal health issues in KAZA

The Steering Committee (SC) met immediately prior to the larger WG meeting from 10-11 June, 2019 in Victoria Falls. Using breakout notes from the previous AHSWG meeting (held August 2018), the SC produced a master list of identified animal health issues for action within KAZA and began to prioritize them according to the criteria below.

Priority	Key
C	Completed
O	Ongoing, with some funding
U	Greatest urgency in terms of animal health & conservation outcomes in KAZA
L	Easy to accomplish (low-hanging fruit) within one year with limited resources
B	Both urgent & low hanging fruit

Following this, the SC presented the consolidated draft list of priority animal health activities to the WG for consideration. In breakout groups, AHSWG participants reviewed and refined the master list (Annex 3). In the same breakout groups, participants went on to identify key role players, and timeframes were delineated. Finally, the WG honed the list down to flag those actions that it could immediately commit itself to undertaken within the first year, i.e. July 2019-June 2020. These are presented Table 1 below.

Table 1. Prioritised activities for the year 2019-2020

Priority legend

C Completed

O Ongoing

U Greatest urgency in terms of animal health & conservation outcomes in KAZA

L Easy to accomplish (low hanging fruit) within 1-year with limited resources

B Both Urgent AND Low hanging fruit

No	Topic	Objective	Activity	Responsibility	Location/ Scope	Timeline	Details	Priority
1.1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Prepare updated regional guidelines for CBT beef production	AHEAD	SADC region	2017-2018	Revised to incorporate 2015 changes to OIE Terrestrial Animal Health Code that allow for quarantine.	C
1.2			Revise guidelines for CBT beef production based on SADC Livestock Technical Committee (LTC) input for proposed adoption as SADC document	AHEAD	Presented to SADC LTC (Jul & Dec 2018)	Jul 2018 – Jun 2019	Revised following SADC LTC feedback; approved by SADC Council of Ministers as regional document (June 2019)	C
1.3			Identify priority sites in KAZA WDAs for CBT pilot projects	H4H	Multiple sites	2018- to date	Field site assessment with eventual feasibility studies	O
1.4			Initiate CBT pilot work at multiple sites identified in WDAs (3 countries to date)	Govt & community partners; H4H, BPCT; CLAWS; ORI; CIRAD; VFWT; PPF; CI; AHEAD	(BW) Habu & Eretsha (ZM) Simalaha (ZW) Victoria Falls	2018 – to date	Various stages from feasibility studies to early implementation at production level (e.g. herding/kraaling pilots)	O
1.5			Conduct CBT beef market opportunities analysis for Ngamiland, BW	AHEAD, WWF	Ngamiland, BW	2017	Stakeholder consultation & desktop study.	C
1.6			Conduct detailed gap analysis on implementation of CBT beef in Ngamiland, BW	AHEAD consortium in partnership with DVS, BW	Ngamiland, BW	Nov 2017- Jul 2019	Stakeholder consultation & field site visits; capacity-building/ training; workshops. Draft report completed; DVS HQ validation (June 2019); stakeholder validation workshop (July 2019)	O
1.7			Conduct analysis of regional abattoir capacity	TBD			Analysis to consider potential for more efficient use of resources within KAZA	L

1.8		Improve understanding & ability to mitigate risk	Collate data & apply rainfall biomass model to help guide risk mitigation/ future management strategies	DVS – Afonso & Machado (AN); Mbeha & Mafonko (BW); Amushila (NA); Katampi (ZM); Taylor (WWF)	Rainfall station data (as many as possible); mortality data available for KAZA component; modelling	Jul 2019 – Jun 2020; ongoing with progress report by end of Yr-1	Collection of data (yr-1); apply Coe, Cumming & Philipson model (1976) - Yr-2 (Taylor). Rainfall data & statistics on animal mortality, especially livestock (deaths due to disease, predation, environmental/underlying nutrition, fence & road kills). [Editor's note: consider FEWS NET famine early warning system for possibly useful tools.]	B
2.1	Surveillance	Improve decision making by making surveillance data more comparable across KAZA landscape	Collation of existing SOPs	DVS - Afonso & Machado (AN); Mbeha & Mafonko (BW); Amushila (NA); Katampi (ZM); Hanyire (ZW)	Desktop	Jul – Sep 2019	PDF documents, send to AHSWG SC	B
2.2			Collation of recent & planned surveillance operations within KAZA	DVS - Afonso & Machado + Cuando-Cubango province vet officer (AN); Mbeha & Mafonko (BW); Amushila (NA); Katampi (ZM); Hanyire (ZW)	Desktop. Data from 2015 onwards (passive & active operations)	Jul-Sep 2019	List of surveillance operations & where	B
3.1	Disease risk assessment	Coordinate & spearhead prioritised AHSWG activities	Produce Terms of Reference (ToRs) for a proposed KAZA-wide epidemiologist	VFWT (Foggini); AHEAD; Chaitezvi (ZW)	Start process to produce ToRs & source funds	Jul 2019 – Jun 2020	Email & Skype meetings b/w team; desktop	L
3.2		Improve ability to mitigate disease risk	Desktop survey of epidemiological capacity within KAZA	TBD	TBD	Likely 2020-2021	Progress envisioned once KAZA-wide epidemiologist position filled &/or Yr-2 activity	L
4.1	Diagnostics	Improved speed & accuracy of diagnoses to improve disease management	Survey of diagnostic capacity within KAZA (including listing labs that are accredited for certain tests)	Team to source info: Foggini (VFWT); Hanyire (ZW); Mbeha (BW). Nyika to provide info from LTC (via Manyire)	Initially desktop study; ZW chairing LTC lab sub-committee (indicated some info already there)	2019	Progress envisioned within one year. Conduct survey for disease risk assessment capacity, with view of more efficient use of resources within KAZA	L

4.2			Promote use of regional (KAZA) facilities/labs	TBD	TBD	Likely 2020-21	Progress envisioned once survey of diagnostic lab capacity completed	B
4.3		Improved speed & accuracy of diagnostics / analysis to improve disease management / forensic identification	Develop veterinary SOPs for gross examination & next course of action for confiscated consignments of animal products	DVS - Afonso & Machado (AN); Mbeha & Mafonko (BW); Amushila (NA); Katampi (ZM); Hanyire (ZW)	Examination of legislation - both wildlife & veterinary health statutes (2019); start to develop SOPs (2020)	Oct 1 - Dec 15, 2019 (gather Acts/regulations)	Examine with view to developing SOPs & share w/ group (2019); develop SOPs (2020); developed in partnership with law enforcement agencies.	B
4.4			AHSWG members to get their own countries to support CITES CoP18 Doc.56 resolution dealing with movement of diagnostic & forensic samples	Individual countries with top-down & bottom-up approaches	1. Chair for AHSWG 2. Conservation WG 3. Country delegation to CITES CoP18 4. Country representatives	ASAP (before Sep 2019)	Through written communication to the Directors cc KAZA focal persons	B
5.1			Communications	Enable more effective transboundary collaboration	Set up WhatsApp group for field level operatives	One administrator per country: Afonso (AN); Nkgowe (BW); Amushila (NA); Katampi (ZM); Foggin (ZW)	Include representatives from PS (DVS; wildlife & private sector)	Initiated 13 Jun 2019; full set of names by Jun 30
5.2	Institute veterinary officer meetings (local/field-level)	Representatives from PS			Veterinary officers stationed within KAZA	Use existing mechanisms where possible e.g. TBNRM forum	Initial step: brief &/or write to superiors in PSs	B
6.1	Disease control	Ensure fencing decisions are based on sound cross-sectoral cost/benefit analysis	Determine mechanisms in place in each PS for cross-sectoral engagement on fencing issues (start w/ key government authorities)	Individual countries	DVS representatives: Matamdiko (BW); Amashila (NA); Tapiwa (ZW)	Aug 31, 2019	Consultation with relevant stakeholders and written communication	B
6.2			Re-establish Botswana multi-sectoral national fencing committee to review fencing	BW - co-chaired by DVS & DWNP; support provided by AHEAD	Botswana	2018 - to date (ongoing)	Regular meetings of Committee; input from technical experts on specific issues, as required	O

6.3			Conduct assessment of current & planned veterinary fences affecting KAZA's WDAs	AHEAD; WWF	Start process to source funds	Attempt to source funds: Yr-1	Actual assessment possibly done at individual country level?	U
6.4		Improve KAZA-wide disease management	Coordinate shared emergency disease response	TBD				O
6.5			Coordination of vaccination campaigns (activities to be synchronized)	TBD				O
7.1	Cross cutting – Research	Improve regional knowledge base for science-based decision making	Identify veterinary research priorities	Steering Committee (SC)	AHEAD to share preliminary list with SC for expansion	Jul 2019 - Jun 2020	Desktop	L

Top Tier Diseases for KAZA

Anthrax
Foot and mouth disease (FMD)
Rabies
Trypanosomiasis (Angola)
Bovine tuberculosis (BTB)
Contagious bovine pleuropneumonia (CBPP)

Tier 2 Diseases for KAZA

Bovine brucellosis
African swine fever (ASF)
Canine distemper virus (CDV)

10. Key discussion points

The following were pertinent points raised during this session:

- i. **Improve speed & accuracy of diagnostics/analysis to improve disease management/forensic identification.** The movement of samples within KAZA to referral testing facilities or labs is currently constrained by several factors including restricted movement between veterinary zones of differing animal health status. However, there was recognition that there are perfectly competent facilities within KAZA which could be utilised under certain conditions and for specific purposes, which could enable more timely determination of results. This is important from a disease risk management perspective. However, national protocols and procedures need to be considered, as does whether these facilities within KAZA have the necessary accreditation to offer such services and if not, how this could be facilitated. Drawing from experiences from other TFCAs and even KAZA itself, it was acknowledged that while high-level harmonization of legislation and policy in TFCAs is a time-consuming and challenging goal, developing working, field level Standard Operating Procedures (SOPs) has proven easier to achieve within broader national and regional frameworks. This is reflected in the workplan (Table 1) where the AHSWG proposes to develop SOPs to enable crossborder collaboration on sample movement while addressing longer term accreditation issues based on an assessment of diagnostic capacity within KAZA. CITES permit requirements (related to Appendix 1 & 2 listed species) are also a barrier to wildlife sample analysis. This issue has also been raised by the IUCN Wildlife Health Specialist Group and the OIE Working Group on Wildlife. As a first step, AHSWG members agreed to sensitise their own countries to support the upcoming CITES CoP18 Doc.56 resolution dealing with movement of diagnostic and forensic samples. See: <https://cites.org/sites/default/files/eng/cop/18/doc/E-CoP18-056.pdf>
- ii. **Improve decision making by making surveillance data more comparable.** To establish a baseline, it was agreed that all PSs begin collating a list of existing SOPs as well as recent and planned surveillance operations within KAZA. Once complete, this will allow for an assessment of existing SOPs to determine if updates and/or harmonization would increase efficiency – recognising that some countries may require support in SOP development.
- iii. **Enable more effective transboundary collaboration.** The need for improved communication between field-based veterinary officers from different partner states came out strongly in discussions, especially when dealing with disease outbreaks. As a first step, it was agreed that a WhatsApp group should be established. It was also felt that joint field-based veterinary officer meetings held at least twice a year in different locations would help improve trust and communications across borders. To ensure this does not add unnecessary burden to operatives on the ground, it was suggested that these align with existing mechanisms e.g. the TBNRM forums, or the Joint Permanent Commissions if appropriate.
- iv. **Ensure fencing decisions are based on sound cross-sectoral cost/benefit analysis.** WG members reiterated that CBT approaches to beef production facilitate the management of FMD trade risk while diminishing the need for some expensive and environmentally damaging fences. Discussions centred around the need to assess current and planned veterinary fences affecting KAZA's Wildlife Dispersal Areas (WDAs) – to gain a clearer understanding of their utility and/or which are most environmentally damaging. Partner states

noted that fences are expensive for governments to maintain and many are in a state of disrepair [causing further wildlife and livestock mortality through entanglement]. Even though disease control was the original justification for putting up many fences, this has evolved over time with some serving a multitude of purposes, including mitigating human-wildlife conflict and border security. Consequently, any review of fences in KAZA must be cognizant of these various intentions and the changing sociopolitical realities on the ground. Botswana noted the recent revival of its multisectoral National Committee on Cordon Fences, previously known as the Ad Hoc Committee on Fences. One of the functions of the Committee will be to conduct a review of its internal veterinary fences.

- v. **Topics for future AHSWG meetings.** WG members felt it might be helpful to focus on one or two big issues that need to be resolved at the KAZA level. However, these types of discussion would require attendance by all DVS directors. Examples might include: (i) use of regional abattoirs e.g. Katima abattoir for Chobe cattle i.e. more efficient use of resources within the TFCA, and (ii) transit of beef (livestock products) through the region to other African markets.

11. Immediate next steps

The following immediate next steps were agreed to by the group:

- i. Angola and Botswana to consult and submit names for WhatsApp group
- ii. Brief KAZA DVS and Animal Production Directors at the next SADC LTC to bring them up to speed [completed June 2019]
- iii. SC to circulate consolidated draft action table to AHSWG by 24 June; feedback from AHSWG by 28 June [completed June 2019]
- iv. SC to prepare and disseminate 2019 AHSWG report & workplan to KAZA Secretariat for circulation to Conservation WG [completed July 2019]
- v. SC to draft a motivation letter on simplification of CITES sample transfer for PSs [completed July 2019 & submitted to KAZA Secretariat]
- vi. SC to prepare meeting notes and disseminate, and upload to AHSWG website [completed August 2019]
- vii. Brief the Conservation WG at their next meeting
- viii. AHSWG to begin to undertake agreed upon activities
- ix. SC to check in with WG after 6 months to ensure workplan progress
- x. AHSWG to meet again at least once before July 2020

12. Recommendations for consideration by the KAZA structures

- i. Country representatives to sensitize the delegations from each KAZA PS that will be attending CITES COP18 on the importance of the resolution related to sample transfer so that it may be supported; and
- ii. Communication regarding the KAZA AHSWG (e.g. pertaining to meetings) to be copied to Directors of Veterinary Services and Animal Production in the ministries of agriculture, whilst being sent directly to the KAZA lead ministries. This will enable the Directors to lobby for their personal attendance (including sponsorship) at WG meetings and/or that of the most appropriate, delegated officers.

13. Closing remarks

Dr Wigganson Matandiko of DVS, Botswana reminded the group that everything starts with a dream – let us dream and go out and do good work.

In closing remarks, Dr Josphat Nyika, Director of Field Veterinary Services, Zimbabwe, suggested a few takeaways as the group prepared to head home. He noted that this meeting has come and gone, but as we head home, the ingredients for success include engagement and re-engagement with stakeholders. Collaboration is key. The AHSWG must remain focused on finding pragmatic approaches and to 'bite what we can chew'.

Let us implement what we have agreed to do. Encourage information sharing and prompt reporting. There are many animal health issues in KAZA. We can tackle them one by one. As we cross one mountain, there are many more to climb. The terrain is tough, but we should not give up. Collaboration and teamwork is the key. Let's keep up the momentum.

He concluded by thanking the SC for their work in preparation for the meeting and for their work steering the ship. He thanked AHEAD and the OIE, as well as all collaborating partners. He also noted that this is the first time all five PSs had attended and gave special thanks to Angola for participating without the aid of interpreters. He wished everyone safe journeys home.

Before departing Victoria Falls, a site visit was also arranged to the VFWT Wildlife Diagnostic Lab to discuss some of the VFWT's disease projects and conservation work, including responding to the poisoning of wildlife and spill-over into vultures. Attendees were also able to gain a better understanding of the lab's functions in terms of serology, haematology, biochemistry, parasitology, molecular diagnostics (PCR), histology, pathology and toxicology.

13. Annex 1. Attendance

No.	Surname	Name	Country	Affiliation	Title &/or expertise	Email
1	Afonso	Paulo J. A.	Angola	Ministry of Agriculture & Forestry	Head, Dept of Animal Registration & Identification	adelinoj2@gmail.com
2	Machado	Iracelma Brandão de Matos	Angola	Ministry of Agriculture & Forestry	Wildlife Veterinarian, Dept of Animal Health (Vet Services)	iracelmamachado@yahoo.com.br
3	Hofmeyr	Markus	Botswana	Great Plains Conservation	Chief Conservation Officer & Veterinarian	markus@greatplainsconservation.com
4	Matandiko	Wigganson	Botswana	Ministry of Agricultural Development & Food Security	Senior Veterinary Officer, Dept of Veterinary Services	wmatandiko.1965@gmail.com wmatandiko@gov.bw
5	Mbeha	Bernard	Botswana	Ministry of Agricultural Development & Food Security	Principal Veterinary Officer, Dept. Veterinary Services	bmbeha@gov.bw bernardmbeha75@gmail.com
6	Nkgowe	Comfort	Botswana	Ministry of Environment, Natural Resources Conservation & Tourism	Principal Veterinary Officer, Dept of Wildlife & National Parks	comnkgowe@gmail.com cnkgowe@gov.bw
7	Ramsden	Nidhi	Botswana	Seanama Conservation Consultancy	AHEAD Technical Liaison	nidhigureja@yahoo.com
8	Valsson	Olafur	Botswana	OIE-Sub-Regional Representation, Southern Africa (SRRSA)	Programme Officer, AMR	o.valsson@oie.int
9	Amushila	Ludgerus	Namibia	Ministry of Agriculture, Water & Forestry	State Veterinarian, Directorate of Veterinary Services	amushilal@mawf.gov.na l.amushila@yahoo.com
10	Masaire	Edmore	Namibia	Herding for Health Programme, CI	Technical Support	emhazvineyi27@gmail.com
11	Taylor	Russell	Namibia	WWF - Namibia	Transboundary Conservation Planning Advisor	rtaylor@wwf.na
12	Atkinson	Shirley	USA	Cornell University	AHEAD Regional Coordinator	s.atkinson@cornell.edu
13	Osofsky	Steve	USA	Cornell University	AHEAD Programme Coordinator	s.osofsky@cornell.edu
14	Katampi	Jackson	Zambia	Ministry of Tourism & Arts	Senior Wildlife Veterinarian Officer, Dept of National Parks & Wildlife	jacksonzozo10@gmail.com
15	Nambota	Andrew	Zambia	Peace Parks Foundation	Country Manager - Zambia	anambota@peaceparks.org andrewnambota56@gmail.com

16	Chaitezvi	Columbas	Zimbabwe	Ministry of Environment, Tourism & Hospitality	Chief Veterinary Officer, ZIMPARKS	colchaitezvi@gmail.com cchaitezvi@zimparks.org.zw
17	Foggin	Chris	Zimbabwe	Victoria Falls Wildlife Trust	Wildlife Veterinarian, Wildlife Disease Diagnostics Lab	cfoggin@zol.co.zw
18	Hanyire	T. George	Zimbabwe	Ministry of Lands, Agriculture, Water, Climate & Rural Resettlement	Acting Head of Wildlife Unit, Dept of Veterinary Services	tghanyire@gmail.com
19	Moyo	Nothando	Zimbabwe	Ministry of Environment, Tourism & Hospitality	TFCA Programme Officer, ZIMPARKS	nrmoyo@zimparks.co.zw
20	Nyika	Josphat	Zimbabwe	Ministry of Lands, Agriculture, Water, Climate & Rural Resettlement	Director, Vet Field Services, Dept of Veterinary Services	nyika06@gmail.com dvsharare@gmail.com

14. Annex 2. Meeting agenda



Kavango Zambezi Transfrontier Conservation Area



Animal Health Sub-Working Group Meeting

DRAFT AGENDA

12-13 June 2019

Victoria Falls, Zimbabwe

Purpose

The aims of this meeting are to:

- Provide updates on key animal health related issues – current and emerging – within KAZA or that have a bearing on KAZA
- Determine practical steps towards addressing prioritised transboundary animal health issues within the TFCA; and
- Prepare an update for submission to the Conservation Working Group.

Participation

- Partner State representatives from respective departments:
 - The director for the department of veterinary services
 - The director for the department of animal production
 - Head wildlife veterinary officer
- Invited practitioners and regional entities working in support of KAZA (e.g. SADC FANR, OIE, FAO, AHEAD, Victoria Falls Wildlife Trust)
- KAZA Secretariat

Draft Agenda
Chair: Coordinating Country - Botswana
Meeting Facilitator: KAZA Secretariat and AHEAD

Time	Agenda item	Presenter/ Facilitator
<i>Day 1 – Wednesday 12 June 2019</i>		
8:00	Registration	KAZA Secretariat/ AHEAD
Introduction and Background		
8:30	Opening and welcome remarks	W. Matandiko (BW)
8:35	Participants introductions	All
8:45	Feedback from the meeting of the Steering Committee	Chair of Steering Committee, C. Nkgowe
9:00	Presentation and adoption of agenda	AHEAD
9:10	Review and adoption of previous meeting notes	AHEAD
Updates from Partner States on Current / Emerging Livestock and Wildlife Health Challenges, Activities & Gaps in the KAZA Landscape		
9:30	Angola	I. Machado
9:45	Botswana	W. Matandiko
10:00	Namibia	L. Amushila
10:15	Q & A, Discussion	Plenary
10:30	TEA BREAK	
11:00	Zambia	J. Katampi
11:15	Zimbabwe	G. Hanyire
11:30	Q & A, discussion	All
Updates from Cooperating Partners / Stakeholders		
11:45	Current developments relevant to transboundary animal disease in the context of SADC	O. Valsson
12:00	Lessons emerging from implementation of CBT of beef at local and regional scales	S. Atkinson / S. Osofsky
12:15	Update from the Herding for Health pilots in TFCAs	E. Masaire
12:30	Q & A, discussion	Plenary
13:00	LUNCH	
14:00	Facilitation of sample sharing, diagnostics and communications: utility of a KAZA-focused laboratory	C. Foggin
14:15	Management of KAZA's elephant population: the role of fences	R. Taylor
14:30	Q & A, discussion - including any emerging issues not already brought-up	Plenary
15:00	TEA BREAK	
Addressing prioritised transboundary animal health issues in KAZA		
15:30	Prioritisation of identified animal health issues for action within KAZA, with Steering Committee having used breakout group notes from previous meeting	C. Chaitezvi
15:50	Review & discussion	Breakout groups
17:30	Adjourn for the day	
18:00	GROUP DINNER – all participants	

<i>Day 2 – Thursday 13 June 2019</i>		
8:00	Plenary report back on Day 1 breakout groups	Plenary
10:00	GROUP PHOTO & TEA BREAK	
10:30	Consideration of strategic actions to address priority issues – identifying key role players & timeframes (working towards an actions table)	Breakout groups
12:00	Plenary discussion	Plenary
12:20	Consolidating actions table of immediate next steps	Facilitated session
12:45	AHSWG update to Conservation Working Group	C. Nkgowe
13:15	Closing remarks	J. Nyika (ZW)
13:30	LUNCH	
14:30	Field visit to Victoria Falls Wildlife Trust Diagnostics Laboratory	C. Foggin/ AHEAD
17:00	Adjourn	

15. Annex 3. Prioritised strategic actions for identified animal health issues

Priority legend

- C Completed
- O Ongoing
- U Greatest urgency in terms of animal health & conservation outcomes in KAZA
- L Easy to accomplish (low hanging fruit) within 1-year with limited resources
- B Both Urgent AND Low hanging fruit

Timeframe

- Priority for Year-1
- Consider thereafter

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Prepare updated regional Guidelines for CBT beef production	AHEAD	SADC region	2017-2018	Revised to incorporate 2015 changes to OIE Terrestrial Animal Health Code that allow for quarantine. http://www.wcs-ahead.org/kaza/181114-guidelines-for-implementing-cbt-final.pdf	C
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Revise guidelines for CBT beef based on SADC Livestock Technical Committee (LTC) input for proposed adoption as SADC document	AHEAD	Presented to SADC LTC (Jul & Dec 2018)	Jul 2018 - Jun 2019	Revised following SADC LTC feedback; approved by SADC Council of Ministers as regional document (June 2019)	C
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Identify priority sites in KAZA Wildlife Dispersal Areas (WDAs) for CBT pilot projects	H4H	Multiple sites	2018 - to date	Field site assessment with eventual feasibility studies	O
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Initiate CBT pilot work at multiple sites identified in WDAs (3 countries to date)	Governmental & community partners; H4H; BPCT; CLAWS; ORI; CIRAD; VFWT; PPF; CI; AHEAD	(BW) Habu & Eretsha, (ZM) Similaha, (ZW) Victoria Falls	2018 - to date (ongoing)	Various stages from feasibility studies to early implementation at production level (e.g. herding/kraaling pilots)	O
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Conduct CBT beef market opportunities analysis for Ngamiland, BW	AHEAD; WWF	Ngamiland, BW	2017	Stakeholder consultation & desktop study. http://www.wcs-ahead.org/kaza/171003_rpt_final_marketopportunitiesforcbtbeef_ngamiland.pdf	C

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Assess CBT beef market opportunities for other KAZA sites			Longer term activity to enable trade	Stakeholder consultation & desktop	
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Conduct detailed gap analysis on implementation of CBT beef in Ngamiland, BW	AHEAD consortium in partnership with DVS, BW	Ngamiland, BW	Nov 2017 - Jul 2019	Stakeholder consultation & field site visits; capacity-building/training; workshops. Draft report completed; DVS HQ validation (June 2019); larger stakeholder validation workshop (July 2019)	O
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Conduct analysis of regional abattoir capacity	TBD			Analysis to consider potential for more efficient use of resources within KAZA	L
1	Animal Production & Livelihoods	Improve understanding & ability to mitigate risk	Collate data & apply rainfall biomass model to help guide risk mitigation/future management strategies	DVS - Afonso & Machado (AN); Mbeha & Mafonko (BW); Amushila (NA); Katampi (ZM); Hanyire (ZW); Taylor (WWF)	Rainfall station data (as many as possible); mortality data available for KAZA component; modelling	Jul 2019 -Jun 2020; ongoing with progress report by end of Yr-1	Collection of data (yr-1); apply Coe, Cumming & Philipson model (1976) - Yr-2 (Taylor). Rainfall data & statistics on animal mortality, especially livestock (deaths due to disease, predation, environmental/underlying nutrition, fence & road kills). [Editor's note: consider FEWS NET famine early warning system for possibly useful tools.]	B
1	Animal Production & Livelihoods		Develop veterinary Standard Operating Procedures (SOPs) for dealing with illegally transported livestock/wildlife & stray livestock				In partnership with law enforcement agencies	U
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Assess current Livestock Identification Systems to determine if harmonization would be beneficial				As part of assessment, evaluate whether establishing country ID systems should be more of a priority (to enable trade)	

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
1	Animal Production & Livelihoods	Facilitate sustainable integrated land use & livelihoods in KAZA	Assess market opportunities for wildlife & wildlife products					
2	Surveillance	Improve decision making by making surveillance data more comparable across KAZA landscape	Collation of existing SOPs	DVS - Afonso & Machado (AN); Mbeha & Machado (BW); Amushila (NA); Katampi (ZM); Hanyire (ZW)	Desktop	Jul 1 - Sep 30	PDF documents, send to AHSWG SC	B
2	Surveillance	Improve decision making by making surveillance data more comparable across KAZA landscape	Collation of recent & planned surveillance operations within KAZA	DVS - Afonso & Machado + Cuando-Cubango province vet officer (AN); Mbeha & Machado (BW); Amushila (NA); Katampi (ZM); Hanyire (ZW)	Desktop. Data from 2015 onwards (passive & active OPs)	Jul 1 - Sep 30, 2019	List of surveillance operations & where	B
2	Surveillance	Improve decision making by making surveillance data more comparable across KAZA landscape	Assess existing SOPs to determine if updates/harmonization would increase efficiency					U
2	Surveillance	Improve decision making by making surveillance data more comparable across KAZA landscape	Based on assessment, provide support to those countries requiring SOP development				Through inter-country support	U
2	Surveillance		Promote more rigorous passive surveillance		Objectives (activities are baby steps towards objective)		Through greater observation, reporting & sharing of data	U

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
2	Surveillance		Training of field officers in passive surveillance		Harmonization of SOPs		To help recognize, report & sample for disease (feedback v important to roll up into risk mitigation strategy)	U
2	Surveillance		Undertake joint targeted surveillance operations				Process to include development of MoU / SOPs for shared operations	
2	Surveillance		Develop good practice guidelines				Long term aspiration - to enable cost-effective & focused surveillance	
3	Disease risk assessment	Coordinate & spearhead prioritized AHSWG activities	Produce Terms of Reference (ToRs) for a proposed KAZA-wide epidemiologist	AHEAD; VFWT (Foggin); Chaitezvi (ZW)	Start process to produce ToRs & source funds	Jul 2019 - Jun 2020	Email & Skype meetings b/w team; desktop	L
3	Disease risk assessment	Improve ability to mitigate disease risk	Desktop survey of epidemiological capacity within KAZA	TBD	TBD	Likely 2020-2021	Progress envisioned once KAZA-wide epidemiologist position filled &/or Yr-2 activity	L
3	Disease risk assessment	Improve ability to mitigate disease risk	Determine high/low risk areas and resource gaps				Focus on prioritized diseases. ID perception & resource disparities between countries	U
3	Disease risk assessment	Improve ability to mitigate disease risk	Conduct further research into maintenance of FMD virus in cattle				[Also incl. under cross-cutting]	U
3	Disease risk assessment	Improve ability to mitigate disease risk	Assess vaccination and other control measures				ID disparities between countries & develop MoUs / SOPs	
3	Disease risk assessment	Improve ability to mitigate disease risk	Develop research questions				Including, for example, interface issues of relevant to KAZA	
3	Disease risk assessment	Improve ability to mitigate disease risk	Facilitate research through AHSWG					

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
4	Diagnostics	Improved speed & accuracy of diagnoses to improve disease management	Survey of diagnostic capacity within KAZA (including listing labs that are accredited for certain tests)	Team to source info: Foggin (VFWT); Hanyire (ZW); Mbeha (BW). Nyika to provide info from LTC (via Manyire)	Initially desktop study; ZW chairing LTC lab sub-committee (indicated some info already there)	2019	Progress envisioned within one year. Conduct survey for disease risk assessment capacity, with view of more efficient use of resources within KAZA	L
4	Diagnostics	Improved speed & accuracy of diagnoses to improve disease management	Promote use of regional (KAZA) facilities/labs	TBD	TBD	Likely 2020-2021	Progress envisioned once survey of diagnostic lab capacity completed. To increase efficiency esp. related to wildlife diseases	B
4	Diagnostics	Improved speed & accuracy of diagnostics / analysis to improve disease management / forensic ID	Develop veterinary SOPs for gross examination & next course of action for confiscated consignments of animal products	DVS - Afonso & Machado (AN); Mbeha & Mafonko (BW); Amushila (NA); Katampi (ZM); Hanyire (ZW)	Examination of legislation - both wildlife & veterinary health statutes (2019); start to develop SOPs (2020)	Oct 1 - Dec 15, 2019 (gather Acts/regulations)	Examine with view to developing SOPs & share w/ group (2019); develop SOPs (2020); developed in partnership with law enforcement agencies.	B
4	Diagnostics	Improved speed & accuracy of diagnostics / analysis to improve disease management / forensic ID	Develop agreements for sample transfer (including for diagnostic, research & genetics investigations)	Foggin (VFWT); Matandiko (BW); Katampi (ZM)	Start process for developing blanket permit for KAZA countries for specific tests		Initially could be based on bi-lateral arrangement vs KAZA-wide for all five PSs	U
4	Diagnostics	Improved speed & accuracy of diagnostics / analysis to improve disease management / forensic ID	AHSWG members to get their own countries to support CITES CoP18 Doc.56 resolution dealing with movement of diagnostic & forensic samples	Individual countries with top-down & bottom-up approaches	1. Chair for AHSWG 2. Conservation WG 3. Country delegation to CITES CoP18 4. Country representatives	ASAP (before Sep 2019)	Through written communication to the Directors cc KAZA focal persons	B

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
4	Diagnostics	Improved speed & accuracy of diagnostics / analysis to improve disease management / forensic ID	Investigate possibility of a KAZA-wide CITES permit to deal with movement of diagnostic & forensic samples				First step in Yr-1 to support CITES COP resolution); if successful, do not need a KAZA wide CITES permit	U
4	Diagnostics	Improved efficiency of diagnoses to improve disease management	Improve efficiency of diagnosis of diseases of immediate public health concern				To include anthrax, rabies, poisoning	U
4	Diagnostics	Improved speed & accuracy of analysis to improve forensic ID	Enhance forensic capacity in existing labs including training of personnel				To include training & equipment / infrastructure	U
4	Diagnostics		Assess importance and provide diagnosis of other (emerging) zoonoses (long term & ongoing)					
4	Diagnostics	Improved speed & accuracy of diagnostics / analysis to improve disease management / forensic ID	Work towards official accreditation for select lab facilities (for select diseases/forensic tests) within KAZA					
5	Communications	Enable more effective transboundary collaboration	Set up WhatsApp group for field level operatives	One administrator per country: Afonso (AN); Nkgowe (BW); Amushila (NA); Katampi (ZM); Foggin (ZW)	Include representatives from PS (DVS; wildlife & private sector)	Initiated 13 Jun 2019; full set of names to be provide by Jun 30	Develop rules of communication	O

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
5	Communications	Enable more effective transboundary collaboration	Institute veterinary officer meetings (local/field-level)	Representatives from PS	Veterinary officers stationed within KAZA	Use existing mechanisms wherever possible e.g. TBNRM forum	Initial step: brief &/or write to superiors in PSs	B
5	Communications	Enable more effective One Health collaboration	Improve coordination with human health agencies					
5	Communications	Enable more effective transboundary collaboration	Develop (monthly) report templates & submit & disseminate within AHSWG				To include: diagnosis, vaccinations, causes of mortality and safety issues. Consider development of phone app - dissemination via phone & email to core group	
5	Communications	Enable more effective transboundary collaboration	Evaluate existing databases & determine feasibility of establishing shared database				Consider filters to WAHID database (look at USGS national wildlife health centre database as e.g.)	
6	Disease control	Ensure fencing decisions are based on sound cross-sectoral cost/benefit analysis	Determine mechanisms in place in each PS for cross-sectoral engagement on fencing issues (start w/ key government authorities)	Individual countries	DVS representatives: Matandiko (BW); Amashila (NA); Tapiwa (ZW)	Aug 31, 2019	Consultation with relevant stakeholders and written communication; specific activities to be determined thereafter	B
6	Disease control	Ensure fencing decisions are based on sound cross-sectoral cost/benefit analysis	Re-establish Botswana multi-sectoral national fencing committee to review fencing	BW - co-chaired by DVS & DWNP; support provided by AHEAD	Botswana	2018 - to date (ongoing)	Regular meetings of Committee; input from technical experts on specific issues, as required	O

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
6	Disease control	Ensure fencing decisions are based on sound cross-sectoral cost/benefit analysis	Conduct assessment of current & planned veterinary fences affecting KAZA's WDAs	AHEAD & WWF	Start process to source funds	Attempt to source funds: Yr-1	Actual assessment possibly done at individual country level?	U
6	Disease control	Ensure fencing decisions are based on sound cross-sectoral cost/benefit analysis	Consider fencing in BW land-use planning				Especially with regard to NG 1-4	
6	Disease control	Ensure fencing decisions are based on sound cross-sectoral cost/benefit analysis	Develop holistic KAZA-wide fencing strategy as part of broader land use planning process					
6	Disease control	Improve KAZA-wide disease management	Coordinate shared emergency response	TBD				O
6	Disease control	Improve KAZA-wide disease management	Coordination of vaccination campaigns (activities to be synchronized)	TBD			Develop MoUs; also part of Communication	O
6	Disease control	Improve KAZA-wide disease management	Institute control of diseases of immediate concern				To consider anthrax, rabies - urgent for some countries	U
6	Disease control	Improve KAZA-wide disease management	Synchronize disease control plans & develop KAZA plan				To base on risk assessment & ID of high risk areas	
7	Cross cutting - Research	Improve regional knowledge base for science-based decision making	Identify veterinary research priorities	Steering Committee (SC)	AHEAD to share preliminary list with SC for expansion	July 2019 - June 2020	Desktop	L

No	Topic	Objective	Activity	Responsibility	Location / Scope	Timeline	Details	Priority
7	Cross cutting - Research	Improve regional knowledge base for science-based decision making	Conduct further research on maintenance of FMD virus in cattle				Cross-cutting but also considered under diagnostics	U
7	Cross cutting - Research	Improve KAZA-wide animal health capacity	Training of field officers & community animal health officers				Capacity-building to focus on recognizing, reporting and sampling for disease (surveillance & diagnostics)	U