

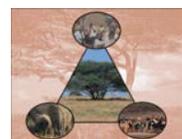
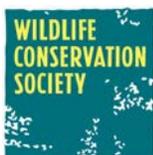


## TECHNICAL REPORT

# ANIMAL HEALTH POLICY, LEGISLATION AND TRADE IN BEEF IN THE FIVE PARTICIPATING STATES OF THE KAVANGO ZAMBEZI TRANSFRONTIER CONSERVATION AREA (KAZA TFCA)

*Wildlife Conservation Society*

*Animal & Human Health for the Environment And Development (AHEAD) Program*



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***Technical Report to the Wildlife Conservation Society (WCS)***

**ANIMAL HEALTH POLICY, LEGISLATION AND TRADE IN BEEF IN  
THE FIVE PARTICIPATING STATES OF THE KAVANGO-ZAMBEZI  
TRANSFRONTIER CONSERVATION AREA (KAZA TFCA)**

**Final Report**

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## SUMMARY

A study of the policy and legislation relating to the control of transboundary diseases and zoonoses in the five countries participating in the Kavango-Zambezi Transfrontier Conservation Area (KAZA TFCA) was undertaken. The study included an examination of the potential for the countries concerned to access international export markets for meat. In order to determine the possible relevance and impact of the legislation on the KAZA TFCA, national policy and legislation related to biodiversity conservation, land use and rural development was also examined for comparative purposes. The livestock trade policies of the two regional organisations to which some or all of the five countries belong were examined and compared with the national policies where available. Legislation for disease control was compared with international recommendations of the World Organisation for Animal Health (OIE) and requirements of the European Commission/European Union (EC/EU) and the United States Department of Agriculture (USDA).

The five countries that contribute territory to the KAZA TFCA are Angola, Botswana, Namibia, Zambia and Zimbabwe. These countries differ widely in animal health status, with Botswana and Namibia able to export meat to European markets from foot and mouth disease (FMD)-free zones while the other countries are unable to do so because, among other reasons, they do not have such zones. Historically Zimbabwe exported beef to Europe, but lost access in 2000 after FMD epidemics became widespread and control was perceived to have been lost. Zambia is in the process of establishing a 'free zone' from which it is hoped that at least regional markets will become accessible, while Angola has a small cattle population and there is no indication that meat export is contemplated. This is reflected in the legislation of the countries, with Botswana and Namibia having additional legislation in order to satisfy export requirements including sophisticated animal identification and trace-back systems.

There is no evidence from available policy documents or legislation for animal disease control, even in new proposed legislation in Namibia and Zambia, that any deviation from the present approach of creating and maintaining FMD-free zones, as well as in some countries areas free of contagious bovine pleuropneumonia (CBPP) and tsetse fly, will be considered. This is largely because that is what is required by their international trading partners and because it has historically enabled the control of FMD and is generally perceived by veterinary authorities to be necessary to maintain access to international markets for their meat, in spite of the well

documented negative effects that this approach to disease control has had on wildlife and biodiversity conservation. Namibia has a strategy to enable recognition of the Northern Communal Areas, with the exception of the eastern part (Caprivi and two districts in Kavango), as a FMD-free zone either with or without vaccination. However, for this to occur will likely require some deviation from requirements currently recommended in the OIE's Terrestrial Animal Health Code. Zimbabwe has expressed the intention of re-establishing FMD-free zones by methods that would include the removal of buffalo; legislation exists to support this approach (because it has been done before on a large scale). Zambia intends to establish a FMD- and CBPP-free zone in the Central and Copperbelt Provinces, where there are no major concentrations of wildlife.

Both of the regional economic communities, i.e. Southern African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA), support free regional trade in livestock and livestock products but how this is to be achieved between countries of very different animal disease status is unclear. Both bodies have shown an interest in commodity-based trade, which has been adopted as official policy by COMESA<sup>1</sup>. The EC requirements are based on, but sometimes exceed, the recommendations of the OIE. Export to the United States of America appears to be impossible because no country in Africa is rated for export of meat (processed or not) by the Food Safety Inspection Services (FSIS), although Namibia south of the veterinary cordon fence is recognised as free of FMD by the Animal and Plant Health Inspection Services (APHIS).

KAZA TFCA member countries have a strong imperative to support wildlife conservation and to build up a lucrative tourist industry based on their wildlife resources. It has been demonstrated that income from tourism in Botswana already far exceeds that from livestock production, even when meat is exported to Europe.<sup>2</sup> However, most of the countries have a strong tradition of livestock keeping, in particular cattle, and it is certain that compatibility between livestock production and control of animal diseases on one hand and biodiversity conservation on the other will have to be achieved if the transfrontier conservation areas are to flourish. An important step towards achieving compatibility in this context was taken at a SADC workshop held at Kasane, Botswana in November 2008, where livestock and conservation interests were represented and priority issues and actions identified. Taking that initiative forward could provide

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<sup>1</sup> D. Cassidy, personal communication, November 2010

<sup>2</sup> Macro-economic framework for National Development Plan 10, Botswana

a way to develop policies that will support the co-existence of livestock production and trade on the one hand and biodiversity conservation on the other.

## **ACKNOWLEDGEMENTS**

We would like to express our gratitude to the numerous people who have assisted us with information during the site visits and in correspondence. A full list of persons consulted is supplied (Annex 6).

## **ABBREVIATIONS AND ACRONYMS**

AHEAD	Animal & Human Health for the Environment And Development
APHIS	Animal and Plant Health Inspection Service (USDA)
ASF	African swine fever
AU-IBAR	African Union – Interafrican Bureau for Animal Resources
BMC	Botswana Meat Commission
BSE	Bovine spongiform encephalopathy
CAADP	Comprehensive African Agricultural Development Programme
CBPP	Contagious bovine pleuropneumonia
COMESA	Common Market for Eastern and Southern Africa
DNAPF	Direcção Nacional de Agricultura, Pecuária e Florestas
DVS	Department of Veterinary Services
EAC	East African Community
EC	European Commission
EDF	European Development Fund
EMPRES	Emergency Prevention System for Transboundary Animal Diseases and Plant Pests and Diseases
EPA	Economic Partnership Agreement
EU	European Union
EFSA	European Food Safety Authority
FANR	Food, Agriculture and Natural Resources (SADC)
FAO	Food and Agriculture Organization of United Nations
FAO-ECTAD	FAO Emergency Control for Transboundary Animal Diseases
FMD	Foot and mouth disease
FSIS	Food Safety Inspection Service (USDA)
FTA	Free Trade Area
GF-TADS	Global Framework for the eradication of Transboundary Animal Diseases
GLTFCA	Great Limpopo Transfrontier Conservation Area
HACCP	Hazard Analysis Critical Control Point
HPAI	Highly pathogenic avian influenza
IFAD	International Fund for Agricultural Development
IUCN	The World Conservation Union
KAZA	Kavango-Zambezi
LITS	Livestock Identification and Trace-back System

MCF	Malignant catarrhal fever
NCA	Northern Communal Area (Namibia)
ND	Newcastle disease
NDP	National Development Plan (Botswana)
NGO	Non-governmental Organisation
ODMP	Okavango Delta Management Plan
OIE	World Organisation for Animal Health (Office International des Épizooties)
PACAPS	Pastoral Areas Coordination, Analysis and Policy Support
SACU	Southern African Customs Union
SADC	Southern African Development Community
SAT	Southern African Territories (FMD serotypes)
SPS	Sanitary and Phyto-sanitary
TAD	Transboundary animal disease
TAHC	Terrestrial Animal Health Code (of OIE)
TCF	Technical Cooperation Facility
TFCA	Transfrontier Conservation Area
UK	United Kingdom
UN	United Nations
USA	United States of America
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VCF	Veterinary cordon fence (Namibia)
WCS	Wildlife Conservation Society
WTO	World Trade Organization
ZAWA	Zambia Wildlife Authority

# 1. INTRODUCTION

Five countries will participate in the KAZA TFCA: Angola, Botswana, Namibia, Zambia and Zimbabwe. Policy and legislation related to animal disease control and trade in meat and meat products in the five countries were examined in the context of the establishment of the TFCA and compared with international and regional requirements. Legislation and policy relating to wildlife, biodiversity and ecosystem conservation in the five countries were examined in order to identify areas of agreement or conflict. Additionally, a number of documents relating to rural development and land use as well socio-economic impact of both animal diseases and conservation of natural resources were examined. These included policy documents relating to agricultural development and food security. Relevant documentation was obtained both from the internet and during site visits to four of the countries (Botswana, Namibia, Zambia and Zimbabwe). The legislation coverage in this report is believed to be adequate but not exhaustive, because (particularly in Botswana and Namibia), much of the subsidiary legislation exists in the form of circulars and other non-electronic communications which were not possible to gather and scan in the time available. Some of these are in fact confidential. Similarly, not all policy documents were available in electronic format or necessarily in the public domain. However, a number of important policy documents were obtained, as well as pending legislation, which can be considered to reflect policy even if the actual policy documents were not available. For both Namibia and Zambia, press releases relating to current animal health policy were available, as well as publicity material in Namibia.

The spirit and intent of legislation for animal disease control is similar in all five countries, although the format differs. The basis of legislation in Zambia and Zimbabwe is similar and derives from legislation dating from the time when Southern and Northern Rhodesia (now Zimbabwe and Zambia) and Nyasaland (now Malawi) were a Federation under British Colonial rule. Botswana legislation also has its roots in British law. Namibian legislation is based on South African law and although amended to some extent these laws were carried forward into independence and some are still in force although new legislation is pending. Angola's legislation is derived from Portuguese law but most of the relevant laws were promulgated after independence. Animal health legislation in these 5 countries, along with many others internationally, is not aimed at achieving specific policy; rather, it provides the government veterinary service with the authority to develop and enforce measures aimed at animal disease management by the government of the day, i.e. it is enabling in nature. This means that the legislation can be used to accommodate almost any policy that may be developed.

Botswana and Namibia (and Zimbabwe until 2000) derive valuable foreign exchange from exporting beef to the EU and other, principally regional, markets. Animal health policy and legislation in those countries have therefore been geared to ensure that international requirements, and more precisely the exacting requirements of the EU, are met. Zambia has recently decided to try to access regional beef markets and the existing legislation is being upgraded accordingly. This is part of a wider trend in sub-Saharan Africa, particularly in arid and semi-arid regions where crop farming is problematic, to exploit livestock production as a poverty reduction mechanism. However, there are unintended and sometimes poorly understood consequences of such development that can have far reaching effects. Significant negative impacts on wildlife populations have been recorded in many countries, resulting directly, or indirectly, from the pursuit of animal health policies that rely heavily on veterinary fences and cordons (AHEAD-GLTFCA Working Group 2008, Ferguson & Hanks (eds) 2010, Mbaiwa & Mbaiwa 2006). In some southern African countries, large-scale destruction of wildlife was undertaken with the intention of removing the free-living hosts of tsetse flies to control trypanosomosis (Phelps & Lovemore 2004). Veterinary legislation in Zimbabwe provides for destruction of African buffalo in several districts in order to control FMD (see section 2.5.1).

Botswana, Namibia, Zambia and Zimbabwe have a high potential for ecotourism and wildlife. Biodiversity and ecotourism are national priorities although the socio-economic difficulties experienced in Zimbabwe have tended to turn tourists to other areas, in particular Zambia. Angola's situation is very different from that in the other countries. Beef export has never been on the agenda as far as can be established, and tourism is only just starting to be an option now that the long period of civil unrest appears to be over. The southern part of the country where most of the cattle are produced and part of which will be included in KAZA is undeveloped and will require large inputs in terms of infrastructure and restocking with livestock to function at the same level as the other four countries. Restocking of southern Angola with livestock, supported by foreign donors, is in progress, mainly in the more arid western parts. The unspoilt nature of this large area provides obvious ecotourism potential. However, for the eastern area to be included in the KAZA TFCA the de-mining programme of the Luiana Partial Reserve must be completed as envisaged in the plans for the establishment of the KAZA TFCA (Transfrontier Conservation Consortium 2006). It is difficult to obtain accurate information on progress. Information downloaded from the web site [www.kazapark.com](http://www.kazapark.com) on 17<sup>th</sup> September 2010 gave an October 2008 update that described progress in de-mining Luiana and further proposals for funding. In an article published in *Getaway* (Fox, 2009) it was stated that the Angolan sector of

KAZA had not yet been de-mined and that 'funding will have to be poured into mine clearing operations before ecotourism can flourish.' The article also mentioned that elephants are moving from Botswana and Caprivi into Angola and apparently are able to avoid the land mines. De-mining is included in the activities in the KAZA TFCA to be funded by KfW Entwicklungsbank, according to a press release dated 17 June 2010. An undated document describes a project 'Pathways for Peace' to de-mine the elephant paths by Roots of Peace and Conservation International but the amount of progress made is not clear (Roots of Peace Project Summary, undated).

The analysis of legislation and policy for each country has been conducted under five headings:

- Animal disease control policies e.g. disease free zones
- Control of interface diseases and zoonoses
- Policy on international and regional trade in meat and animal products
- Regulation of trade in meat and animal products
- Other policy and legislation that impinges on livestock production and disease control

Legislation for registration of veterinarians and legislation for animal welfare where it exists is included under the last heading. The former may impact on KAZA in terms of acceptance of the competence of veterinarians of other countries, and whether or not the latter exists may have implications for export markets owing to increasing consumer concerns.

It must be borne in mind that animal disease control and international trade in meat are not the only issues in terms of government policy for livestock production. The five countries vary considerably with respect to natural resources and economic activity, but all of them have large poor rural communities who depend on subsistence livestock production. Rural development and food security are major concerns for all the countries.

Social issues are, however, more prominent in documents relating to Angola and Zambia. Zambia is one of the poorest countries in the region, while Angola, although resource-rich, has high levels of poverty among the four million returnees from neighbouring countries and an even higher number of internally displaced people who have been unable to resume normal subsistence farming activities owing to the abundance of land mines (Roots of Peace [undated]). In these two countries rural populations rely heavily on natural resources for subsistence, and the challenge is to enable continued access to natural resources but ensuring that this is

sustainable. While it is evident from much of the documentation relating to biodiversity conservation that many believe that subsistence level livestock farmers would be better off seeking their livelihoods in other ways, for example by being employed in the tourism industry, this is something that is not easily dictated. To most of those farmers cattle mean much more than a potential source of income. Their culture is rooted in cattle and, recognising this, most governments believe that encouraging subsistence farmers to farm cattle more productively and finding ways for them to generate more income by accessing higher value markets is vital for future rural development. At the same time all these countries acknowledge and promote the need to conserve wildlife and natural environments. The most important constraints that exclude poor livestock producers from higher priced markets are low productivity, poor quality animals and the fact that many of them are restricted to areas where African buffalo (*Syncerus caffer*) are infected with FMD. This is reflected in legislation that provides for strict movement control of animals and products as well as physical separation of infected and non-infected areas.

It is also important to remember that, as is the case world-wide, attempts are underway to effect greater regional integration in sub-Saharan Africa. The political decision has been taken to incorporate the 26 countries of COMESA, SADC and the East African Community (EAC) into a free-trade area (FTA) by 2012. All 5 countries involved in this analysis are members of SADC while Zambia and Zimbabwe are members of COMESA. This future development implies that measures to bring the FTA into effect will soon be implemented, So, for example, while COMESA and SADC have their own adaptations of the Agreement on the Application of Sanitary and Phyto-sanitary Measures (SPS Agreement), the FTA is likewise developing its own SPS protocol. The result is likely to be that within a short time there will be further integration of trade standards for intra-regional trade. What effects these will have on foreign exports of animal commodities and products is unclear at the moment but significant alterations in trade patterns could result.

The legislation and policy documents for the countries and other background documents are tabled in Annex 1. A matrix for comparing national compliance with international recommendations and requirements is provided in Annex 2.

## **2. NATIONAL POLICY AND LEGISLATION**

### **2.1 Angola**

#### **2.1.1 *Salient issues***

- Beef export is not of current concern as Angola is a net importer of beef and the national herd consists of fewer than 5 million cattle
- Strong emphasis on food security and citizens' rights e.g. for land use
- Strong imperatives to conserve the environment and biodiversity

#### **2.1.2 *Animal disease control policy***

No documents relating to animal disease control policy were available. According to information from the Counsellor for Agriculture at the Angolan Embassy in Pretoria it is a policy to set up a Ministerial Commission to deal with important matters (not only animal disease control). Currently there are Ministerial Commissions for highly pathogenic avian influenza (HPAI; never diagnosed in Angola) and combating rabies (a serious outbreak occurred in the environs of Luanda in 2009 and several people, mostly children, lost their lives).

#### **2.1.3 *Control of interface and other relevant animal diseases including zoonoses***

The Animal Health Law, 4 of 2004, is recent and covers all aspects including import and export of animals and animal products and the safety and wholesomeness of animal products i.e. food safety. A translation is available (Annex 4). The only reference to wild animals is a provision that if wild animals are imported they will be subject to all the restrictions imposed for import of any live animal and additionally must be quarantined for a minimum period of 30 days. All of the diseases listed by OIE are notifiable by law. Five diseases are listed for which owners will be compensated if the authorities cull their animals (rinderpest, FMD, African swine fever [ASF], tuberculosis and Newcastle disease [ND]) but provision is made for others to be added as necessary. In terms of control of outbreaks, the law provides for declaration of infected areas, movement restrictions, quarantine, compulsory slaughter and disposal but fences are not mentioned as a control measure.

Other legal instruments relevant to animal health are the Statutory Instruments and Regulations that reflect the structure of the Ministry of Agriculture, Fisheries and Forestry and of the Institute for Veterinary Services, which includes a Department of Animal Production, Industry and Technology. There are several instruments reflecting the structure of the Ministry, the latest

dated 2010, but this includes Rural Development which we were informed by the Counsellor for Agriculture at the Embassy of Angola in South Africa, Mr Roberto dos Santos, in July 2010, now forms a separate Secretariat in the government structure for which legislation dated 2009 is available. There is also an Executive Secretariat for the National Committee for the *Codex Alimentarius* in Angola.

The government provides a user-friendly flier explaining why there are restrictions on the movement of plants and animals and what the restrictions are.

#### **2.1.4 Policy on international and regional trade in meat and meat products**

As indicated, there appears to be no particular policy other than an intention, captured in the Animal Health Law, to ensure that any animals or animal products that are exported are accompanied by international certification. Angola has a relatively small cattle population (about four and a half million head) for the size of the country and is a net importer of food including meat. Five companies in Angola import meat (none export it) (<http://www.meatproducts1.com/meat-suppliers/Angola.html>). Official information on sources were not available but South Africa exports beef to Angola (DAFF 2010) as does Brazil, which in certain cases transits Namibia to Angola (A. Bishi, personal communication 2010). Only the arid and semi-arid south western part of the country is regarded as primarily suitable for livestock production (Fig. 1), i.e. the area to be included in the KAZA TFCA (the extreme eastern part of Kwando-Kubango) is not primarily a livestock producing area.

Figura 2  
Grandes regiões agrícolas de Angola

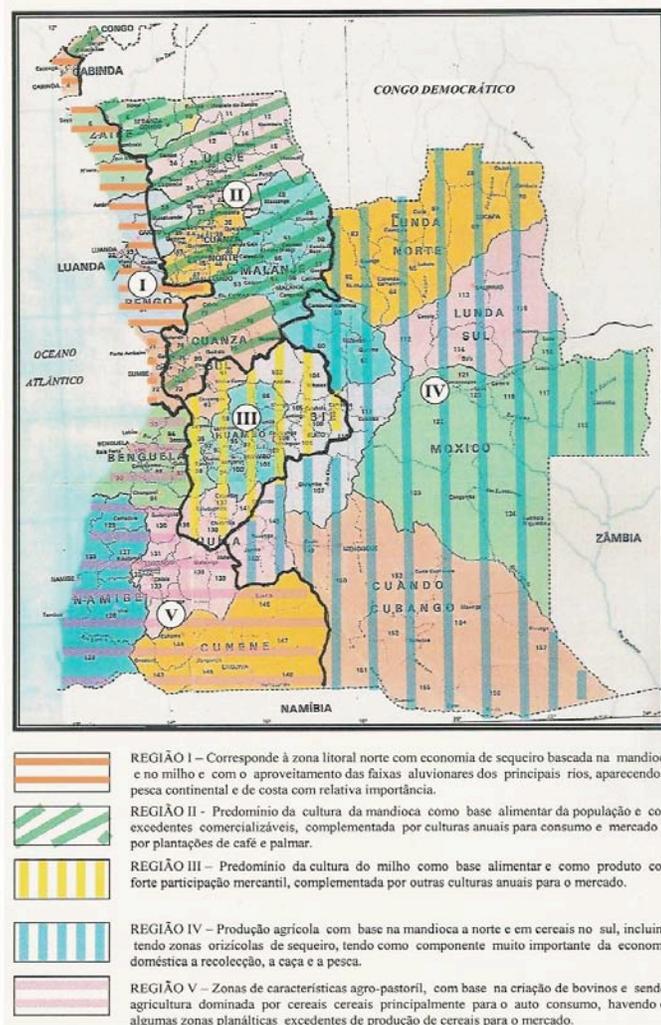


Figure 1: Agro-ecological zones, Angola. Region V: Suitable for livestock production

([www.angola.gov.ao](http://www.angola.gov.ao))

### 2.1.5 Regulation of trade in meat and meat products

All aspects are provided for in the Animal Health Law described above. Ensuring that the health and safety of consumers is protected is also provided for in the Consumer Protection Law, the implementation of which is overseen by the National Institute for Consumer Protection. The National Committee for the Codex Alimentarius in Angola is responsible for liaison with the international Codex Alimentarius Commission (a joint WHO/FAO Commission) and is therefore also involved in issues relating to food safety.

### **2.1.6 Other relevant policy, legislation and projects**

The National Policy for Forests, Wildlife, and Conservation Areas initiated in 2008 is available as a Discussion Document on the government web site. The policy recognises that 60% of the Angolan population lives in rural areas and depends to a large extent on natural resources like wood and wildlife for sustenance, pointing out that almost 60% of the nation's energy is provided by wood and charcoal, 41% using paraffin and only 1.45% and 0.1% using electricity and natural gas respectively. The policy aims to provide for a far more sustainable use of natural resources. Of particular interest is that the policy is a joint document of the Ministry of Agriculture and the Ministry of the Environment. In all the other countries for which policy documents were available these were developed exclusively by the wildlife authorities.

A draft Bill for a law for Forestry, Wildlife and Terrestrial Conservation Areas dated 2006 is still available on the government web site for comment. Section VIII is specifically concerned with transfrontier conservation areas. Article 211 provides a definition and objectives, and Article 212 (Government) states that TFCAs are constituted by international agreements and approved by the competent organs of state, and that the governance should be by the international instrument referred to, i.e. the international agreement. Various press releases posted on the government web site indicated that the Ministry of the Environment was strongly in favour of TFCAs and, besides KAZA, has signed up to others in the north and east with neighbouring countries (DRC and Zambia).

Legislation for the structure and functions of the Ministry of the Environment is provided in Decree 04/09 of 2009 (Annex 4). The Directorate of Biodiversity is responsible for all matters pertaining to conservation of ecosystem biodiversity. It consists of three Departments, one of which is the Department of TFCAs. The basic law relating to the environment and its protection, 5/98, was in fact proposed by the Oil Ministry, and lays the foundation for structures to be put in place for the management of the environment and biodiversity. Decree 51/04, also from the Oil Ministry, makes provision for environmental impact assessments. Law 03/06 makes provision for Associations for the Protection of the Environment in order to assure the democratic participation of Angolan citizens in managing the environment. Decree 59/07 provides for the licensing of activities that can impact on the environment. A pre-independence regulation, 2873/99 of November 1957, known as the Hunting Regulation, exists, but according to the Counsellor for Agriculture hunting is unregulated at present and a Ministerial Commission has

been established for the prohibition of hunting. There is also a Ministerial Commission for National Parks.

The Lands Law 09/04 lays down basic principles for land use and occupation as well as provision for transfer of land from state to private ownership. It is underpinned by the Revised Constitutional Law 23/1992. Decree 02/06, from the Ministry of Urbanism and the Environment, puts in place legislation for an integrated management system for the national territory, with implications for land use in terms of development, economic activities and biodiversity conservation. Law 15/05, the Basic Law for Agricultural Development, while aimed at developing agricultural activities that will help to eliminate hunger and poverty, places a very strong emphasis on sustainable agricultural practices that do not harm the environment. The protection of forests, soils, water, the ecosystem and all natural resources is a recurrent theme throughout the document. Agricultural development is supported by a document describing the Programme for Extension and Rural Development, which recognises that training and education will be needed because agricultural activities were largely abandoned during the protracted civil unrest. It is also supported by the Action Plan for National Food Security and the National Strategy for Food Security (MINADRP 2008). The development of these documents may have been prompted by an Evaluation Brief published by the World Food Programme in 2006 covering its activities in Angola and expressing strongly the need for more involvement by the government in coping with the situation and making provision for improvements to the situation. The effort to increase food production is supported in the central highlands by a Roots of Peace project 'Harvesting hope – fulfilling Angola's agricultural potential'. The project includes de-mining, like the Roots of Peace/Conservation International project in the Luiana Partial Reserve referred to in the introduction.

## **2.2 Botswana**

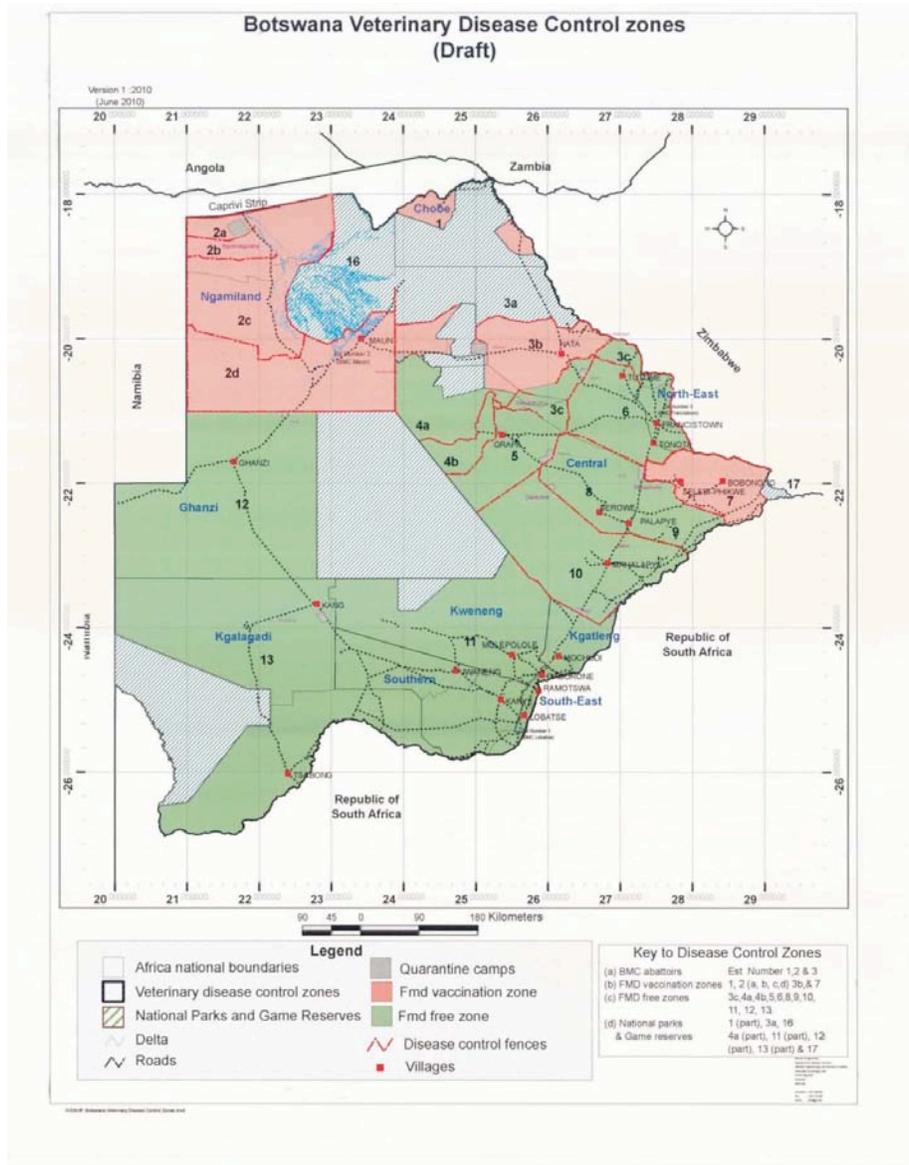
### **2.2.1 *Salient issues identified***

- Policy to expand the area available for agriculture and livestock production
- Emphasis on expanding the geographical area free of FMD for beef export
- Lack of understanding by conservationists of the reasons why cattle are kept

### **2.2.2 Animal disease control policy**

National policy in terms of animal disease control is reflected in the National Policy on Agricultural Development of 1991 and National Development Plans (NDP) 9 (1 April 2003 – 31<sup>st</sup> March 2009) and 10 (1 April 2009 – 31 March 2016). These documents make it clear that, building on the success of the disease control policy based on fencing to create areas internationally recognised as free from FMD, no change in animal disease policy is envisaged. The intention to create buffer zones along FMD high risk areas is stated as a strategy under NDP 10, although the locations are not specified. During the site visit we were informed that the intention was to increase the amount of land available for livestock production with gazetting of more land for agricultural use and extending the 'disease-free' zones further northward. A controversial plan to create a buffer zone by establishing 8 x 8 km game farms on the Ngamiland boundary (the Kuke fence) has been replaced with an alternative plan to fence off the south-eastern corner of Ngamiland (Hainaveld farms – Fig. 2). The 8 x 8 game farms may be established along the southern side of the Southern Buffalo Fence, which separates the Okavango Delta from Ngamiland, to provide further protection against FMD. There is also an intention to improve management and disease control through fencing communal grazing areas. This concept has its roots in the National Policy on Agricultural Development which incorporated the acceleration of fencing of communal grazing land that had originally been put forward in the Tribal Land Grazing Policy of 1975.

Interestingly, the Macro-economic Outline and Policy Framework for NDP 10 points out that service exports like tourism are more profitable than goods exports such as beef because of Botswana's landlocked situation and the cost of moving bulky goods and that, in fact, exporting goods to the Johannesburg area is profitable and competitive but anywhere further away is not. This is not reflected in the NDPs, although NDP 9 does include concepts like diversification of livestock production to reduce dependence on beef. NDP 10 indicates that only 1.7% of GDP was derived from agriculture in 2008/2009, as opposed to 42.7% in 1966. Beef production accounts for 80% of agricultural GDP. NDP 10 indicates that a modest growth to 2.2% of GDP is projected over the next 7 years. On the other hand, tourism contributed 5% of GDP in 2008/2009 (16% of non-mining GDP), and is projected to provide 12% of GDP by 2016.



**Figure 2: Draft map of Botswana Veterinary Disease Control Areas (courtesy of Mr Neil Fitt)**

**2.2.3 Control of interface and other relevant animal diseases including zoonoses**

Most of the legislation relating to the control of animal diseases is contained in the Diseases of Animals Act, No 9 of 1977, and its regulations, amendments and subsidiary legislation. A complete list is available in Annex 1. The legislation empowers the veterinary services to take actions needed both to prevent the introduction of new diseases into Botswana by the importation of animals and their derivatives and the actions needed to control and prevent the spread of diseases that are present within the country’s borders. The regulations and subsidiary legislation provide a list of diseases for which specific directives are included in the regulations,

but in terms of the law any disease occurrence must be reported to the authorities. The relevant diseases for which additional provisions apply (i.e. transboundary, other interface and zoonotic diseases) are anthrax, theileriosis, FMD, CBPP<sup>3</sup>, rabies, rinderpest<sup>4</sup>, ASF, trypanosomosis, and bovine tuberculosis. The most important of these diseases is FMD, since it has to be controlled to protect the beef export industry. The use of fences to prevent the spread of animal diseases is the subject of regulations 53 – 56 and is not specific to FMD, but in practice, apart from the erection of additional fences to prevent southward movement of cattle from the northern Ngamiland during the CBPP outbreak of 1995/1996, most veterinary fences have as their purpose the control of FMD. Provision is made for the declaration and management of infected areas in the Diseases of Animals Act as well as the control of movement of animals. The actual system of infected, buffer and free zones used for the management of FMD is not described in law and is dynamic. Detailed descriptions are provided by Derah & Mokopasetso (2005) and Mapitse (2008). Recently the disease-free area has been expanded northwards and recognition of an additional free zone (4a) by the OIE was pending during the site visit. In addition to the additional provisions made in the Diseases of Animals Regulations, control of rabies forms the subject of a separate Act, the Prevention of Rabies Act 48 of 1971. Other legislation that is relevant in the sense that it aims to avoid introduction of foreign diseases or illegal movement of animals are the Stock Diseases (Semen) Regulations of 1968, the Stock Theft Act 21 of 1996 and the Matimela Act 25 of 1968, which makes provision for impounding and controlling strayed stock, although dealing with strayed stock is also covered in the Diseases of Animals, Regulations 16 and 17 of the Diseases of Stock (Quarantine and Compensation). Regulations prohibit the importation of a wide range of animal-derived and other agricultural products from Zimbabwe in relation to FMD outbreaks. This legislation dates from 1930 but is apparently still in force.

#### **2.2.4 Policy on international and regional trade in meat and meat products**

Policy on export of meat (beef) is reflected in the policy documents cited above as being supportive both in terms of improving disease control and improving livestock production. The 2000 – 2002 Strategy Paper for Botswana 2000 of the Africa Development Bank (Annex 1) refers to the fact that beef export is the major foreign exchange earner after diamonds but that 80% of the cattle are kept under traditional grazing systems characterised by low productivity

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<sup>3</sup> CBPP is not an interface disease or a zoonosis but is a disease that affects three of the KAZA countries and is targeted for eradication; although it does not affect beef trade the main reason given for the massive culling of cattle in response to an outbreak of CBPP in 1995 was to protect the beef export trade with the EU

<sup>4</sup> Rinderpest will be declared extinct in 2011

and output needs to increase. To achieve this, a programme for genetic improvement of cattle was proposed in NDP 9, although it was reported in NDP 10 that it had not so far achieved very much. Since then the beef industry has been overtaken by the tourism sector as a generator of foreign income.

The concepts of gazetting land for agricultural purposes under NDP 9 and fencing communal grazing areas under the National Policy for Agricultural Development are also aimed at improving management and production as well as controlling disease in the case of the fences. In his Budget Speech for 2002 the Minister of Finance and Development Planning stated that in order to increase productivity in the livestock sector the speedy implementation of management reforms was essential. This required the acceleration of the fencing and allocation of ranches. He also mentioned the achievements in the implementation of the livestock identification and trace-back system (LITS) but indicated that a review was needed to try to reduce the very high costs involved.

In spite of the small contribution that agriculture including the export of beef makes to GDP and the warnings that export of services rather than goods would be more profitable, there is a clear desire to provide government support in order to achieve larger amounts of beef for export, with one of the strategies apparently being to increase the amount of land available for cattle production. There is also a determination to fulfil all the requirements of the EC including the requirement for geographical freedom from FMD as well as any other requirements relating to being rated as posing no more than an acceptable level of bovine spongiform encephalopathy (BSE) risk and control of the use of undesirable feed additives. Legislation has been developed to support these objectives.

Botswana also exports beef to other countries in the region, in particular South Africa, and as the Macro-economic Outline and Policy Framework pointed out, export of goods to the Johannesburg area allows a good profit to be realised because the costs of getting them there are relatively low. It also points out that once a bridge is built at Kazungula the Zambian market will become accessible at a much lower cost. The availability of regional markets is another incentive for expansion of cattle production. However, Namibia has better established export channels for beef and mutton to South Africa.

### **2.2.5 Regulation of trade in meat and meat products**

The livestock industry is heavily regulated by a number of laws that cover the various aspects of branding, licensing, movement, sale and slaughter of livestock as well as the export of livestock and meat. The Botswana Meat Commission (BMC) was established by Law 22 of 1965 and controls all aspects of the meat industry. The relevant acts are listed in Annex I. Historically and currently BMC has had a monopoly for export of beef from Botswana to all foreign markets. This legislation is under review and, in response to a question posed during the National Meat Workshop held in Kanye from 17 – 18 November 2009, BMC's speaker, Mr S.K. Molapisi, indicated that it was expected that the Act would be modified to permit other meat producers to export meat and meat products. According to information received from GRM International, the new legislation should come into force early in 2011.

The Livestock and Meat Industries Act 1 of 2007 covers, in addition to the slaughter of domestic livestock, the slaughter of farmed and wild game intended for human consumption. Recent legislation related to the export trade in beef concerns the prohibition of the use of anabolic hormones and thyrostatic substances, the livestock identification and trace-back regulations, the removal of specified risk materials, and stock feed regulations that prohibit the feeding of animal protein (latter 2 for BSE). The LITS is fully described in presentations by Fanikiso (2009) and Sehularo (2010). However, there is evidence that system has some structural problems that need to be addressed. For example it could not be used in management of the major FMD epidemic in Ngamiland between 2007 and 2009 because most cattle in Ngamiland did not carry digital identification boluses.

### **2.2.6 Other relevant policy and legislation**

The right to use land for agricultural purposes including raising livestock is enshrined in the Agricultural Resources Conservation Act 39 of 1972 and other aspects relevant to keeping livestock are covered in the Water Act (40 of 1967) and the Town and Country Planning Act (11 of 1977). The Wildlife Conservation and National Parks Act (28 of 1992) prohibits the presence of domestic animals in national parks and legalises their destruction if found there. It also provides for control of domestic animals in game reserves and sanctuaries and the destruction of wildlife if necessary for purposes of disease control, human safety or protection of livestock and crops outside national parks, game reserves and sanctuaries.

Policy and strategy for the conservation of wildlife and promotion of ecotourism are contained in NDP 9 and 10. Together with the Macro-economic Outline and Policy Framework and the Ministries'/Departments' Goals for NDP 10, these documents demonstrate that the income from tourism, which focuses almost entirely on wildlife conservation areas, is ten times greater than that from agriculture including beef exports.

The Game Ranching Policy aims to offer an alternative to livestock production as part of the drive for diversification in agriculture. While it is evident that local and community participation will be encouraged, the policy states that its realisation will depend on external and private sector investment and participation because the main constraints are lack of freehold land, capital and know-how. One of the stated objectives is to use game ranches for the conservation of rare or endangered species.

Two projects were identified that will have considerable impact on land use in the KAZA area in Botswana, namely the Zambezi Agro-commercial Integrated Development Project at Pandamatenga and the Okavango Delta Management Plan (ODMP) under which the delta will be managed as a Ramsar site (a wetland of international importance). Both developments may impact negatively on traditional livestock producers. The project at Pandamatenga is aimed at intensifying agricultural activities, mainly crop production, and the only livestock production supported under the project is poultry, although there are passing references to dairy and ostrich farming in the Appraisal Report. The main purpose of the project is to make Botswana self sufficient in horticultural production (N. Fitt, personal communication, 2010). It is acknowledged in the project documentation that cattle production is popular in the area in spite of lack of access to markets owing to the presence of FMD. Livestock farmers will have to be moved from one section in the development area, KM 256, to other land to be identified by the Chobe Land Board, with compensation for the structures they have built. The horticultural initiative at Pandamatenga is designed so that passage-ways/corridors will enable the movement of wildlife, elephants in particular, between the Hwange National Park in Zimbabwe and the Chobe area of Botswana, but the development is nevertheless expected to place some restrictions on wildlife movement (Perkins 2009).

The ODMP makes provision for livestock production in the area although there is a strong motivation to move it away from the delta area to mitigate interface problems. Epidemics are cited as one of the potential problems. Conflict with wildlife is seen as a major problem and communities requested that their watering points be moved further away to reduce contact. In a

review of national policies and plans in relation to the Okavango Delta, Arntzen *et al.* (2006) question the viability of livestock production in the delta and Ngamiland, although they admit that it is important to the local economy. The establishment of the Hainaveld ranches under the National Policy on Tribal Grazing Land (1975) is said to have had a profound effect on land use in Ngamiland and the fear is expressed that the National Policy for Agricultural Development (1991) would lead to more fencing and livestock expansion in Ngamiland. This appears to be the case, as the Hainaveld farms are to be fenced off in order to expand the FMD-free area. A reference is quoted stating that Ngamiland is too far from markets to be economical for livestock production. The government is addressing this through the rehabilitation of the abattoir in Maun (currently in progress), which will enable safe commodities like de-boned, de-glanded matured beef and/or canned products to be exported from the area into the free zones for local consumption. This will enable more beef produced in the free zone to be exported.

Arntzen *et al.* (2006) pointed out that consideration should be given to increasing productivity of cattle in the existing farming areas rather than expansion of available grazing land. This was echoed by staff of the Botswana Department of Wildlife and National Parks during the site visit. Veterinary fences and interaction between wildlife and livestock were seen as policy challenges and the recommendation was made that land use should be determined by comparative advantages. This does not take into account the cultural aspects of cattle keeping and the fact that Botswana is a democracy in which the wishes of the majority are likely to influence government policy. The negative effects of veterinary cordon fences on wildlife are pointed out in the ODMP documentation as well as in numerous publications, e.g. those by Klein (2007) and Mbaiwa & Mbaiwa (2006). However, in the documents relating to both the ODMP and the Pandamatenga projects it is recorded that livestock producers in the Delta area regard the fences as a protection against wildlife but consider that they are too weak and need electrification, and resent the fact that if their cattle cross broken fences into the wildlife area they are shot, whereas wildlife crossing the fence into their domain are simply chased back again. On the other hand, tour operators approve of the fences because they keep the cattle out!

As far as international policy in terms of animal disease control and trade in meat is concerned, the EU is Botswana's major overseas trading partner. The UK has an historical imperative to support Botswana by buying beef, but there may be few other reasons to support a small market that is not even able to fulfil its quotas. According to NDP 10 the amount of beef exported to the

EU fell from 13,508 tonnes (71% of quota) in 1997 to 6,455 tonnes (34% of quota) in 2007, with a low of 6,127 tonnes (32% of quota) in 2006. It is stated in the plan that one of the major constraints for increased beef production and access to the international beef markets is ‘the threat of transboundary and wildlife-transmitted animal diseases such as foot and mouth disease (FMD). Prevention and timely control of these diseases continue to be a challenge to the sector’ (p. 184 paragraph 9.232).

The relationship between the EU and Botswana (and other meat exporters in the SADC Region) is complicated by the on-going saga whereby the EU is attempting to replace the Lomé and Cotonou Agreements that are no longer compatible with WTO principles with economic partnership agreements (EPAs) with individual countries. This would make it possible for countries like Botswana to enjoy quota- and tariff-free access to EU beef markets. However, such an eventuality could possibly lead to the break-up of the Southern African Customs Union (SACU – the oldest customs union in the world) because South Africa is unwilling to accept EU conditions for establishment of an EPA. Many countries in SACU are highly dependent on revenues derived from SACU. This is a highly politicised issue and its resolution does not appear to be imminent. As a temporary measure Botswana has reached an interim agreement on its EPA with the EC.

Veterinarians are registered under the Veterinary Surgeons Act 35 of 1971 (Chapter 61.04 of the Laws of Botswana which lists all subsidiary legislation) with the Board of Veterinary Surgeons and the necessary qualifications for registration are determined by the Minister acting on the advice of the Board.

The Cruelty to Animals Act of 1936 (Proclamation 27, 1936) prohibits all acts of cruelty to animals specified in the act as well as any unspecified actions that cause unnecessary suffering. Provisions for humane treatment and slaughter of animals at abattoirs are also made in the Livestock and Meat Industries Act 32 of 1962.

## **2.3. Namibia**

### **2.3.1 Salient issues identified**

- New official policy (2010) to attain zonal freedom from FMD in the Northern Communal Areas (NCAs) so that cattle producers in these areas will no longer be marginalised, with the exception of those in the Caprivi and the easternmost district of Kavango, which would remain an 'infected zone'

### **2.3.2 Animal disease control policy**

As in Botswana, the animal disease control policy is largely geared towards supporting the beef export market to the EU. The entire country south of the veterinary cordon fence is recognised by OIE as a FMD-free zone and this area is the only location in Africa that is recognised by the USDA as being free of FMD (Namibia excluding the area north of the Veterinary Cordon Fence - VCF). Fifty-two per cent of the cattle population in Namibia is located in the area north of the VCF and these cattle are excluded not only from international markets but also from the higher priced markets south of the VCF in order to comply with OIE requirements for maintaining the FMD-free status south of the fence. To allay dissatisfaction on the part of politicians representing the population of the NCAs export abattoirs were set up at Oshakati and Katima Mulilo (Caprivi) from which beef was exported for many years to South Africa provided the cattle were subjected to 21-day quarantine and testing for FMD. Export of beef to South Africa derived from Oshakati continues but South Africa no longer accepts beef from Katima Mulilo due to recent FMD outbreaks in the Caprivi.

Although the Meat Corporation of Namibia (MeatCo) pays the producers the same price for beef as those paid south of the VCF, the producers aver that the cattle lose so much condition during the journey to the abattoir and the enforced quarantine that the prices are not worth it, and the abattoir is under-utilized (Bishi & Kamwi 2008). A new strategy, now incorporated into official policy, has been developed with the objective of having the NCAs with the exception of the Caprivi and two adjacent districts in eastern Kavango recognised as a FMD-free zone. A presentation by Dr Frans Joubert of the Directorate of Veterinary Services in October 2009 indicates that the ultimate objective is to allow free movement of livestock and livestock products throughout Namibia with potential access for meat from any part of the country to gain access to international markets. A news bulletin issued on 4<sup>th</sup> August 2010 announced that the project was under way, starting with an awareness campaign dealing with identification and traceability of

livestock. The initiative was supported by the Millennium Challenge Account and the estimated cost to achieve the desired disease freedom status was 20 million Namibian dollars (Heita 2010). The initiative is in line with the National Agricultural Policy of 1995 which aims to achieve equity in the agricultural sector. The policy has been launched with the publication of a booklet including a foreword signed by the Minister of Agriculture, Water and Forestry of Namibia and a flier summarising the policy (Ministry of Agriculture, Water and Forestry, Namibia, 2010).

### **2.3.3 Control of interface and other relevant animal diseases including zoonoses**

The legislation relating to control of animal diseases is currently embodied in the Animal Diseases and Parasites Act 13 of 1956 and its regulations as amended by the Animal Diseases and Parasites Amendment Acts 3 of 1996 and 10 of 2005 and the Animal Identification Regulations in a government notice published in 2009. A new Animal Health Bill will replace the earlier acts but is unlikely to become law before the end of 2010. The bill is available on the parliamentary web site (Annex 1) but according to the status given on the web site is still at the first reading stage in the National Assembly. Three readings in each of the houses as well as a committee session in each will be required before the bill can become law. Specific provision is made for the erection of fences to separate wildlife from livestock and to control disease, with the proviso that the fences will be maintained by the veterinary department, and for the animal identification and trace-back system. The existing legislation is aimed at preventing introduction and spread of diseases and enables the necessary procedures to be undertaken to support this, including the erection of fences and the restriction of movement of animals and products. Specified regulations apply to a list of diseases of which FMD, trypanosomosis, anthrax, CBPP, Corridor disease, brucellosis, tuberculosis, rabies, Rift Valley fever, bovine malignant catarrhal fever [MCF], ASF, avian influenza and ND are of interest. The regulations are in a cumbersome format that lists diseases to which particular regulations are applicable, with most diseases appearing on several lists. The proposed new law is said to be shorter and less complicated. However, most of the emphasis is on movement control, separation of domestic livestock from wildlife reservoirs where applicable, and in some cases prophylactic measures such as compulsory vaccination of domestic stock for anthrax. During the site visit it was established that additions to the legislation exist largely in the form of circulars that are not available electronically and that would take a great deal of time to locate as they are contained in files that include other types of circulars. However, many of these may not become part of the permanent legislature if they are issued to cover temporary situations such as outbreaks and later revoked. Control of FMD and CBPP is supported by contingency plans that are periodically updated. After

an outbreak of FMD occurred in eastern Kavango in 2007 a document was written about the lessons learned with a view to improving control of outbreaks (Bishi & Samkange, undated).

#### **2.3.4 Policy on international and regional trade in meat and meat products**

Namibia has been successful in gaining access to the EU beef market and can also theoretically access the US market after being rated FMD- and rinderpest-free south of the VCF by APHIS. All the beef exported to the EU is currently sourced from the FMD-free area south of the VCF. Like Botswana, Namibia has agreed an interim EPA with the EU. In order to assure Namibia's ability to meet export quotas and at the same time meet political expectations and improve the livelihoods of cattle farmers north of the VCF, the plan to have most of the NCAs recognised as an FMD-free zone described above (2.3.2) has been developed. This plan is further justified by the current need to import low quality beef to satisfy the local market because permitting the entry of meat from the NCAs at present would jeopardise the free status of the zone south of the VCF.

South Africa remains the main trading partner for beef in terms of volume and would be an initial target market for meat from a free zone north of the VCF. This zone will exclude the cattle farmers in the far eastern Kavango and in the Caprivi, who will continue to farm in a zone regarded as infected with FMD. However, an undated document was obtained during the site visit reflecting a risk analysis that was performed to determine the risk of importing frozen de-boned, de-glanded, matured beef from Caprivi into South Africa. The conclusion was that the beef would not pose a significant risk, and, until the recent FMD outbreaks in the Caprivi, beef as described was exported to South Africa from the Katima Mulilo abattoir.

#### **2.3.5 Regulation of trade in meat and meat products**

The Meat Board was established by the Meat Industry Act No 12 of 1981 that abolished previous legislation for control of the meat industry. The Act was amended after independence by the Meat Industry Amendment Act No 22 of 1992. The act provides for control by the Meat Board of all aspects of the meat industry. Other legislation that supports trade in meat, in particular the export trade, relates to the identification of livestock and the prevention of undesirable residues in meat. Feeding of ruminant protein to ruminants is banned (Government Notice 199, Government Gazette No 1927 of 15<sup>th</sup> August 1998). According to an EU document relating to effectively enforced feed bans both Namibia and Botswana (relevant legislation in Statutory Instrument 126 of 2004) were exempted in 2004 from providing certification to attest to such a ban being in force. The regulations for the identification of livestock under the Animal

Diseases and Parasites Act were published by means of Government Notice No 29 of 2009 and provide for the livestock identification and trace-back system required for export. The system is described in a presentation made at an international conference in March 2009 (Annex 1). The Prevention of Undesirable Residue in Meat Act no 21 of 1991 (commencement proclaimed in 1994) and its regulations also published in 1994 provide for the prohibition of the use of hormones as growth promoters. Veterinary medicines are controlled under the Medicines and Related Substances Act 13 of 2003 and stock remedies under the later amended version (1996) of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No 36 of 1947.

### **2.3.6 Other relevant policy and legislation**

During the site visit it was established that the Directorate of Parks and Wildlife Management has adopted a vision of a 'world class Kavango-Zambesi Transfrontier Conservation Area (KAZA TFCA)'. The vision recognises that resident communities will need development opportunities with the emphasis on ecotourism. Community-based natural resource management and communal conservancies are established in the NCA including in Caprivi and the conservancy initiative is described by Weaver & Petersen (2008).

Under the Environmental Management Act 7 of 2007 land use and transformation and agricultural processes are listed as activities that might require an environmental clearance certificate.

Legislation for nature conservation resides in the Nature Conservation Ordinance, 1975, the Controlled Game Products Proclamation, 1980, the Nature Conservation General Amendment Act 31 of 1990 and the Nature Conservation Amendment Act 5 of 1996. Only the last two were available on the government web site. The other laws are summarised in the section on Environment of Namlex Index to the Laws of Namibia 2010 (Annex 1). The Nature Conservation Amendment Act of 1996 makes provision for 'an economically based system of sustainable management and utilisation of game in communal areas'.

The Communal Land Reform Act 5 of 2002 will have bearing on land use matters within the KAZA area.

The National Drought Policy and Strategy has among its objectives the preservation of sufficient reproductive capacity in livestock herds and the provision of sufficient water for livestock. There

is a shift in approach from regular financial assistance to large numbers of farmers to on-farm management of risk and reducing vulnerability to drought in the long term.

The report on the AHEAD Introductory Workshop on possible applications of AHEAD in Namibia provides useful information on interface diseases and disease control in Namibia.

The current legislation pertaining to veterinary registration was not obtained but up-to-date information on the legislation is available as a power point presentation by the Registrar presented at an OIE seminar held in Arusha, Tanzania, in September 2009 (Annex 1). Current legislation dating from 1984 – 1986 will be replaced by a Veterinary Professionals and Para-professionals Act that was a draft bill at that time but does not appear to be available yet.

Animal welfare is legislated for in the Animals Protection Act of 1971.

## **2.4 Zambia**

### **2.4.1 Salient issues**

- Creation of a 'disease free' zone in Central and Copperbelt Provinces which is the main focus of the veterinary department for 2010/2011
- Strong emphasis on the importance of livestock (emphasised by the creation in 2010 of a separate, reportedly well financed Ministry of Livestock and Fisheries while the Zambian Wildlife Authority (ZAWA) is clearly short of resources)

### **2.4.2 Animal disease control policy**

The National Agricultural Policy for 2004 – 2014 aims to improve production and employment over the entire spectrum of agricultural activities including livestock production. One of its strategies is the Prevention and Control of Pests, Crop and Livestock Diseases of National Importance by intensifying monitoring, regulation and facilitation of disease and vector control implementation programmes in priority areas. Private sector and farming community collaboration will be sought for monitoring and regulating animal health activities and ensuring that quarantine and stock movement control measures are enforced. The strategy includes assurance of availability of efficient and sustainable diagnostic techniques, vaccine production to meet national demand, encouragement for development and promotion of ethnoveterinary

remedies and provision of information related to livestock diseases. There is also a strategy for emergency preparedness to react to livestock disease outbreaks and other farming crises.

The animal health status of Zambia is not equivalent to that of most countries to the south. In addition to endemic FMD in cattle populations as well as African buffalo, Zambia suffered an incursion of CBPP in 1997 into the Western Province that has not been brought under control, and endemic theileriosis (apparently both East Coast fever and Corridor disease) and trypanosomosis are regarded as severe constraints for cattle producers. There is therefore a strong focus on bringing these diseases under control and rendering livestock production more economically viable. Probably influenced by the COMESA emphasis on improving regional trade, Zambia is anxious to create conditions that will enable export of beef and other livestock products to other countries in the region. To this end, the newly established Ministry of Livestock and Fisheries has as its flagship project the establishment of a 'disease free' zone in the Central and Copperbelt Provinces to allow export of livestock and livestock products to other countries in the region. Eventually this may lead to access to international markets as well. The protocol for the zone has not become available but some information is available from press releases as well as information gathered during the site visit. It has been accepted that fencing the area is not an option and other strategies will be necessary to prevent the introduction of diseases. According to the Terrestrial Animal Health Code (TAHC) of the OIE, in order to be considered free of one or more diseases the zone must provide complete physical separation of the target animal subpopulation in it from subpopulations of different health status. In the absence of acceptably impenetrable natural barriers this has to be effected by fencing. However, the situation has apparently been discussed with OIE and the separation will be effected by strategic checkpoints and intensive surveillance, as well as vaccination in the adjacent infected areas (members of the Zambian Veterinary Services, personal communication 2010). At present the numbers of livestock, in particular cattle, in the designated zone are low, with most of the cattle being raised in the Western and Southern Provinces. The area is highly suitable for livestock production but the inhabitants apparently do not have a tradition of keeping livestock and tend to look down on livestock keepers. The government is hoping to overcome this by establishing breeding stations to supply seed stock and by initially encouraging farming with sheep, goats and pigs that require less investment and can give a more rapid return. There are some game ranches in the zone and they will be allowed to continue but not to keep African buffalo, which are currently not present in the area. Livestock production and disease control are supported by the International Fund for Agricultural Development (IFAD) Smallholder Livestock

Investment Project 2005, the 9<sup>th</sup> Economic Development Fund Technical Cooperation Facility (TCF) III and the World Bank Livestock Development and Animal Health Project (Annex 1). The maintenance of the disease free zone may prove challenging because information from a private veterinarian in the Southern Province indicated that animal disease control is very weak for various reasons including lack of human resources.

#### **2.4.3 Control of interface and other relevant animal diseases including zoonoses**

The new Animal Health Act was signed into law in September 2010. As the regulations have not yet been made the old regulations will remain in force until such time as they become available. The new Act replaces the Stock Diseases Act of 1961, the Cattle Cleansing Act (15 of 1939/47 of 1963), the Tsetse Control Act (36 of 1941/46 of 1963) and the Cattle Slaughter (Control) Act of 1963 (Annex 1). Only the Control of Dogs Act of 1929 has not been included and remains in force because its revision requires consultation with a large number of stakeholders. The new Act places a strong emphasis on the creation and maintenance of disease free zones and the eradication of animal diseases, but does not digress markedly from the previous legislation. An improvement in the section relating to tsetse control is the removal of a clause in the Stock Diseases Act that provided for the killing of wild animals as necessary, although it does still provide for removal of vegetation including trees. Legislation for the import and export of animals and animal products is also covered in the Act. The Act provides for the establishment of an Animal Disease Control Interdisciplinary Committee which disappointingly does not include a representative from ZAWA, although ZAWA does have a veterinary section.

The Animal Identification Bill, which was also due to become law in 2010 but does not yet appear among the new Acts on the government web site, replaces the Brands Act 12 of 1913. The type of identification system to be used is not specified in the Bill but the intention is to adopt, at least for cattle initially, an individual identification system that will be acceptable for export.

#### **2.4.4 Policy on international and regional trade in meat and meat products**

Until recently, an export trade did not appear to be an option, apart from a reportedly brisk trade in goats across the northern borders with the Democratic Republic of Congo and a more sporadic one across the Tanzanian border. In both cases Zambia is the supplier. The initiatives in COMESA and SADC (Zambia is a member of both) to stimulate regional trade in agricultural products appears to have acted as an incentive to overcome the unfavourable animal disease

situation in Zambia and participate in regional trade. The intention to create a 'disease free zone' (i.e. for FMD and CBPP) has been described above.

#### **2.4.5 Regulation of trade in meat and meat products**

Legislation for the slaughter of animals and both import and export of animals and animal products is contained in the Animal Health Act which replaces the Cattle Slaughter (Control) Act.

#### **2.4.6 Other relevant policy and legislation**

One of the strategies proposed in the National Agricultural Policy for 2004 – 2014 is Maintaining Biodiversity and Promoting Conservation of Aquatic Ecosystems and Sustainable Utilization of Natural Resources. Specific reference is made to the conservation of livestock genetic resources and agro-biodiversity. The conservation of livestock genetic resources is discussed more fully by Lungu (2003). Biodiversity conservation is dealt with in-depth in the National Biodiversity Strategy and Action Plan (undated). Draft policy and legislation for National Parks and Wildlife is available but not yet in force (Policy for National Parks and Wildlife in Zambia 2008 and ZAWA Draft Act Amended Version 2008) and contains no reference to animal health. The current law, Zambia Wildlife Act, 1998 also does not refer to animal health or disease control.

In order to involve communities in wildlife conservation, various strategies have been adopted, including the establishment of Game Management Areas for the sustainable consumption of wildlife through the issue of hunting permits. Communities are encouraged to participate but the advantages of participation have been questioned and it appears that the revenues from hunting do not always filter back to the communities (Fernández *et al.* 2009, Fernández 2010, Tembo *et al.* 2009). A draft amendment to the Zambia Wildlife Act 1998 proposes legislation for the creation of Partnership Parks, which are provided for as Community Partnership Parks in the ZAWA Draft Act Amended Version 2008. Their purpose is to give communities the opportunity to manage parks and obtain revenue from them.

The Zambian component of the KAZA Integrated Development Plan focuses strongly on tourism and it is evident that there is huge potential, but also a need to mitigate the threat of tropical diseases to visitors to the area. The fact that within the last few months two tourists have returned from Zambia to Europe with sleeping sickness after visiting wildlife areas (both had

visited South Luangwa Valley and one had visited other reserves including Kafue as well) (ProMed mail reports) might be a negative factor for the tourist industry.

Veterinarians are registered under the Veterinary Surgeons Act 12 1964 as updated to 1994. It is to be replaced by new legislation, reflected in the Veterinary and Paraveterinary Professionals Bill.

The Prevention of Cruelty to Animals Act 20 of 1920 with various updates and amendments to 1994 is similar to the laws of Zimbabwe and Botswana and also provides for humane treatment of animals sent for slaughter.

## **2.5 Zimbabwe**

### **2.5.1 *Salient issues***

- An imperative to re-establish the necessary conditions to resume beef exports but this may not be feasible under the present situation

### **2.5.2 *Animal disease control policy***

During the site visit it was established that no official documents on policy for animal disease control were available. A draft report of a Department of Veterinary Services (field component) workshop held in June 2010 on future FMD control strategy in Zimbabwe perused during the site visit indicated a focus on re-establishing export of livestock products, in particular beef. This would be achieved by removing all buffalo from areas outside the 'national parks, conservancies and other protected areas', for which there is a legal precedent in the Destruction of Buffalo Order (see below). It is understood that a strategy document will be produced by a team from head office by the end of 2010 but is currently unavailable. The draft report refers to compartmentalization and commodity-based trade but does not specify how these might be applied. The question of re-establishing FMD-free zones and resuming beef exports to the EU was discussed in a paper by Sibanda (2008), an economist who had worked for the Cold Storage Commission. He concluded that under the prevailing economic and farming sector conditions in Zimbabwe resumption of the beef export trade would be impossible.

Annex C to Volume 2 of the pre-feasibility study for the KAZA TFCA report entitled 'Veterinary considerations for the Kavango-Zambezi TFCA: Zimbabwe's Perspectives' (Purchase & Foggin

2006) outlines animal disease surveillance requirements for the KAZA area. However, as indicated in the site report, provision of the necessary resources (human and financial) is unlikely. The main disease problems identified were FMD, trypanosomosis, brucellosis, corridor disease, rabies and other carnivore viral diseases, anthrax, ND, MCF and ASF.

### **2.5.3 Control of interface and other relevant animal diseases including zoonoses**

Legislation for animal disease control is provided mainly by the Animal Health Act No 5 of 1960 and the Animal Health (General) Regulations of 1994 with numerous specific provisions contained in Government Notices and Statutory Instruments (Annex 1). Sections 15 and 16 of the Animal Health Act refer to the power to destroy wild animals if necessary for disease control and to erect veterinary fences, and Section 20 enables among other measures the establishment of veterinary cordons. The Animal Health (Destruction of Buffalo) Order of 1984 makes provision for the destruction of buffalo in 12 districts (Beitbridge, Binga, Bubi, Bulalima-Mangwe, Bikita, Chiredzi, Gwanda, Hwange, Lupani, Matobo, Nyamandhlovu, Wanezi). Specific regulatory measures are provided for control of tsetse fly and trypanosomosis, theileriosis, FMD, rabies, anthrax and ND, as well as others not relevant to the present study. Most of the legislation involves declaration of infected/quarantine areas and movement restrictions. The clearance of vegetation is provided for under the legislation for control of tsetse fly. There is legislation restricting the movement of cattle, pigs and game animals that is relevant for interface disease control (Annex 1). Legislation relating to the identification and registration of livestock is provided in the Brands Act of 1900 and a series of subsequent amendments some of which fall under the Animal Health Act and Statutory Instruments relating to the Stock Register (Annex 1). This legislation is concerned with movement and disease control rather than trade.

Other legislation relevant to animal health in terms of preventing the entry of foreign diseases or the spread of diseases by illegal movement of animals are the regulations providing for import of animals and products of animal origin, the Stock Theft Act of 1959 and the Stock Trespass Act of 1991. Legislation for the registration of veterinarians and the prevention of cruelty to animals has relevance to animal health and wellbeing (Annex 1).

### **2.5.4 Policy on international and regional trade in meat and meat products**

No official documents were obtained but it is evident from information obtained during the site visit that there is a desire to re-establish FMD free zones from which beef export could be resumed. With the loss of market access due to bans that started around 2000 it is evident that

Zimbabwe is far behind Botswana and Namibia in terms of actions, backed by legislation, to comply with the requirements of the EU, like the adoption of a sophisticated LITS. Policy will ideally be informed by feasibility studies that might reveal alternative options to resuming exports to the EU.

### ***2.5.5 Regulation of trade in meat and meat products***

The Cold Storage Commission is a parastatal that was established in 1960 by the Cold Storage Commission Act to operate abattoirs and control the export of chilled and frozen beef. Provision was made for registration of abattoirs in a Statutory Instrument: Cold Storage Commission (Registration of Abattoirs) Regulations 1993. This is also provided for in the Factories and Works Act Revised Edition 1996, and trade in agricultural goods including meat is also regulated by the Control of Goods Act Revised Edition 1996, the Produce Export Act 4, 1921, and, for carcass classification and grading, the Agricultural Products (Livestock) (Carcass Classification and Grading) Regulations of 2000. The use of hormones in livestock production is prohibited by Statutory Instrument 24 of 1988 (Control of Goods (Livestock Hormones) Regulations, 1988). Statutory Instrument 277 of 1997 (Farm Feeds (Amendment) Regulations 1997 (No 6) prohibits the feeding of ruminant protein to ruminants, and the definition of 'ruminant' is updated by an apparently unnumbered Statutory Instrument of 2001 (Farm Feeds (Amendment) Regulations, 2001 (No 7) to mean 'any cloven-hoofed cud-chewing animal'. The most recent legislation relating to the marking of cattle obtained is Statutory Instrument 99 of 1998 (Brands Regulations, 1998).

### ***2.5.6 Other relevant policy and legislation***

A draft policy document on wildlife-based land reform has been obtained. The only provisions relevant to animal disease control are a requirement for large and medium scale (A2) farmers to obtain veterinary clearance to go into private game ranching on their properties as well as permission from National Parks and Wildlife, and the requirements for double electrified fencing recognised as veterinary fencing around conservancies 'to control spreading of diseases between wild life and domestic animals and vice versa'.

The Parks and Wild Life Act 14 of 1975 does not refer to animal health except that the Minister is empowered to take such measures as may be necessary to control any human or animal disease, including diseases of domestic animals. The Act makes provision for personnel to keep domestic animals for specified purposes.

The Zimbabwe Component of the KAZA Integrated Development Plan (2.3 Land use) indicates that livestock activity occurs on the periphery of the area, with commercial ranches (game or mixed crop, game and cattle) on the eastern edge and pastoralists using seasonal grazing along the border with Botswana.

Veterinary surgeons are registered under the Veterinary Surgeons Act 36 1973 and subsequent legislation (Annex 1).

Animal welfare is provided for in the Prevention of Cruelty to Animals Act 5 of 1960 as amended by a number of Acts, government notices and statutory instruments from 1963 – 1986, including the Prevention of Cruelty to Animals Act No 22 of 1983.

### **3. REGIONAL ORGANISATIONS**

The regional organisations relevant for KAZA are SADC, of which all participating countries are members, and COMESA, of which Zambia and Zimbabwe are members, as well as the African Union, of which all the countries are members. SADC and COMESA are collaborating with the East African Community (all of whose members are either members of SADC or of COMESA, but none are participants in KAZA) to establish a FTA in which unrestricted trade in agricultural products including products derived from animals will be possible. SADC and COMESA are also concerned with promoting agricultural development in the region in the interests of food security and poverty reduction and with a view to stimulating regional trade and promoting access to international markets. Both SADC and COMESA have recognised that access to international markets for agricultural exports, and in particular for animal-derived commodities, is severely constrained by non-tariff barriers to trade. In particular, SPS requirements lead to the exclusion from international trade in commodities derived from cloven-hoofed animals of most of the COMESA countries because they cannot prove freedom from FMD. The reason for this is the almost universal application of OIE standards (see below) that require proof of freedom from FMD for a country or zone (i.e. geographical freedom). These requirements may also be applied within the region, because some countries (Namibia and Botswana, both members of SADC, and Swaziland, which belongs to both SADC and COMESA) are rated for export of beef to the EU on the basis of zonal or (Swaziland) country freedom from FMD, and are not willing to risk losing this status by trading with partners of lesser status. In order for a FTA as described above to function, strategies have to be developed to ensure that non-tariff barriers to trade are not applied unfairly and to facilitate trade between member states regardless of their overall animal

health status. Both COMESA and SADC have been focusing on SPS measures. Both have examined the option of commodity-based trade (Thomson *et al* 2005), which could eliminate the need for geographical freedom from FMD (or other diseases as applicable) in order to trade meat. However, intra-regional trade in livestock and livestock products is still hampered by the imposition of trade restrictions by individual countries that are contrary to the spirit of the regional agreements. Both blocs have systems for reporting non-tariff barriers to trade and a report on this for COMESA indicated that unfair SPS measures accounted for a very small number of the reported infractions. However, this may be because such infractions are under-reported.

### **3.1 African Union – Interafrican Bureau for Animal Resources (AU-IBAR)**

The Inter-African Bureau for Animal Resources of the African Union (AU-IBAR) produces the Animal Health Yearbook which contains useful information about the animal disease situation in member countries that submit reports and in the African region as a whole. An information system for livestock health and production is being developed. AU-IBAR has also been developing a wildlife-focused unit.

### **3.2 Common Market for Eastern and Southern Africa (COMESA)**

COMESA was formed in December 1994 to replace the former Preferential Trade Area which was established in early 1981. COMESA has a wide-ranging series of objectives including the promotion of peace and security in the region, but its main focus is on forming a large economic and trading bloc that will be able to overcome some of the difficulties that face individual states. Its strategy is summed up as 'economic prosperity through regional integration'. Two major achievements have been the establishment of a Free Trade Area and a Customs Union. More information about COMESA is available on their website (<http://about.comesa.int/lang-en/overview>).

COMESA has Regulations on the Application of SPS Measures that were published in December 2009. The objectives of the regulations are similar to the objectives of the SADC SPS Annex in terms of protection of human, animal and plant life and health while not imposing unnecessary hindrances for trade. Both the SADC Annex and the COMESA regulations emphasise that SPS measures must be based on scientific fact and science-based risk

assessment. The regulations are fairly general and do not cover specifics like criteria for freedom from diseases. A large part of the regulations refer to the establishment and functioning of the COMESA Green Pass, which will replace much of the current certification and allow free trade in specific commodities between member countries. Whether all member states will accept it for livestock and livestock products remains to be seen. COMESA has shown strong support for commodity-based trade with the Council of Ministers expressing approval at a recent meeting, and according to recent information it is now part of official COMESA policy (CAADP Policy Brief No 1 and D. Cassidy, personal communication 2010).

### **3.3 Southern African Development Community (SADC)**

SADC had its origin in the Southern African Development Coordination Conference (SADCC), formed on 01 April 1980, as Frontline States whose objective was political liberation of Southern Africa. Signing of the SADC Treaty and Declaration in Windhoek, Namibia on 17 August 1992 transformed the SADCC into SADC, whose objective included economic integration following the independence of the remaining Southern African countries (other than South Africa, which joined SADC after the change to majority rule in 1994). The membership, main programmes, structure and organs as well as the vision and mission of SADC are described on the SADC web site ([www.sadc.int/index/browse/page/715](http://www.sadc.int/index/browse/page/715)). Coordination and harmonization of agricultural policies and programmes in the SADC region is the responsibility of the Food, Agriculture and Natural Resources Directorate (FANR) ([www.sadc.int/fanr/](http://www.sadc.int/fanr/)). According to the information on the web site, the main focus of FANR is to ensure:

- Food availability, access, safety and nutritional value;
- Disaster preparedness for food security;
- Equitable and sustainable use of the environment and natural resources;
- Strengthening institutional frameworks and capacity building.

There are four Technical Units that coordinate the FANR programmes: Agricultural Research and Development; Environment and Sustainable Development; Food Security; and Natural Resources Management. There are three sections under Food Security: Agricultural Information Management, Crop Development and Livestock Development.

The SADC Trade Protocol was developed in 1996 for trade between member countries. Article 6 of the protocol states that, apart from exceptions provided for in the protocol, member states

should adopt policies and implement measures to eliminate existing non-tariff barriers to trade and should refrain from imposing any new ones. Article 9 deals with general exceptions, one of which is the right to impose a non-tariff barrier if necessary to protect human, animal or plant life or health. Article 16 refers to SPS measures and states that they should be based on international standards, guidelines and recommendations, and provides for member states to enter into consultation in order to reach agreement on recognition of equivalence of specific SPS measures. Article 17 builds on Article 16 in terms of charging member states to as far as possible, without prejudice to human, animal or plant health, implement SPS measures in such a way as not to create unnecessary barriers to trade and to accept measures that differ from their own as equivalent provided that the objectives of the measures are achieved. In July 2008 the SPS Annex to the SADC Protocol on Trade was approved by the SADC Committee of Ministers of Trade. For SPS measures related to trade in livestock and livestock commodities, the protocol largely adheres to the recommended OIE standards and the WTO SPS agreement. No reference is made to safety of the end product except in the case of fully processed products that are subject to the food safety standards determined by the Codex Alimentarius. However, unofficially there has been an interest in commodity-based trade.

The official (2006) SADC Regional Biodiversity Strategy helpfully references challenges at the wildlife / livestock interface in several places (see <http://www.wcs-ahead.org/sadc.html> ).

## **4. POTENTIAL TRADING PARTNERS (NORTHERN HEMISPHERE)**

### **4.1 European Union/European Commission (EU/EC)**

The basic approach of the EC is that all imports of food products should comply with the principles of European Food Law which emphasises process control across the food chain. However, when considering imports of animal products from so-called 'third countries', the EC also places emphasis on geographic freedom of the country or area of production from potentially dangerous animal infections capable of causing transboundary animal diseases. So to some extent the EC adopts a 'belt and braces' approach to management of animal diseases. The requirements that potential exporters are expected to comply with are clearly laid out on the EC website [http://ec.europa.eu/food/animal/animalproducts/freshmeat/index\\_en.htm](http://ec.europa.eu/food/animal/animalproducts/freshmeat/index_en.htm). The foundation for imports is veterinary certification by the competent authorities of the exporting

country. However, to qualify for access to EU markets a set of procedures need to be followed by the competent authority. In summary these are:

- Formal recognition of the reliability of the competent authority of the third country by the EC in matters related to animal- and public health;
- Be listed on the 'positive list of eligible countries' which entails the following:
  - Possess a competent veterinary authority
  - Membership of the OIE and meeting its standards and reporting obligations
  - Guarantee by the national authorities that relevant hygiene and public health requirements are met (in essence compliance with EC Regulations 853/2004 and 854/2004)
  - A functional monitoring system and programme for residues of veterinary medicines, pesticides and contaminants that requires initial approval and annual renewal
  - Exported products may only be sourced from 'approved establishments'
  - Inspection by the EC's Food and Veterinary Office to confirm compliance.

Countries that have submitted the required data and have been rated by OIE as having 'negligible' or 'controlled' risk of BSE obviously have an advantage. None of the countries in Southern Africa have achieved this. However, Botswana and Namibia are able to export de-boned beef, which is regarded as a safe product in terms of BSE transmission, to the EU. Zimbabwe lost its authority to do so after uncontrolled and widespread FMD outbreaks occurred from 2000, and Zambia and Angola have not attempted to be rated for export to EU.

#### ***4.1.1 Relationship between OIE and EC standards for importation of products derived from animals***

The EC adopts a somewhat anomalous position in relation to OIE standards and procedures because on the one hand it participates actively in the activities of the OIE by co-ordinating the inputs and, where necessary votes, relating to OIE decisions while on the other hand, it also in some cases adopts standards that differ from those of the OIE. The best example of this is in relation to beef exports to the EU where, for southern African countries, there is a requirement that the meat be de-boned as well as being derived from officially recognised FMD-free zones without vaccination. This is not applied to South American countries. The reason for this is, apparently, that the EC is uncertain that the vaccine stains available in their FMD vaccine bank are adequate to cover outbreaks of FMD that originate from southern Africa. This is despite the

fact that under the 'New Animal Health Strategy (2007-2013) and Council Directive 2003/85/EC specifically related to FMD it is explicitly stated that control measures in the event of an outbreak are based on 'stamping out' of affected and 'in-contact' herds and regional restriction on the movement of susceptible animals and their products. It also needs to be appreciated that apart from minor incursions of SAT sero-types viruses into the Middle East, these viruses have not been involved in transcontinental spread of FMD and the circumstantial evidence is that that they do not spread as efficiently in domestic livestock as do the other lineage of FMD virus, viz. serotypes A, O and Asia 1.

The double requirement is held by some in the SADC Region to amount to unjustified 'ratcheting up' of the internationally accepted standard.

#### **4.2 United States Department of Agriculture (USDA)**

The requirements for animal and animal product imports to the USA are available on the APHIS web site [http://www.aphis.usda.gov/import\\_export/animals/animal\\_import/animal\\_imports.shtml](http://www.aphis.usda.gov/import_export/animals/animal_import/animal_imports.shtml) and further requirements are available on the FSIS web site [www.fsis.usda.gov](http://www.fsis.usda.gov). Access for fresh and frozen meat and various types of processed meat depends on the absence of certain specified diseases from the area of origin. Namibia with the exception of the area north of the VCF is rated by APHIS as free of FMD and rinderpest and is the only African country listed. However, Namibia does not appear on the FSIS table of countries from which fresh and processed meat may be imported so presumably would not be able to export meat to USA. Furthermore, the APHIS list notes that special certification requirements exist for countries listed as free if they (1) supplement their national meat supply with fresh, chilled or frozen meat of ruminants or swine from countries/regions that are not designated free, (2) share a land border with a country that is not designated as free of FMD or rinderpest, (3) import ruminants or swine from countries/regions that are not designated free of FMD or rinderpest under conditions that are less restrictive than would be acceptable for importation into the USA.

APHIS provides a manual which details the circumstances under which imports may be released. The chapters can be downloaded separately in pdf format. The requirements appear to be exacting. Table 3.12.22 of the chapter on Foreign Origin Meat and Meat Products, Ruminants provides the conditions for import of fresh meat of ruminants from a country known to be free from BSE and FMD. Fresh meat from cattle, sheep and goats from countries free from

the specified diseases, with adequate proof of origin, and that did not transit a country known to be affected with FMD, will nevertheless be referred to FSIS before release, although similarly properly certified meat from ruminants other than cattle, sheep and goats can be released without FSIS inspection, suggesting that not all meat is routinely submitted to FSIS.

It appears that for importation into the USA geographical freedom alone is not necessarily enough – the status of neighbours and trading partners can also affect ability to export meat to the USA. Updating of changes in disease status may not always be complete. A number of countries listed as being infected with ASF have in fact been free of the disease for many years (for example Cuba, Haiti and Malta), although the countries that became newly infected in 2007 (Georgia, Armenia, Russia, Mauritius) do feature in the list.

With regard to BSE, the USDA refers to BSE-free countries and BSE minimal risk countries. The 1997 regulations are not available on the APHIS or FSIS web sites, but it seems very unlikely that the US would consider importing meat from countries regarded as posing more than minimal risk, and, apart from FMD, this may be the main reason why no African countries are listed as able to export meat to the USA.

## **5. INTERNATIONAL ORGANISATIONS CONCERNED WITH ANIMAL HEALTH AND TRADE**

### **5.1 Food and Agriculture Organisation of the United Nations (FAO)**

The FAO's Animal Health Service (AGAH) is part of the Animal Production and Health Division (AGA). Its activities are directed at assisting its member countries (mostly in the developing world) with achieving early warning, early detection and early response to animal disease emergencies. It operates a Crisis Management Centre (CMC-AH) which is the operations arm of the Emergency Prevention System for Transboundary Animal Diseases and Plant Pest and Diseases (EMPRES).

In practice, AGAH has divided its activities between assisting member countries to manage animal disease emergencies while at the same time embarking upon initiatives against major transboundary animal diseases (TADs), the most important being rinderpest. Resulting directly

and indirectly from these activities rinderpest will be declared eradicated by the UN in 2011. As an extension of this tradition and in association with the OIE the 'Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADS)' was initiated in 2004 with the objective of 'eliminating the micro-organisms (that cause TADs) at the source of their circulation'

([http://www.oie.int/fileadmin/Home/eng/About\\_us/docs/pdf/GF-TADS\\_approved\\_version24May2004.pdf](http://www.oie.int/fileadmin/Home/eng/About_us/docs/pdf/GF-TADS_approved_version24May2004.pdf)). A large number of TADs are targeted under this programme among which FMD is prominent. The strategy behind this approach (referred to as progressive control), with special reference to FMD, has been explained in a recent publication which sets out the following mile-stones (Rweyemamu *et al.*, 2008):

- Assessing and defining national FMD status
- Instituting vaccination and movement control
- Suppressing virus transmission to achieve absence of clinical disease
- Achieving recognition of freedom from FMD with vaccination from OIE
- Achieving recognition of freedom from FMD without vaccination from OIE
- Extending FMD-free zones
- Maintaining FMD freedom.

However appropriate this approach may be for other regions of the world, its aptness for regions such as southern and eastern Africa where large wildlife populations still occur is dubious at the least. The issue of how FMD can be managed so that both livestock development and biodiversity can proceed in parallel is essentially not addressed. Thus a major disease management initiative has been launched without apparent consideration of the environmental impacts. For the above reasons the GF-TADS programme adopted jointly by FAO and OIE needs careful consideration within the SADC Region.

## **5.2 World Organisation for Animal Health (OIE)**

### ***5.2.1 Approach of the OIE to animal disease management and trade in animal commodities***

The OIE (World Organisation for Animal Health; formerly the 'Office International des Epizooties'), although not a UN agency, has two international mandates: coordination of management of animal diseases, and standard setting for trade in livestock and livestock commodities.

It has been widely accepted since its establishment in 1924 as the leader of the international health community and co-ordinating body for management of animal diseases. Initially the OIE comprised only 28 countries with the object of overcoming the rinderpest problem in Europe that was a major concern. Following the success of its efforts directed against rinderpest, it grew into an international animal health institution with a current country membership of 177, including all the major trading countries of the world. Since 1945 when the FAO was established as an agency of the UN the OIE and FAO have had an uneasy relationship, but there is now broad agreement between the two regarding their respective roles; FAO focuses mostly on development issues while the OIE is responsible for standard setting and animal disease information gathering and dissemination.

Under the umbrella of the SPS Agreement of the WTO, a Global System for Agrifood Trade evolved to balance the needs for free international trade on the one hand and management of biological hazards posed by traded foodstuffs, animals and plants on the other. These matters are regulated by the SPS Committee which has three international standard-setting bodies to support it, *viz.* the Codex Alimentarius for food safety, the OIE for trade issues impacted by animal diseases and the International Plant Protection Convention for issues related to plant diseases and health. Thus the OIE sets international trade standards for animal commodities as far as animal diseases are concerned.

Agreement between the WTO and OIE on the latter's role in standard-setting for trade was only achieved in 1998, i.e. long after the OIE was leading and co-ordinating animal health management internationally.

The SPS Agreement lays out 14 principles (articles) that guide its activities and those of the three international standard-setting bodies mentioned above ([www.wto.org](http://www.wto.org)). However, because the principles under which the OIE operates were already in existence when the SPS Agreement came into being there is to some extent a lack of congruence between the Codex Alimentarius and OIE in the way they operate. So, for example, while the OIE has a predominantly geographic approach to management of animal health risks, the Codex Alimentarius recommends procedures and processes (essentially based on a hazard analysis critical control point [HACCP] approach) that ensure that each food product is safe for human consumption. This means that for foods derived from animals that need to meet international standards for food safety as well as animal diseases, there is a lack of congruence between the two sets of standards. The original idea was that OIE would address trade safety issues 'up to

the farm gate' while Codex Alimentarius would set standards for processing 'outside the farm gate', i.e. the OIE does not have a mandate to set standards for products. This is increasingly problematic because management of potential hazards for both food safety and animal diseases should ideally be integrated and take place right across value chains, i.e. from the farm to the packaged product ready for consumption. This latter approach is increasingly supported by advocacy of safety being assured by 'best practice' throughout production chains, exemplified by catch-phrases such as 'farm to fork' and 'stable to table', e.g. GlobalGap. More detail regarding the OIE is accessible via the OIE's website ([www.oie.int](http://www.oie.int)).

### **5.2.2 The OIE approach to control of transboundary diseases**

The approach of the OIE is predicated on the idea that TADs need to be eradicated. This is largely based on the examples of smallpox and rinderpest which were both finally eradicated world-wide through mass vaccination of people and cattle respectively in the remaining foci in the developing world. The concept has been extended to trade policy which, in essence, means that safe trade in respect of animals and animal products can best be assured by sourcing such commodities and products from localities (countries or zones) free from these infections. Hence most recommendations in the TAHC dealing with trade in animal commodities require that the locality of origin should be free of the disease (more correctly the infection) in question. There are some exceptions but that is the general rule.

Chapter 4.3 of the TAHC provides the criteria for zonation. However, for only 4 diseases does the OIE provide an accreditation mechanism, *viz.* rinderpest, FMD, CBPP and BSE. For three of these diseases member countries may apply for recognition that their country or one or more zones within the country are free from the infection. For BSE, however, application may only be made for recognition that the infection occurs below a set prevalence rate. This is because the origin of BSE is unproven and therefore future 'freedom' from the infection cannot be assured with certainty.

Many other TADs are problematic when it comes to prospects for eradication because they are maintained by free-living hosts and vectors, including arthropods. This is a particular problem for countries in Southern Africa where many TADs are transmitted by arthropods and others involve wildlife in their life-cycle. For these diseases eradication is not technically feasible at present. Consequently other approaches have been developed or are under discussion. One is compartmentalisation (criteria dealt with in chapter 4.3, application in chapter 4.4 of the TAHC)

that is apt for integrated production chains that are not necessarily geographically confined to single locations. Another approach that is under investigation is commodity-based trade. Information on this is available at <http://www.oie.int/international-standard-setting/overview/commodity-based-approach/> with links to commissioned studies (Anon 2010; Paton *et al.* 2009). The chapters of the TAHC relevant to control of TADs and trade in livestock and livestock commodities are listed in Table 1.

**Table 1: Relevant chapters of the OIE Terrestrial Animal Health Code (2010)<sup>5</sup>**

<b>Chapter</b>	<b>Title</b>
1.1	Notification of diseases and relevant epidemiological information
1.6	Status for OIE listed diseases: Procedures for self declaration and for official recognition by the OIE
2.1	Import risk analysis
4.1	General principles on identification and traceability of live animals
4.2	Design and implementation of identification systems to achieve animal traceability
4.3	Zoning and compartmentalisation
4.4	Application of compartmentalisation
5.1	General obligations related to certification
5.2	Certification procedures
5.3	OIE procedures relevant to the Agreement on Sanitary and Phytosanitary Measures of the World Trade Organization
6.1	The role of veterinary services in food safety
6.2	Control of biological hazards of animal health and public health importance through ante- and post-mortem meat inspection
6.3	The control of hazards of animal health and public health importance in animal feed
6.6	Introduction to the recommendations for controlling antimicrobial resistance
6.7	Harmonisation of international antimicrobial resistance surveillance and monitoring programmes
6.8	Monitoring of the quantities of antimicrobials used in animal husbandry
6.9	Responsible and prudent use of antimicrobials in veterinary medicine
8.1	Anthrax
8.5	Foot and mouth disease
8.10	Rabies
8.11	Rift Valley fever
10.4	Avian influenza
10.13	Newcastle disease
11.3	Bovine brucellosis
11.5	Bovine spongiform encephalopathy
11.6	Bovine tuberculosis
11.8	Contagious bovine pleuropneumonia
11.13	Theileriosis
16.1	African swine fever

<sup>5</sup> The diseases chosen are either interface or trade sensitive diseases or both. Trypanosomosis is not listed by OIE although is of obvious relevance.

The OIE apparently intends in future (already done for some diseases like BSE) to list commodities that are safe to trade irrespective of the disease status of the country with respect to that specific disease. How this fits into the concept that product 'safety' needs to be achieved through management of risk right across the value chain is unclear. A related problem with the TAHC is that ways through which equivalence of risk management can be achieved (Article 4 of the SPS Agreement) is only superficially addressed.

How to enable safe trade in respect of commodities and products from localities that cannot be rendered free of potentially dangerous infections that are associated with wildlife remains a problem that the OIE has not yet adequately addressed.

### **5.2.3 *The OIE and biodiversity conservation***

Until recently the OIE paid limited attention to health problems of wildlife specifically although a Working Group on Wildlife Diseases has been in existence since 1994. A document is currently being drafted within the OIE on disease management at the wildlife-livestock interface, the idea being to inform future policy direction on this issue. In this context the OIE has in the past drawn a distinction for some specific diseases (e.g. HPAI) between the health status of wild and domestic animal populations, i.e. so as to inhibit trade in livestock commodities and products as little as possible. A question that has arisen is whether this approach could be widened to include other disease/wildlife problems such as SAT serotypes of FMD virus and African wildlife as has been proposed by SADC?

The fact that biodiversity conservation is based, among other principles, on maintenance of the connectedness between biota while management of directly transmitted animal diseases is based on separation of animal populations of different health status creates a fundamental dilemma. So far, the OIE has not addressed this issue directly.

### **5.2.4 *OIE standards***

Two sets of standards are up-dated and published annually by the OIE and can be directly accessed from the OIE website:

- Terrestrial Animal Health Code
- Aquatic Animal Health Code

A supporting manual is also available, viz. Manual of Diagnostic Tests and Vaccines for Terrestrial Animals. It is updated annually on-line and a new edition is published approximately every four years.

## **6. CONCLUSIONS AND RECOMMENDATIONS**

Very little official policy documentation on animal health issues is available in the 5 target countries although there is an appreciable amount of literature produced by academic and development NGOs on animal health management and its direct and indirect impacts. It is not clear whether the apparent lack of official documentation reflects the real situation or whether the documentation that may exist is simply not in the public domain. Legislation, by its nature on the other hand, is available to those with the wherewithal to look for it such as commercial farmers but it is usually not easily accessible for the many small-scale livestock farmers in these countries. However, legislation in the five countries provides limited indication of policy direction because it is mainly enabling in nature and could potentially be used to support more or less any animal health policy.

All the five countries have participated in ensuring the global eradication of rinderpest and all five are listed by the OIE in this respect. Botswana is also listed by the OIE as free from CBPP.

Animal health legislation in the five countries is consistent with OIE guidelines but the level at which the legislation and internal control measures are applied depends largely on the country's success in accessing external markets for livestock and livestock products. Thus Botswana and Namibia, which export beef to the EU as well as other international (Norway) and regional markets, have created and maintained zonal freedom from FMD (where vaccination is not practised) necessary to access these markets. So far none of the target countries, or any other in Southern Africa, has attempted to access markets on the basis of freedom from FMD where vaccination is practised, despite the success of South American countries in this regard and the potential it has for broadening access in situations where wildlife is abundant.

Consequent upon the need for access to high-value beef markets, Botswana and Namibia also have legislation to support management of BSE risk and have introduced appropriate LITS as well as measures preventing undesirable residues in meat. Zimbabwe, which until 2000 exported beef to the EU, has most of the legislation in place but more recent requirements like a

modern animal identification system are not in place. Zambia is aiming for at least regional export and is therefore in the process of creating an FMD free zone (without the use of fencing) and has a new Animal Health Act and an Animal Identification Bill that is expected soon to become law. Angola does not export beef and its Animal Health Law, although recent (2006), provides for control and prevention of animal diseases at the national level.

All of the countries have policies or draft policies that strongly support wildlife and environmental conservation and development of tourism based on wildlife. This is partly due to global ethical imperatives but also due to the realisation that the revenues from the tourism sector are important for future development. It would appear, however, that the influence that animal health policies and activities have on biodiversity conservation and *vice versa* are rarely understood and even more rarely taken into consideration. Thus from a legislation and official policy perspective the historical conflict between wildlife conservation and management of diseases to enable livestock development and trade appears to remain well entrenched. The net result is that conservation and animal disease management continue as largely independent development initiatives. It is true, however, that dialogue and communication between officials concerned with conservation and animal disease management has improved significantly, such as in Namibia for example. In Angola, the bill for conservation of wildlife and natural resources has been developed jointly by the Ministries responsible for agriculture and for the environment. Nevertheless, in general, animal health policy and legislation does not reflect changes that would reduce the conflict between veterinary disease control and biodiversity conservation, other than omission of a clause from the new Zambian Animal Health Bill that formerly enabled the killing of wild animals to manage tsetse and trypanosomiasis. The bottom line is that the gulf between livestock interests and those of wildlife conservation is, in effect, as wide as ever, although the need to address the problem is probably better understood.

The solution will lie in achieving accommodation between agricultural development and wildlife conservation. There are many issues besides veterinary controls that complicate the picture; in particular, human-wildlife conflict encompassing crop damage, predation of livestock and threats to human lives.

Two aspects need to be addressed for this accommodation to occur: (1) development of mechanisms that can be implemented to enable integration of livestock production and trade on

the one hand and bio-diversity conservation on the other and (2) fostering of communication so that the needs and potential mechanisms are understood by appropriate decision makers.

In November 2008 a workshop 'Achieving compatibility between the Transfrontier Conservation Area concept and international standards for the management of Transboundary Animal Diseases' was held at Kasane, Botswana under the auspices of the EC-funded SADC FMD Project, supported by USAID. This brought together a wide range of international and regional stakeholders representative of both conservation and livestock interests. A number of priority issues and proposed actions were identified which are available in the workshop report ([http://www.wcs-ahead.org/sadc\\_forum.html](http://www.wcs-ahead.org/sadc_forum.html)). One of these was developing a broad base of support at both regional and international levels for commodity-based trade generally, and de-boned beef from SADC specifically, for adoption by OIE. Unfortunately, SADC's FANR lost the capacity to take the matter further but a blue-print remains that could be developed further with a view to implementation in the near future.

#### **6.1 Recommendations**

- Follow up on progress made in implementing the recommendations made at the Kasane 2008 workshop and if necessary convene another stakeholder workshop to address issues that have not progressed satisfactorily
- Make a concerted effort at identifying locations, circumstances with concomitant solutions for achieving better integration of wildlife conservation and livestock development in southern Africa.
- Development of pilot projects aimed at achieving integration of livestock/wildlife
- Identification and promotion of scientific studies to support standard-setting for commodities and products derived from areas that are not recognised as free from trade-influencing TADs such as FMD.

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Transfrontier Conservation Consortium 2006 Pre-feasibility study of the proposed Kavango-Zambezi Transfrontier Conservation Area, Final Report, Country Surveys, Volume 3 <http://www.peaceparks.org/xMedia/PDF/Peace%20Parks/KZTFCA/Volume%203%20KAZA%20TFCA%20Prefeasibility%20Study%20Final%20Report.pdf> (accessed 29 July 2010)

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USDA APHIS 2009 Bovine spongiform encephalopathy – Countries/regions affected with bovine spongiform encephalopathy (BSE)

[http://www.aphis.usda.gov/import\\_export/animals/animal\\_import/animal\\_imports\\_bse.shtml](http://www.aphis.usda.gov/import_export/animals/animal_import/animal_imports_bse.shtml)

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[http://www.aphis.usda.gov/import\\_export/plants/manuals/ports/downloads/apm\\_pdf/03\\_12foreignmeatrumin.pdf](http://www.aphis.usda.gov/import_export/plants/manuals/ports/downloads/apm_pdf/03_12foreignmeatrumin.pdf) (accessed 16 October 2010)

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[http://www.aphis.usda.gov/import\\_export/animals/animal\\_import/animal\\_imports\\_asf.shtml](http://www.aphis.usda.gov/import_export/animals/animal_import/animal_imports_asf.shtml)

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[http://www.aphis.usda.gov/import\\_export/animals/animal\\_import/animal\\_imports\\_fmd.shtml](http://www.aphis.usda.gov/import_export/animals/animal_import/animal_imports_fmd.shtml)

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[http://siteresources.worldbank.org/INTZAMBIA/Resources/Zambia\\_Brochure\\_V3](http://siteresources.worldbank.org/INTZAMBIA/Resources/Zambia_Brochure_V3) (accessed 12 December 2010)

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[http://www.worldbank.org/external/default/WDSP/IB/2007/06/26/000090341\\_2007062614.pdf](http://www.worldbank.org/external/default/WDSP/IB/2007/06/26/000090341_2007062614.pdf) (accessed 12 December 2010)

World Bank 2010 Project Information Document: World Bank Livestock Development and Animal Health Project Report No AB5873

[http://www.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/07/21/000020953\\_2010072113.pdf](http://www.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/07/21/000020953_2010072113.pdf) (accessed 23 September 2010)

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[http://vle.worldbank.org/bnpp/files/TF03504zambia\\_summary\\_final\\_11Jul.pdf](http://vle.worldbank.org/bnpp/files/TF03504zambia_summary_final_11Jul.pdf) (accessed 22 December 2010)

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[http://www.zawa.org.zm/Downloadables/RESEARCH\\_PLAN%5b1%5d.rev\\_fxm2.pdf](http://www.zawa.org.zm/Downloadables/RESEARCH_PLAN%5b1%5d.rev_fxm2.pdf) (accessed

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<http://www.zawa.org.zm/Downloadables/Draft%20Policy> (accessed 23 September 2010)

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<http://www.zawa.org.zm/Downloadables/KAVANGO-ZAMBIA> (accessed 23 September 2010)

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## Annex 1 Classification of documents according to country, category and issues

### Key

1. Control of animal diseases
2. Livestock production
3. Trade in livestock and livestock products
4. Biodiversity conservation and ecosystem health
5. Rural development and food security
6. Land use

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
<b>ANGOLA</b>						
<b>Legislation</b>						
Anteprojecto do Lei das Florestas, Fauna Selvagem e Áreas de Conservação Terrestres 06				+		
Estatuto Organico do Ministério da Agricultura 00/2009	+	+			+	
Estatuto Organico do Ministério da Agricultura, do Desenvolvimento Rural e das Pescas [1]_2010 1/2010	+	+			+	
Estatuto Organico do Ministério do Ambiente Decreto-Lei no. 4/09 23-09-2009				+		
Estatuto Organico da Secretaria de Estado para o Desenvolvimento Rural Decreto-Lei no. 1/2009					+	
Lei das Associações de Defesa do Ambiente Lei no 3/2006				+		
Lei de Bases do Ambiente [1] Lei no 5/1998				+		
Lei de Base do Desenvolvimento Agrário Lei no 15/2005					+	+
Lei Constitucional 2008						+
Lei de Defesa do Consumidor, Lei no 15/03	+		+			
Lei do Ordenamento do Território e do Urbanismo Lei no 3/2004					+	+
Lei de Revisão Constitucional [1] Lei no 23/1992 09-05-2008						+
Lei de Sanidade Animal Lei no 4/2004	+		+			
Lei de Terras [1] Lei no 9/2004						+
Regulamento de Caça 2873/99/1957 27-01-1999				+		
Regulamento Geral dos Planos Territoriais, Urbanísticos e Rurais [1] Decreto no 2/2006					+	+
Regulamento interno da Direcção Nacional de Agricultura, Pecuária e Florestas Dec exec 52/06	+	+				
Regulamento interno do Instituto Nacional de Defesa do Consumidor [not numbered or dated]	+		+			

<b>Document</b>	<b>1. Control of animal diseases</b>	<b>2. Livestock production</b>	<b>3. Trade in livestock</b>	<b>4. Biodiversity conservation</b>	<b>5. Rural development</b>	<b>6. Land use</b>
Regulamento interno do Instituto dos Serviços de Veterinária Decreto exec 127/06/2006	+		+			
Regulamento interno do Secretariado Executivo do Comité Nacional para o Código Alimentar em Angola Decreto executivo 1/06			+			
Sobre a Avaliação de Impacto Ambiental Decreto nº 51/04				+		
Sobre o Licenciamento Ambiental Decreto nº 59/07				+		
<b>Policy/Strategy</b>						
Estratégia Nacional de Segurança Alimentar e Nutricional 2009		+			+	
Plano de Acção de Segurança Alimentar e Nutricional 2009		+			+	
Política Nacional de Florestas, Fauna Selvagem e Áreas de Conservação 2008				+		
<b>Projects</b>						
Programa de Extensão e Desenvolvimento Rural 2007					+	
Roots of Peace & Conservation International: Pathways for Peace [not dated]				+		
Roots of Peace: Harvesting hope – fulfilling Angola's agricultural potential				+		
<b>Other</b>						
DNAPF: Assistência técnica a empresas agro-pecuárias emergentes		+			+	
DNAPF: Movement of plants and animals 2007	+					
Encontro Nacional de Pecuária, Camabatela, 23 – 30 November 2007	+	+			+	
UN World Food Programme 2006 Evaluation of the Angola portfolio of activities						
<b>BOTSWANA</b>						
<b>Legislation</b>						
Acts since 2009 [table – Livestock Improvement Act 2009 refers]		+				
Agricultural Resources Conservation Act Chapter 35.06 Act 39, 1972		+		+		
Bills since 2009 [Pandamatenga Agricultural Infrastructure Development Project (Loan) (Authorisation) Bill 27.02.09 refers]					+	+
Botswana Meat Commission Act, Law 22 of 1965 [as amended]			+			
Branding of Cattle Act, Law 19 of 1962 [as amended]	+		+			
Cattle Export and Slaughter Levy Act Chapter 51.01 Act 10 2005			+			
Classified table of laws of Botswana	+	+	+	+	+	+
Control of Goods, Prices and Other Charges, Act 23 of 1973 [as amended]			+			
Control of Goods Subsidiary legislation			+			
Control of Livestock Industry Act, Proclamation 67 of 1941 [as amended]			+			

<b>Document</b>	<b>1. Control of animal diseases</b>	<b>2. Livestock production</b>	<b>3. Trade in livestock</b>	<b>4. Biodiversity conservation</b>	<b>5. Rural development</b>	<b>6. Land use</b>
Control of Livestock Industry: Subsidiary legislation			+			
Cruelty to Animals Act Chapter 37.02 1936 (as subsequently amended)	+					
Declaration of contagious bovine pleuropneumonia (lung sickness) infected area (Amendment) (No. 2) Order, 1996 [Diseases of Animals Act: Statutory Instrument No. 23 of 1996]	+					
Diseases of Animals Act 9 1977 [as amended]	+					
Diseases of Animals Act Subsidiary Legislation	+		+			
Livestock and Meat Industries Act Chapter 36.03 Act 1 2007			+			
Local Government District Councils Act. Statutory Instrument No 30 of 1992 National Resources Protection (Model) Bye Laws, 1992				+		
Matimela Act Chapter 36-06 Act 25 1968	+					
Prevention of Rabies Act Chapter 37.02 Act 48 1971	+					
Registration of Livestock Act, Proclamation 10 of 1921 [as amended]			+			
Statutory Instruments since 2009 [Control of Goods (Marking and Labelling of Halaal and non-Halaal Meat and Meat Products) Regulations 2009 refers]			+			
Stock Diseases (Semen) Regulations 1968	+					
Stock Theft Act 21 of 1995	+					
Town and Country Planning Act Chapter 32-09 Act 11 1977					+	+
Veterinary Surgeons Act Chapter 61.04 1971 (as subsequently amended)	+					
Water Act 40 of 1967				+	+	+
Wildlife Conservation and National Parks Act Chapter 38.01 Act 28 1992				+		
<b>Policy/Strategy</b>						
Botswana 2000: 2000 – 2002 Strategy Paper African Development Bank		+	+	+	+	+
Botswana 2009 – 2013 Country Strategy Paper African Development Bank		+	+	+	+	+
Botswana 2008 – 2013 Country Strategy Paper European Commission		+	+	+	+	
Budget Speech 2002: Minister of Finance and Development Planning		+	+			
Frimpong 1995 Review of Tribal Grazing Land Policy 1975	+	+		+	+	+
Game Ranching Policy for Botswana				+	+	+
Macroeconomic Outline and Policy Framework for NDP 1 <sup>st</sup> draft October 2007		+	+	+		
Motsumi National Biodiversity Strategy and Action Plan 2008 Power Point presentation				+		
National Biosafety Framework, Final Draft, July 2006		+		+	+	
National Development Plan 9	+	+	+	+	+	+

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
National Development Plan 10 Volume 1	+	+	+	+	+	+
National Development Plan 10 Volume 2	+	+	+	+	+	+
National Policy on Agricultural Development 1991		+				
<b>Projects</b>						
<i>Okavango Delta Management Plan</i>						
ODMP Project Proposal, April 2002				+		+
ODMP Inception Report Volume 1 Main Report February 2005				+		+
ODMP Inception Report Volume 2 Project Components 2005				+		+
ODMP Final Framework Management Plan Executive Summary February 2006				+		+
ODMP Final Framework Management Plan February 2006				+		+
ODMP Draft Management Plan Executive Summary 2008				+		+
ODMP Draft Management Plan July 2006				+		+
ODMP: Arntzen J, Mpho T, Nyalugwe K 2006 Review and streamlining of national policies, plans, regional protocols and international conventions in relation to the Okavango Delta		+		+		+
ODMP: Policy, planning and strategic component Final Report Review and streamlining of national policies, regional protocols and international conventions: Strategic Environmental Assessment Policy Framework 2006				+		+
ODMP Turpie J, Barnes J, Arntzen J, Nherera B, Lange G-M, Buzwani B 2006 Economic value of the Okavango Delta and implications for management		+		+		+
ODMP Sustainable Livestock Management Component 12 – Assessment of the Feasibility of Providing Watering Points in the Sandveld Areas to Reduce Livestock and Wildlife Interactions in the Okavango Delta RAMSAR Site, Botswana Final Report 2007		+		+		+
ODMP Management Plan 2008				+		+
ODMP Okavango Delta Ramsar Site Shared and Common Vision for 2010				+		+
ODMP Okavango Delta Ramsar Site Land use and land management plan 2005 – 2029 Final report 2006				+		+
Pandamatenga Agricultural Infrastructure Development Project: Appraisal Report					+	+
Zambezi Agro-commercial Integrated Development Project Reports Volume 1 EIA					+	+
Zambezi Agro-commercial Integrated Development Project Reports Volume 1 EIA exec summary					+	+
Zambezi Agro-commercial Integrated Development Project Reports Volume 2 Socio-economic					+	+
Zambezi Agro-commercial Integrated Development Project Reports Volume 3 Appendix 2						

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
Environmental health						
Zambezi Agro-commercial Integrated Development Project Reports Volume 3 Appendix 3 Land use					+	+
Zambezi Agro-commercial Integrated Development Project Reports Volume 3 Appendix 6 Poultry production		+				
Zambezi Agro-commercial Integrated Development Project Reports Volume 3 Appendix 8 Wildlife				+		
<b>Other</b>						
Botswana using digital bolus to trace stolen cattle Practical Action – EA Peace Bulletin September 2004	+					
Derah N & Mokopasetso M 2005 The control of foot and mouth disease in Botswana and Zimbabwe <i>Tropicultura</i> Special issue 2005	+					
Fanikiso M 2009 Animal identification and traceability Public Sector Perspective and Experience from Botswana International Conference on Animal Identification and Traceability – From farm to fork La Rural, Buenos Aires, Argentina, 23 – 25 March 2009	+		+			
Klein R 2007 Cheetah Status Report Botswana 2007 Cheetah Conservation Botswana				+		
Mapitse N 2008 Botswana's foot-and-mouth-disease and beef trade policy. Transboundary animal disease and market access: future options for the beef industry in southern Africa Working Paper 3 2008 Institute of Development Studies, Brighton	+		+			
Mbaiwa JE, Mbaiwa OI 2006 The effects of veterinary fences on wildlife populations in Okavango Delta, Botswana. <i>International Journal of Wilderness</i> 12: 17 – 23, 41	+			+		
MIFUGO Project: Feedback Workshop and Seminar on Livestock Identification and Traceability Systems (LITS) Hotel Boulevard, Nairobi, 4 – 7 May 2009	+		+			
National Meat Workshop 17 – 18 November 2009	+		+			
Sehularo K 2010 Animal identification, livestock and product traceability. Regional Information Seminar for recently appointed OIE Delegates, Gaborone, Botswana, 9 – 10 March 2010	+		+			
<b>NAMIBIA</b>						
<b>Legislation</b>						
Animal Diseases & Parasites Act No 13 of 1956	+					
Animal Diseases and Parasites Act: Animal Identification Regulations Government Notice No 29 of 2009	+					
Animal Diseases and Parasites Act Standing Regulations Amendment, Government Notice No 114 of 1995	+					

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
Animal Diseases and Parasites Amendment Act 1996 (Act No 3 of 1996)	+					
Animal Diseases and Parasites Amendment Act (Act 3 of 1996) Promulgation Government Notice No 136 of 1996	+					
Animal Diseases and Parasites Amendment Act No 10 of 2005	+					
Animal Diseases and Parasites Amendment Act (Act No 10 of 2005) Promulgation Government Notice No 111 2005	+					
Animal Health Bill (as read for the first time) 2010	+					
Animals Protection Act No 71 of 1962 [Law of the RSA]			+			
Communal Land Reform Act 5, 2002						+
Environmental Management Act No 7, 2007				+		
Environment, in NAMLEX Index to the Laws of Namibia				+		
Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947 [Law of the RSA] [as published 1996]	+					
General Law Amendment Act 14, 2005	+					
Meat Industry Act No. 12 of 1981 as amended			+			
Medicines and Related Substances Control Act No. 13 of 2003	+					
Medicines and Related Substances Control Act, 2003 Classification of medicines and other substances as scheduled substances, Government Notice 2004	+					
NAMLEX Index to the Laws of Namibia Legal Assistance Centre 2010 update	+	+	+	+	+	+
Nature Conservation Amendment Act 5 of 1996				+		
Nature Conservation General Amendment Act 31 of 1990				+		
Prevention of Undesirable Residues in Meat Act 21 of 1991			+			
Prevention of Undesirable Residues in Meat Act 21 of 1991: Commencement, Regulations and Declaration of prohibited substances (Proclamation No. 29 and Government Notices No. 219 and No. 220 of 1994)			+			
Schneider H (compiler) 1997 Compendium of Veterinary Acts, Proclamations and Regulations as applicable in Namibia	+					
Stock Brands Act No 24 of 1995	+		+			
Stock Brands Act: Government Notice No 72 of 2004 Declaration of sheep and goats to be stock	+		+			
Stock Brands Act: Meat Board Covering Note and Memo with proposed amendments February 2002			+			

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
Stock Brands Act: Government Notice No 73 of 2004, Regulations in terms of the Stock Brands Act, 1995	+		+			
Stock Brands Act: Government Notice No 39 of 2007 Stock Brands Act 1995: Amendment of Regulations	+		+			
Stock Theft Act 12 of 1990	+					
Stock Theft Amendment Act 19, 2004	+					
<b>Policy/Strategy</b>						
Draft Strategy for the eradication of trans-boundary animal diseases in the Northern Communal Areas of Namibia 2010	+		+			
Heita D 2010 Moves to declare North FMD free	+		+			
Joubert F 2009 Foot and mouth disease and other transboundary diseases in Namibia Presentation 13 October 2009	+		+			
Policy for the eradication of transboundary animal diseases in the Northern Communal Areas of Namibia 2010 (flier)	+		+			
Policy for the eradication of transboundary animal diseases in the Northern Communal Areas of Namibia 2010 (Booklet with signed introduction by the Minister)	+		+			
National Agricultural Policy 1995		+			+	
National Drought Policy and Strategy 1997		+			+	+
Weaver C & Petersen T 2008 Namibia communal area conservancies. <i>Best Practices in Sustainable Hunting</i> 2008:48 – 52				+	+	
<b>Other</b>						
Bamhare C & Bishi A 2006 Contingency plan for foot and mouth disease Updated November 2009	+					
Bishi A S, Kamwi J A 2008 Veterinary science, transboundary animal diseases and markets: pathways for policy in Namibia Transboundary animal disease and market access: future options for the beef industry in southern Africa Working Paper 4 Institute of Development Studies Brighton	+		+			
Bishi A, Samkange A [no date] Lessons from FMD Outbreak in Kavango and Eastern Caprivi [Outbreak in November 2007]	+					
Contingency plan for contagious bovine pleuropneumonia April 2010	+					
Dondona et al 2010 Preliminary report of transfrontier disease surveillance in free-ranging buffalo...	+		+	+		
Marais A 2009 Veterinary Council of Namibia. Presentation, OIE Seminar, Arusha, Tanzania, September 2009	+					
Risk Analysis in Relation to the importation of beef from the Caprivi region of Namibia [no date]	+		+			

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
SADC: Analysis of the Agricultural Technologies and Dissemination Situation in Namibia: Draft consultancy report, March 2008					+	
Toto A 2009 An enhanced animal identification and traceability information system in Namibia. OIE Conference on Animal Identification and Traceability, Buenos Aires, Argentina, 24 <sup>th</sup> March 2009	+		+			
Toto A & Thalwitzer S [not dated, ca 2010] EU sanitary demands for red meat trade: impact on sustainable development in Namibia A summary policy brief			+			
<b>ZAMBIA</b>						
<b>Legislation</b>						
Agricultural Credits Act 23, 1995 <u>and</u> Agricultural Credits (Registration) Regulations, Statutory Instrument 91 of 1996			+			
Agricultural Lands Act 57 of 1960 [as amended]						+
Agricultural Products Levy Act 19, 1957 [as amended] <u>and</u> Agricultural Products Levy (Cattle) Order, Federal Government Notice 245, 1959, <u>and</u> Agricultural Products Levy (Withdrawal) Order, Statutory Instrument 47, 1966			+			
Agriculture (Fertilisers and Feed) Act 51, 1966 [as amended by Act 13 of 1994] <u>and</u> Agriculture (Farm Feed) Regulations, Statutory Instrument 197 of 1970	+		+			
Agriculture (Fertilisers and Feed) (Amendment) Bill, 2010	+		+			
Animal Health Act 27, 2010	+					
Animal Identification Bill, 2010	+		+			
Biosafety Act No 10 2007	+			+		
Brands Act 12, 1913 [as amended]	+		+			
Cattle Cleansing (Repeal) Bill, 2010	+					
Cattle Slaughter (Control) (Repeal) Act, 2010	+		+			
Control of Dogs Act 1929	+			[+] <sup>9</sup>		
Dairies and Dairy Produce Act 16, 1929 [as amended], Dairies and Dairy Produce Regulations, Government Notice 32, 1931 [as amended], Dairy Produce Marketing and Levy Act 27, 1961 [as amended] <u>and</u> Dairy Produce Board (Establishment) Act 3, 1964 [as amended]			+			
Dairy Industry Development Act 22, 2010		+	+		+	
Environmental Management Bill, 2010				+		

<sup>9</sup> By implication

<b>Document</b>	<b>1. Control of animal diseases</b>	<b>2. Livestock production</b>	<b>3. Trade in livestock</b>	<b>4. Biodiversity conservation</b>	<b>5. Rural development</b>	<b>6. Land use</b>
Environmental Protection and Pollution Control Act 12 of 1990, 13 of 1994 12 of 1999				+		
Fencing Act 19, 1949 [as amended]					+	+
Lands Acquisition Act 2 1970 [as amended]					+	+
Lands Act 29 of 1995, Lands (Amendment) Act 20 of 1996					+	+
Lands (Amendment) Bill, 2010					+	+
Pig Industry Act 28, 1959 [as amended] and Export of Pigs Act 24, 1925 [as amended]		+	+			
Prevention of Cruelty to Animals Act 20 1920 (updated to 1994)	+					
Public Pounds and Trespass Act 2, 1920 [as amended]	+					
Tsetse Control (Repeal) Bill, 2010	+					
Stock Diseases Regulations, Government Notices 443 of 1963, 497 of 1964, 13 of 1994	+					
Veterinary and Para-veterinary Professions Bill, 2010	+					
Veterinary Surgeons Act 1964	+					
Water Act 34 1948 [as amended]				+	+	+
Zambia Wildlife Act 1998				+	+	
Zambia Wildlife (Amendment) Act 2009 (draft)				+	+	
ZAWA Draft Act 2008. Amended version Govt Gazette 24/04/1998				+	+	
<b>Policy/Strategy</b>						
Biotechnology and Biosafety Policy				+		
FAMIS (COMESA) News: Zambia Livestock Disease Free Zones	+		+			
Government Agro Vision to focus on food security 30/08/10	+	+	+		+	
National Agricultural Policy (2004 – 2015) 2004 (:26 – 30)	+	+	+	+	+	+
National Biodiversity Strategy and Action Plan (2000 – 2004)				+	+	
Policy for National Parks and Wildlife in Zambia, June 2008 (Draft)			+	+	+	+
Preliminary First Draft National Report on the implementation of the Convention on Biological Diversity, Ministry of the Environment and Natural Resources, December 1997				+		
President's opening speech, parliament, 17 <sup>th</sup> September 2010	+	+				
The Post Newspaper Report 31/01/10 Disease free zones	+		+			
<b>Projects</b>						
IFAD Smallholder Livestock Investment Project 2005	+					
European Development Fund 10 <sup>th</sup> EDF TCF project description	+	+	+		+	
World Bank Livestock Development and Animal Health Project: Project information document	+	+	+			

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
The World Bank Group in Zambia [not dated] Accelerating and sharing growth through improved competitiveness			+			
Zambia: Support for Economic Expansion and Diversification (SEED) Project, 2007 Data sheet				+		
ZAWA [not dated] Research and monitoring programme for Kafue National Park and adjacent game management areas				+		
<b>Other</b>						
Fernández A 2010 Wildlife conservation in Zambia. Impact of Game Management Areas on Household Welfare. Thesis, MSU				+	+	
Fernández A et al. 2009 The impacts of wildlife conservation policies on rural household welfare in Zambia <sup>2</sup>				+	+	
Hichaamba et al. 2007 Regoverning markets: Small scale producers in modern agri-food markets. Information sheet. April 2007			+			
Lungu JC 2003 Animal genetic resources policy issues in Zambia.		+		+	+	
Lungu R M 2008 Implementation of Zambia's National Biodiversity Strategy and Action Plan				+		
Metcalfe S, Kepe T 2008 Your elephant on my land. J. Env. Dev. 17				+	+	+
Mudenda D Zambia's trade situation: implications for debt and poverty reduction (not dated; <2005)			+		+	
Observing poverty reduction: A compilation of participatory poverty assessment summary reports 2002 – 2005, 2006 Civil Society for Poverty Reduction Secretariat, Zambia					+	
Sinyangwe PG, Clinch NJL 2003 Increasing the efficiency of livestock service delivery. Primary Animal Health Care Workshop 2002	+					
Tembo G et al. 2009 Impact of natural resource conservation policies on household consumption around Zambian national parks <sup>10</sup> .				+	+	
World Bank/USAID 2006 Zambia: SPS management Recommendations of a joint World Bank/USAID Assessment Team, 12 July 2006			+			
Zambia Vulnerability Assessment Committee (ZVAC) 2009 In-depth Vulnerability and Needs Technical Assessment Report					+	
<b>ZIMBABWE</b>						
Agricultural Products Marketing (Livestock) (Carcass Classification and Grading) Regulations, Statutory Instrument 182, 2000			+			

<sup>10</sup> Policy brief under Policy Synthesis: Food Security Research Project

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
Animal Health Act No 5 of 1960	+					
Animal Health Act Subsidiary Legislation	+					
Brands Act (Ord. 4 of 1900)	+					
Brands Act Subsidiary legislation	+					
Cold Storage Commission Act 9 of 1960			+			
Cold Storage Commission (Registration of Abattoirs) Regulations, 1993 SI 37 1993			+			
Control of Goods Act Revised Edition 1996			+			
Control of Goods Act, Subsidiary legislation			+			
Dairy Act 28, 1937 [as amended]		+	+			
Environmental Management Act 13, 2002				+		
Factories and Works Act Revised Edition 1996			+			
Fencing Act 45, 1976 [updated]						+
Fertilizers, Farm Feeds and Remedies Act Revised Edition 1996	+		+			
Fertilizers, Farm Feeds and Remedies Act, Subsidiary Legislation	+		+			
Meat Statistics Regulations 1968 (Federal Act 10/55)			+			
Parks and Wildlife Act 14 1975				+		
Prevention of Cruelty to Animals Act 5 of 1960 (Chapter 19.09 consolidating legislation to 1986)	+					
Prevention of Cruelty to Animals Amendment Act 22 of 1983	+					
Produce Export Act Ord. 4 1921			+			
Produce Export Act, Subsidiary legislation			+			
Protection of Wildlife (Indemnity) Act 21, 1989				+		
Public Health (Abattoir, Animal and Bird Slaughter and Meat Hygiene) Regulations 1995 SI 50 1995			+			
Public Health (Port Health) Regulations 1995 SI 121 1995	+					
Scientific Animal Experiments Act 17 1963	+					
Stock Remedies Regulations 1977 RGN 11 1977 and Stock Remedies (Amendment) Regulations, 1978 (No. 1) RGN 47 1978	+		+			
Stock Trespass Act 6/1991	+					
Trapping of Animals (Control) Act Revised Edition 1996				+		
Veterinary Surgeons Act 36 1973 (as updated to 1979)	+					
Veterinary Surgeons Act, Subsidiary legislation	+					

<b>Document</b>	<b>1. Control of animal diseases</b>	<b>2. Livestock production</b>	<b>3. Trade in livestock</b>	<b>4. Biodiversity conservation</b>	<b>5. Rural development</b>	<b>6. Land use</b>
<b>Policy/Strategy</b>						
Wildlife based Land Reform Policy Draft 4 04/05/2010				+	+	+
<b>Other</b>						
Purchase, N. & Foggin, C. 2006. Veterinary considerations for the Kavango-Zambezi TFCA - Zimbabwe's perspectives. Prefeasibility Study of the proposed Kavango-Zambezi Transfrontier Conservation Area, Final Report, Annexes, Volume 2, Annex C	+					
Sibanda, R. 2008 Market access policy options for FMD-challenged Zimbabwe: a re-think. Working Paper 6 Institute of Development Studies Brighton	+		+			
<b>AU-IBAR</b>						
Interafrican Bureau for Animal Resources 2009 Strategic Plan – Executive Summary 2010 – 2014	+	+				
Pan African Animal Health Yearbook 2003 AU-IBAR	+	+				
Pan African Animal Health Yearbook 2008 AU-IBAR	+	+				
<b>COMESA</b>						
COMESA Agricultural Programmes					+	
COMESA Regulations on the application of sanitary and phytosanitary measures, 2009			+			
COMESA 2007 Report on the workshop on non-tariff barriers. First Workshop on the Development of a Monitoring Mechanism for the Elimination of Non-Tariff Barriers to Trade, Nairobi, 27 – 28 June 2007 CS/TCM/NTBS/1/2 <sup>11</sup>			+			
COMESA 2007 Final Report on the First Meeting of COMESA Enquiry Points for Non-Tariff Barriers, Blantyre, Malawi, 27 – 29 September 2007, CS/TCM/NTBS/1/8 <sup>12</sup>			+			
Commodity-based trade in livestock products – New opportunities for livestock trade in the COMESA region. COMESA CAADP Policy Brief No 1			+			
<b>SADC</b>						
Flatters, F. 2002. The SADC Trade Protocol: Outstanding issues on rules of origin. Updated version of background paper, 2 <sup>nd</sup> SADC Roundtable on Rules of Origin, Gaborone, Botswana, 24-26 October 2001			+			
Hoffmann JAH 2007 Fostering trade through Private – Public Dialogue Expert Meeting on SADC – EPA Negotiations			+			

<sup>11</sup> Marked Distribution limited but available on the COMESA web site

<sup>12</sup> Marked Distribution limited but available on the COMESA web site

<b>Document</b>	<b>1. Control of animal diseases</b>	<b>2. Livestock production</b>	<b>3. Trade in livestock</b>	<b>4. Biodiversity conservation</b>	<b>5. Rural development</b>	<b>6. Land use</b>
Imani Development for Regional Trade Facilitation Programme (RTFP), 2007 Final Report: 2007 update survey of non tariff barriers to trade: Botswana			+			
Imani Development for Regional Trade Facilitation Programme (RTFP), 2007 Final Report: 2007 update survey of non tariff barriers to trade: Namibia			+			
Imani Development for Regional Trade Facilitation Programme (RTFP), 2007 Final Report: 2007 update survey of non tariff barriers to trade: Zambia			+			
Imani Development for Regional Trade Facilitation Programme (RTFP), 2007. Final Report: 2007 update survey of non tariff barriers to trade: Zimbabwe			+			
Imani Development for Regional Trade Facilitation Programme (RTFP), 2007 Inventory of regional non tariff barriers: Synthesis report			+			
Magalhães J 2010 Regional sanitary and phytosanitary frameworks and strategies in Africa – Report for the Standards and Trade Development Facility (STDF)			+			
SADC FMD Project/FAO-ECTAD 2009 Achievement of freedom from FMD in vaccinated areas and requirements for proving to the OIE that freedom has been achieved. Report, Training Workshop, Gaborone Sun Hotel, Gaborone, Botswana, 21 – 23 October 2009	+		+			
SADC Protocol on Trade 1996			+			
SADC Protocol on Trade: Annex 1 Concerning the rules of origin for products to be traded between the member states of the Southern African Development Community [not dated]			+			
SADC Protocol on Trade Sanitary and Phytosanitary (SPS) Annex, 2008			+			
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SADC Secretariat 2004 Enhancing agriculture and food security for poverty reduction in the SADC region. Key Issues Paper for Extra Ordinary Summit, Dar es Salaam, Tanzania, 15 May 2004					+	
SADC 2009 Measures to address food security in the SADC region					+	
SADC (not dated) The SADC trade protocol [4-page guide for Namibian importers]			+			
Southern African Global Competitiveness Hub 2008 Draft Business Guide to the SADC Protocol on Trade			+			
<b>EU/EC</b>						
<b>Legislation</b>						
Commission Regulation (EC) No 991/2001, 22 May 2001 [BSE]			+			
Commission Regulation (EC) No 657/2006, 10 April 2006 [BSE]			+			
Commission Regulation (EC) No 21/2008, 11 January 2008 [BSE]			+			
Commission Regulation (EC) No 357/2008, 22 April 2008 [BSE]			+			

<b>Document</b>	<b>1. Control of animal diseases</b>	<b>2. Livestock production</b>	<b>3. Trade in livestock</b>	<b>4. Biodiversity conservation</b>	<b>5. Rural development</b>	<b>6. Land use</b>
Commission Regulation (EC) No 571/2008, 19 June 2008 [BSE]			+			
Commission Regulation (EC) No 2074/2005, 5 December 2005			+			
Council Directive 85/511/EEC, 18 November 1985 [FMD]	+		+			
Council Decision 79/542/EEC, 21 December 1976 [amended] <sup>13</sup>			+			
Council Directive 2002/99/EC, 16 December 2002			+			
Regulation (EC) No 853/2004, 29 April 2004			+			
Regulation (EC) No 854/2004, 29 April 2004			+			
Regulation (EC) No 882/2004, 29 April 2004			+			
<b>Policy/Strategy</b>						
European Community, 2007 A new animal health strategy for the European Union (2007 – 2013) where “Prevention is better than cure”	+		+			
European Medicines Agency 2006 CVMP strategy on antimicrobials 2006 – 2010 and Status report on activities on antimicrobials			+			
<b>Other</b>						
Allen D 2005 Hormone growth promoters in cattle Note prepared for BSAS			+			
European Commission 2004 Effectively enforced feed-ban Guidance note, revision of 2004			+			
European Community, Directorate-General for Health and Consumers, 2008 Guidance document on the implementation of certain provisions of Regulation (EC) No 853/2004 on the hygiene of food of animal origin			+			
European Union, 13 March 1998 Measures concerning meat and meat products (hormones)			+			
Food Standards Agency UK (not dated) Consultation on the application of EU Regulation 882/2004 in the United Kingdom			+			
<b>USDA</b>						
<b>Regulatory</b>						
USDA APHIS 2010 Animal Product Manual Chapter 3 Foreign origin meat and meat products, ruminants			+			
USDA APHIS 2009 Bovine spongiform encephalopathy – Countries/regions affected with bovine spongiform encephalopathy (BSE)			+			
USDA APHIS 2010 Foot-and-mouth and rinderpest – Countries/regions free of foot-and-mouth			+			

<sup>13</sup> Superseded by Commission Regulation (EU) 206/2010 (March 12, 2010), and later by Commission Regulation (EU) 810/2010 (Sept 15, 2010).

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
disease (FMD) and rinderpest						
USDA APHIS 2010 Countries/regions affected with African swine fever (ASF)			+			
USDA FSIS Office of International Affairs 2010 Countries/products eligible for export to the United States			+			
<b>Other</b>						
National Association of State Departments of Agriculture Research Foundation 2001 The Animal Health Safeguarding Review – Results and recommendations	+		+			
<b>FAO</b>						
Cirelli, M.T. & Morgera, E. 2009. Wildlife law and the legal empowerment of the poor in sub-Saharan Africa. FAO Legal Papers Online #77, May 2009				+	+	
Cirelli, M.T. & Morgera, E. 2010. Wildlife law in the Southern African Development Community. Joint Publication of FAO & CIC, Budapest				+	+	
EMPRES 1997 Concept paper on the emergency control of contagious bovine pleuropneumonia (CBPP) in Southern and Eastern Africa	+					
EMPRES 2007 Focus on foot-and-mouth disease – situation worldwide and major epidemiologic events in 2005 – 2006. No 1 2007 FAO, Rome	+					
EMPRES 2009 Keeping the food chain safe. FAO, Rome	+		+			
FAO [not dated but earlier than 1996] FAO strategy for international animal health	+					
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FAO 2005 Report of the informal meeting of African institutions on livestock policy making for Africa, Rome, 8 – 9 March 2005 PPLPI Meeting Report	+	+	+		+	
FAO 2008 Climate-related transboundary pests and diseases. Technical Background Document, Expert Consultation, 25 – 27 February 2008, FAO, Rome	+					
FAO-OIE (in collaboration with WHO) 2008 The global strategy for prevention and control of highly pathogenic H5N1 avian influenza. FAO, Rome	+					
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Fingleton, J. 2004 Legislation for veterinary drugs. FAO Legal Papers Online #38, August 2004	+					
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Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
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Riviere-Cinnamond, A. 2005. Animal health policy and practice: Scaling-up community-based animal health systems, lessons from human health. PPLPI Working Paper No 22, FAO, Rome	+					
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<b>OIE</b>						
OIE/FAO 2004 Global framework for the progressive control of transboundary animal diseases	+					
OIE/FAO 2009 Global conference on foot and mouth disease “The way towards global control”, Asunción, Paraguay, 24 – 26 June 2009 Final Recommendations	+					
OIE (undated) Guidelines on veterinary legislation	+					
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OIE 2009 Ad hoc Group on private standards and international trade in animals and animal products, Paris, 9 – 10 November 2009			+			
OIE 2009 Final report – OIE questionnaire on private standards. Executive summary			+			
OIE 2009 Final report – OIE questionnaire on private standards [Full report]			+			
OIE 2009 Implications of private standards in international trade of animals and animal products – Update 15 December 2009			+			
OIE 2009 Editorial: Veterinary legislation is the foundation of any efficient animal health policy	+					
OIE 2010 Devising import health measures for animal commodities (commodity-based approach0			+			
OIE 2010 Fact sheet: Animal diseases prevention and control	+					
OIE 2010 Roles of public and private standards in animal health and animal welfare. Resolution 26, 27 May 2010			+			
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Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
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Wolff, C. & Scannell, M. 2008 Implication of private standards in international trade of animals and animal products. 76 <sup>th</sup> General Session, International Committee, OIE, Paris, 25 – 30 May 2008			+			
<b>KAZA TFCA</b>						
AHEAD-GLTFCA Working Group 2008 As the fences come down – Emerging concerns in transfrontier conservation areas [Portuguese version also available]				+		
Ferguson, K. & Hanks, J. (eds) 2010 Fencing impacts: A review of the environmental, social and economic impacts of game and veterinary fencing in Africa with particular reference to the Great Limpopo and Kavango-Zambezi Transfrontier Conservation Areas. Mammal Research Institute, University of Pretoria, South Africa				+		
Fox J 2009 The birth of Africa's greatest game park. Special Report: KAZA. <i>Getaway</i> 21 (7): 34 – 43, October 2009				+		
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Hoffman, I. 2010. Livestock biodiversity. <i>Revue scientifique et technique</i> , OIE 29: 73 – 86		+		+		
Integrated Development Plan for the Zambian Component of the Kavango-Zambezi Transfrontier Conservation Area, June 2008, Zambia Wildlife Authority				+	+	+
Jones B T B 2008 Legislation and policies relating to protected areas, wildlife conservation, and community rights to natural resources in countries being partner in the Kavango Zambezi Transfrontier Conservation Area				+	+	+
KAZA Zimbabwe Integrated Development Plan, August 2009, Zimbabwe Parks and Wildlife Management Authority (Draft)				+	+	+
KAZA-TFCA Ministerial Meeting 2010 Kavango-Zambezi Transfrontier Conservation Area implementation calls Press Release, KAZA-TFCA Ministerial Meeting, 15 July 2010, Livingstone, Zambia				+		
KfW Entwicklungsbank Press Release, 17 June 2010 Nature protection, peace and tourism - KfW Entwicklungsbank finances world's biggest conservation area in Africa				+		
Ministry of the Environment and Tourism, Namibia, 2005 AHEAD: Possible applications in Namibia? Introductory Workshop, Roof of Africa, Klein Windhoek, 29 November 2005				+		

Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
Perkins (not dated) TFCAs: Same old problems at a different spatial scale	+			+		+
Pre-feasibility study of the proposed Kavango-Zambezi Transfrontier Conservation Area, Final Report, Volume 1, 2005				+	+	+
Pre-feasibility study of the proposed Kavango-Zambezi Transfrontier Conservation Area, Final Report, Annexes, Volume 2, 2006				+	+	+
Pre-feasibility study of the proposed Kavango-Zambezi Transfrontier Conservation Area, Final Report, Country Surveys, Volume 3, 2006				+	+	+
Southern African Peace Parks – Kavango-Zambezi Park Development, 2009				+		
Tourism in the Kavango-Zambezi Transfrontier Conservation Area [briefing note on survey undertaken in 2004]				+	+	
WCS 2009 Beyond fences: Policy options for biodiversity, livelihoods, and transboundary disease management in Southern Africa. Scaling up Conservation Success with SCAPES – Draft document	+			+	+	+
<b>OTHER/GENERAL</b>						
Cabrera R et al. 2007 (Draft) African capacity building for meat exports: Lessons from the Namibian and Botswanan beef industries			+			
Department of Agriculture, Forestry and Fisheries, South Africa 2010 Beef market value chain profile <a href="http://www.nda.agric.za/docs/AMCP/BeefMVCP2009-2010.pdf">http://www.nda.agric.za/docs/AMCP/BeefMVCP2009-2010.pdf</a> (accessed 24 December 2010) <sup>14</sup>			+			
Hazell P 2007 All-Africa Review of Experiences with Commercial Agriculture – Case Study on Livestock. Background paper for the Competitive Commercial Agriculture in Sub-Saharan Africa (CCAA) Study		+	+			
Magalhães J 2010 Regional sanitary and phytosanitary frameworks and strategies in Africa – Report for the Standards and Trade Development Facility (STDF)			+			
Media Institute of Southern Africa 2010 Government Secrecy in an Information Age A report on open and secretive public institutions in southern Africa MISA, Windhoek						
Rich K M & Perry B D 2010 The economic and poverty impacts of animal diseases in developing countries: New roles, new demands for economics and epidemiology	+		+			
Rweyemamu M, Roeder P, MacKay D, Sumption K, Brownlie J, Leforban Y 2008 Planning for progressive control of foot and mouth disease worldwide	+					

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Document	1. Control of animal diseases	2. Livestock production	3. Trade in livestock	4. Biodiversity conservation	5. Rural development	6. Land use
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Scoones I, Bishi A, Mapitse N, Moerane R, Penrith M L, Sibanda R, Thomson G & Wolmer W 2010 Foot and mouth disease and market access: challenges to the beef industry in southern Africa <i>Pastoralism</i> 1	+		+			
Scoones I & Wolmer W 2008 Foot-and-mouth disease and market access: challenges for the beef industry in southern Africa	+		+			
Scott A, Zepeda C, Garber L, Smith J, Swayne D, Rohrer A, Kellar J, Shimshony A, Batho H, Caporale V & Giovannini A 2006 The concept of compartmentalisation	+					
Stirling A C, Scoones I 2009 From risk assessment to knowledge mapping: Science, precaution and participation in disease ecology Ecology & Science Resilience Alliance URL: <a href="http://www.ecologyandsociety.org/vol14/iss2/art14/">http://www.ecologyandsociety.org/vol14/iss2/art14/</a>	+					
Thomson G R 2008 A short overview of regional positions on foot-and-mouth disease control in southern Africa	+		+			
Thomson G R, Leyland T J & Donaldson A I 2009 De-boned beef – an example of a commodity for which specific standards could be developed to ensure an appropriate level of protection for international trade			+			
Thomson, G.R., Perry, B.D., Catley, A., Leyland, T.J., Penrith, M.-L. & Donaldson, A.I. 2006. Certification for regional and international trade in livestock commodities: the need to balance credibility and enterprise.			+			
Thomson, G.R., Tambi, E.N., Hargreaves, S.K., Leyland, T.J., Catley, A.P., van t’Klooster, G.G.M. & Penrith, M.-L. 2004. International trade in livestock and livestock products: the need for a commodity-based approach			+			

**Annex 2 Comparison of national and regional policy/legislation with OIE, EU and US regulations/policies for trade in fresh, chilled and frozen meat (beef)**

International <sup>15</sup>	Botswana	Namibia	Zimbabwe	Zambia	Angola
<b>OIE</b>					
<b><i>FMD control</i></b>					
Notifiable at country level	Yes	Yes	Yes	Yes	Yes
Good record of reporting to OIE	Annual and 6-monthly reports up to date to June 2010 Events: 20 days to report and to submit: ranked 40/77 and 41/77	Annual and 6-monthly reports for 2009. Events: 4 days, ranked 8/77 and 7/77 for reporting and submitting reports	Last report submitted for up to June 2009 Events: 14 days, ranked 33/77 and 32/77 for reporting and submitting reports	Annual and 6-monthly reports for 2009. Not in table for immediate notifications	Annual and 6-monthly reports for 2009. Not in table for immediate notifications (most diseases are endemic)
Regulatory measures <sup>16</sup> for control in place	Yes	Yes	Yes	Yes	Yes
Disease free zones established and recognised	Yes	Yes	No longer effective	Not yet established but in the pipeline	No but provision is made in the Animal Health Law
<b><i>BSE meat safety</i></b>					
Risk level posed by country <sup>17,18</sup>	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined
SRMs removed by law	Yes: Statutory Instrument 124 of 2004, Diseases of Animals (BSE Control (Removal of Specified	Yes: Municipal By-Law and EU Directive 999/2001 and 727/2007 (information supplied by CVO of	No legislation found	No	No

<sup>15</sup> The OIE standards form the basis of other standards and only additional requirements are listed for EC and USDA

<sup>16</sup> These are not listed here as they fall under the general animal disease control acts as well as in various subsidiary legislation

<sup>17</sup> The categories are Negligible, Controlled, Undetermined (TAHC Chapter 11.5)

<sup>18</sup> Botswana and Namibia were both rated GBR II (Geographic/global BSE risk – presence of any BSE-infected unlikely but cannot be excluded) by EFSA in 2003 but the GBR system was abandoned in 2006 in deference to OIE's international standard. Neither country has complied with that standard owing to the difficulty of collecting sufficient points to comply with the surveillance standard

<b>International<sup>15</sup></b>	<b>Botswana</b>	<b>Namibia</b>	<b>Zimbabwe</b>	<b>Zambia</b>	<b>Angola</b>
	Risk Materials)) Regulations	Namibia)			
No ruminant protein to ruminants by law	Yes: Statutory Instrument 126, 2004, Diseases of Animals (Stock Feed) Regulations	Yes: Government Notice 199, Government Gazette No 1927 of 15th August 1998	Statutory Instrument 277 of 1997 (Farm Feeds (Amendment) Regulations 1997 (No 6); unnumbered Statutory Instrument of 2001 (Farm Feeds (Amendment) Regulations, 2001 (No 7)	Provided for in the new legislation (Animal Health Bill of 2010)	No
Rinderpest status	Free	Free	Free	Free	Free
CBPP status	Free	Infected	Not officially recognised as free	Infected	Infected
EU (EC)					
FMD control					
Disease free zones approved	Yes	Yes	No	Not applicable	Not applicable
BSE meat safety					
Feed ban effectively applied	Yes: EC, Effectively enforced feed ban, guidance note, revision of April 2004, footnote 1	Yes: EC, Effectively enforced feed ban, guidance note, revision of April 2004, footnote 1	No	No	No
Other					
Animal identification and trace-back system in place	Yes: Statutory Instrument 12, 2005, Diseases of Animals (Livestock Identification and Trace-back) Regulations	Yes: Government Notice No 29 of 2009	No: Most recent legislation on identification is Statutory Instrument 99 of 1998 (Brands Regulations, 1998)	Provided for in the new legislation (Animal Health Bill of 2010)	No (Dogs, cats and simians must be registered)

<b>International<sup>15</sup></b>	<b>Botswana</b>	<b>Namibia</b>	<b>Zimbabwe</b>	<b>Zambia</b>	<b>Angola</b>
Growth promoters banned	Yes: Statutory Instruments 103, 1987 and 51, 2007, Diseases of Animals (Prohibition of Use of Anabolic Hormones and Thyrostatic Substances) Regulations	Yes: Prevention of Undesirable Residue in Meat Act no 21 of 1991	Yes: Statutory Instrument 24 of 1988 (Control of Goods (Livestock Hormones) Regulations, 1988)	No	No
Veterinary drug control to prevent residues <sup>19</sup>	No: Draft Veterinary Drugs Act 2000 <sup>20</sup> . DVS empowered to control drugs <sup>21</sup>	Yes: Medicines and Related Substances Act 13 of 2003; Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No 36 of 1947 as amended 1996; Prevention of Undesirable Residue in Meat Act no 21 of 1991	Veterinary drugs fall under the same Act as human drugs (Fingleton 2004)	No	No
USDA					
FMD control					
Listed as free from FMD	No	Yes (area south of the veterinary cordon fence)	No	No	No
BSE					
Listed as free or minimal risk	No	No	No	No	No
Rinderpest	No	Yes (area south of the veterinary cordon fence)	No	No	No

<sup>19</sup> There is a SADC project that is intended to speed up drug registration but progress has not been rapid

<sup>20</sup> Fingleton 2004; Not listed among existing or new laws on government web site

<sup>21</sup> <http://www.gov.bw/en/Ministries--Authorities/Ministries/MinistryofAgriculture-MOA/Tools--Services/Application-for-the-sale-of-veterinary-drugs-and-feeds/>

### Annex 3 Sources of legislation

Legislation	Source
<b>Angola<sup>22</sup></b>	
All national laws	<a href="http://www.governo.gov.ao/LegislacaoTodos.aspx">http://www.governo.gov.ao/LegislacaoTodos.aspx</a>
Agriculture, veterinary	<a href="http://www.minadrp.gov.ao/LegislacaoTodos.aspx">http://www.minadrp.gov.ao/LegislacaoTodos.aspx</a>
Environment	<a href="http://www.minamb.gov.ao/LegislacaoTodos.aspx">http://www.minamb.gov.ao/LegislacaoTodos.aspx</a>
<b>Botswana<sup>23</sup></b>	
All national laws	<a href="http://www.laws.gov.bw/">http://www.laws.gov.bw/</a>
<b>Namibia<sup>24</sup></b>	
All national laws	<a href="http://namlii.org/PGContent.php?UID=602">http://namlii.org/PGContent.php?UID=602</a>
<b>Zambia</b>	
Legislation to 2006	<a href="http://www.parliament.gov.zm/index.php?option=com_docman&amp;task=cat_view&amp;gid=21&amp;Itemid=49">http://www.parliament.gov.zm/index.php?option=com_docman&amp;task=cat_view&amp;gid=21&amp;Itemid=49</a>
Acts of parliament 2010	<a href="http://www.parliament.gov.zm/index.php?option=com_docman&amp;task=cat_view&amp;gid=135&amp;Itemid=113">http://www.parliament.gov.zm/index.php?option=com_docman&amp;task=cat_view&amp;gid=135&amp;Itemid=113</a>
Bills before parliament	<a href="http://www.parliament.gov.zm/index.php?option=com_docman&amp;task=cat_view&amp;gid=135&amp;Itemid=113">http://www.parliament.gov.zm/index.php?option=com_docman&amp;task=cat_view&amp;gid=135&amp;Itemid=113</a>
<b>Zimbabwe</b>	
Veterinary legislation	Obtained from the Chief Director of Veterinary Services (not available online)
Selected laws	<a href="http://faolex.fao.org/">http://faolex.fao.org/</a>
<b>European Union</b>	
All legislation	<a href="http://eur-lex.europa.eu/en/index.htm">http://eur-lex.europa.eu/en/index.htm</a>

<sup>22</sup> All of the laws can be easily downloaded as pdfs by clicking on the title and following directions

<sup>23</sup> All of the laws can be downloaded as pdfs by clicking on the title in the list

<sup>24</sup> The laws are available on the site but browsing is not an option, one needs to know which law one is looking for, although keyword based searches are possible

## **Annex 4      Translations of Angola legislation/policy**

**Note:** Only selected laws of major relevance have been selected for full or partial translation. Mini-abstracts of all the laws are provided in a separate document inventory.

### **Animal Health Law (full document)**

#### ***Chapter 1***

##### *Article 1 (Scope)*

1. Establishes the norms for production, trade, import and export of animals, their products and by-products in the whole of the country.
2. The present law fundamentally regulates all activities related to health, public health, veterinary, technology and animal industry, importation and exportation of animals and storage of products derived from animals in the Republic of Angola.

##### *Article 2 (Objectives)*

The principal objectives of the present law are:

- a) Prevention and organisation to combat animal diseases;
- b) Campaign against epizootics;
- c) Control of the wholesomeness of animal products;
- d) Identification of the measures for control of the processing industry;
- e) Sanitary control of the borders of the country, avoiding the entrance of diseases that could pose a risk of the danger of spreading to animals including man;
- f) Establishment of the rules for internal movement, import and export of animal origin, its products and by-products;
- g) Inspection and taking measures against infractions.

##### *Article 3 (Definitions)*

For the purposes of this law, it is understood by:

- a) Sanitary slaughter: a prophylactic sanitary operation, under the authority of the veterinary administration on confirmation of a disease, consisting of the culling of all sick and contaminated animals in a herd and, if necessary, all those in other herds that could have been exposed to the infection either directly or by other herds by all possible means of transmission;
- b) Sanitary Authority: agents of the health and livestock services identified under the sanitary regulation of the Republic of Angola;
- c) Veterinary Authority: the services directly responsible for applying zoosanitary measures;
- d) Meats: All the reputedly edible parts of an animal;

- e) Fresh meats: meats that were not submitted to any treatment that would irreversibly modify its organoleptic and physicochemical characteristics;
- f) Health certificate: certificate issued by the competent authority attesting that the meats or animal products conform to the standards established for the purpose for which they are destined;
- g) International health certificate: certificate issued by a veterinary officer of the exporting country attesting that the meats or products of animal origin destined for human consumption conform to the international standards in force relating to veterinary hygiene of foodstuffs and/or animal health;
- h) Inedible offal [spoils]: parts of the animal that post slaughter are used for any purpose other than food;
- i) Movements: changes of locality to which animals, their products, inedible offal and fodder are subjected;
- j) Epizootic: the appearance of an infectious-contagious disease in an animal population and at a determined point in an area;
- k) Quarantine Station: an establishment where animals are placed and maintained in complete isolation, without direct or indirect contact with other animals, there to be observed for a shorter or longer period and to undergo various tests for control and diagnosis, with the object of allowing the veterinary officer that they are not affected by certain diseases or are asymptomatic carriers;
- l) Animal farm [exploitation]: a livestock facility where animals are bred or tended;
- m) Disease focus: all the livestock and other farms and facilities where there are animals with diseases mentioned in lists A and B of the OIE;
- n) Forages: plants or plant parts used as animal feed;
- o) Abattoir: an establishment with adequate facilities and equipment to slaughter animals destined for human or animal consumption;
- p) Observation: inspection carried out by the veterinary authority to ensure that an animal is free of diseases covered by the zoosanitary code;
- q) OIE:
- r) Panzootic: a rapidly spreading transboundary disease
- s) Incubation period: time from when the agent penetrates the host until clinical signs appear;
- t) Port of entry or exit: a land border, port or airport through which is permitted the entry or exit of animals, their products, by-products, inedible offal, trophies and feedstuffs;

- u) Products of animal origin: meats, products of animal origin destined for and animal human consumption and for pharmaceutical or industrial use;
- v) 'Reses': animals finally destined for slaughter or extermination;
- w) Semen: sperm of breeding animals (mammals and birds) destined for artificial insemination;
- x) Free zone: well delimited area in which no case of disease was reported during the indicated period;
- y) Infected zone: an area in which a disease was confirmed and which should be well delimited and established by the competent veterinary authority.

## **Chapter 2**

### ***Contagious diseases and general measures to be applied***

#### *Article 4* *(Diseases that must be reported)*

1. The diseases subject to immediate and obligatory declaration are all the infectious-contagious or parasitic diseases selected by OIE contained and written in the annexed list<sup>25</sup> and others that might emerge;
2. For the above diseases, if necessary, under the sanitary provisions, specific measures, movement restrictions and declaration of infected zones may be necessary;
3. This law should cover the description of all the diseases that affect animals and the measures that should be applied in each case.

#### *Article 5 (Contaminated animals)*

All animals are considered contaminated that have cohabited with sick animals or with soiled objects, instruments or rations emanating from the focus or infected zone.

#### *Article 6 (Obligation to declare infection)*

The proprietary owner, trustee or person responsible for the animal or animals affected by one of the diseases listed in the annex or subject to the infection or with the possibility of being infectious must by obligation:

- a) Make a written declaration to the local administrative authority or to the person responsible for the livestock zone;
- b) Subject himself to all the legal and regulatory prescriptions of the competent veterinary authority;
- c) Proceed to quarantine the sick animal or animals;

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<sup>25</sup> The Annex consists of the former List A and List B diseases of the OIE arranged by species as in the TAHC

d) Destroy, by incineration, within a period of 24 hours, animals dead at inspection or killed by compulsory slaughter.

*Article 7 (Prohibition of consumption of animals that died of disease)*

It is prohibited to sell or use for consumption meats of animals dead as a result of disease or compulsory slaughter.

*Article 8 (Carcasses or viscera of affected animals)*

It is prohibited to throw carcasses or viscera of animals into lakes or water courses or other places that could provoke contamination of man, other animals, or the environment.

*Article 9 (Obligation to register animals)*

The owners or those responsible for dogs, cats and simians should:

- a) Have their animals registered with the community services;
- b) Vaccinate all dogs and maintain valid anti-rabies vaccination certificates;
- c) Present the certificate of the last vaccination if moving the animal from the country, or have the animal revaccinated;
- d) Be alert for any behavioural change in the animal;
- e) Communicate to the local competent authority any clinical or laboratory diagnosis and information about the measures taken;
- f) Arrange for the killing of the animal clinically suspected of rabies and the decapitation of the carcass, if it is impossible to obtain the animal alive.

*Article 10 (Restriction of movement of dogs)*

Access of dogs to fairs, markets, reserves, abattoirs or other areas with concentrations of cattle is limited to avoid the transmission of infections or infestations.

*Article 11 (Prohibition of free circulation of pigs)*

It is expressly prohibited to have free-ranging or herded pigs adjacent to areas where cattle are produced to avoid the dissemination of cysticercosis.

*Article 12 (Capture of stray dogs)*

1. All stray dogs in public places should be caught by the community services and placed in reserves destined for the purpose for 48 hours.
2. In this period the owner of the animal should come and fetch it, with proof that the animal was vaccinated and pay a fine the value of which is fixed by law.
3. Once the period above has elapsed the retained dogs will be killed.

### **Chapter 3** **Prophylactic therapy**

#### *Article 13 (Prophylactic therapy)*

The complexity of prophylactic therapy and its importance in animal and public health recommends the following measures:

- a) It is prohibited for private entities to carry out vaccination for diseases for which vaccination is obligatory unless they are properly accredited or licensed to do so by the national competent veterinary authority;
- b) It is expressly prohibited to introduce into the country vaccines and other biological products for veterinary use without previous registration with the protective Ministry.

### **Chapter 4** **Health measures relative to the inspection, movement, importation and exportation of animals, their products, by-products, inedible remains and feedstuffs**

#### *Article 14 (Inspection of animals destined for slaughter)*

All animals destined for human consumption must be subjected to ante- and post mortem inspection.

#### *Article 15 (Locality for inspection of animals destined for slaughter)*

1. Sanitary inspection of slaughter animals and carcasses may only take place in abattoirs officially recognised and associated.
2. In areas where there are no abattoirs, sanitary inspection is done in places indicated for slaughter by the competent authority in the zone.
3. Sanitary inspection of the remaining facilities that produce, process, store or sell products of animal origin is carried out by the national or local competent authority.

#### *Article 16 (Inspection of animals)*

1. All live animals or products of animal origin that pass through railway stations, customs, customs posts or populated centres are inspected and given a document that proves this inspection;
2. The provincial health authorities should inform the competent service for inspection and sanitary control and wholesomeness of products of animal origin of any expansive or public health occurrence so that they in turn, if they so decide, can inform the official services of the neighbouring countries and the OIE.

#### *Article 17 (Inspection of products of animal origin)*

1. All products of animal origin destined for human consumption must be inspected using the techniques indicated by the national competent authority.

2. All the owners of warehouses receiving products of animal origin destined for human consumption are obliged to declare the reception of those products to the national competent authority, to whom they should exhibit the respective health certification and afterwards the respective inspection.

*Article 18 (Movement of animals)*

1. Movement, entry or exit from the country of animals, their products and by-products, inedible remains and feedstuffs is not permitted unless accompanied by the respective health certificate issued by the competent veterinary authority.

2. The sanitary licences conceded should indicate their period of validity and the sanitary requirements established for the entry and exit of animals, their products and by-products, inedible remains and feedstuffs.

*Article 19 (Prohibition of the movement of sick animals)*

1. The movement, entry or exit is prohibited of animals suspected of diseases or presenting recent sequelae of an infectious-contagious or parasitic disease, or ectoparasites.

2. The passage of vehicles may be prohibited or disinfection measures may be required if their movements are considered dangerous because they could act as means of disseminating animal diseases.

3. The veterinary authorities may prevent the loading of animals, either in railway wagons or ships, whenever these modes of transport do not have sufficient space and dimensions to carry the number of animals to be carried or shipped.

*Article 20 (Expenses resulting from sanitary impositions)*

The costs resulting from the sanitary requirements relative to movement, entry or exit of animals, their products and by-products, inedible remains and feedstuffs, are borne by the persons interested in the movements.

*Article 21 (Importation of animals)*

1. Importation of animals for slaughter is expressly prohibited.

2. Entry into the country of animals, their products and by-products, inedible remains and feedstuffs not accompanied by a health certificate from their country of origin is equally prohibited.

3. The customs authorities may not and should not proceed with the dispatch of the entry without having been presented with the sanitary documentation required in the previous point.

4. Animals, their products and by-products, inedible remains and feedstuffs in contravention of the second point of this article are apprehended and lost in favour of the State.

*Article 22 (Importation of wild animals)*

The importation of wild animals, apart from the sanitary measures established in the present law, regulations, international conventions and treaties, are subjected to a period of quarantine never less than 30 days.

*Article 23 (Importation of live and non-live biological products of animal origin)*

1. The importation of live and non-live biological products of animal origin needs special prior authorisation from the competent authority.
2. The entry of live and non-live biological products of animal origin considered infected can only be allowed if they come packed in metal or resistant plastic containers, hermetically sealed and properly labelled.
3. Restrictions may be placed on the importation of products of animal [or] plant origin suspected to be vehicles for agents that cause animal diseases.

*Article 24 (Export of animals and animal products)*

1. The exportation of animals, their products and by-products, inedible remains and feedstuffs is subject to prior authorisation by the national competent authority.
2. All live animals for export should be inspected before embarkation.

**Chapter 5**  
**Compensation owed to livestock producers**

*Article 25 (Compensation)*

1. Compensation paid by the state is assured for the owners of animals killed by order of the competent veterinary authority owing to any of the contagious diseases mentioned below:
  - a) Rinderpest;
  - b) Foot and mouth disease;
  - c) Tuberculosis;
  - d) African swine fever;
  - e) Newcastle disease;
  - f) Others to be determined in the future.
2. The award of compensation is subject to the owners or their representatives
  - a) Being registered with the competent public services;
  - b) Having a register of the actual animals;

- c) Having technical veterinary assistance guaranteed by the livestock technicians in their respective areas of jurisdiction;
- d) Not having blame for the appearance of the disease.
- e) The value and the conditions of the compensation are determined by regulation.

## **Chapter 6** **Competence of the responsible Ministry**

### *Article 26 (Intervention of the responsible Ministry)*

The activities related to health, veterinary public health, production, technology and the animal industry are ultimately orientated by the responsible Ministry.

### *Article 27 (Competence of the responsible Ministry)*

The responsible Ministry must:

- a) Periodically inform the OIE about the zoosanitary situation in the country and obligatorily declare outbreaks of disease;
- b) Instruct and implement compliance with any instructions regarding the movement of affected animals or products;
- c) Support the major actions linked to livestock such as livestock promotion, vaccination campaigns, censuses and livestock enquiries.
- d) Take care that attention is given to the conservation of the hygiene and health of the environment;
- e) Take and apply sanitary measures in case of an emergency.

## **Chapter 7** **(Transgressions, seizures and penalties)**

### *Article 28 (Intervention of the responsible Ministry)*

All the establishments where products of animal origin destined for human and animal consumption are handled are subject to sanitary inspection:

- a) Abattoirs;
- b) Butcheries;
- c) Processing factories [sausage factories];
- d) Storage facilities for agro-livestock products;
- e) Warehouses for agro-livestock products;

f) Feed mills (factories for producing rations).

*Article 29 (Facilities for visits)*

1. The owners or those responsible for the establishments referred to in article 28 must authorise and facilitate the visits to their installations for inspection by the agents for sanitary inspection.

2. Impeding the agent from carrying out his duty constitutes a crime of disobedience and implies the application of regulatory measures.

*Article 30 (Obligation to show products for consumption)*

1. The proprietors or those responsible for the establishments mentioned in Article 28 must show to the inspectors acknowledgement of receipt of all the products of animal origin destined for consumption so that they can be inspected before being sold.

2. The competent livestock authority should issue at the end of the inspection a certificate attesting to the health of the products.

3. Failure to comply with above prescriptions implies that the competent veterinary authority will apply the convenient measures followed by a fine the value of which is regulated.

*Article 31 (Penalties)*

Failure to observe the dispositions of this law in any way can result in the following sanctions:

a) Warning;

b) Fine;

c) Suspension of license to trade;

d) Seizure of the product;

e) Suspension of registration;

f) Cessation of registration.

*Article 32 (Destination of seized products)*

Products that according to the analysis are considered falsified and which can be used for other ends may not be returned to the owner and have the following destination:

a) Donation to charitable institutions when they are fit for consumption;

b) When unfit for consumption but able to be used for industrial purposes they are transformed or denatured at the expense of the state and sold by public auction to determined industries in which they may be applicable, with the money realised entering the coffers of the state;

c) When they cannot be used they should be destroyed or rendered unusable with the owner paying all costs including transport to the place where they are rendered unusable.

*Article 33 (Destination of altered products)*

Food products of animal origin that are altered, adulterated, corrupted or falsified should be seized immediately and their possessor punished with a fine whose value is fixed by regulation, in conformity with the gravity of the offence and the nature of the place or establishment where this was verified or carried out, apart from any other penalty that he may be liable for.

*Article 34 (Competencies)*

The following are competent to perform confiscations, arrest suspects and participate in the infractions: official veterinary personnel, all the administrative authorities and those of the Public Ministry, police, inspectors of the administration and their respective agents, inspectors of the community services and the affiliated farmers and producers, while it is lawful for any citizen to denounce the existence of products in the conditions of Article 7.

**Chapter 8**

***Final and Transitory Dispositions***

*Article 35 (Revocations)*

All the legal dispositions that contradict the present law, namely those passed in 1931 and 1932, are revoked.

*Article 36 (Doubts and omissions)*

Doubts and omissions raised about the interpretation and application of the present law are resolved by the National Assembly.

Seen and approved by the National Assembly in Luanda, on the 24<sup>th</sup> of June 2004.

**INTERNAL REGULATION OF THE INSTITUTE FOR VETERINARY SERVICES (Full document except where indicated)**

**Executive Decree no 127/06 of 22 September**

Decree no 46/05, which approved the organic statute of the Institute of Veterinary Services (IVS), established in its article 26 that the competencies of the sections, technical and administrative areas, as well as the livestock zones, municipal representations and sanitary training of the institute would constitute the internal regulation of the IVS approved by the Minister.

*[Various introductory provisions]*

**Chapter I  
General Dispositions**

**Article 1  
(Nature)**

*[Describes the nature and scope of the Institute for Veterinary Services as a collective public body]*

**Article 2  
(Attributes)**

- a) Contribute to the formulation of the agrarian policy in the domain of livestock production, animal health, veterinary public health, trade and movement of animals and products of animal origin and their derivatives;
- b) Elaborate, promote, orientate and execute at national level programmes of action in the domain of support and improvement of livestock production, animal health and veterinary public health, always taking into account the conservation of the environments and social well-being;
- c) Assure compliance with international obligations in respect of animal health and veterinary public health and zootechnical improvement;
- d) Contribute to the preservation and worth of the patrimony of species of zoo-economic interest;
- e) Participate in the elaboration of the policy regarding prices, credits and insurance in the livestock sector;
- f) Cooperate, in the context of its attributes, with congeneric institutes and related national, regional and international organs;
- g) Represent the country in specific international and regional organisations in acts and manifestations of a technico-scientific nature, arising from agreements and conventions assumed or to be assumed, ensuring compliance with its respective obligations.

**Article 3**  
**(Organs in general)**

*[Structure and composition of the IVS]*

**Article 4**  
**(Competencies of the organs)**

The competencies are defined in Decree no 46/05, with the exception of the sections, livestock zones and municipal representatives of the IVS.

**CHAPTER II**  
**Competencies of the Sections of the IVS**

**Article 5**  
**(Epidemiology Section)**

Competencies:

- a) Promote the protection of the national territory from epidemics;
- b) Promote the prevention and control of animal diseases including those of bees, wildlife, and zoonoses;
- c) Organize the fight against enzootics and epizootics that arise in the national territory, by the permanent services or campaigns mounted by special brigades;
- d) Keep up to date the knowledge and evolution of the zoosanitary status of the national territory;
- e) Cooperate in studies involving research and experimentation, to clarify questions related to diagnosis, prophylaxis and therapeutics of the infectious-contagious and parasitic diseases of animals;
- f) Collaborate, in agreement with the above determinations, with the services of other countries and with international organizations, in the training, study and application of the control measures and the fight against animal diseases;
- g) Keep the regional services, neighbouring territories and exporting countries informed about the sanitary status of the country;
- h) Establish the sanitary standards for the functioning of the lazarets and quarantine facilities;
- i) Perform studies, without prejudicing the competencies and other organs, related to the migrations and transhumances affecting the ecology and pathology of wild species and their relations with domestic animals;
- j) Organise the prophylaxis and the combat against emerging and transboundary diseases.

**Article 6**  
**(Section of Veterinary Public Health)**

Competencies:

- a) Assure the genuineness and wholesomeness of products of animal origin;
- b) Establish the sanitary standards for import, export and transit of animals, their products, by-products, waste and feedstuffs, for the whole national territory;
- c) Issue certificates of origin and health, authorisations for import and movement permits for animals etc.
- d) Discipline production, registration, import, export, commercialization and application of sera, vaccines, allergens and other biological products and pharmaceuticals for veterinary use;
- e) Discipline the sanitary inspection of animals, housing and places where they are exploited, used, exhibited or presented;
- f) Establish the sanitary provisions for dead animals, their remains and any products able to constitute a danger to health;
- g) Establish the safety standards designed to prevent the import or movement of animals etc as well as means of transport that might constitute a danger to animal health;
- h) Collaborate with the sanitary authorities in the adoption of control measures for public health relative to animal diseases transmissible to man;
- i) Discipline the hygiene/sanitary inspection of products and derivatives of animal origin destined for internal consumption and export, either as human or animal food or for industrial use;
- j) Determine the genuineness and the hygienic characteristics of products and derivatives of animal origin and issue the respective certificates of origin and health;
- k) Establish and inspect the conditions to observe in the production, collection, preparations, manufacture and treatment, conservation or storage, handling, transport and sale of the products referred to previously and the respective installations.

**Article 7**  
**(Section of Animal Production)**

- a) Organise and guide the action of the services referred to by recognition, occupation or improving the conditions in the zones where livestock production does not exist or should be intensified or supported;
- b) Guide the acquisition, distribution and re-creation of animals in the nuclei for repopulation;
- c) Define and characterise the livestock zonation of the country;
- d) Keep the record of the zootechnical or livestock capacity of the country up to date;

- e) Promote zootechnical assistance to the livestock farms or associations that are interested;
- f) Keep up to date the registrations of the livestock farms purposefully;
- g) Propose standards for competitions or contests involving livestock, including regional and international competitions;
- h) Guide the acquisition of production and distribution of breeders, fertile ova, semen and embryos adequate for the diverse ecological conditions in the country;
- i) Promote the organisation, guide the licensing and genealogical registration of breeders, their use and procedure for monitoring them;
- j) Establish the rules and support the holding of fairs, shows, auctions, competitions and other contests of interest for livestock;
- k) Appraise the projects and plans for construction or rehabilitation and equipment of livestock facilities;
- l) Collaborate with research institutions in the domain of zootechnology;
- m) Protect the genetic heritage of the national breeds and biotypes;
- n) Propose the establishment of standards for the regulation of pasturage, in conformity with the land laws;
- o) Guide the installation of drinking water supply systems;
- p) Propose measures related to the management and use of pastures, in collaboration with the respective local authorities;
- q) Motivate the improvement of feed regimens and nutrition on farms;
- r) Assure the application and compliance with international standards in terms of nutrition;
- s) Guide the utilization, conservation and feed provisioning of livestock operations.

### **Article 8**

#### ***(Technical and Animal Industry Section)***

- a) Propose or issue instructions about the technical requirements to observe in the preparation, manufacture, handling, packaging, storage, collection, transport and distribution of products and by-products of animal origin destined for human or animal consumption or other ends;
- b) Establish the characteristics of products and derivatives of animal origin destined for human consumption or industrialization and their respective packaging;
- c) Guide and control the processing industry for products of animal origin;

- d) Appraise the projects and plans for construction or rehabilitation of the facilities or establishments destined for the preparation, manufacture, treatment, conservation, storage, sale, transport and collection of products, by-products and waste products of animal origin;
- e) Grant, without prejudice to the competencies conferred on other authorised services, charters and licenses for the installation, functioning and exploitation of the establishments that handle, prepare or transform products, by-products and waste products of animal origin;
- f) Strive for the application of the standards for commercialization of animals, their products and by-products;
- g) Guide and control the technical assistance to the processing industry for meat and derivatives and poultry products;
- h) Guide and control the technical assistance to the dairy industry;
- i) Propose or issue instructions about the technical requirements to observe in the use of industrial chilling [cold chain] for the preparation, manufacture, handling, packaging, collection, storage and transport of products and by-products of animal origin and for the industries as well as workshops for the preparation of wool, hides, skins, fibres and other by-products or waste products of animal origin;
- j) Survey the needs of the internal market with a view to disciplining the trade, import and export of animals and products of animal origin;
- k) Collect information about external markets to allocate products of animal origin and support their exportation;
- l) Issue facts about tables of prices, levels of utilization or exploitation, slaughter quotas or consumption, imports and exports related to public supply of products of animal origin;
- m) Promote, themselves or in collaboration with other entities, studies directed towards establishing the costs of animal technology and industry;
- n) Observe the activity of commercialisation of the different livestock species, quantifying it in the sense of growth in the levels of extraction, without prejudice to their growth and development, with a view to the permanent protection of the natural resources available;
- o) Propose or issue facts about the technical requirements to observe in the preparation, manufacture, handling, packaging, storage, collection, treatment, transport and distribution of meats and their derivatives, milk and its derivatives, including yoghourts, ice creams and others, as well as products used in their conservation and methods employed in their preparation;
- p) Elaborate tables of classification of products, such as wool, hides, skins, fibres and other waste or by products of animal origin;
- q) Monitor the treatment of waste water from abattoirs, dairy industry and commercial piggeries, with a view to protecting the environment.

The rest of the document deals with the administrative sections of the Veterinary Services.

**Article 16**  
**(Livestock Zone)**

A Livestock Zone consists of one or more municipalities of the same province, determined by the density of the animal population and the intensity of livestock activity.

Many of the veterinary activities including movement control and vaccination are devolved down to municipal level.

# PRINCIPAL LAW FOR AGRICULTURAL DEVELOPMENT (Excerpt)

No 15/05

## Relevant clauses

### CHAPTER III Natural Resources

#### Article 11 (General Principles)

1. The sustainable development of productive agricultural systems depends on safeguarding the productive capacity of the soil, the availability and quality of the water resources and the conservation of the biodiversity associated with fauna and flora.
2. The methods of agricultural production should be compatible with an economically and ecologically rational use of natural resources that support them, based on technologies that do not induce irreversible negative effects on the environment.

Article 12 deals with the regulation of soil use for agriculture to preserve its productive capacity and protect it from soil erosion or pollution with chemical or biological matter.

Article 13 deals briefly with regulation of land use.

Article 14 deals with integrated management to prevent water pollution.

#### Article 18 (Flora and fauna)

1. The flora and fauna constitute elements to preserve and value in the spaces involving agricultural activity, either as ecological assets and genetic heritage or for sustainable economic use.
2. The maintenance of biological diversity, associated with flora and fauna, should be supported in the context of regulation of the rural space, requiring that the productive activities subjected to restrictions in terms of methods and techniques for agricultural production should benefit from compensatory assistance for loss of income.

Article 20 (incentives for agro-business) 1 f identifies as a priority for incentives the assurance of compatibility between productive agriculture and conservation of natural resources.

Article 23 (Quality of food) refers to protection of the environment and natural resources.

Article 33 (Agrarian research) specifies that research orientated towards solving concrete agricultural problems must be compatible with the sustainable use of natural resources and environmental protection.

## **Bill for Forestry, Wildlife and Terrestrial Conservation Areas (Excerpt)**

### **Section VIII The transfrontier conservation areas**

#### **Article 211 Definition and objectives**

1. Transfrontier conservation areas are any type of conservation area that, for reasons of ecological balance or interests of ecotourism, should include lands situated in other states.
2. The objectives of the TFCAs are international cooperation in the management of shared resources and the objectives of each type of conservation area referred to in the preceding articles.

#### **Article 212 Government**

1. The TFCAs are constituted by international agreements and approved by the competent organs of the State.
2. The government of the TFCAs should consist of the international instrument referred to in the previous point.

#### **Types of conservation area defined and described in the draft law**

##### **1. Integral nature reserves**

Integral nature reserves are conservation areas by virtue of possessing rare or endemic species and/or ecosystems or geological or physiological characteristics of special importance.

##### **2. Parks**

Parks are areas that are conserved to protect the ecological integrity of one or various ecosystems for the present and future generations and for recreational purposes.

##### **4. Special nature reserves**

Special nature reserves are conservation areas, intact or little altered, that preserve their character and natural influence, without significant or permanent constructions, that are conserved to preserve their natural state.

##### **5. Partial nature reserves**

Partial nature reserves are areas that are conserved essentially for the maintenance of certain geomorphological, hydrological characteristics, particular habitats and/or species, as well as for recuperation of species in extinction, threatened with extinction or vulnerable.

## 6. Natural monuments and protected landscapes

Natural monuments are conservation areas that contain one or various particular natural elements of exceptional importance or unique, preserved on account of their rarity, their aesthetic quality or their intrinsic cultural importance.

Protected landscapes are land areas, sometimes including the shore and adjacent waters, where the interaction between human activity and nature will build a landscape with specific and exceptional aesthetic, ecological or cultural qualities and that sometimes have great biodiversity.

## **Annex 5      Summaries of selected documents**

**Note:** These summaries are provided for a few of the documents where the content seemed to warrant more than a mini-abstract.

### **Botswana**

#### ***Diseases of Animals Act Subsidiary Legislation***

This single document contains the following subsidiary legislation to the Diseases of Animals Act:

- Declaration of stock-free zones Order 1982: The order provides for stock-free zones from which livestock must be removed and includes 'any area declared as a game reserve under the Wildlife Conservation and National Parks Act'.
- Diseases of Stock Regulations 1926 [as amended to 2001]: These are the regulations accompanying the Diseases of Animals Act. They include a list of specified diseases, describe the special provisions for certain disease including foot and mouth disease and make provision for the prevention and control of diseases including by the use of fences.
- Quarantine and compensation Regulations 1930 [as amended to 1966]: refers to quarantine camps for lung sickness.
- Diseases of Stock (Poultry) Regulations 1941: Requirements for permits for introduction of poultry and birds other than poultry as defined in the regulations are detailed.
- Stock Diseases (Semen) Regulations 1968: The introduction of semen of domestic livestock and dealings in semen are provided for in the regulations.
- Prohibition of sale of imported cattle to the Botswana Meat Commission for export to the European Union Regulations 1998: Cattle imported into Botswana must be identified with a specified brand on the right shoulder within seven days of entry to ensure that their meat will not be exported to the EU.
- Diseases of Stock (Inoculation) Order 1952: The order makes provision for annual vaccination of all cattle against anthrax.
- Foot and mouth disease (Conveyance of products) Order 1960: The order specifies a range of materials considered likely to convey or spread foot and mouth disease.
- Movement of stock (Restriction) Order 1960: The order prohibits any movement of stock within Botswana without a permit.

- Muzzling Order 1954: The order provides for dogs and other carnivores and monkeys to be muzzled by order of veterinary and livestock officers. It is evidently aimed at the prevention of rabies.
- BSE control (Removal of specified risk materials) Regulations 2004: The regulations provide for the removal and disposal of specified tissues from slaughtered cattle to mitigate the risk of transmission of BSE as required for export to EU.
- Livestock identification and trace-back Regulations 2005: The regulations provide for the individual identification of cattle by means of boluses containing an electronically stored identification number that resides in the rumen.
- Stock feed Regulations 2004: The regulations prohibit the manufacture or use of animal protein or animal waste in feed destined for mammalian livestock and specify the labelling requirements. Similar provision is made for fertilizer to which stock might have access. There are also provisions for disposal of waste containing animal protein.
- Prohibition of use of anabolic hormones and thyrostatic substances Regulations 1987 [as amended in 2007]: The regulations specify the substances that are prohibited, outline the exceptions under which use is permitted for veterinary therapy and fertility procedures. Animals in which they have been used must be permanently identified. The animal may only be slaughtered after the withdrawal period and if accompanied by a veterinary permission stating the purpose of the treatment. The regulations also provide for laboratory testing.

The last four regulations all respond to requirements of the EU.

***Agricultural Resources Conservation Act 39 of 1972 [as amended]***

The Act makes provision for the conservation and improvement of the agricultural resources of Botswana, establishes an Agricultural Resources Board and defines its powers and functions, and provides for conservation committees and subordinate conservation committees and prescribes their functions. The definition of agricultural resources includes: the animal life and fauna of Botswana including animals, birds, reptiles, fish and insects. "Stock" includes cattle, horses, donkeys, mules, sheep, goats, ostriches, pigs, animals of the family Bovidae in captivity, domestic fowls, turkeys, geese, ducks, and any other domesticated or captive animal or bird which the Minister may specify by order published in the Gazette. The Board has no powers

over any land constituted as a national park in terms of the Wildlife Conservation and National Parks Act.

Conservation orders may prohibit, regulate, require or control

- The grazing and watering of livestock
- The fencing of land
- The use of chemicals e.g. insecticides

Measures can be taken for the elimination or prevention of spread of tsetse fly.

Section 19 consists of special provisions regarding the control of livestock: and may prescribe the maximum number and class of stock to be kept and pastured or that may be watered at any specified watering point. Non-compliance may result in confiscation of stock.

### ***Ministries'/Departments' Goals for NDP 10, February 2010***

Projects under the NDP 10 include provision of a computerized information and communication system for the agricultural extension services; consultancies to benefit livestock owners whose interest is export to international markets; improvements to the dairy industry through provision of marketing facilities at strategic points, breeding stock and stimulation of fodder production; demonstration of modern farming technology through the National Master Plan for Arable Agriculture and Dairy Development (NAMPAADD) to promote diversification and commercialization of agricultural production; livestock improvement through supply of breeding stock, developing and fencing community farms, and demonstration of good management practices, to benefit livestock farmers, the Botswana Meat Commission and staff of the Ministry of Agriculture; animal diseases emergency control, aimed mainly at tsetse and FMD, to be achieved by restricting movement of animals and constructing further fences where necessary; promotion of the poultry and ostrich farming industries by encouraging more people to enter the industry. Other relevant projects in agriculture involve infrastructure provision at Pandamatenga; development of the extension services by providing better accommodation and facilities; the Livestock Management and Infrastructure Development (LIMID) Project under the agricultural support schemes; and improving infrastructure at the outstations of the Ministry of Agriculture.

Projects for the Ministry of Environment, Wildlife and Tourism include computerization to achieve an Integrated Wildlife Management System; consultancies for policy formulation guidance and policy review, as well as for Botswana's contribution to the feasibility study for

private sector projects and investment in the KAZA TFCA., which is seen to benefit communities by creating employment; natural resources management; environmental management activities focused mainly on the wetlands; infrastructure developments for the Department of Wildlife and National Parks; community/private sector support aimed at community-based natural resource management activities to fulfil management and development roles; and tourism development with a focus on community involvement through skills development.

### ***National Development Plan 9***

The NDP (2004) covers all aspects of development in all sectors in Botswana. Chapter 10 is devoted to agriculture. Relevant points from the Livestock Production section (pp. 179 – 202):

- Emphasis on the success of cordon fences and strict animal movement control in maintaining the FMD-free status necessary for exporting beef to the EU. A new 646 km double electric cordon fence was erected at Ngamiland and Bobirwa/Zimbabwe border.
- Botswana granted geographical BSE risk level I status which ensures ability to export beef.
- LITS system implemented since 2000 – identification by reticular bolus.
- Competitive advantage for beef conferred by raising of beef on rangelands free of chemical treatment
- BVI FMD vaccine production safeguards national herd

#### **Agricultural Policy and Strategy for NDP 9**

- Focus on conservation of agricultural land resources and disease control
- Strategy for dairy farming
- Diversification of Botswana's beef export markets; also export of small stock and poultry meat; must also improve efficiency and competitiveness in production
- Gazettement of agricultural land to prevent loss of agricultural land for non-agricultural purposes

#### **Agricultural Policy objectives:**

- Improvement in food security – household (main focus) and national
- Diversification of production base (includes piggery, poultry, ostrich, dairy, bee-keeping)
- Increased output and productivity
- Increased employment opportunities
- Secure and productive environment for producers
- Conservation of scarce agricultural and land resources for future generations

Specific strategies in the Livestock Sub-sector:

Animal disease and pest control:

- Maintain annual surveillance for FMD, CBPP, ND in high risk areas;
- Construction of disease control fences along international borders with system of pickets and border patrol;
- Regular workshops for staff and stakeholders on disease emergency preparedness;
- Feasibility studies on establishing an emergency fund for animal disease control;
- Eradication of tsetse in Okavango Delta by aerial spraying and sterile insect technique

Veterinary public health and food safety

- Harmonise meat inspection regulations
- Intensify LITS implementation
- Regular residue testing (pesticides and veterinary drugs)
- Control and regulate use of veterinary drugs

Livestock marketing: improve infrastructure and access to marketing information and provide training

Chapter 13 (pp. 236 - 254) Wildlife, National Parks and Tourism

- Greater efforts and measures to reduce land use conflict relating to humans and wildlife
- Sustainable management of wildlife for the benefit of local communities and future generations and the environment

Human – livestock –wildlife conflict: mostly due to encroachment of livestock areas on wildlife areas. Conflict will be minimised by:

- Fencing projects
- Increase Problem Animal Control manpower
- Provide equipment and boreholes

Interface diseases mentioned are FMD, anthrax, rabies, canine distemper.

Wildlife management areas:

- Instituted as migration corridors and buffer zones
- Perceived to be inhibiting agricultural uses of land
- Meant to benefit communities through the Community-based Natural Resource Management Programme
- Needs government policy on fees from activities in these areas

Strategies:

To sustain wildlife populations:

- Revision of 1986 wildlife conservation policy
- Development of animal specific management strategies and policies
- Development and implementation of Game Ranching Policy
- Update endangered/threatened wildlife species list

To reduce conflict:

- Fencing to separate communities from wildlife areas
- Increase PAC manpower
- Train local communities in non-lethal PAC activities
- Provide additional resources for rapid response for PAC
- Install additional boreholes and watering points to reduce pressure
- Continue education and training through CBNRM

Wildlife policy for NDP 9

- Wildlife conservation policy review
- Predator conservation strategy
- Game ranching policy
- Conservation and management strategy for rhinos
- Elephant management plan review

The next chapter, Environmental conservation, includes policy and strategy for wetlands conservation.

### ***National Development Plan 10***

A new, integrated, results-based approach is adopted and the plan will run over seven years as opposed to six as was previously the case. NDP 9 is reviewed and it is noted that economic growth was slower than projected. There was a decline in all the traditional exports (diamond, copper-nickel and beef).

Agricultural Sector Programmes (educational): Agricultural Skills Development Programme: (increasing income): Livestock Development Programme, Agricultural Business Development Programme (develop livestock industry supply chain through:

- Increasing cattle off-take (throughput at processing plants) by removing supply barriers posed by the requirements of veterinary and police permits and transport logistics between the markets and the production areas;
- Improving product quality consistency (to better meet customers' needs); and
- Reducing the seasonality of supply (to improve base load production levels). );

National Plant and Animal Health Regulatory Services Programme (example is given that about 10% of animals that reach BMC have measles, resulting in a loss of P 50 million of potential export earnings – need to educate farmers and provide infrastructure;

Agricultural Research and Technology Development Programme (includes conservation of genetic resources); Support to Enhance Service Delivery Programme (includes computerization, e.g. of extension services).

Policy is to liberalise beef markets and expand export base for agricultural products.

Skills development and infrastructure development will be provided to facilitate business.

Productivity: Agricultural sector characterized by low productivity. Beef contributes 80% of agricultural GDP which is 1.7% of total GDP and has declined markedly over the last 10 years. Failure to reach the 18,916 tons per annum quota under the Cotonou Agreement is discussed, with a low of 6,127 being reached in 2006. Compliance with SPS requirements has enabled Botswana to maintain the export trade but it is under constant threat from 'transboundary and wildlife-transmittable animal diseases' like FMD. Failure to adopt modern breeding technologies also contributes to the problem. Drought has also been a problem.

About 40% of households own cattle. FMD will be controlled by the establishment of buffer zones along high FMD risk areas, as well as effective management and monitoring tools for disease control.

Increased beef production is seen to be a major outcome of the goals of NDP 10.

Of interest was a comment that South Africa had in the past adopted protectionist measures against goods exported from Botswana in spite of regional agreements on free trade.

There are also strategies to improve and expand tourism and increase citizen participation.

### ***Game Ranching Policy for Botswana***

The policy is aimed at developing a game ranching industry that will provide a commercially viable and sustainable alternative for livestock enterprises either on its own or in mixed livestock/game ranches. It only deals with game ranching – game farming to be dealt with in a separate policy document. [Game farming = more intensive production like ostriches, crocodiles, snakes, rabbits, guinea fowl etc].

Major constraints for game ranching are lack of freehold land, capital and know-how. The National Policy on Agricultural Development (1991) provides for a shift from communal to leasehold land tenure in tribal areas.

The game ranching industry is seen as an opportunity for economic diversification in rural areas.

Objectives:

- Increase economic returns from wildlife outside National Parks, Game Reserves and Wildlife Management Areas
- Promote development of a commercially viable and environmentally friendly industry
- Maximise private sector role in the development and value addition of the industry facilitated by government
- Facilitate development of markets for wildlife and products
- Provide up to date knowledge through research and extension
- Use game ranches for conservation of rare/endangered species
- Ensure well-being of game populations in the wild
- Facilitate and give preference to Botswana in Management and ownership and encourage foreign partnerships
- Increase impact of game ranching on national and rural economy, employment and diversification

Development of game ranches within the buffalo fence not supported – would interfere with wildlife migration.

Non-indigenous species not encouraged and would be subject to special conditions e.g. extra fencing.

### ***National Policy on Agricultural Development 1991***

Forms the basis for NDP 8 agricultural development; the policy objectives are identical to those reflected in NDP 9.

## Recommendations for Livestock Sub-sector:

### Breeding:

- Artificial breeding programme to improve quality

### Animal Health:

- Government responsible for prevention and control of nationally important diseases such as FMD, anthrax, black quarter, brucellosis, and rabies through movement control and free compulsory vaccination
- Tsetse eradication using environmentally safe and acceptable methods embodied in NDP 7
- Maintenance of high standards of meat hygiene

### Fencing of land for ranching:

- Individuals and communities would be allowed to fence grazing land to improve livestock management and productivity<sup>26</sup>
- Development of land use plans

### Dairy farming:

- Fresh milk production open to non-citizens and will qualify for Financial Assistance Programme

### Draft power:

- Will continue but due to major problems alternatives will be sought.

## **Zambia**

### ***Animal Health Act 27, 2010***

The Act provides for the appointment of the Director responsible for veterinary services and other staff and defines their powers and functions; provides for the prevention and control of animal diseases; provides for the quarantine of animals; regulates the importation and exportation of animals, animal products, animal by-products, articles and animal feed; establishes the Animal Disease Control Fund; and repeals and replaces the Stock Diseases Act 1961. It replaces the Stock Diseases Act of 1961 as well as the Tsetse Control, Cattle Cleansing and Cattle Slaughter (Control) 1948 Acts.

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<sup>26</sup> Interestingly, the standard 8 x 8 farms proposed by the Tribal Grazing Land Policy (1975) are identified as having been a wrong approach as areas vary in carrying capacity – yet a similar proposal was made for game ranches in 2010

Issues that could affect KAZA are:

- Restrictions on cross-border movement of animals
- Declaration of disease control zones and quarantine areas
- Import and export of animals
- Regulatory powers for eradication of diseases including maintenance of a disease free area
- Transportation of animals
- Declaration of tsetse control areas – the proviso of the old Act for killing wild animals has been removed but there is a clause ‘the application of any other method or technique that may be considered appropriate and effective’; this is unlikely to include killing of wildlife which is neither appropriate nor effective in modern approaches to tsetse control. The cutting of vegetation including trees remains in force
- Restriction or prohibition of travel in tsetse control areas
- Declaration of disease free areas
- Declaration of animal disease emergency and application of measures for control including declaration of a disease control zone
- Establishing an Animal Disease Control Interdisciplinary Committee – no representative from ZAWA
- Power to formulate regulations relating to a wide variety of disease control activities

## Annex 6 Persons consulted during the course of the study

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<sup>27</sup> Consulted in connection with another project: contact detail may be useful

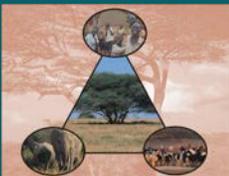
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*The Wildlife Conservation Society's Animal & Human Health for the Environment And Development (AHEAD) Program is a convening, facilitative mechanism, working to create enabling environments that allow different and often competing sectors to literally 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 socioeconomic and environmental context.*