Organisation Mondiale de la Santé Animale

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PVS Gap Analysis Report

Botswana

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21st November – 1st December 2011

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LIST OF ACRONYMS, ABBREVIATIONS AND/OR SPECIAL TERMS

AH	Animal Health
BCA	Botswana College of Agriculture
BNVL	Botswana National Veterinary Laboratory
BSE	Bovine Spongiform Encephalomyelitis
BVI	Botswana Vaccine Institute
CBPP	Contagious bovine pleuropneumonia
CVL	Central Veterinary Laboratory
CVO	Chief Veterinary Officer
DVO	District Veterinary Office
DVS	Director of Veterinary Services – Chief Veterinary Officer (CVO)
EU	European Union
FMD	Foot and Mouth Disease
FTE	Full Time Equivalent
HPAI	Highly Pathogenic Avian Influenza
LAC	Livestock Advisory Centre
LITS	Livestock Identification and Traceability System
MoA	Ministry of Agriculture
MoH	Ministry of Health
OIE	World Organisation for Animal Health
OIE-PVS	OIE Tool for the Evaluation of Performance of Veterinary Services
RVF	Rift Valley Fever
SADC	Southern Africa Development Community
SANAS	South African National Accreditation System
SPS	Sanitary and Phytosanitary
TAD	Trans-boundary Animal Disease
TRACES	TRAde Control and Expert System of the EU
VS	Veterinary Service(s)
VPH	Veterinary Public Health
VLU	Veterinary Livestock Unit
VSB	Veterinary Statutory Body (see OIE Code definition)
WTO	World Trade Organisation

ACKNOWLEDGEMENT

The conduct of this OIE-PVS Gap Analysis by Dr. Eric Fermet-Quinet (Team Leader), and Dr. Julia Punderson (Technical Expert) and Dr. Jean-Claude Balcet (Technical Expert), here after called the OIE-PVS Gap Analysis Team, has been formally authorised by the OIE.

The OIE Gap analysis team wishes to express its gratitude to the staff of the Botswana Veterinary Services, as well as their principles and others from supporting agencies who participated in this evaluation

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EXECUTIVE SUMMARY

The aim of the OIE PVS Gap Analysis is to assist countries to identify in detail and prioritise activities that will strengthen their VS, enhance compliance with international standards. The PVS Gap analysis uses the OIE PVS Evaluation as a baseline. The OIE PVS Evaluation is an external, independent, and objective, assessment of the current status of the VS. In contrast, the PVS Gap Analysis is the product of a fully participatory process developed by the expert team working with the VS to identify in detail and cost out the targeted pathway of advancement.

The OIE PVS Gap Analysis is intended to aid, either directly or as an input for the development of a VS strategic plan to be used in advocating changes and targeting the necessary investments to strengthen VS to address the challenges of the future. The changes discusses are intended to target improvements in effectiveness and efficiency in the delivery of veterinary services, taking into account, but avoiding being driven only by political or budgetary considerations. However, all of the changes discussed could be accomplished with the context of the current budget with the consideration that in the future likely decreases would need to be accommodated.

The OIE PVS Gap Analysis is divided into four main components: identification of broad national priorities for VS in four domains (livestock development and trade; veterinary public health;animal health; and organisational structure and management of the VS); identification of the expected results for each of the 46 critical competencies of the PVS Tools, identification of the specific tasks needed to achieve these targets, and preliminary estimations of the costs associated with these changes.

For **livestock development and trade** the main focus is to maintain and expand access to international export markets of animal products and to ensure food security through national production (import substitution) and safe imports of animal and animal products.

The priorities in **Veterinary Public Health (VPH)** were identified as ensuring the similar standards of food safety for both the national and international market; and to develop comprehensive control of the use of veterinary medicine and biologicals.

The priorities identified in **Animal Health (AH)** are to ensure that all official programmes relevant to transboundary diseases (TADs) and zoonosis are risk based and subject to cost efficiency and cost benefit analysis; promote joint programmes with stakeholders for diseases of economic importance; and, to improve farmers access to professional clinical diagnostic services.

Cross cutting priorities in the area of **veterinary organisational structure and management** are to progressively improve efficiency of the VS without compromising OIE compliance, within a context of budget constraints, decentralisation and privatisation. The most significant overarching priority, which will require long term commitments to accomplish, is to establish a field animal health network in OIE compliance; this will involve recruiting and/or creating an enabling environment for settlement of a sufficient number of veterinarians for field activities and to increase the contact of veterinarians in the field.

Even if a PVS Gap Analysis is usually aimed at identifying the activities to be implemented during a five year period to improve the compliance of VS with international standards, it was acknowledged that considering the remarkable progress made in Botswana since the OIEPVS mission, the methodology used during this PVS Gap Analysis was more directed toward the identification of a „proposed scenario" mainly to develop an expanded field network of veterinarians within the current approximate budget. It will realistically take longer than the 5 year window of a routine PVS Gap Analysis.

Indeed, the lack of veterinarians in the field is a critical shortcoming and is not in compliance with OIE standards. The lack of veterinarians impacts not only the ability to export; but also

all official activities related to animal health. Currently the system focuses on FMD detection and control primarily to maintain the beef export market and relies largely on non-technical personnel. Without more veterinarians in the field the necessary services for animal disease control programmes cannot be delivered. Establishing a more extensive field veterinary network will also support surveillance and early detection of disease outbreaks or emerging disease. The resources needed to fully implement the field veterinary network can be done withincurrent and projected budget but will require long term planning and support.

Expanding the availability of veterinarians, first in the public sector, could support the gradual development of private veterinary services and allow for privatisation or delegation of some VS activities. Developing clinical and diagnostic veterinary services on a fee for service basis (with appropriate incentives to initially develop this capacity within the official VS) could provide a path to sustainability development of these services. Without enough veterinarians in the field there are no professional resources to improve service delivery or delivery of animal health programs. To change to a system where animal health programs are responsive to changes in animal health status and can be delivered more effectively will require the presence of more skilled professionals in the field. The increased number of veterinarians in the field should also lead to improvement in the health status of animal populations heading to exportand provide increased return for the producers.

The PVS Gap Analyses team estimated that the number of veterinarians would increase over the next 10 years by about 75 veterinarians to fully man the projected 65 field animal health veterinary units. This would increase the number of veterinarians in VS from 55 to 130; however, under the proposed scenario this would be offset by decreasing the number of veterinary para professionals employed by DVS from 729 to 410.

The proposed scenario also includes a general increase in veterinarian"ssalaries of 20 to 30%which can be accomplished within the current and projected VS budget. Increasing veterinarians salaries within VS willallow VS to better compete with the private industrial sector and enhance retention.

Additional priorities related to cross cutting topics were identified:

1. **Maintain Internal Coordination of the VS (chain of command)**

The growing role of the District Agricultural Coordinators in controlling resources at the District level has the potential to disrupt the currently strong chain of commandwithin VS and negatively impact the ability to rapidly identify and respond to animal health emergencies. Inserting the District Agricultural Coordinator into the chain of command from central VS to the field exacerbates the current lack of technical expertise in the field and places yet another layer between the large cadre of veterinary para-professionals conducting animal health activities in the field and veterinary expertise. Preserving and improving the level of veterinary expertise in the field should be held as an important factor if changes to the chain of command are considered.The best option would be to keep VS aside from the decentralisation process. Animal production administrative authority, on the contrary, might be decentralised, and if necessary for purpose of efficiency and coherence, contract on an individual basis some of its activities with staff of the VS without risks of breakingthe chain of command or hampering priority to veterinary activities.

2. **Improve the animal identification system and supporting databases (CC II.13A)**

Improvements in the livestock identification system are needed to support livestock development and trade as well as animal health. Improvements to the animal identification system are critical on several fronts: access to international markets relies on a system of traceability; animal movement controls require readily accessible identification; and, effective animal health programmes rely on accurate accessible information about the status and identification of the population.

Since the PVS evaluation 2010, VS has put in place a 3 year contract to improve the LITS system to upgrade both the software and hardware. This will continue to be a major budget item under both current conditions and in the proposed scenario.

To make the system more accessible to the field the number of identification readers is being increased to more quickly identify animals during vaccination programmes and for movement control. Improvements to the database are underway to integrate animal health information from other databases into a single system that is more accessible in the field. Entry of data into the central database is also being improved to make the information available more quickly.

In the proposed scenario, resources were allocated to add visible identification to the bolus system in use for cattle and enhance identification of individual animals to improve movement controls. Temporary visual identification for movement control and vaccination campaign management for ruminant species is proposed.

Improved data management for animal identification will require additional technical support staff for data entry at the district level. The integration of databases at the central level will improve information access at the local level. The improved flow of information supports improved animal movement, animal health, veterinary public health and reporting of laboratory information.

3. Re-evaluate the zoning system

Reassessment by risk analysis of the disease control fencing and control gate system should be done to maintain the most effective disease control zones and emergency response. Periodic evaluation of the disease situation should be planned to ensure appropriate reallocation of resources to ensure that effective controls remain in place.

The current zoning process is one of the biggest current budget items requiring a huge commitment of resources to maintain the fences and control gates and. Fences and control gates not in the active disease control areas should be evaluated for possible decommissioning. This could significantly decrease size of the VS support staff. However, even with the decommissioning of a significant amount of fencing, this will remain a large part of the budget for the foreseeable future.

Critical review of the management of quarantine activitiesis also needed to ensure they are effectively managed and provide the most efficient movement of livestock between zones. Improvements to the animal identification system will be helpful in the regard. Livestock producers will benefit from better prices for appropriately identified cattle that are eligible to enter the export slaughter channels.

4. Re-evaluate the disease control programmes

All animal health programmes should be submitted to analysis for efficacy, efficiency and cost benefit. Currently the VS undertakes a variety of the animal health programmes including passive surveillance programmes for TB, CBPP, FMD, cysticercosis, hydatid disease (echinococcosis), active surveillance programmes for salmonella in poultry, BSE andFMD, as well as early detection HPAI, RVF and emerging animal and zoonotic disease. This includes extensive compulsory vaccination programmes for FMD, rabies and brucellosis as well as identification, movement controls and animal welfare activities.

The effectiveness of these programmes is severely constrained by the lack of veterinarians in the field and the need to rely on non-technical support staff to conduct field activities. The serious lack of veterinarians in the field also impedes the development of the livestock sector and broadly hampers disease control measures. In addition, the lack of veterinarians in the field is not in compliance with international standards.

5. **Improve the standard of food safety for the national to equal that for the international market**

As part of a global trend, consumers and the national authority of Botswana are demanding that the food available in the domestic marketplace be of the same standard as that that produced for export. For Botswana this will entail implementing an appropriate level of inspection at slaughter and for products produced nationally supported by additional residue testing. This will require the dedication of resources for veterinary inspection and supervision of veterinary para-professionals primarily at the district level.

Increased capacity for inspection of an array of animal products will need to be developed in coordination with the Ministry of Healthand include dealing with a number of major zoonosis present in Botswana such as TB, cysticercosis, hydatid disease, anthrax, brucellosis and rabies.

6. **Ensure access and comprehensive control of veterinary medicines and biologicals.**

One of the priorities identified by VS was to ensure a comprehensive system of controls for the use of veterinary medicine and biologicals in Botswana and assuring the sustained availability of quality veterinary medicine and biologicals. The long standing Livestock Advisory Centers (LACs) can serve as an appropriate venue to support the VS policy to strengthen the controls on veterinary medicines while ensuring national availability of veterinary medicine and biologicals sourced from legitimate sources (preventing trafficking of counterfeit products), stored and distributed under controlled conditions to ensure maintenance of the cold chain where necessary and prevent misuse.

The LAC system should be remain under the authority of VS veterinarians within the animal health fieldveterinary network and function with access to a revolving fund to ensure a continuous supply of the necessary veterinary medicines and biologicals on a national basis. Establishing retail prices in the LAC compatible with that found in the private sector will allow the LAC to be self-sustaining and to encourage development of the capacity of a private veterinary network to better serve both the livestock owner and the private veterinary profession in Botswana.

Conclusion

VS have undertaken the development of a comprehensive system of internal audits. These audits will necessarily develop fully over time and require supportcontinued through additional training of staff and internal review to enhance creditability of the VS system and provide a critical resource to sustain improvements and compliance.

The PVS Gap Analysis team made considerable effort to characterize what an appropriate field veterinary network forBotswana would look like. Initial training, recruitment in the public or settlement in the private sector, increase of revenues of enough veterinarians may be accomplished within the current and future budget constraints.

The global challenge for the VS in Botswana is to improve the overall efficiency and effectiveness within a context of increasing budgetary constraints through adapted structural reform, without compromising compliance to OIE standards. Of special concern is the need to maintain the strong chain of command within a context of decentralisation policy, and to establish of an effective field veterinary network within a context of privatisation policy.

METHODOLOGY OF THE PVS GAP ANALYSIS MISSION

A PVS Gap Analysis mission facilitates the definition of a country"s Veterinary Services" objectives in terms of compliance with OIE quality standards, suitably adapted to national constraints and priorities. The country PVS Gap Analysis report includes an indicative annual budget and one exceptional budget (for exceptional investments), when relevant, consolidated to propose an indicative 5 year budget for the Veterinary Services. In practice, this means:

- Defining, together with the Veterinary Services, and in accordance with national priorities and constraints, the expected result (i.e. level of advancement defined in the OIE PVS tool) at the end of the five-year period for the critical competencies of the OIE PVS tool which are relevant to the national context;
- Determining the activities to be carried out in order to achieve the expected results for the critical competencies of the OIE PVS Tool which are relevant to the national context of the country;
- Determining, with the help of information, data or interviews, the tasks and human, physical and financial resources required to implement these activities to enable the Veterinary Services to function appropriately.

I The PVS Gap Analysis process

I.1 Background information

Following a request to the OIE from its government, an evaluation of the Veterinary Services of Botswana using the OIE PVS Tool for the evaluation of Performance of Veterinary Services, based on OIE international standards on quality of Veterinary Services[1], was conducted in April 2010 by a team of independent OIE certified experts.

In order to adequately understand the objectives of the country, as well as the figures presented in the PVS Gap Analysis report, it is important to have access to some key information. A part of this information comes from the country OIE PVS evaluation report, other parts come from other sources.

Using the information provided, the PVS Gap Analysis mission team developed a proposed programme using resources currently allocated to develop a more comprehensive field network of veterinarians and bring Botswana into full compliance with OIE standards. However, fully implementing this network will take a number of years because it must first rectify the severe shortage of veterinarians in the country. The intention of this „proposed scenario" is to lay out how the number of veterinarians in the field can be substantially increased within the current budget allocation to improve the level of professional contact at field level within the current budgetary allocation.

I.1.A Country details

Geography

Botswana is a landlocked country of about 581,730 km^{2}in the Southern African region bordered by Namibia (west and northwest); Zambia (north); Zimbabwe (northeast) and South Africa (east and south).

Botswana is known for its abundance and variety of wildlife, with wilderness areas dedicated for conservation. National Parks and Game, Forest and Private Reserves cover 17% (104,460 km^2) of the country.

[1]Section 3 OIE Terrestrial Animal Health Code: http://www.oie.int/eng/normes/mcode/en_titre_1.3.htm

Administration

Before independence in 1966 the Republic of Botswana wasthe British protectorate of Bechuanaland. Botswana has a rapidly developing market economy closely tied with the economy of South Africa. The country's economy is one of the most successful in Africa and the World Bank cites Botswana as one of the world's great development success stories (estimated per capita nominal GNI of$6,260 in 2009 and a growth rate of 8.6%).

Botswana is divided into 10 administrative districts as follows: Central District, Ghanzi District, Kgalagadi District, Kgatleng District, Kweneng District, North-East District, North-West District, South-East District, Southern District, Chobe District (Separated from North-West District).

Districts are then further divided into a total of 28 sub-districts based on population and economic activities.

Agriculture

Agriculture in Botswana is practiced primarily to feed the country, rather than for export, with the exception of cattle rearing. Agriculture provides a livelihood for more than 80% of the population, but supplies only about 50% of food needs and accounts for only 2% of measured GDP, primarily through beef export. GDP from livestock accounts for more than 88% of the agricultural GDP.Subsistence farming and cattle rearing predominate.

The land is characterized by the Sandveld and Hardveld with the Okavango Delta in the north is the world"s largest inland delta. Botswana has less than 1% arable land with 45% of the country considered to be in pasture although much of the country is considered to be desert with minimal rainfall (FAO). Communal grazing is predominant.

Livestock

Livestock industry is the dominant component of Botswana"s agriculture but generates only 2.6% of total measured GDP. Botswana has a long standing export market for beef to South Africa and the European Union, but all other livestock sectors are marginal or in early stages of development. Botswana's dairy industry is developing but produces less than 50% of the quantity of fresh milk consumed in the country and almost the entire quantity of processed milk is imported (primarily from South Africa). The poultry sector which is relatively new butis rapidly developing and the country is relatively self-sufficient in this commodity. Pork is mostly imported from South Africa.

Livestock farming systems in Botswana isdominated by traditional „Cattle Post" production system. Recently, alternatives have been encouraged, including feedlots, dairyingand specialist systems such as apiculture and ostriches as well as small stocks such as pigs and poultry.

The traditional "Cattle Post" production system uses unfenced communally held rangeland with central watering points. Tribal or communal land makes up about 70% of the country and is administered by local Land Boards. The cattle owner, or more often a herdsman, lives in a small dwelling near a borehole and tends and waters the livestock. The water is most commonly pumped from a borehole, but in areas where there is a shallow water table - such as in pans and dry river beds, water is taken from hand dug wells. The post generally has a holding kraal, which is traditionally made of thorn fence, or upright tree trunks dug into the ground. More modern kraals are commonly built with poles and wire - as in commercial ranching. The cattle are let out in the daytime, and may roam for several days, before returning for water. In winter, when temperatures are mild, and during the rainy season, cattle can wander

far from their home kraal. Goats and sheep, are generally found closer to the kraals, and tend to return every night. The presence of large predators in some areas may require returning animals to the kraals at night. Cows with young calves tend to remain closer to the kraal also as they need to drink water more regularly than dry cows and other types of livestock. Cattle posts may also have horses and donkeys – which are used mainly for transport.

Botswana VS is oriented for rural development and beef export as part of the mission and vision of the Ministry of Agriculture.

The total value of livestock in Botswana is estimated to be 1,28 billion €. This rough estimate takes into account a conversion rate of 1 € for 8,5 Pula and average value of every species: cattle 3600 Pula, sheep 600 Pula, goat 500 Pula, Horse 3000 Pula, Donkey 400 Pula, Poultry 30 Pula.

One should note that cattle account for 83% of this total value, the growing poultry sector already accounts for 11%.

Geographic features

Climatic and/or agro-ecological zones	Rainfall (mm/year)
Sandveld	< 350
Hardveld	400
Alluvial planes	450
Lacustrine	< 600

Source: PVS evaluation report 2010

Topography	Km2	%
Total area	582 000	
Pasture lands		60
Arable land		0,7
Forest		21
Wetlands/deserts		45

Demographic data

Human population		Livestock households/farms	
Total number	2 000 000	Total number	
Average density / km2	3	% intensive	15 %
% of urban	40 %	% agro-pastoral (mixed)	5 %
% of rural	60 %	% extensive	80 %

Source: PVS evaluation report 2010

Current livestock census data

Animals species	Total Number	Value per head	Intensive system (% or no.)	Mixed system (% or no.)	Extensive system (% or no.)
Bovines	2 500 000		5000 dairy + 10 % beef feed lots	5 %	85 %
Sheep	170 000			95 %	5 %
Goats	724 000			97 %	3 %
Pigs	10 000		98 %		2 %
Horses, Donkeys	200 000				100 %
Poultry	40 000 000		97 %	3 %	

Source: PVS evaluation report 2010

Animal and animal product trade data

Animals and animal products	Average annual import (2009)		Average annual export (2009)	
	Quantity	Value	Quantity	Value
Dairy products	50 000 tons	20 000 000 €		
Beef products			29 000 tons	80 000 000
Cattle	1250 heads			
Pigs	Medium			
Poultry	Low			

Source: PVS evaluation report 2010

Economic data (in €)

National GDP	20 000 000 000
National budget	2 000 000 000
Livestock GDP	400 000 000
Economic value of livestock population	1 280 000 000
Annual public sector contribution to agriculture	135 000 000
Annual budget of the Veterinary Services	37 000 000

Source: PVS evaluation report 2010

I.1.B Current organisation of the Veterinary Services

1. Central level

The Department of Veterinary Services (DVS) within the Ministry of Agriculture (MoA), is the Competent Authority.In 2008, the former Department of Animal Health and Production was divided into two independent departments; the Department of Animal Production (DAP) and DVS. The head of DVS is a veterinarian and serves as Botswana"s OIE Delegate.

The DVS has 6 technical divisions and anadministrative division which includes human resources, accounts and supplies (see organogram on next page). The 6 technical divisions are headed by Deputy Directors who are all veterinarians.

2. Nationwide network

A national reform is aligning the 17 former “veterinary districts” and some “clusters” to conform to the administrative layout of the country"s 10 districts and 28 sub-districts.

The VS will thus include: 10 District Veterinary Offices (DVO) with 28 sub-districts veterinary offices, although 10 of the sub-districts will be housed with the DVO. All 10 DVOs are headed by veterinarians, but not all of the Sub-District Veterinary Offices (SDVOs) are headed by veterinarians and may be headed by a non-veterinary scientific officer.

The next administrative level is the cluster. Clusters are further divided into extension areas which are to be the operational field level for VS; however, the cluster is not yet fully established as an administrative system. Each SDVO generally has about 10 extension areas which are considered too many for one SDVO to effectively supervise. To address this technical officers are given the role of assisting several adjacent extension areas (thus forming a cluster).To the OIE PVS team, it seems that whether communication (reports and instructions) between an extension area and its SDVS is direct or via a cluster depends on the individual SDVS; this may result in excessive variation and inconsistencies. The field level of the VS organisation has 294 extension areas; each with at least one technical officer (veterinary para-professional) and one support (industrial-class) staff member. The extension areas serve farmers day-to-day needs directly at “crush-pens” (cattle handling facilities used cooperatively by neighbouring farmers).

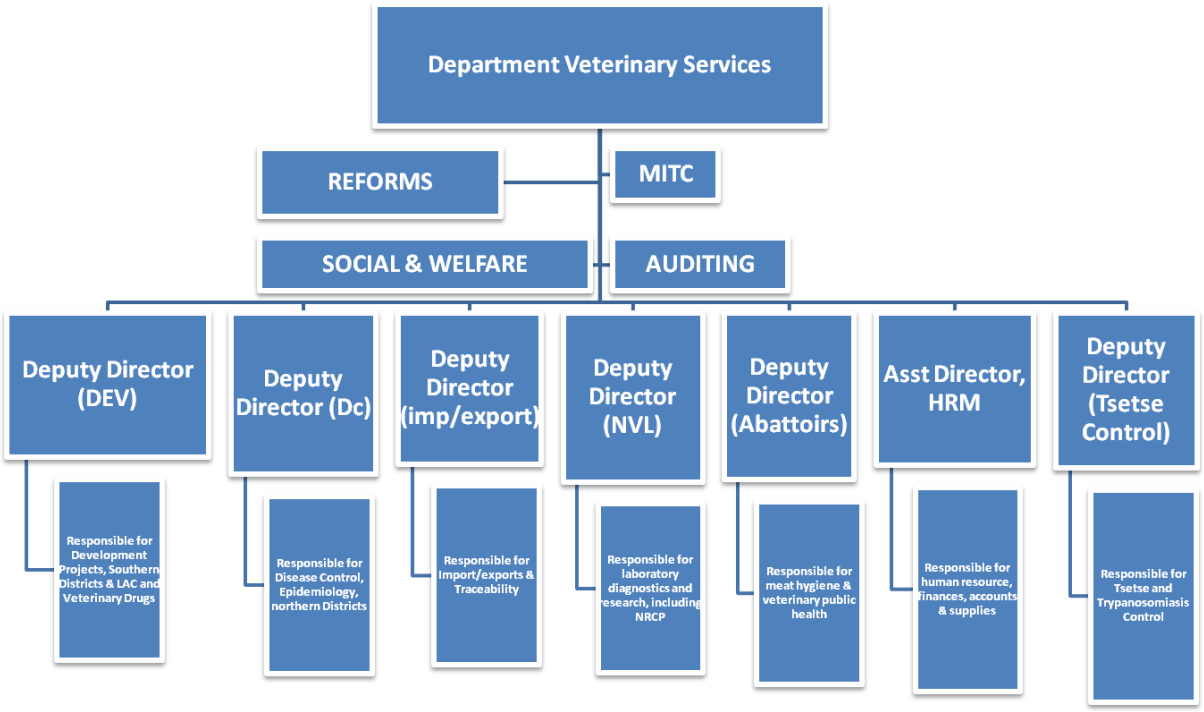
Veterinary medicine and biologicals are mainly retailed through public veterinary services via 35 Livestock Advisory Centres (LACs), generally located within the SDVOs or extension area offices.

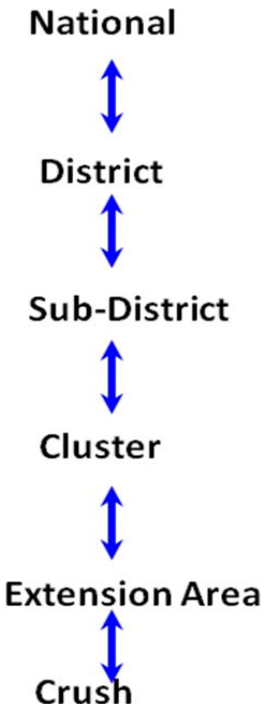
SDVOs supervise a total of 56 internal checkpoints as part of the animal disease control zoning system. Administratively speaking, international border points report directly to the DVS.However, in practice most are supervised by the local SDVO.

3. Veterinary Research and Laboratory Services

The Botswana National Veterinary Laboratory (BNVL) in Gaborone is the only veterinary laboratory in Botswana.BNVL is supervised by the Deputy Director in charge of “Diagnosis, Research and Disease Investigation Division” of the DVS (see organogram on page 39).All specimens collected at extension areas, abattoirs and dairy plants are sent to the BNVL.

ORGANOGRAMME OF THE VS





I.1.C Descriptionof entities or sites related to Veterinary Services activities

List of entities and sites	Terminology or namesused in the country	Number of sites
GEOGRAPHICAL ZONES OF THE COUNTRY		
Climatic, and agro-ecological zones	Sandvelt, Hardvelt, Alluvial plains,and lacustrine	4
ADMINISTRATIVE ORGANISATION OF THE COUNTRY		
1st administrative level	District	10
2nd administrative level	Sub-district	28
Urban entities		7
VETERINARY SERVICES ORGANISATION AND STRUCTURE		
Central (Federal/National) VS	Department of VS	1
Internal division of the central VS	Divisions	7
1st level of the VS	District veterinary office	7
2nd level of the VS	Sub-district veterinary office	28
3rd level of the VS	Cluster	55
Veterinary organisations (VSB, unions…)	VSB, BV association	2
FIELD ANIMAL HEALTH NETWORK		
Field level of the VS for animal health	Extension area	294
Private veterinary sector	Private veterinarians	14
Other sites (dip tank, crush pen….)	Crush pen	4500
VETERINARY MEDICINES & BIOLOGICALS		
Production sector	Botswana Vaccine Institute	1
Import and wholesale sector	Medswana and Gaborony Vet clinic	2
Retail sector	Livestock Advisory Centre	35
Other partners involved	Pharmacies, private vets and drug shops	135
VETERINARY LABORATORIES		
National labs	BNVL	1
Regional and local labs		
Associated, accredited and other labs		
ANIMAL AND ANIMAL PRODUCTS MOVEMENT CONTROL		
Bordering countries	Namibia, Zimbabwe, Zambia, South Africa	4
Airports and ports border posts	Seretse, Francistown, Maun, Kasane	4
Main terrestrial border posts	Authorised for animals and food	9
Minor terrestrial border posts	Not authorised for animal and food	15
Quarantine stations for import	In green or red zones	5 + 18
Internal check points	Veterinary control gates	56
Live animal markets	LMCCs + loading ramps	2 + 100
Zones, compartments, export quarantines	1 grey, 4 pink, 1 green	6
PUBLIC HEALTH INSPECTION OF ANIMALS AND ANIMAL PRODUCTS		
Export slaughterhouse	BMC Francistown and Lobatse + Ostrich	3
National market slaughterhouses	Non export municipal	14
Local market slaughterhouse	Licenced slaughter slabs	64
Slaughter areas/slabs/points	Rural slaughter facilities	?
On farm or butcher"s slaughtering sites	Wildlife on site and mobile slaughter	3
Processing sites (milk, meat, eggs, etc)	Milk processing plants and on farm	14
Retail outlets (butcher, shop, restaurant)	Not under VS mandate	
TRAINING AND RESEARCH ORGANISATIONS		
Veterinary university		0
Veterinary paraprofessional schools	BCA and MITC	2
Veterinary research organisations	NBVL and BCA	2
STAKEHOLDERS' ORGANISATIONS		
Agricultural Chamber / room /organisation	Botswana Agricultural Union	1
National livestock farmers organisations	Cattle, Poultry, Ostrich, Pig, Dairy, Shoats	6
Local (livestock) farmers organisations	Ghanzi, Sandveld, Southern Beef	50
Consumers organisations	Botswana Consumer Council	1

I.1.D Summary results of the OIE PVS evaluation

Human, physical and financial resources

Botswana has very competent Veterinary Services consisting essentially of a relatively small cadre of well-trained veterinarians; with many technical personnel. The veterinarians were trained at internationally recognized veterinary faculties and many have specialized international post graduate training. Positions at the central, district and sub-district levels are clearly designated for veterinarians, but the available number of veterinarians in the field is quite limited and the vast majority of the direct contact with livestock and producers is done by a large staff of veterinary para-professionals. All veterinary para-professionals have received formal training in animal health but are not generally directly supervised by veterinarians during their field activities, in part because there are too many levels of sub-delegation between the district veterinarians and the veterinary para-professionals and non-technical staff performing field activities.

In addition, there are only two public sector veterinarians working in the important wildlife sector and relatively few private veterinarians working in the field with commercial farmers.

DVS has adequate and well managed physical resources at all levels. This includes a very good central laboratory with the capacity to handle a large number and variety of samples annually with good quality control systems and accreditations in place. DVS collects and maintains a large volume of high quality data within the various components of VS, including the laboratory, but the various electronic databases for BNVL, GIS, disease control and LITS are not integrated.

Operational and emergency funding of the VS are sustainable. However, the recent economic crisis, has affected capital investment, mainly on renewal of some logistic.

Technical authority and capability

Botswana has a well supplied and maintained central veterinary laboratory (BNVL) which currently provides its services free of charge. BNVL has broad capacity for veterinary diagnostics and veterinary public health and uses other laboratories for tests it cannot perform. The laboratory is ISO or SANAS accredited for a number of tests and quality assurance is in place.

Botswana has well established border inspection posts (BIPs) and all land borders are fenced to limit incursion of foreign livestock and wildlife. The BIPs are adequately staffed and linked by telecommunications and supervised by DVO veterinarians.

Botswana has an internationally recognized system for early detection and emergency response. Quarantine, zoning and border security activities are well executed. VS implement a variety of well planned disease prevention, control and eradication programmes. Ad hoc groups are used to deal with emerging issues.

Extensive surveillance is done for several diseases but is focused primarily on FMD in cattle. It is constrained by the lack of veterinarians in the field.

Food safety inspection is in place and in progress at all levels of red meat slaughtering.

Controls are in place for Veterinary medicines and biological and residue testing is enforced for the beef export sector and regularly audited.

The risk analysis process is well understood by DVS but currently there is no one trained in risk analysis on the staff. It is recommended that someone be hired or trained in risk analysis.

Interaction with stakeholders

As a beef exporting country, Botswana regularly attends regional (SADC) meetings and is an active member of the OIE and *Codex Alimentarius*.

Legal authority is established in the Veterinary Surgeons Act of 1973, which regulates all veterinarians. Under a new proposed act the current Veterinary Board will be replaced by the establishment of a Veterinary Statutory Body (VSB). The proposed VSB will expand the current Board and regulate both veterinarians and veterinary para-professionals.

Consultation with stakeholders is not formalised and occurs mainly on an ad hoc basis; however, there are well developed consumers groups organised under a national association. Producers are only consulted to organise animal health campaigns and sometimes to review gaps found during these campaigns. Extension workshops and other trainings are primarily given by veterinary para-professionals at the local level on a variety of subjects in their extension areas which provides more or less regular contact between veterinary para-professionals and farmers. Contact with veterinarians is highly variable but generally is rather limited.

Access to markets

Veterinary legislation and regulations are regularly and adequately developed and implemented.

Botswana has long established export markets for beef in the region and Europe which is supported by VS with considerable resources. These markets have been maintained by on-going compliance with OIE standards and certification of the specific requirements of the importing country. Botswana is an active member of the SADC Livestock Technical Committee which establishes trade protocols for regional trade.

Botswana has a good historical record of OIE notifications about different diseases and a history of transparency.

VS has successfully implemented strict control of animal movements to slaughter and between animal disease (FMD) control zones. An individual animal identification is in place for cattle; however, this traceability system is used mainly at the export abattoirs. Botswana has an extensive and long standing zoning system based on hundreds of kilometres of animal and wildlife control fences. Some of these zones are progressing toward FMD free-without-vaccination status.

I.2 Methodology

I.2.A Organisation of the mission

Following a request to the OIE from its government, a PVS Gap Analysis mission based on the outcomes of the OIE PVS report was conducted from 21st November to 1st December 2011 by a team of independent OIE certified experts: Dr Eric Fermet-Quinet as team leader and Dr Julia Punderson and Dr Jean-Claude Balcet as technical experts.

The first step of the PVS Gap Analysis mission is discussion and agreement with the CVO and representatives from each of the DVS Divisions on national priorities relevant to VS. This was followed by discussion with VS leadership of the desired levels of advancement for each critical competency in the context of the national priorities and constraints. The goal is to facilitate better compliance with recognized international standards as determined by OIE and agreed upon by all OIE member countries.

Generally, the PVS Gap Analysis is then conducted to identify the specific tasks needed to move each critical competency to reach the target of a five year period including an estimation of the resources needed to achieve these targets.

In this case, based on the detailed information provided and the remarkable progress made since the OIEPVS mission the previous year, the PVS Gap Analysis team developed a „proposed scenario" to develop an expanded field network of veterinarians within the current approximate budget. However, this network will take more than the five year window afforded by the Gap Analysis tool.

Day (D)	Purpose of the meeting	Participants
Tuesday 22/11	Courtesy meeting with the Minister Definition of the national priorities and of unit costs	Minister of Agriculture OIE Sub-Regional Office Heads of Divisions of DVS and OIE Delegate
Wednesday 23/11	Morning -Technical meeting on Trade Chapter Afternoon- Technical meeting on Veterinary Public Health Chapter	Heads of relevant departments
Thursday 24/11	Technical meeting Animal Health	Heads of relevant departments
Friday 25/11	Morning: Meeting on organisation of VS Afternoon: Meeting on Laboratory Issues	Heads of relevant departments
26-27/11	First synthesis of findings by the team of experts	The experts
Monday 28/11	First synthesis of findings by the team of experts	The experts
Tuesday 29/11	Validation meeting for all CC"s and CEC"s Collection of additional information & finalisation of the PVS Gap Analysis.	Heads of Divisions and Sections
Wednesday 30/11	Report writing and preparation for concluding meeting	The experts
Thursday 01/12	Final meeting	CVO, deputies and GS
Friday12/12	Departure	

I.2.B Estimation of resources needed

A logical approach for estimating the budget for strengthening the VS is used. This approach is as follows:

The Veterinary Services should have the financial resources sufficient to carry out essential tasks and duties, and be able to adapt to changes in animal health status. The budget for field activities (for government staff and officially delegated private veterinarians) must allow for planned activities, but should also support a flexible approach necessary to allow immediate responses when these are required. The amount of expenditure for each activity should be adjusted according to the national constraints, human resources (number and public/private split), priorities and trends in animal health and changes of animal health status.

Generally, the budget is developed for specific activities so that the desired level of advancement may be achieved as determined by the objectives, situation and characteristics of the country. The necessary tasks and resources required are identified and budgeted. Priorities are set out to provide assistance with the actual

allocation of funds - these will need to be finalised by the Veterinary Services during operational planning.

In this case, based on the level of the development of the VS and the remarkable progress made since the OIS-PVS mission in April 2010, it was agreed that it was not necessary to establish a budget for the next 5 years but rather to explore scenarios under current and projected budget constraints to develop a more comprehensive network of veterinarians in the field to ensure enhanced compliance with OIE standards over the next 5 to 10 years. This will be referred to throughout the report as the “proposed scenario”.

The overall budget analysis (Chapter VI) synthesises the different budget lines: on-going investment, salaries, repairs and maintenance, operations, etc. This budget demonstrates the effectiveness of the PVS Gap Analysis, its sustainability and also identifies the need to incorporate the programme into the quality control policy of the Veterinary Services.

Notes

The international currency used in this report for the estimation of costs and the budget is the euro [€].

In Botswana the amortisation rate of buildings/facilities, transport and equipment has been determined as such:

- 25 years for construction of building
- 15years for renovation of building
- 5 years for cars and 4x4, 3 years for motorbikes
- 5 years for cold chain
- 5yearsfor laboratory equipment
- 3years for telecommunication and computer equipment sets

Unit costs

1- Currencies

	Currency	Exchange rate
Currency used for this report (USD or EUR)	Euro	Number of Pula per Euro
National currency	Pula	10

2- Material investments

Buildings	Supply cost / unit	Number of years for amortisation
Unit of surface (m2) or (sq2)	**m2**	
Maintenance cost per unit of surface	20	
Renovation cost per unit of surface	150	15
Building cost per unit of surface	400	25
Transport (purchasing cost)		
Motorbikes	2 500	3
Cars	18 000	5
4x4 vehicles	35 000	5
Equipment set		
Cost of Telecommunication set (scanner+fax+telephone+photocopier)	600	3
Cost of office equipment set (base computer and necessary peripherics)	750	3

3- Non material expenditure

Training		
Initial training (per student)		
Veterinarians (DVM, BVS) total training cost	175 000	
Veterinary paraprofessionals total training cost		
Specialised training (short courses, certificates, Masters degree, PhD, etc))		
Accommodation per month	1 000	
Training fees per month	3 000	
Travel per month	1 000	
Cost of specialised training per month	**5 000**	
Continuing education (daily cost per man on a basis of a group of 15 people)		
Per diem for 15 participants	1 350	
Room rental and educational tools per day	100	
Daily cost of a national expert consultant	200	
Daily cost per trainee	**110**	
National expertise (cost per day)		
Daily fees	150	
Per diem	50	
Total cost per day and per expert	**200**	
International expertise (cost per week)		
Daily fees	220	
Per Diem	780	
Average cost of an international flight	1 000	
Total cost per week	**8 000**	

4- Salaries (salaries, bonuses and social benefits) / year

Veterinarians	27 000
Other university degree	20 000
Veterinary para-professionals	14 000
Support staff	3 500

5- Consumable resources

Travel allowances		
Per diem for technical staff	90	
Per diem for drivers	90	
Daily allowance for technical staff travelling abroad	250	
Average cost of an international flight	1 000	
Weekly allowance abroad	**2 750**	
Transport fees		Unit
Price of fuel (average between petrol, diesel or mixt) per unit	1,00	litre
Average number of km/miles per year		Unit
Average distance per year by motorbike (miles or km)	5 000	km
Average distance per year by car (miles or km)	20 000	km
*Average distance per year by 4*4 car (miles or km)*	15 000	km
	Fuel consumption per 100 km/miles	*Running (fuel + maintenance + insurance = consumption x 2)*
Km or mileage cost (motorbike)	2,5	0,05
Km or mileage cost (car)	7	0,14
Km or mileage cost (4x4 vehicle)	15	0,30

6- National economic indicators

GDP		Sources
National GDP	20 000 000 000	PVS report 2010
Agriculture GDP		
Livestock GDP	400 000 000	"
Total value of national herd	1 280 000 000	"
Value of exported animals and animal products	80 000 000	
Value of imported animals and animal products		
Number of VLU	2 800 000	calculation by experts
Country budget		
National Budget	2 000 000 000	"
Agriculture and Livestock Budget	135 000 000	"
Veterinary Services Current Budget	35 000 000	VS data 2011
Current budget for salaries of public staff of VS		
Current operational budget of VS		
Current capital investment of VS		
Current budget of VS for delegated activities	-	

I.2.C Organisation of the report

The desired levels of advancement for each PVS critical competency were identified, recognising national priorities and constraints, in discussion with the Veterinary Services of Botswana. A PVS Gap Analysis was then completed to facilitate their compliance with recognised international standards as determined by the OIE. The following chapters indicate the resources and activities necessary to strengthen the Veterinary Services. The chapters follow a logical order identifying priorities, recognising constraints and issues, assessing processes and resources necessary and providing a work-plan for improvement. Included in all sections and most critical competencies are elements of the "proposed scenario".

Chapter II.2 of the methodology part of this report sets out the levels of advancement to be reached as decided by the Veterinary Services in discussion with the PVS Gap Analysis mission team.

The first four chapters of the second part of this report presenting the PVS Gap Analysis set out the objectives to be achieved, taking into consideration in particular the need to strengthen the technical independence and coordination of the Veterinary Services.

- Chapter I sets the standards required for international trade in animals and animal products, establishing the levels of advancement required for exports if and as targeted by the national policy;
- Chapter II considers veterinary public health, including specifically food safety, veterinary medicines and biologicals;
- Chapter III addresses animal health issues, the core mission of any Veterinary Services;
- Chapter IV considers the capability and capacity of veterinary laboratories, as required by the three preceding chapters.
- The place of zoonosis may vary depending on the organisation of the country"s Veterinary Services (e.g. either under Chapter II (Animal Health pillar) or under Chapter III (Veterinary Public Health pillar).
- Chapter V makes recommendations on the general management of the Veterinary Services and the related regulatory services, including their public and private components, aiming at providing coordination and technical independence in line with OIE standards. Both the organisational structure of the national (public) Veterinary Services, including central and decentralised structures, and the role of private veterinary practitioners are defined. This chapter also identifies the reinforcement of cross-cutting skills (communication, legislation, education, etc.) required to run effective Veterinary Services in the country.
- In order to assess its sustainability and coherence, Chapter VI presents the Budget for strengthening the Veterinary Services and proposes an indicative analysis of this budget, including a breakdown per main budget lines(investments, operations, emergency) and sub-lines (salaries, items, etc.), and a comparison with GDP (national, agriculture and livestock), national budget (total, agriculture, Veterinary Services), value of national livestock and of imported and exported animal products.

II National and international priorities and expected levels of advancement

The strengthening of the VS is based on carefully developed and agreed national priorities with consideration of national constraints. National priorities have been discussed and agreed on by the VS leadership as part of the OIE PVS Gap Analysis mission. Relevant strategic planning or other documentation already in existence, such as for the agricultural or livestock sectors, relevant aspects of human health (zoonoses), or for the VS itself are taken into account to ensure that the PVS Gap Analysis is consistent with broader, related national priorities and policies previously established and agreed on. In this case, the "proposed scenario" provides an additional framework for the development of VS structures to more fully comply with international standards.

II.1 National priorities

Table n°1 - Table for listing national priorities

Category of priorities	National priorities	Explanatory comments (importance for the country)
Policy on **livestock development (LD)** and trade	LD1: Maintain and expand access to international export markets of animal products. LD2: Ensure food security through national production (import substitution) and safe imports of animal and animal products.	National Master Plan for Arable Agriculture and Dairy Development (2002) Botswana Excellence; a strategy for economic diversification and sustainable growth (November 2008) National Agriculture Development Plan (1991; now being updated) Review of Agricultural Policy (Draft) Livestock and Meat Industries Act of 2007 Botswana beef export and trade policy [2005]
Technical priorities in Veterinary Public Health (VPH)	VPH1:Ensure same level of food safety (including for residues) for national and international market VPH2: Develop comprehensive control of use of veterinary medicine and biological to limit side effects.	Residue surveillance programmes for milk, livestock and meat products; Regulation prohibiting use of anabolic and thyrostatic and beta agonist substances (2007); Regulation prohibiting animal protein feeding to ruminants; Food Control Act of 1994; Draft regulation on control of veterinary medicines Public Health Act (includes zoonosis; update drafted)
Technical priorities in **Animal Health (AH)**	AH1:Ensure that all official programmes relevant to TADs and zoonosis are based on risk analysis and cost efficiency and cost benefit analysis AH2: Promote joint programmes with stakeholders for other relevant diseases of economic importance AH3: Promote access to relevant professional clinical diagnostic and other services delivered to farmers	Preserve diagnostic capacity at BNVL in the context of plans to join 3 research entities together: Department of Agriculture research, national food technology research centre, and BNVL
Policy on organisational structure and management of the **Veterinary Services (VS)**	VS1:Undertake progressive structural reforms to improve efficiency of the VS without compromising OIE compliance, within a context of budget constraints, decentralisation and privatisation. VS2: Establish a field animal health network in OIE compliance involving a sufficient number of veterinarians.	Budget speech 20011/12 Privatization Master Plan II, 2012-2017 MoA Restructuring document- organization, decentralization and methods

II.2 Level of advancement

The experts and the VS then worked together, taking into account the national priorities, current levels of advancement and progress made since the OIE PVS mission report for each of the 46 critical competencies over the next five years, as well as the "proposed scenario" for the longer term, as indicated in the table below.

Table n°2 - Levels of advancement

Critical competencies	Levelof advancement	
	current	target
Chapter 1. Human, physical and financial resources		
I.1.A. Veterinarians and other professionals	2	3
I.1.B. Veterinary para-professionals and other technical staff	3	4
I.2.A. Professional competencies of veterinarians	4	4
I.2.B. Competencies of veterinary para-professionals	4	4
I.3. Continuing education	3	4
I.4. Technical independence	4	4
I.5. Stability of structures and sustainability of policies	4	5
I.6.A. Internal coordination (chain of command)	4	5
I.6.B. External coordination	4	5
I.7. Physical resources	3	4
I.8. Operational funding	4	4
I.9. Emergency funding	3	3
I.10. Capital investment	3	4
I.11. Management of resources and operations	3	5
Chapter 2. Technical authority and capability		
II.1 Veterinary laboratory diagnosis	5	5
II.2 Laboratory quality assurance	5	5
II.3 Risk analysis	2	5
II.4 Quarantine and border security	4	5
II.5.A. Passive epidemiological surveillance	2	3
II.5.B. Active epidemiological surveillance	4	5
II.6 Early detection and emergency response	4	4
II.7 Disease prevention, control and eradication	3	4
II.8.A. Ante and post mortem inspection	2	4
II.8.B. Inspection of collection, processing and distribution	2	3
II.9 Veterinary medicines and biologicals	3	4
II.10 Residue testing	3	3
II.11 Emerging issues	3	4
II.12 Technical innovation	2	4
II.13.A. Animal identification and movement control	3	5
II.13.B. Identification and traceability of products of animal origin	3	3
II.14 Animal welfare	2	4
Chapter 3. Interaction with stakeholders		
III.1 Communications	2	4
III.2 Consultation with stakeholders	2	4
III.3 Official representation	3	4
III.4 Accreditation / authorisation / delegation	3	4
II.5.A. Veterinary Statutory Body authority	3	3
II.5.B. Veterinary Statutory Body capacity	2	2
III.6 Participation of producers and stakeholders in joint programmes	2	3
Chapter 4. Access to markets		
IV.1 Preparation of legislation and regulations	4	5
IV.2 Implementation of legislation & stakeholder compliance	3	5
IV.3 International harmonisation	3	4
IV.4 International certification	4	5

IV.5 Equivalence and other types of sanitary agreements	3	5
IV.6 Transparency	4	5
IV.7 Zoning	5	5
IV.8 Compartmentalisation	2	2

PVS GAP ANALYSIS

I Strengthening competencies for international trade

The purpose of this section is to explain the proposed activities in the field of international trade development, for both imports and exports.

This will include the activities presented in Critical Competency Cards II.4, II.13, IV.4, IV.5, IV.6, IV.7 and IV.8. If necessary, links could be made with the important cross-cutting competencies dealt with in the 5th pillar on management of Veterinary Services (e.g. chapter V.2 of the report) in the 2nd pillar on veterinary public health or in the 3rd pillar on animal health.

I.1 Strategy and activities

Botswana"s strategy related to trade is oriented to developing its access to the international market (especially for beef meat).

Two main aspects of this have a major budgetary impact:

- First, taking into account its high cost, the extensive zoning system of fences and control gates should be maintained based on risk analysis. Although budgetary constraints cannot be the driving force to define zoning, zoning appears too static and has not assessed on a rigorous basis to identify inefficiencies or wastage of resources. In the proposed scenario, management of non-essential fences and gates internal to “green” zones are transferred to farmers associations or local authorities.
- Second, the current animal identification and traceability system should be improved very significantly in compliance with importers audit requirements. In the proposed scenario, visible permanent ear-tagging of cattle is added to bolus insertion, as well as temporary identification of all animals moving between districts. Animal identification will be implemented free of charge by the animal health field veterinary network (see chapter III).

Border security should maintain its current level on the selected entry points for animal and animal products (15 border points are not authorised for such entry), but take advantage of the regional integration to further develop pre-import requirements in order to avoid implementation of vaccination and identification procedures at border posts.

Generally, the VS will maintain credibility by developing its own ability for general internal auditing of international certification, pursuing development of sanitary agreements with trading partners, and consulting with relevant stakeholders.

I.2 Human resources

The main impact on human resources is a reduction of support staff related to the expected decrease of number of fences and gates maintained by VS.

Data management of animal identification requires support staff at each district level, as data entry and relevant forms or registers should be updated very regularly. This is best done at the local level. In addition, with the integration of databases, access at the local level of information within the entire system will be used with greater frequency for animal movement controls, and to address animal health, veterinary public health and reporting of laboratory information.

The following table describe the human resources needed in the proposed scenario, where most internal fences and gates are decommissioned (30% of fences and 50% of gates):

- 30 veterinary para-professionals maintained for border security;

- 780 support staff for zoning, including team of fence builders, quarantines, etc.;
- 10 veterinary para-professionals for marketing facilities control, posted in DVOs;
- 30 support staff for data entry, posted in DVOs; and
- animal identification may represent an equivalent of 25 Full Time Equivalent (FTE) positions that should be taken into account for the workload of AH field veterinary network, and are not budgeted here. Temporary identification for trade cannot be assessed properly, but should not be very important taking into low level of local trade.

Table n°3 - Human resources needed for trade inspection and control of animal and animal products

Trade inspection and control of animal and animal products					Human resources							
PVS Critical competency	Categories of sites to inspect or of tasks to perform	Number of sites (or task) of this category	Number of days of work per year on site (or per task)	Number of hours of work per day on site (or per task)	Veterinarians		Other university degree		Veterinary para-professionals		Support staff	
					on site	total in equivalent full time	on site	total in equivalent full time	on site	total in equivalent full time	on site	total in equivalent full time
II.4	**Quarantine and border security**									29,6		
	Seretse airport	1	365	12,0					1	2,4		
	Francistown airport	1	365	12,0					1	2,4		
	Maun airport	1	365	1,0					1	0,2		
	Kasane airport	1	365	1,0					1	0,2		
	terrestrial border posts- 6 to 6	5	365	12,0					1	12,2		
	terrestrial border posts 6 to 12	2	365	16,0					1	6,5		
	terrestrial border posts 6 to 10	2	365	14,0					1	5,7		
	unauthorized entry points	15										
II.13.A	**Animal ID and Movement control**									35,0		28
	Internal check points											
	market facility control	10	224,0	8,0					1	10,0		
	Animal identification											
	cattle x 60% x 60%	900000	1	0,05					1	25,0		
	Data management for animal ID											
	cattle	2500000	1	0,020							1	28
II.13.B	**Traceability of products of animal**											
IV.7.	**Zoning**											780
	gates between red/green zones 24	28	365	24,0							2	272,5
	gates between red/ green zones 16h	14	365	16,0							2	90,8
	internal quarantines	13	365	24,0							2	126,5
	maintenance of fence	29	225	8,0							10	290,0
IV.8	**Compartimentalisation**											

In the proposed scenario, 140 man-days of continuing education are budgeted for 40 veterinary para-professionals and 30 data entry staff, on the basis of 2 man-days per year.

I.3 Physical resources

Physical resources are essential to be maintained for trade purposes, although the possible reduction in number of fences and control gated will allow a decrease to this budget.

In the proposed scenario:

- All border posts, markets and quarantines are computerised systematically.
- All sites have access to telecommunications (including gates).
- An important equipment budget (1,5 million €) is devoted to identification equipment, including an increased number of readers for the electronic identification boluses.
- Fence builders still need important means of transportation (30 4x4 and 15 larger trucks) and maintenance costs are estimated to be 25% of the cost of initial building for 3000 km of fences.

I.4 Financial resources

The major impact of the proposed strategy will be the reduction of budget outlay related to zoning. However, even under the proposed scenario that reduces resources needed for control gates and fences, this still represents a significant commitment of resources within the budget.

In the proposed scenario, an important part of the budget is related to identification, as in addition to the bolus, permanent and temporary ear-tagging is implemented.

In addition, an exceptional budget of 296000 € over 5 years for 100 days of national expertise training, 12 months of specialized training, and 27 weeks of international expertise isincluded primarily to address upgrading the identification system and supporting databases. The national expertise and specialized training will be primarily to train data entry personnel, while the international expertise supports the on-going contract to update the LITS identification system.

The sub-total for trade related activities is around 10 million € per year, with approximately a third of this amount for investments, a third for salaries and a third for consumables (mostly for identification).

Table n°4 - Sub-Total for strengthening competencies for international trade

SUB-TOTAL TRADE						
Resources and Budget lines	Current Number	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments						
Buildings (m²)		2300				
Existing building to be maintained (m²)		2300	20	1	46 000	
Existing building to be renovated (m²)			150	15		
Building to be built (m²)			400	25		
Transport						
Motorbikes			2 500	3		
Cars			18 000	5		
4x4 vehicles		30	35 000	5	210 000	
Other transport					450 000	
Other transport						
Telecommunication equipment set		68	600	3	13 600	
Office equipment set		64	750	3	16 000	
Other specific equipment						
					2 251 300	
					27 500	137 500
Sub-total Material investments					**3 014 400**	**137 500**
Non material expenditure						
Specialised training (man-months/ 5 years)		12	5 000			60 000
National expertise (days/5 years)		100	200			20 000
International expertise (weeks/5 years)		27	8 000			216 000
Special fund for……		-				
Sub-total non material expenditure						**296 000**
Salaries / year						
Veterinarians		-	27 000			
Other university degree		-	20 000			
Veterinary para-professionals	40	40	14 000		560 000	
Support staff	1 200	810	3 500		2 835 000	
Sub-total Salaries					**3 395 000**	
Consumable resources / year						
Administration			20%		679 000	
Travel allowances						
staff within the country (man-days) / year		-	90			
drivers within the country (man-days) / year		-	90			
staff abroad (man-weeks) / year		13	2 750		35 750	
Transport fees						
Km or miles Motorbikes / year		-	0			
Km or miles cars / year		-	0			
Km or miles 4x4 vehicle / year		450 000	0		135 000	
Km, miles, hours or days Other transport / year					1 050 000	
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Specific costs						
Specific continuing education (man-days / year)		140	110		15 400	
Specific communication / year						
Specific consultation / year						
Specific kits / reagents / vaccines						
bolus replacement					500 000	
eartags					1 000 000	
Sub-total Consumable resources					**3 415 150**	
Delegated activities / year						
Specific official delegation / year						
Sub-total Delegated activities						
Total in Euro					***9 824 550***	***433 500***
Total in Pula					***98 245 500***	***4 335 000***

II Strengthening competencies for veterinary public health

The purpose of this section is to explain the proposed activities in the field of food safety.

This will chiefly include the activities presented in the Critical Competency Cards II.8, II.9 and II.10. If necessary, links could be made with the important cross-cutting competencies developed in the 5th pillar on management of Veterinary Services (e.g. Chapter V.2 of the report).

II.1 Strategy and activities

Strengthening competencies for veterinary public health is a normal trend for developed VS. Botswana‟s policy is to assure national consumers that equivalent standards are applied for domestic and international markets in terms of veterinary public health.

II.1.A Food safety

The overall food safety strategy is to give the national consumer the same level of protection provided for products for the international market. This will necessitate the expansion of a residue testing programme to products distributed throughout the national market and placing veterinary para-professionals under the effective supervision of veterinarians at slaughter facilities whatever their sizes and species slaughtered. Much of the coordination responsibility will be with the DVO, including increasing the capacity for inspection of animal products, such as meat products, milk processing, eggs for human consumption and animal feeds. Full compliance with international standards will also necessitate working more closely with the Ministry of Health.

This improved ante and post-mortem inspection programme will also target major zoonosis present in Botswana (e.g., TB, cysticercosis, hydatid disease (echinococcosis), anthrax).

II.1.B Veterinary medicines and biologicals

To strengthen controls for veterinary medicines, decrease residues and prevent development of antimicrobial resistances, the strategy is to develop a comprehensive system supported by detailed regulations on prescription, registry, etc, at all levels.

In the context of Botswana characterised by a low density of animals, retail sales should be under the control of veterinarians of the field veterinary network as part of their regular clinical activities and not through separate channels of distribution. The current LAC network should be fully integrated into the field veterinary network. This strategy would also support possible future privatization of the field veterinary network, by securing the distribution channel. In particular, private veterinarians should not be authorized to open stand-alone veterinary pharmacies and other „drug shops‟ should no longer be authorized to sell veterinary products without veterinary controls.

The control system for veterinary pharmaceuticals should be planned and implemented by central level, with possible further support of DVOs to perform inspections in the field.

In the proposed scenario, the function of LAC is only maintained as an independent central entity for import and wholesale purposes in order to retain a strong position to negotiate with pharmaceutical industry. The LAC revolving fund should be flexible enough to ensure regular supply of any veterinary medicines and biological requested by the field veterinary network. Wholesale pricing should only be directed to veterinarians (public or private) working in the field. A retail margin should be established to promote fair competition for private sector veterinarians. This margin

should also be established to reduce “self-purchase” by farmers and to promote prescription following appropriate clinical diagnostics.

II.1.C Residue testing

The aim of the VS is to provide the same standards for national consumers as for the international market. Scientific planning and control measures will be adapted for meat, milk, and eggs.

II.2 Human resources

The main trend in area for human resources is to increase the number of veterinarians involved in slaughter inspection.

In the proposed scenario, the calculation table demonstrates that:

- 33 veterinarians and 135 veterinary para-professionals are requiredto provide appropriate inspection for all slaughter places with full time working hours;
- an equivalent of 10 full time veterinarians is needed to provide inspection in the 65 rural slaughter slabs (estimated 2 hours and 3 times a week);
- inspection of sites of animal products processing could be done by specialised staff of central level with support of the DVO if necessary; and
- veterinary drug controls could be performed by relevant specialised staff of central level with support of the DVO if necessary.

In addition, an estimated exceptional budget of 90 000€ over 5 years for specialised training of staff to perform the necessary inspections is included in the budget.

II.3 Physical resources

Few physical resources are needed for veterinary public health as slaughter and processing facilities are not considered part of the VS.

In the proposed scenario, maintenance of the warehouse, cold chain and transportation for the current central LAC has been budgeted, as it is expected that its role as the main wholesaler of veterinary pharmaceuticals is necessary during an undetermined transition period in the context of Botswana. In the future, if the LAC system can become self-sufficient and provide veterinary pharmaceuticals under a competitive pricing scheme appropriately controlled, it may remain the best outlet for these products.

In addition, the cold chain has also been budgeted for each DVO to support the official vaccination campaigns by ensuring adequate cold storage of vaccines.

II.4 Financial resources

Most of financial resources necessary in veterinary public health are related to human resources.

In the proposed scenario, a budget is maintained to continue to perform residues analysis abroad. This budget might be reduced with the progressive development of residues testing capacity at the national level. However, this will be balanced against the possible extension of residue programmes for animals and products in the domestic market.

The total budget is around 4 000 000 € per year. The trend of this budget will be to increase in the future, in order to support further economic development of the livestock industry in Botswana.

Table n°5 - Human resources needed for VPH inspection and control

Categories of sites to inspect	Number of sites of this category	Number of days of work per year on site	Number of hours of work per day on site	Veterinarians		Other university degree		Veterinary para-professionals		Support staff	
				on site	total in equivalent full time	on site	total in equivalent full time	on site	total in equivalent full time	on site	total in equivalent full time
Ante & post mortem inspection					**44,3**				**135,6**		
Export slaughterhouses red meat	3	250	8,0	2	6,7			20	66,7		
Export ostrich slaughterhouses	1	250	8,0	1	1,1			3	3,3		
municipal and private slaughterhouses	21	250	8,0	1	23,3			1	23,3		
rural private slaughter slabs	65	150	2,0	1	10,8						
wildlife and mobile slaughter	1	20	8,0	1	0,1			1	0,1		
small poultry slaughterhouses (D1+D2)											
medium poultry slaughterhouses (B+C)	16	250	8,0					2	35,6		
major poultry slaughterhouses (A)	2	250	8,0	1	2,2			3	6,7		
Animal products inspection					**0,5**						
Meat processing											
Senn foods national meat process	1	4	8,0	1	0,0						
Others meat processing	20	2	4,0	1	0,1						
Dairy processing											
Industrial mixed dairy plants	14	2	4,0	1	0,1						
Milk collecting points											
Cheese making small factories											
Eggs processing											
Eggs packaging and selling farms	100	1	2,0	1	0,1						
Eggs processing (powder, etc)											
Fisheries or aquatic sectors											
Fish factory											
Landing stage/wharf											
Drying plant and processing											
Aquaculture farms											
Other food processing											
honey and others	100	1	1,0	1	0,1						
Distribution sector											
Food retail market/shops (MoH)											
Restaurants (MoH mandate)											
Butchers (MoH mandate)											
Feeding stuff sector											
Major feed companies	3	2	4,0	1	0,0						
Small feed sellers	200	1	1,0	1	0,1						
Veterinary medicines/biologicals					**1,0**						**1**
Drug registration and management	1	180	8,0	1	0,8					1	0,8
Producing companies [BVI]	1	2	8,0	1	0,0						
Import -Metswana and Gabarone	2	2	4,0	1	0,0						
LAC	35	2	2,0	1	0,1						
Pharmacies/vets/drug shops	135	1	2,0	1	0,2						
Residues testing											
sampling in export slaughter house	1000										
sampling in national slaughter houses	2000										

Table n°6 - Sub-Total for strengthening competencies for veterinary public health

SUB-TOTAL VETERINARY PUBLIC HEALTH						
Resources and Budget lines	Current Number	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments						
Buildings (m²)		1 500				
Existing building to be maintained (m²)		1 500	20	1	30 000	
Existing building to be renovated (m²)		-	150	15		
Building to be built (m²)		-	400	25		
Transport						
Motorbikes		-	2 500	3		
Cars		-	18 000	5		
4x4 vehicles		-	35 000	5		
Other transport					50 000	
Other transport					40 000	
Telecommunication equipment set		-	600	3		
Office equipment set		-	750	3		
Other specific equipment						
					22 000	
Sub-total Material investments					**142 000**	
Non material expenditure						
Specialised training (man-months/ 5 years)		18	5 000			90 000
National expertise (days/5 years)		-	200			
International expertise (weeks/5 years)		-	8 000			
Special fund for…..						
Sub-total non material expenditure						**90 000**
Salaries / year						
Veterinarians	10	33	27 000		891 000	
Other university degree		-	20 000			
Veterinary para-professionals	155	135	14 000		1 890 000	
Support staff		-	3 500			
Sub-total Salaries					**2 781 000**	
Consumable resources / year						
Administration			20%		556 200	
Travel allowances						
staff within the country (man-days) / year		-	90			
drivers within the country (man-days) / year		-	90			
staff abroad (man-weeks) / year		-	2 750			
Transport fees						
Km or miles Motorbikes / year			0			
Km or miles cars / year			0			
Km or miles 4x4 vehicle / year			0			
Km, miles, hours or days Other transport / year					140 000	
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Specific costs						
Specific continuing education (man-days / year)		-	110			
Specific communication / year						
Specific consultation / year						
Specific kits / reagents / vaccines						
					250 000	
Sub-total Consumable resources					**946 200**	
Delegated activities / year						
Specific official delegation / year						
Sub-total Delegated activities						
Total in Euro					***3 869 200***	***90 000***
Total in Pula					***38 692 000***	***900 000***

III Strengthening competencies for animal health

The purpose of this section is to explain the activities proposed in the field of animal health.

These activities are chiefly those presented in the Critical Competency Cards II.5, II.6; II.7 and II.14. If necessary, links could be made with the important cross-cutting competencies dealt with in the 5th pillar on management of Veterinary Services (e.g. Chapter V.2 of the report).

III.1 Strategy and activities

The VS of Botswana has in place many animal disease control programmes with the majority of resources directed to the detection and control of FMD; these programmes have been essential for maintaining international exportation of beef.

All current animal health programmes have been developed using low skilled personnel without substantial presence of veterinarians in the field. This does not comply with OIE standards and poses a major risk for exports in the long term. No credible passive surveillance programmes can be implemented for animals at farm level in the current context.

The field veterinary network should be sufficient to implement the regulated activities (workload), be accessible to farmers, and provide surveillance and early detection supported by adequate resources to be sustainable.

In order to maintain control of all field activities, avoid wastage of resources, support possible sustainability and deliver the best services to farmers, the field veterinary network should be in charge of a comprehensive set of activities related to animals, including identification, extension, and veterinary drugs retail distribution. This is a key point especially in a context of low animal density in Botswana.

Animal health programmes have not been regularly assessed in term of risk, efficacy, efficiency and cost/ benefit analysis. Such analysis is needed to ensure that the programmes appropriately serve the current and future context of Botswana"s livestock industries.

In the proposed scenario, the animal health programmes are reorganised as follows:

- passive surveillance programmes will be limited to tuberculosis, CBPP, FMD, cysticercosis, hydatid disease (echinococcosis), through systematic observation of lesions and signs during inspection with data entry at all slaughter places;
- active surveillance programmes for salmonella in poultry, BSE in slaughterhouses, on FMD in the free zone, for post vaccination control of FMD in FMD vaccination zones, and for surveys of FMD and brucellosis in small ruminants
- early detection and rapid response programmes will be established for FMD in the free zones, and for HPAI, RVF and CBPP;
- compulsory vaccination programmes for FMD (only in vaccination zones), rabies (all dogs and cats) and brucellosis (for female cattle less than 7 months);
- vaccination for anthrax (except in case of outbreaks) and blackleg will be voluntary and has already been turned over to the private sector;
- animal welfare activities will be developed with joint responsibility of the central level and DVO veterinarians in coordination with customs and police, and private sector.

III.2 Human resources

As part of the overarching long term strategy, the main trend in human resources is to bring veterinarians into the field and in contact with animals and farms. These veterinarians should work in the field and directly supervise the activities of veterinary para-professionals.

All activities that do not require technical qualifications, such as animal handling, should be the responsibility of the farmers, in consequence requiring fewer VS support staff.

Currently there are 2.8 million VLU in Botswana but only 75 veterinarians, of whom 14 are in the private sector. To improve contact of veterinarians with livestock in the field, additional veterinarians will need to be recruited or trained.

In the proposed scenario, it is estimated that 65 teams composed of 1 veterinarian and an average of 3 veterinary para-professionals per team could undertake all official vaccinations and active surveillance within the 90 days of official campaign (May to July) on the basis of one crush per day [total 6,000 crushes to be visited].

In addition to the 90 day official campaigns, the field veterinary network will also undertake animal and public veterinary health extension work, on the basis of one day per year for groups of 30 farmers. This will represent 30 days of work for one or two staff of each team (60000 farmers / 30 / 65 = 30).

In addition to above mentioned activities, if one includes rural slaughter inspections made by the field veterinarian and other tasks related to movement control, it is estimated that 60% of working time will be devoted to official activities. This strategy will allow for the progressive development of clinical diagnostics and veterinary medicine retail sales. This is a necessary first step to foster the development and sustaining a network of private veterinarians in the field. Any progression to privatisation must also take into account the relative importance of public activities delegated to the private sector that must continue to be financed. A strategy for privatisation or delegation of official activities to the private sector cannot be done without sustained adequate financial support for these activities.

The following table provides an assessment of the distribution of the 65 teams according to the number of animals present in each district and some sub-districts (detailed data not available for all sub-districts).

On average, each team would be in charge of approximately 44 000 VLU, 900 farmers and 90 crushes with a maximum accessibility distance of approximately70 Km. This estimations is considered coherent and consistent with regional variations.

In the proposed scenario, all 65 veterinarians and 195 veterinary para-professionals are budgeted as public staff. However, this network should be reviewed as a comprehensive strategy developed to progressively serve as an incentive for the establishment of a network of private veterinarians within Botswana (see chapter V and VI).

Administrative level	Area in Km2 or sq mile	Number of VLU	Number of crushs	Number of farmers	Number of VLU / Km2 or sq mile	Proposed optimum number of FVPs*	Accessibility to optimum number of FVPs*	Number of crushs per FVP	Number of farmers per FVP*	Number of VLU per FVP*
	l	m = (a)	n	o	p = m/l	s	t = √((0,5*l)/s)	u = (n/s)	v = (o/s)	w = (m/s)
Kgatleng	7 960	79 332	172	3285	9,97	2	45	86	1643	39 666
S.East	1 780	144 727	208	2891	81,3	4	15	52	723	36 182
Gaborone		81 643	84	1076						
Lobatse		63 083	124	1815						
Kweneng	35 890	261 376	430	5676	7,3	6	55	72	946	43 563
Southern	28 470	261 273	210	2461	9,2	6	49	35	410	43 545
Kanye		156 322								
Jwaneng		104 951	210	2461						
Kgalagadi	106 940	206 403	315	4041	1,9	5	103	63	808	41 281
Tsabong		131 047	199	2079						
Hukuntsi		75 356	116	1962						
Ghanzi	117 910	286 851	403	3356	2,4	7	92	58	479	40 979
N.West	109 130	368 227	644	10127	3,4	9	78	72	1125	40 914
Maun		321 382	539	8042						
Shakawe		46 845	105	2085						
Chobe	20 800	15 106	28	365	0,7	1	102	28	365	15 106
N.East	5 120	223 494	742	4024	43,7	5	23	148	805	44 699
Central	147 730	985 563	2885	21861	6,7	20	61	144	1093	49 278
Nata		68 842	329	2326						
Letlhakane		169 504	461	3644						
Serowe		177 418	423	6369						
Palapye		170 156	467	4430						
Mahalapye		241 157	693							
S/Phikwe		158 485	512	5092						
Total	**581 730**	**2 832 350**	**6037**	**58087**	**4,9**	**65**	**67**	**93**	**894**	**43 575**

III.3 Physical resources

The field veterinary network should maintain adequate resources.

In the proposed scenario, the following physical resources are budgeted for each of the 65 field veterinary posts:

- 100 m^2 building
- 2 vehicles 4x4
- 1 cold chain (fridge, small generator and cool box)
- 1 office and 1 telecommunication equipment sets
- 1 clinical equipment set

III.4 Financial resources

In the current scenario, human and physical resources represent around 55% of the budget as a fully public field veterinary network. Based on the estimation that 60 % of the workload for the field veterinary network is devoted to public activities, at least 60 % of the resources should be retained to continue to support officially delegated activities within the budget.

The second important budget item is for transportation. It may be overestimated as the budget calculation is based on an average distance of 15000 km per year for all 4x4 used by the VS. Distances to implement official activities during campaign and extension were estimated on the base of one return travel to each crush (6000 times for campaign and 2000 times for extension). For an average return distance estimated at 70 Km, each team would need to cover around 10 000 Km annually (8000x70/65 = 10 000). However, to allow further development of clinical services and to average mileage of all vehicles in the VS for budgeting purposes, the estimate of 15 000 Km per year and per 4x4 vehicle seems adequate, as well as the necessity to maintain 2 vehicles for each team in context of multiple team activities.

The third important budget line is related to purchase of vaccines, including1,4 million FMD doses, but also 150 000 rabies doses and 250 000 brucellosis vaccines. The impact of vaccines costs on the budget indicates the necessity of an in depth cost benefit analysis for all programmes.

The total budget for AH is estimated around 10 million € per year.

Table n°7 - Sub-Total for strengthening competencies for animal health

SUB-TOTAL ANIMAL HEALTH						
Resources and Budget lines	Current Number	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments						
Buildings (m²)		6 500				
Existing building to be maintained (m²)		6 500	20	1	130 000	
Existing building to be renovated (m²)		-	150	15		
Building to be built (m²)		-	400	25		
Transport						
Motorbikes		-	2 500	3		
Cars		-	18 000	5		
4x4 vehicles		130	35 000	5	910 000	
Other transport						
Other transport						
Telecommunication equipment set		65	600	3	13 000	
Office equipment set		65	750	3	16 250	
Other specific equipment						
					9 750	48 750
					13 000	
Sub-total Material investments					**1 092 000**	**48 750**
Non material expenditure						
Specialised training (man-months/ 5 years)		-	5 000			
National expertise (days/5 years)		-	200			
International expertise (weeks/5 years)		-	8 000			
Special fund for						
Sub-total non material expenditure						
Salaries / year						
Veterinarians		65	27 000		1 755 000	
Other university degree		-	20 000			
Veterinary para-professionals	485	195	14 000		2 730 000	
Support staff	1 602	-	3 500			
Sub-total Salaries					**4 485 000**	
Consumable resources / year						
Administration			20%		897 000	
Travel allowances						
staff within the country (man-days) / year		-	90			
drivers within the country (man-days) / year		-	90			
staff abroad (man-weeks) / year		-	2 750			
Transport fees						
Km or miles Motorbikes / year			0,05			
Km or miles cars / year			0,14			
Km or miles 4x4 vehicle / year		1 950 000	0,30		585 000	
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Specific costs						
Specific continuing education (man-days / year)		-	110			
Specific communication / year						
Specific consultation / year						
Specific kits / reagents / vaccines						
					2 800 000	
					250 000	
Sub-total Consumable resources					**4 532 000**	
Delegated activities / year						
Specific official delegation / year						
Sub-total Delegated activities						
Total in Euro					***10 109 000***	***48 750***
Total in Pula					***101 090 000***	***487 500***

IV Strengthening competencies for veterinary laboratory diagnostic

The purpose of this section is to explain the proposed activities in the field of veterinary laboratory diagnostic: Critical Competency CardsII.1 and II.2.

IV.1 Strategy and activities

The strategy is to maintain the high level of competence and efficacy of the BNVL, including quality assurance. Furthermore, to preserve the current high diagnostic capacity at BNVL it will be critical to ensure that any changes put in place by MoA to join the research entities at the Department of Agriculture research laboratory, national food technology research centre, with BNVL does not compromise BNVL"s competency.

The proposed scenario will not impact this competency.

IV.2 Human resources

Same level of human resources should be maintained, with support of relevant specialisation in residue testing and veterinary medicine controls (as mentioned in VPH).

A specific continuing education programme should be staffed in order to ensure an appropriate level of quality. It has been estimated that 610 working days would be needed, corresponding to 5% of the payroll.

IV.3 Physical resources

Same level of physical resources should be maintained. In this regards, according to the current value of equipment declared by the VS (estimated 5 million €), the budget for maintenance and metrology, currently around 500 000 €, is not enough. Annual maintenance and metrology should be estimated at around 20 % of the value of equipment, therefore estimated at 1 million € per year.

IV.4 Financial resources

Financial resources of the BNVL should be maintained to keep the laboratory fully operational.

Currently they are estimated at around 400 000 € for reagents and miscellaneous.

The total budget for laboratory is estimated at 3,2 million €.

Table n°8 - Sub-Total for strengthening competencies for veterinary laboratory

SUB-TOTAL VETERINARY LABORATORIES						
Resources and Budget lines	Current Number	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments						
Buildings (m²)		3 000				
Existing building to be maintained (m²)		3 000	20	1	60 000	
Existing building to be renovated (m²)		-	150	15		
Building to be built (m²)		-	400	25		
Transport						
Motorbikes		-	2 500	3		
Cars	3	3	18 000	5	10 800	
4x4 vehicles	1	1	35 000	5	7 000	
Other transport						
Other transport						
Telecommunication equipment set		-	600	3		
Office equipment set		-	750	3		
Other specific equipment						
	500 000				1 000 000	
Sub-total Material investments					**1 077 800**	
Non material expenditure						
Specialised training (man-months/ 5 years)		12	5 000			60 000
National expertise (days/5 years)		-	200			
International expertise (weeks/5 years)		-	8 000			
Special fund for….						
Sub-total non material expenditure						**60 000**
Salaries / year						
Veterinarians	12	12	27 000		324 000	
Other university degree	28	28	20 000		560 000	
Veterinary para-professionals	29	29	14 000		406 000	
Support staff	15	15	3 500		52 500	
Sub-total Salaries					**1 342 500**	
Consumable resources / year						
Administration			20%		268 500	
Travel allowances						
staff within the country (man-days) / year			90			
drivers within the country (man-days) / year			90			
staff abroad (man-weeks) / year			2 750			
Transport fees						
Km or miles Motorbikes / year			0			
Km or miles cars / year		60 000	0		8 400	
Km or miles 4x4 vehicle / year		15 000	0		4 500	
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Specific costs						
Specific continuing education (man-days / year)		580	110		63 800	
Specific communication / year						
Specific consultation / year						
Specific kits / reagents / vaccines	400 000				400 000	
					20 000	
Sub-total Consumable resources					**765 200**	
Delegated activities / year						
Specific official delegation / year						
Sub-total Delegated activities						
Total in Euro					***3 185 500***	***60 000***
Total in Pula					***31 855 000***	***600 000***

V Strengthening competencies for general management and regulatory services

In this section, reference should be made to the Critical Competency Cards I.2, I.3, I.4, I.5, I.6, I.11, II.3, II.11, II.12, III.1, III.2, III.3, III.4, III.5, III.6, IV.1, IV.2 and IV.3.

V.1 General organisation of the Veterinary Services

The global challenge for the VS in Botswana is to be able to improve their overall efficiency within a context of growing budgetary constraints through well adapted structural reforms without compromising compliance with OIE standards.

Compliance with OIE standards is especially at risk regarding the maintenance of the chain of command within a context of decentralisation policy. OIE compliance is also challenged without the establishment of an effective field veterinary network and within a context of privatisation policy. It will be critical to develop a clear strategy based on an accurate, detailed, functional analysis of the VS and its future needs with consideration for the requirements for OIE compliance and then to effectively communicate the strategy to the decision makers in the Ministries of Agriculture, Interior and Finance.

V.1.A Technical independence

Technical independence is a key factor of quality and credibility of the VS. Botswana won international credibility by establishing rigorous procedures and notifications. Technical independence will be improved through general regular internal audits.

Such technical independence is at risk by the lack of veterinarians in the field, who are considered internationally to represent a warranty of professional competences. The VS of Botswana face a problem of recruitment of veterinarians in the public sector and of settlement of private veterinarians in the field. This is not only because of lack of graduates, but also due to the lower level of salaries (estimated to be 20-30% less) and career opportunities than in the industrial private sector..

In the proposed scenario, in order to retain veterinarians in the public sector and to ensure sustainability of the AH field veterinary network, the budget has been established on the basis of a 30 % increase of revenues of veterinarians, passing from an average of 20 000 € up to 27 000 €per year.

V.1.B Coordination

The success of the VS in Botswana are partially due to a strict and direct chain of command from central to field level, passing through DVOs and Sub-DVOs.

In the context of decentralisation, the OIE PVS evaluations already mentioned that any disruption of the chain of command could be considered a major non-compliance with OIE standards and close the door of important export markets. VS already shares vehicles with other agriculture services at district level which may endanger the chain of command and capacity for VS to effectively perform early detection, rapid response and surveillance activities. VS should preferably not be incorporated in the decentralisation process and may benefit from splitting off animal production (which may take a positive advantage of decentralisation policy) from the VS authority.

In the proposed scenario, the chain of command is strictly maintained and kept outside the decentralisation process. Functions of coordination, such as planning and control, should be clearly defined and separated from field activities. In that context, the sub-district level does not seem adequate for coordination purposes.

V.1.C Veterinary practice organisation and policy

The private veterinary sector remains very limited in Botswana. In that regard, the establishment of a VSB does not appear to be a priority. However, clear regulations of professional behaviour, responsibility and duties should be established. Those regulations should include clear and effective supervision of veterinary para-professionals by veterinarians in all domains and sectors.

The privatisation policy should not be established only on the basis of budgetary constraints, but should seek to improve service delivery to farmers and provide access to an appropriate level of clinical diagnostics that are currently not available. In the context of Botswana, with the low density of animals, the sustainability of the veterinarians in the field can only be assured if they have a comprehensive integrated set of activities to perform. In particular the sale of veterinary medicines should be linked with veterinary diagnosis and practice.

In a context of shortage of veterinarians, the public sector will need to be maintained in the medium term to deliver basic services. It is particularly important for the VS to consult with private sector and interact with stakeholders to establish the basis for progressive development of veterinary field network. Three key elements should be analysed: development of official delegation, development of fees for clinical services performed in the public sector, and establishment a clear separation of wholesale and retail prices/functions/beneficiaries for veterinary medicine distribution.

V.1.D Official delegation

Official delegation is key for the establishment of a private AH field network. All activities related to AH could be delegated, as well as some activities related to VPH and Trade under appropriate controls and with an appropriate resource of private veterinarians in the field as resident practitioners available throughout the year locally.

It is key to establish very detailed procedures to allow, implement and control official delegation. The main points are to ensure sustainability of a network “in peace time” and to avoid establishing “private monopoly”. In that regard, official delegation should be linked to residency and practice in a specific area. In addition, farmers should have a choice of veterinarians, private or public; this is especially true during the transition period.

In the proposed scenario, a simulation was done on the basis of the 65 teams whose cost is around 6 500 000 € per year in the fully public sector.

Taking into account the current level of drug import (estimated at 1 million € by LAC and an equivalent amount by private sector importers, wholesale margin of 10%, retail margin of 50%), the gross margin of retail sales may provide 1 million € in net income to the field veterinary network. Clinical examination and other services fees could be estimated to provide the same amount of income. The total of 2 million € would still make it necessary to inject 4,5 million € from the national budget each year to support official delegation. This is coherent with the estimated 60% working time dedicated to official programmes as mentioned in AH chapter. The following table gives an estimate of the possible distribution of such amount.

The main lesson here is that, although official delegation is a very powerful tool to encourage development of the private veterinarians field network, it involves long term commitments within the VS budget to ensure sustainability and expected savings realistically will not be more than 30% compared to the fully public sector network.

Income generated by the Field Veterinary Network	bm	2 000 000
Income generated by a Field Veterinary Post	bn = bm / s	30 769
Cost of the Field Veterinary Network	bo = (an)	6 622 500
Cost of a Field Veterinary Post	bp = (am)	101 885
Minimum budget for the Field Veterinary Network	bq = (bo-bm)	**4 622 500**
Minimum budget for a Field Veterinary Post	br = (bp-bn)	**71 115**

Officially delegated activities	Type of target bs	Number of targets bt	% Target bu	Number of tasks to perform bv = (bt*bu)	Possible unit cost for distribution of budget bw	Total bx = (bv*bw)
Passive surveillance (II.5.A)						***5 000***
						-
Brucella testing of dairy farms	dairy cows	5 000	100%	5 000	1	5 000
						-
						-
						-
						-
						-
Active surveillance (II.5.B)						***10 000***
FMD active surveillance	bovines	2 000 000	0,001	2 000	5	10 000
						-
						-
						-
						-
						-
						-
Early detection and emergency response (II.6)						***5 000***
HPAI investigation of suspected foci	poultry foci	10	100%	10	100	1 000
FMD investigation of suspected foci		10	100%	10	100	1 000
RVF investigation of suspected foci		10	100%	10	100	1 000
CBPP investigation of suspected foci		10	100%	10	100	1 000
Anthrax investigation of suspected foci		10	100%	10	100	1 000
						-
Disease prevention, control and eradication (II.7)						***2 600 000***
FMD vaccination	cattle red zone	600 000	200%	1 200 000	1,5	1 800 000
Rabies vaccination	dogs and cats	150 000	80%	120 000	5	600 000
Brucellosis vaccination	young female	250 000	80%	200 000	1	200 000
						-
						-
						-
						-
						-
						-
Food safety (II.8)						***304 200***
part time rural slaughter inspection	3 x week x 2 hours	10 140	100%	10 140	30	304 200
						-
						-
						-
						-
Identification and traceability (II.13)						***950 000***
permenent identification of cattle	bovines	900 000	100%	900 000	1	900 000
temporary identification for movement	other animals	10 000	100%	10 000	5	50 000
						-
Participation of producers and other stakeholders in joint programmes (III.6)						***300 000***
1 day extension meetings	farmer groups	2 000	100%	2 000	150	300 000
						-
						-
Other Delegated activities						**-**
						-
						-
						-
Annual distances	**Km or miles**			**560 000**	**0,6**	**336 000**
					Total	**4 510 200**

V.2 Cross-cutting competencies of the VS

V.2.A Initial training

The lack of veterinarians is estimated around 100 in Botswana in the proposed scenario. As it is not realistic to train or recruit this many veterinarians within a single short generation, it is proposed to train 10 veterinarians per year over a period of 10 years.

Although the training related costs generally do not fall under the VS responsibility, this budget has been incorporated for purpose of highlighting its importance.

V.2.B Continuing education

The VS will establish a clear planning of continuing education. In the proposed scenario, some specific needs of continuing education have been highlighted in some critical competences. As a global budget, continuing education has been established on the base of 2 days per year for each technical staff.

V.2.C Management of operation and resources

The VS need to extensively review their management of data, in order to decrease the heavy paper work, integrate all data-bases, improve efficiency, and to develop relevant analysis.

A total of 2 million € has been budgeted by the VS in 2011 and in the proposed scenario is shared within relevant critical competences.

V.2.D Communication

Communication is an area of improvement of VS that will become very important in the context of structural change. A new position will be created to manage communication and capitalize on the availability of free radiobroadcasting, TV and new-papers.

V.2.E Consultation with stakeholders

Consultation of stakeholders will be formalised at all levels. This is needed to make progress in several critical competencies and to improve efficiency and help VS evaluating the needs of producers.

Two general annual meetings may be organised every year in each districts to ensure continued contact with stakeholder and provide an on-going forum for continued collaboration.

V.2.F Official representation

The VS should be in a position to fully participate to all relevant meetings and communicate important topics to impacted stakeholders.

In the proposed scenario, 15 meetings per year for one man week have been budgeted.

V.2.G Joint programmes

Development of joint programmes will be an important new strategy for the VS, especially for transition formerly official and compulsory vaccinations to voluntary status and institute cost recovered for some vaccinations (e.g. black leg, anthrax, etc.).

The VS should keep responsibility for all extension activities related to AH and VPH. These extension activities are part of the regular contact between the AH field veterinary network and farmers.

In the proposed scenario, extension will be organised at least one day per year and per group of 30 farmers and delivered as a professional contact to address the specific challenges of the local area.

V.2.H Legislation

The VS of Botswana will continue to develop and audit their legislation system as a strong point of their competence.

V.3 Human resources

Human resources identified in this section are limited in the management of the VS, but should receive a high level of specialisation in a number of required fields (e.g., risk assessment, auditing), but most specifically in veterinary public administration.

The total represents 21 veterinarians, 9 other professionals, 17 veterinary para-professionals and 83 support staff.

The organisation of central and DVO staff should more fully reflect the functions within VS.

Internal coordination of the VS		**21**	**6**	**17**	**81**
Central level		**11**	**6**	**7**	**31**
General Directorate		3	6	0	24
Director		1			2
Audit Section		1			1
Risk analysis section		1			1
Physical, human and financial management			6		20
Animal health		2	0	1	3
Disease Control and eradication		1		1	3
Epidemiological surveillance		1			
Veterinary Public Health		4	0	1	2
food safety section (slaughter and animal products)		2		1	1
veterinary medecine section		2			1
Trade, Border control and Traceability		2	0	5	2
Traceability section		1		5	1
border control and international certification		1			1
Deconcentrated Level of coordination		**10**	**0**	**10**	**50**
1st level of deconcentrated coordination	10	10	0	10	50
Distirct coordination		1		1	5

V.4 Physical resources

Ownership of physical resources is key for technical independence of the VS and necessary to avoid breaking the chain of command. In this regard, pooling of vehicles with other services should be avoided

In the proposed scenario, the VS will require:

- buildings: 1000 m^2 for central and 200 m^2 for each DVO
- 14 cars and 13 vehicles 4x4 (at least one per DVO)
- 22 telecommunications sets
- 85 office equipment sets

V.5 Financial resources

Naturally, two third of annual budget for management is represented by human resources and physical resources. The major competent is linked to transportation for representation and supervision.

Global budgets should be earmarked for continuing education (132 000 €), communication (60 000 €), consultation (40 000 €) and official representation (65 000 €), even though some of this has been distributed within other chapters.

The total recurrent budget for management is around 2 250 000 € per year.

Apart from the yearly budget, an exceptional budget of approximately 9 400 000 € is included for training new veterinarians and specialised training of existing staff. As this level of expenditures for training is expected to be maintained during 10 years to supply enough veterinarians for the field, this exceptional amount could be considered as part of the regular budget of the VS for next decade or so.

Table n°9 - Sub-Total for strengthening general management and regulatory services

SUB-TOTAL MANAGEMENT OF VETERINARY SERVICES						
Resources and Budget lines	Current Number	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments						
Buildings (m²)		3 000				
Existing building to be maintained (m²)		3 000	20	1	60 000	
Existing building to be renovated (m²)		-	150	15		
Building to be built (m²)		-	400	25		
Transport						
Motorbikes		-	2 500	3		
Cars	1	14	18 000	5	50 400	
4x4 vehicles	1	13	35 000	5	91 000	
Other transport						
Other transport						
Telecommunication equipment set		22	600	3	4 400	
Office equipment set		85	750	3	21 250	
Other specific equipment						
Sub-total Material investments					**227 050**	
Non material expenditure						
Initial training (number of students / 5 years)		50				8 750 000
Specialised training (man-months/ 5 years)		59	5 000			295 000
National expertise (days/5 years)		1 000	200			200 000
International expertise (weeks/5 years)		12	8 000			96 000
Special fund for…….						
Sub-total non material expenditure						**9 341 000**
Salaries / year						
Veterinarians	33	21	27 000		567 000	
Other university degree	6	9	20 000		180 000	
Veterinary para-professionals	20	17	14 000		238 000	
Support staff	83	83	3 500		290 500	
Sub-total Salaries					**1 275 500**	
Consumable resources / year						
Administration			20%		255 100	
Travel allowances						
staff within the country (man-days) / year		1 200	90		108 000	
drivers within the country (man-days) / year		1 200	90		108 000	
staff abroad (man-weeks) / year		10	2 750		27 500	
Transport fees						
Km or miles Motorbikes / year			0,05			
Km or miles cars / year		280 000	0,14		39 200	
Km or miles 4x4 vehicle / year		195 000	0,30		58 500	
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Km, miles, hours or days Other transport / year						
Specific costs						
Specific continuing education (man-days / year)		480	110		52 800	
Specific communication / year					60 000	
Specific consultation / year					40 000	
Specific kits / reagents / vaccines						
Sub-total Consumable resources					**749 100**	
Delegated activities / year						
Specific official delegation / year						
Sub-total Delegated activities						
Total in Euro					**2 251 650**	**9 341 000**
Total in Pula					***22 516 500***	***93 410 000***

VI Resources analysis

The proposed budget is the result of the PVS Gap Analysis established in the baseline scenario described earlier in the report. This budget should be viewed as a tool providing only rough budget guidelines. It does not purport to substitute the actual DVS budget that will incorporate all the detailed budgetary items reflecting the specific circumstances surrounding current DVS operations.

The proposed total regular DVS budget amounts to about 29.3 million € annually. The exceptional budget over five years amounts to about 10 million €, or about 2 million€ annually. The proposed total average budget outlay each year for the five year period that would cover both regular and exceptional expenditures is therefore approximately31.3 million €. This is to be compared with the current DVS budget for 2011 of about35.0 million €.The PVS Gap Analysis mission was informed that the budget will be reduced by 5% to about 33.2 million €for fiscal year 2012 as part of the 5% across the board national budget reduction.

It is to be noted that the proposed budget would still be lower than the expected 2012 budget. This means that the DVS could accommodate all the proposed reforms well within its allocated budget resources. These reforms include an increase in key expenditure items such as staff salaries with the recruitment of an additional 75 veterinarians and a 30% increase of the salaries of veterinarians. The proposed budget also includes an increase in the cost of logistical facilities resulting from the fact that DVS would be provided with its own logistical resources (particular vehicles) as opposed to sharing these resources with other services as part of the current pooling system. To be noted also that the exceptional budget covers the cost of long term degree training of the new veterinarians due to come on board within the next five years, amounting to about8.8 million €.

The distribution of budget expenditures over five years is as follows:

i. investments represent about 24% of total expenditures; most investment expenditures would be undertaken for trade control purposes specifically for zoning and animal identification; the budget also includes a sizable 5.6% for non-material investments corresponding to the training of veterinarians overseas;
ii. consumables account for 33% of total expenditures; and
iii. salaries are 43% of total expenditures; these expenditures incorporate 30% increase in the salaries of veterinarians (12% of total expenditures).

TOTAL BUDGET									
Resources and Budget lines	Current Number	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**	**Total budget for 5 years**	**% annual budget**	**% total budget for 5 years**
Material investments									
Buildings (m²)	-	16 300							
Existing building to be maintained (m²)	-	16 300	20	1	326 000		1 630 000	1,1%	1,0%
Existing building to be renovated (m²)		-	150	15					
Building to be built (m²)		-	400	25					
Transport									
Motorbikes	-	-	2 500	3					
Cars	4	17	18 000	5	61 200		306 000	0,2%	0,2%
4x4 vehicles	2	174	35 000	5	1 218 000		6 090 000	4,2%	3,9%
Other transport					500 000		2 500 000	1,7%	1,6%
Other transport					40 000		200 000	0,1%	0,1%
Telecommunication equipment set	-	155	600	3	31 000		155 000	0,1%	0,1%
Office equipment set	-	214	750	3	53 500		267 500	0,2%	0,2%
Other specific equipment					3 323 550	186 250	16 804 000	11,4%	10,8%
Sub-total Material investments					**5 553 250**	**186 250**	**27 952 500**	**19,0%**	**17,9%**
Non material expenditure									
Initial training (students / 5 years)		50				8 750 000	8 750 000		5,6%
Specialised training (man-months/ 5 years)	-	101	5 000			505 000	505 000		0,3%
National expertise (days/5 years)		1 100	200			220 000	220 000		0,1%
International expertise (weeks/5 years)		39	8 000			312 000	312 000		0,2%
Special funds									
Sub-total non material expenditure						**9 787 000**	**9 787 000**		**6,3%**
Salaries / year									
Veterinarians	55	131	27 000		3 537 000		17 685 000	12,1%	11,3%
Other university degree	34	37	20 000		740 000		3 700 000	2,5%	2,4%
Veterinary para-professionals	729	416	14 000		5 824 000		29 120 000	19,9%	18,6%
Support staff	2 900	908	3 500		3 178 000		15 890 000	10,9%	10,2%
Sub-total Salaries					**13 279 000**		**66 395 000**	45,4%	42,5%
Consumable resources / year									
Administration			20%		2 655 800		13 279 000	9,1%	8,5%
Travel allowances									
staff within the country (man-days) / year	-	1 200	90		108 000		540 000	0,4%	0,3%
drivers within the country (man-days) / year	-	1 200	90		108 000		540 000	0,4%	0,3%
staff abroad (man-weeks) / year	-	23	2 750		63 250		316 250	0,2%	0,2%
Transport fees									
Km or miles Motorbikes / year			0,05						
Km or miles cars / year		340 000	0,14		47 600		238 000	0,2%	0,2%
Km or miles 4x4 vehicle / year		2 610 000	0,30		783 000		3 915 000	2,7%	2,5%
Km, miles, hours or days Other transport / year					1 190 000		5 950 000	4,1%	3,8%
Km, miles, hours or days Other transport / year									
Km, miles, hours or days Other transport / year									
Specific costs									
Continuing education (man-days / year)		1 200	110		132 000		660 000	0,5%	0,4%
Communication / year					60 000		300 000	0,2%	0,2%
Consultation / year					40 000		200 000	0,1%	0,1%
Specific kits / reagents / vaccines					400 000		2 000 000	1,4%	1,3%
Other					3 570 000		17 850 000	12,2%	11,4%
Other					1 250 000		6 250 000	4,3%	4,0%
Sub-total Consumable resources					**10 407 650**		**52 038 250**	35,6%	33,3%
Delegated activities / year									
Specific delegated activities									
Other activities or global estimation									
Sub-total Delegated activities									
Total in Euro					***29 239 900***	***9 973 250***	*156 172 750*	***100%***	***100%***
Total in Pula					***292 399 000***	***99 732 500***	***1 561 727 500***		

VI.1 Human resources analysis

Under the proposed scenario, the main trends in human resources would be as follows:

a) The number of veterinarians would increase substantially. Over the next 10 years about 75 veterinarians would be recruited to become DVS staff members following training overseas. These veterinarians would be assigned primarily to the 65 field animal health veterinary units, ensuring presence of trained veterinarians in the field with direct contact with farmers. As a result of this recruitment, the number of DVS veterinarians would increase from 55 up to 130;

b) The number of veterinary para-professionals employed by DVS would be reduced from 729 to 416. In view of the lack of opportunity for veterinary para-professionals to join the DVS staff in the coming five years, it is recommended that the Botswana College of Agriculture reduce the cohorts of students graduating each year; and

c) Support staff employed by DVS would be drastically downsized. Their number would decrease by about 2000 (from about 2900 to 900);

The above downsizing of veterinary para-professionals and support staff should be implemented gradually over a transition period ensuring that the social and economic impacts are minimized. In particular, the staff retrenchment process should strictly adhere to government procedures and laid-off staff would receive severance allowances.

VI.2 Physical resources analysis

The main physical investments proposed as part of the provisional budget include the following: (i) renewal of laboratory equipment; the corresponding budget line item at an amount of about 1.0 million€(13% of total investments including non-material investments) represent a doubling of the current budget line item; (ii) vehicles at DVO and field level, in the amount of 1.8 million€ (24% of total investments)to increase staff mobility, half of it for animal health activities; and (iii) equipment related to the establishment and maintenance of the zoning infrastructure (fencing material) and the traceability system (computer equipment) for trade purpose for a combined amount of 2.5 million€(34% of total investments).

VI.3 Financial resources analysis

Under the proposed budget scenario, the cost of the veterinary services represents: (i) 11.5 **€** per *Veterinary Livestock Unit* (VLU), and (ii) 2.5% of the value of the country"s animal stock.

The cost per VLU is of a magnitude similar to the one incurred in developed countries with intensive animal husbandry system. However, this value is high *prima facie* if one considers that the main animal production system in Botswana is the extensive system. The relatively large costs incurred for veterinary service is explained by Botswana"s disease control system based on an extensive zoning system.

Under the proposed scenario, it is recommended to circumscribe the extension of zoning system to the most important areas (international borders, boundaries between the red and green zones for FMD control, purposely-specific boundaries, e.g., for buffalo control, etc.), and hand over the remaining elements of the zoning network to local communities and producers" associations. However, in spite of these cost-reducing measures, the cost of maintaining the zoning system will remain high. This should be seen as a way to preserving a system that, over the years, has proved very effective to manage livestock and control animal diseases, and remains central to maintain Botswana"s status regarding exports.

VI.3.A. Operational funding

Salaries are a substantial component of the operational budget, representing 56% of total budgeted operating expenditures, as the current scenario is established on the basis of a fully public sector VS. The bulk of resources for consumables (44%) is earmarked for the field animal health network (13%) and the trade border control (4%).

VI.3.B. Emergency funding

There is no provision for emergency funding in the proposed budget because emergencies are funded directly out of the national budget on a case by case basis. This system has worked relatively well so far. The creation of a special fund under the direct control of DVS would eliminate the bureaucratic and political process required for DVS to access the funding. Although such a mechanism is recommended, it has not been taken into consideration in the proposed budget.

VI.3.C. Capital investment

The budget for capital investments is earmarked for 75% for material investments and 25% for non-material investments.

The main material investment budget items are for the following expenditures: (i) renewal of laboratory equipment; the corresponding budget line item at an amount of

about 1.0 million € (13% of total investments including non-material investments) represent a doubling of the current budget line item and more in line with standard renewal rates; (ii) vehicles at DVO and field level, in the amount of 1.8 million €(24% of total investments) to increase staff mobility, half of it for animal health activities; and (iii) equipment related to the establishment and maintenance of the zoning infrastructure (fencing material) and the traceability system (computer equipment) for trade purpose for a combined amount of 2.5 million € (34% of total investments).

The bulk of the non-material investment budget is earmarked for the initial training of veterinarians. This budget item represents 23% of total capital expenditures. Such expenditure could have been considered as being outside the DVS budget. It could be part of the Ministry of Education or other educational institutions in the country, since it has to do with long term degree training. However, given the importance of training new veterinarians to be recruited by DVS, the related expenditure item has been earmarked in the proposed DVS budget.The students benefiting from the training grants would need to sign a contract to join the rank of DVS staff for a minimum period of time (2x the training period is a general standard).

VI.4 Profitability and sustainability

VI.4.A Analysis related to national economy and budget

The proposed budget represents:

- 8.5% of Botswana"s agricultural GDP;
- 40% of the value of beef exports;
- 1.6% of the national budget; and
- 24% of the agriculture and rural development budget.

The proposed budget is commensurate with the livestock sector"s contribution to Botswana"s economy. It represents a slight decrease compared to the current budget allocated to DVS, however it remains high. It can be sustained by the national government budget in the short to medium term even within the frame of an anticipated budget reduction (5% less in 2012 and probably in 2013) and through increased cost recovery for services and joint programmes in the long term.

VI.4.B Analysis of distribution per pillar

Under the proposed budget (investment expenditures including exceptional expenditures, and operational expenditures), the distribution per pillar is as follows:

- Animal health: 32.3%;
- Trade: 31.8%;
- General management and regulatory services: 13.2%
- Veterinary public health: 12.6%
- Diagnostic laboratory maintenance and operational activities: 10.2%

About a third of budget expenditures is earmarked for animal health half of which for the veterinary network. In Botswana"s context, the share of the trade pillar accounts almost as much as the share of the animal health pillar because of the cost of maintaining the zoning system and improving traceability, since these activities are central to maintaining the country"s export status. The relatively large budget share for general management and regulatory services is accounted by the cost of the initial training of the veterinarians who will come on board in the coming years (5.6%).The veterinary public health is expected to be strengthened, hence its share of 12.6%.Laboratory expenditures are expected to be kept at the same level to maintain the excellent standing of the laboratory system.

CONCLUSION

Using the PVS Gap Analysis methodology with the full participation of the VS, the team identified national VS priorities, targeted advancements in the critical competencies, and developed cost estimates for Botswana"s VS to more fully align themselves with international standards. In addition, the team proposed a scenario for a long term strategy for the development of field veterinary network to more fully comply with international standards and better serve Botswana"s livestock stakeholders within the constraints of the current budget.

The VS has acted on the recommendations found in the 2010 OIE PVS Evaluation and made many changes to the benefit of the organisation. In this regard, the PVS Gap Analysis team felt that working within the 5 year window of the template did not serve the broader needs for the development of the Botswana VS and thus endeavoured to develop a scenario to address the more global challenges present and serve as the basis for a longer term strategy. The proposed plan is to develop the veterinary infrastructure of the country by training and recruiting the needed veterinarians to develop a fully functional and sustainable field veterinary network. This network is envisioned as increasing the presence of veterinarians in the field and will allow the privatisation of some functions currently done by the VS with the goal of enhancing the quality of veterinary services throughout the country.

The proposed scenario will take a decade to fully implement and require a commitment from VS that is beyond the limited scope of the PVS Gap Analysis template. However, given the level of competence and commitment of the current VS, it is worth pursuing.

In addition to the proposed scenario for developing the field veterinary network, the 5 pillars of VS competency were assessed:

- For **international trade**, the focus is on sustaining access to markets both regionally and to the very demanding EU market by improving the animal identification system and evaluating the zoning system. Updating the identification system is on-going and will benefit from better integration of the databases to improve access in the field. Risk based review of the current system of zoning fences and control gates to assess optimal utilisation of resources will hopefully identify ways to decrease the length of fences and the number of personnel needed.
- For the **animal health** pillar, the development of a more professional field veterinary network was identified as one of the overarching needs for the improvement ofVS. The need to increase the presence of veterinarians in the field to ensure an appropriate level of professional contact between veterinarians and livestock is critical to maintain compliance with OIE standards which is also critical for credibility in the international trade arena.
- Regarding the **veterinary public health** pillar, the priority is the improvement of food safety inspection in all sectors to provide consumers with products of the same standard as the ones produced for international trade. This will require providing inspection under veterinary supervision for all sectors of production, including the rapidly developing poultry sector and smaller slaughter establishments throughout the country.
- For the **veterinary laboratory**, this will entail ensuring that the quality of service is preserved and adequate funding provided to ensure proper maintenance of current resources.
- The final pillar of **general management and regulatory services**, several cross cutting priorities were identified. Maintaining a strong chain of command in the face of decentralization will present a challenge, especially in the face of budget constraints. The impact of limiting access to needed means of transportation will have a general impact on the performance of routine field activities but will have a greater impact on

the ability to continue to rapidly address outbreaks or emerging disease issues in an effective and timely manner.

However, the greatest impact is the need to develop an effective field veterinary network. This is the overarching and largest challenge for VS to address and will take a major commitment of resources over the next decade to address. The development of a clear stated detailed long term strategy will be needed to realize the implementation of these changes.

A. Critical Competencies for Trade

Trade 1 - II.4. Quarantine and border security

1. Specific objective (Critical Competency)

The authority and capability of the VS to prevent the entry and spread of diseases and other hazards of animals and animal products.

2. Result (Expected level of advancement)

1. The VS cannot apply any type of quarantine or border security procedures for animals or animal products with their neighbouring countries or trading partners.

2. The VS can establish and apply quarantine and border security procedures; however, these are generally based neither on international standards nor on a risk analysis.

3. The VS can establish and apply quarantine and border security procedures based on international standards, but the procedures do not systematically address illegal activities[2] relating to the import of animals and animal products.

4. The VS can establish and apply quarantine and border securityprocedures which systematically address legal pathways and illegal activities.

5. The VS work with their neighbouring countries and trading partners to establish, apply and audit quarantine and border security procedures which systematically address all risks identified.

3. Strategy(if relevant)

Taking into account regional integration [SADC], and relatively low level of imports of animal and animal products, the VS will concentrate their efforts to improve efficiency of the system; the impact being the increasing competence of technical staff and decreasing need of support staff.

4. Tasks to implement (chronological)

Specific tasks		-Establish agreement with neighbouring countries to ensure all import requirement including identification [including branding] are done prior to import - Develop auditing system for border security -Ensure all import requirements are based on risk assessment
Tasks linked to cross-cutting competencies	*III.2 Consultation*	Organize regular consultations with stakeholders about border procedures
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Adequate continuing education should be provided to technical staff to ensure border control [2 days per year for each staff member]
	III.1 Communication	
	I.11.Management of resources and operations	All border post should be equipped with computerized systems
	III.3. Official representation	Organize at least one regional meeting on border security each year [one man week per year]

5. Objectively verifiable indicators (OIE PVS or specific)

- Resource and procedures for border inspection
- Minutes and agreements from meeting with bordering countries
- Audit reports

[2]Illegal activities include attempts to gain entry for animals or animal products other than through legal entry points and/or using certification and/or other procedures not meeting the country"s requirements.

TRADE - 1 / CC: II.4. Quarantine and border security					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)	260				
Existing building to be maintained (m²)	260	20	1	5 200	
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set	13	600	3	2 600	
Office equipment set	13	750	3	3 250	
Other specific equipment					
desinfection sprayer	13	500	5	1 300	
Sub-total Material investments				**12 350**	
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals	30	14 000		420 000	
Support staff		3 500			
Sub-total Salaries				**420 000**	
Consumable resources / year					
Administration		20%		84 000	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year	1	2 750		2 750	
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)	60	110		6 600	
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources				**93 350**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***525 700***	
Total in Pula				***5 257 000***	

Trade 2 - II.13. Identification and traceability

II.13.A. Animal identification and movement control

1. Specific objective (Critical Competency)

The authority and capability of the VS, normally in coordination with stakeholders, to identify animals under their mandate and trace their history, location and distribution for the purpose of animals disease control, food safety, or trade or any other legal requirements under the VS/OIE mandate.

2. Result (Expected level of advancement)

1. The VS do not have the authority or the capability to identify animals or control their movements.

2. The VS can identify some animals and control some movements, using traditional methods and/or actions designed and implemented to deal with a specific problem (e.g. to prevent robbery).

3. The VS implement procedures for animal identification and movement control for specific animal subpopulations as required for disease control, in accordance with relevant international standards.

4. The VS implement all relevant animal identification and movement control procedures, in accordance with relevant international standards.

5. The VS carry out periodic audits of the effectiveness of their identification and movement control system.

3. Strategy(if relevant)

-Taking into account the EU requirements for beef meat imports the VS will develop individual permanent identification for cattle [including in vaccination zone to increase the efficacy of the vaccination programme].
-The identification of animal will be done by animal health veterinary field network
-For other species, identification is not relevant in the country, except for temporary individual or group identification for movements between zones.

4. Tasks to implement (chronological)

Specific tasks		- Identify all cattle with bolus [recycled, but 5% new per year] and visual tag [estimated 900,000 per year on the basis of 2.5 million cattle x 60% female x 60% calving rate]. - Ensure comprehensive data entry of all relevant events [birth, death, vaccination, testing, slaughter, etc.] - Include identification of owners and holdings [farm or communal area] in order to be able to trace movements of animals [between owners or holdings taking into account the different productions systems]. - Develop regular system of audits for identification in cattle. - Develop relevant temporary identification system for movement of all animals between zones (estimated equivalent to 100 000 rump stick tags budgeted on the same price than eartags). - Provide adequate human resources and equipment for data management [estimated 30 support staff in the proposed scenario, positioned at DVO level; on average 3 per DVO]. - Ensure presence of 1 veterinary para professional at each of the 10 district market facilities for the purpose of trade [on average 1 staff position per DVO].
Tasks linked to cross-cutting competencies	*III.2 Consultation*	Organize consultation with stakeholders to improve any identification system
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Organize continuing education for data entry personnel [estimated 2 days per person –10 veterinary para-professionnals and 30 data entry personnel per year]
	III.1 Communication	
	I.11.Management of resources and operations	Upgrade identification database [estimated 25 weeks of international expertise and €1.5 m in equipment]
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Presence of visual identification on all cattle
- Procedures and database outputs
- Audit report of identification system

TRADE - 2 / CC: II.13. Identification and traceability A. Animal identification and movement control					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set	38	750	3	9 500	
Other specific equipment					
ID equipment (central computer, readers, software…)	1	1 500 000	5	300 000	
Sub-total Material investments				**309 500**	
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)	25	8 000			200 000
Special funds for…….					
Sub-total non material expenditure					**200 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals	10	14 000		140 000	
Support staff	30	3 500		105 000	
Sub-total Salaries				**245 000**	
Consumable resources / year					
Administration		20%		49 000	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)	80	110		8 800	
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
bolus (5% per year)	125 000	4,00		500 000	
eartags permanent ID and rump tags for temporary	1 000 000	1,00		1 000 000	
Sub-total Consumable resources				**1 557 800**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***2 112 300***	***200 000***
Total in Pula				***21 123 000***	***2 000 000***

Trade 3 - II.13. Identification and traceability

II.13.B. Identification and traceability of products of animal origin

1. Specific objective (Critical Competency)

The authority and capability of the VS, normally in coordination with stakeholders, to identify and trace products of animal origin for the purpose of food safety, animal health or trade.

2. Result (Expected level of advancement)

1. The VS do not have the authority or the capability to identify or trace products of animal origin.

2. The VS can identify and trace some products of animal origin to deal with a specific problem (e.g. products originating from farms affected by a disease outbreak).

3. The VS have implemented procedures to identify and trace some products of animal origin for food safety, animal health or trade purposes, in accordance with relevant international standards.

4. The VS have implemented national programmes enabling them the identification and tracing of all products of animal origin, in accordance with relevant international standards.

5. The VS periodically audit the effectiveness of their identification and traceability procedures.

3. Strategy(if relevant)

The main aim of traceability of animal products is to comply with export requirements [primarily beef meat to EU and farmed game and trophies]. The VS will also progressively develop traceability of products for domestic products based on national consumer demand or animal and public health priorities. In the strategy, the cost of this traceability will be assumed by stakeholders.

4. Tasks to implement (chronological)

Specific tasks		-Develop audit of traceability of exported animal products. - Provide specialized training for one staff on traceability of animal products [estimated 6 months].
Tasks linked to cross-cutting competencies	*III.2 Consultation*	Organize consultation with relevant stakeholders to develop appropriate traceability of animal products for the national market.
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	Ensure animal identification system paves the way for traceability of animal products with establishment of a compatible specific database on product traceability [100 days of national expertise].
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Regulations, procedures and data management of relevant animal product traceability
-Auditing reports for export products

TRADE - 3 / CC: II.13. Identification and traceability B. Identification and traceability of products of animal origin					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)	6	5 000			30 000
National expertise (days/5 years)	100	200			20 000
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**50 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year		0			
Km or miles 4x4 vehicle / year		0			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources					
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro					***50 000***
Total in Pula					***500 000***

Trade 4 - IV.4. International certification[3]

1. Specific objective (Critical Competency)

The authority and capability of the VS to certify animals, animal products, services and processes under their mandate, in accordance with the national legislation and regulations, and international standards.

2. Result (Expected level of advancement)

1. The VS have neither the authority nor the capability to certify animals, animal products, services or processes.

2. The VS have the authority to certify certain animals, animal products, services and processes, but are not always in compliance with the national legislation and regulations and international standards.

3. The VS develop and carry out certification programmes for certain animals, animal products, services and processes under their mandate in compliance with international standards.

4. The VS develop and carry out all relevant certification programmes for any animals, animal products, services and processes under their mandate in compliance with international standards.

5. The VS carry out audits of their certification programmes, in order to maintain national and international confidence in their system.

3. Strategy(if relevant)

International and national confidence in the international certification process is a key issue for the VS of Botswana

4. Tasks to implement (chronological)

Specific tasks		-Develop auditing of the international certification, especially linked to EU requirements. -Provide 2 weeks international expertise for in-country training on the EU „TRACES" system
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	CE on the EU „TRACES" as necessary for field staff
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Audit reports

[3] Certification procedures should be based on relevant OIE and Codex Alimentarius standards.

TRADE - 4 / CC: IV.4. International certification					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)	2	8 000			16 000
Special funds for…….					
Sub-total non material expenditure					**16 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources					
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro					***16 000***
Total in Pula					***160 000***

Trade 5 - IV.5. Equivalence and other types of sanitary agreements

1. Specific objective (Critical Competency)

The authority and capabilityof the VS to negotiate, implement and maintain equivalence and other types of sanitary agreements with trading partners.

2. Result (Expected level of advancement)

1. The VS have neither the authority nor the capability to negotiate or approve equivalence or other types of sanitary agreements with other countries.

2. The VS have the authority to negotiate and approve equivalence and other types of sanitary agreements with trading partners, but no such agreements have been implemented.

3. The VS have implemented equivalence and other types of sanitary agreements with trading partners on selected animals, animal products and processes.

4. The VS actively pursue the development, implementation and maintenance of equivalence and other types of sanitary agreements with trading partners on all matters relevant to animals, animal products and processes under their mandate.

5. **The VS actively work with stakeholders and take account of developments in international standards, in pursuing equivalence and other types of sanitary agreements with trading partners.**

3. Strategy(if relevant)

Regional integration and food security and trade policies of Botswana impose to actively develop sanitary agreements which cannot be appropriately developed without stakeholder consultation.

4. Tasks to implement (chronological)

Specific tasks		- Continue accrediting process for facilities in neighbouring countries for import of animals, animal product and animal feeds.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	Organize consultation with stakeholders to develop sanitary agreements
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	Accreditation of facilities abroad [teams of up to 3 persons, estimated 12 man weeks per year]

5. Objectively verifiable indicators (OIE PVS or specific)

- New signed agreements and relevant procedures

TRADE-5 /CC: IV.5. Equivalence and other types of sanitary agreements					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year	12	2 750		33 000	
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources				**33 000**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***33 000***	
Total in Pula				***330 000***	

Trade 6 - IV.6. Transparency

1. Specific objective (Critical Competency)

The authority and capability of the VS to notify the OIE of their sanitary status and other relevant matters (and to notify the WTO SPS Committee where applicable), in accordance with established procedures.

2. Result (Expected level of advancement)

1. The VS do not notify.

2. The VS occasionally notify.

3. The VS notify in compliance with the procedures established by these organisations.

4. The VS regularly inform stakeholders of changes in their regulations and decisions on the control of relevant diseases and of the country"s sanitary status, and of changes in the regulations and sanitary status of other countries.

5. The VS, in cooperation with their stakeholders, carry out audits of their transparency procedures

3. Strategy(if relevant)

Auditing of overall VS has been defined as a priority to enhance the credibility of VS at the highest level.

4. Tasks to implement (chronological)

Specific tasks		-Develop audit of VS system in cooperation with stakeholders. -Provide specialized training [estimated 6 months over next 5 years] for auditing central staff [currently named Compliance Unit]
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Resource and competence of the auditing [compliance] staff
-Audit reports

TRADE - 6 / CC: IV.6. Transparency					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)	6	5 000			30 000
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**30 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources					
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro					***30 000***
Total in Pula					***300 000***

Trade 7 - IV.7. Zoning

1. Specific objective (Critical Competency)

The authority and capability of the VS to establish and maintain disease free zones, as necessary and in accordance with the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

2. Result (Expected level of advancement)

1. The VS cannot establish disease free zones.

2. As necessary, the VS can identify animal sub-populations with distinct health status suitable for zoning.

3. The VS have implemented biosecurity measures that enable it to establish and maintain disease free zones for selected animals and animal products, as necessary.

4. The VS collaborate with their stakeholders to define responsibilities and execute actions that enable itto establish and maintain disease free zones for selected animals and animal products, as necessary.

5. The VS can demonstrate the scientific basis for any disease free zones and can gain recognition by trading partners that they meet the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

3. Strategy(if relevant)

Review zoning based on strict risk analysis in order to maintain the fences and control gates which are essential and transfer/decommission others to local authorities or farmers associations..

4. Tasks to implement (chronological)

Specific tasks		In the short term, review fence design to develop a more elephant resistant fence. In the prospered scenario it is simulated that the VS would keep zoning between red and green zone and decommission all internal [intra-zonal] fences. The corresponding resources would be: - Maintain 3,000 km of fences with relevant staff [estimated reduction of maintenance staff by 30% = 400 x 0.7 = 280 support staff organised in 30 teams] physical resources [1 4x4 for each team and, in addition, 15 trucks and other fence construction equipment at 150,000 € each and 35,000 km per year per truck] and financial resources to ensure fence maintenance cost estimated at 25% of construction cost = 2,600€ x 25% = 650€per km per year x 3,000 km = 1.950 million €/year,. - Maintain 42 control gates with relevant staff [2 staff per gate 24 hours] and physical resources [building 30 m^2, tire disinfection and telecommunication] - Maintain all 13 quarantine stations with relevant resources [building 60m^2; 1 computer; 1 telecommunication set, 2 staff 24 hours and tire disinfection]
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Zoning maintenance, procedures and audit reports.

*

TRADE - 7 / CC: IV.7. Zoning					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)	2 040				
Existing building to be maintained (m²)	2 040	20	1	40 800	
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles	30	35 000	5	210 000	
trucks and others for fence maintenance	15	150 000	5	450 000	
Telecommunication equipment set	55	600	3	11 000	
Office equipment set	13	750	3	3 250	
Other specific equipment					
00 km fence maintenance red/green zones 25 %	3 000	650	1	1 950 000	
sprayer + tyre dips	55	5 000	10	27 500	137 500
Sub-total Material investments				**2 692 550**	**137 500**
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff	780	3 500		2 730 000	
Sub-total Salaries				**2 730 000**	
Consumable resources / year					
Administration		20%		546 000	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year		0			
Km or miles 4x4 vehicle / year	450 000	0		135 000	
Km for trucks and other equipment	525 000	2,00		1 050 000	
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources				**1 731 000**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***7 153 550***	***137 500***
Total in Pula				***71 535 500***	***1 375 000***

Trade 8 - IV.8. Compartmentalisation

1. Specific objective (Critical Competency)

The authority and capability of the VS to establish and maintain disease free compartments as necessary and in accordance with the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

2. Result (Expected level of advancement)

1. The VS cannot establish disease free compartments.

2. As necessary, the VS can identify animal sub-populations with a distinct health status suitable for compartmentalisation.

3. The VS have implemented biosecurity measures that enable it to establish and maintain disease free compartments for selected animals and animal products, as necessary.

4. The VS collaborate with their stakeholders to define responsibilities and execute actions that enable it to establish and maintain disease free compartments for selected animals and animal products, as necessary.

5. The VS can demonstrate the scientific basis for any disease free compartments and can gain recognition by other countries that they meet the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

3. Strategy(if relevant)

Compartmentalization is not considered a relevant strategy at this time for Botswana

4. Tasks to implement (chronological)

Specific tasks		
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

B.Critical Competencies for Veterinary Public Health

VPH 1 - II.8. Food safety

II.8.A. Ante and post mortem inspection at abattoirs and associated premises (e.g. meat boning / cutting establishments and rendering plants)

1. Specific objective (Critical Competency)

The authority and capability of the VS to implement and manage the inspection of animals destined for slaughter at abattoirs and associated premises, including for assuring meat hygiene and for the collection of information relevant to livestock diseases and zoonoses. This competency also covers coordination with other authorities where there is shared responsibility for the functions.

2. Result (Expected level of advancement)

1. Ante- and post mortem inspection and collection of disease information (and coordination, as required) are generally not undertaken in conformity with international standards.

2. Ante- and post mortem inspection and collection of disease information (and coordination, as required) are undertaken in conformity with international standards only at export premises.

3. Ante- and post mortem inspection and collection of disease information (and coordination, as required) are undertaken in conformity with international standards for export premises and for major abattoirs producing meat for distribution throughout the national market.

4. Ante- and post mortem inspection and collection of disease information (and coordination, as required) are undertaken in conformity with international standards for export premises and for all abattoirs producing meat for distribution in the national and local markets.

5. Ante- and post mortem inspection and collection of disease information (and coordination, as required) are undertaken in conformity with international standards at all premises (including family and on farm slaughtering) and are subject to periodic audit of effectiveness.

3. Strategy (if relevant)

The strategy is to ensure presence of veterinarians in slaughter facilities to undertake slaughter inspection and supervise meat inspectors according to OIE standards.
Eliminate the double standard for food inspection by working towards applying international standards to the national market for foods of animal origin and by developing the political authority to address consumer demands.

4. Tasks to implement (chronological)

Specific tasks		In the proposed scenario taking into account the current number and level of activity of slaughter facilities the following resources are considered: - Ensure presence of relevant numbers of veterinarians and veterinary para-professionals in all export slaughterhouses, municipal and private slaughterhouses with full timeactivity, as well as in major poultry slaughterhouses [total estimated = 33 veterinarians and 100 veterinary para professionals] - Ensure presence of veterinary para professional in all medium and small scale poultry slaughterhouses [total estimated = 35]. These veterinary para professionals should be regularly superposed by veterinarians from DVO or animal health network. - Assign slaughter inspection of rural slaughter facilities to veterinarians working in field veterinary network for animal health [estimated 2 hours per day x 3 days per week = equivalent workload of 10 Full Time Equivalent]
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	- Develop appropriate regulations for on farm and family slaughter
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	-Ensure full record for passive surveillance of TB, cysticercosis, hydatid disease (echinococcosis), CBPP
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Staffing for slaughter inspection
Effective supervision of veterinary para professionals by veterinarians
Regulations

VETERINARY PUBLIC HEALTH - 1 / CC: II.8. Food safety: A. Ante and post mortem inspection at abattoirs and associated					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians	33	27 000		891 000	
Other university degree		20 000			
Veterinary para-professionals	135	14 000		1 890 000	
Support staff		3 500			
Sub-total Salaries				**2 781 000**	
Consumable resources / year					
Administration		20%		556 200	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources				**556 200**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***3 337 200***	
Total in Pula				***33 372 000***	

VPH 2 - II.8. Food safety

II.8.B. Inspection of collection, processing and distribution of products of animal origin

1. Specific objective (Critical Competency)

The authority and capability of the VS to implement manage and coordinate food safety measures on collection, processing and distribution of products of animals, including programmes for the prevention of specific food-borne zoonoses and general food safety programmes. This competency also covers coordination with other authorities where there is shared responsibility for the functions.

2. Result (Expected level of advancement)

1. Implementation, management and coordination (as appropriate) are generally not undertaken in conformity with international standards.

2. Implementation, management and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes.

3. Implementation, management and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes and for products that are distributed throughout the national market.

4. Implementation, management and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes and for products that are distributed throughout the national and local markets.

5. Implementation, management and coordination (as appropriate) are undertaken in full conformity with international standards for products at all levels of distribution (including on farm processing and farm gate sale)

3. Strategy (if relevant)

Although this field of activity is shared with the Ministry of health, there is a need to increase capability and authority related to inspection of animal products, specifically meat processing, milk processing, eggs, and animal feed.

4. Tasks to implement (chronological)

Specific tasks		- Provide specialized training [estimated 6 months] to one veterinarian at central level assigned to develop inspection of animal products in Botswana.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	- Develop regulation
	I.3.Continuing Education	- The staff in charge at central level should provide continuing education on inspection of animal products to the DVOs.
	III.1 Communication	
	I.11.Management of resources and operations	- Develop appropriate data management tofollow up inspections
	III.3.Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Regulation, procedures, data management

VETERINARY PUBLIC HEALTH - 2 / CC: II.8. Food safety: B. Inspection of collection, processing and distribution of products of animal origin					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)	6	5 000			30 000
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**30 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources					
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro					***30 000***
Total in Pula					***300 000***

VPH 3 - II.9. Veterinary medicines and biologicals

1. Specific objective (Critical Competency)

The authority and capability of the VS to regulate veterinary medicines and veterinary biologicals, i.e. the authorisation, registration, import, production, labelling, distribution, sale and use of these products.

2. Result (Expected level of advancement)

1. The VS cannot regulate veterinary medicines and veterinary biologicals.

2. The VS have some capability to exercise administrative control over veterinary medicines and veterinary biologicals.

3. The VS exercise effective administrative control and implement quality standards for most aspects of the regulation of veterinary medicines and veterinary biologicals.

4. The VS exercise comprehensive and effective regulatory control of veterinary medicines and veterinary biologicals.

5. In addition to complete regulatory control, the VS systematically monitor for adverse reaction (pharmacovigilance) and take appropriate corrective steps. The control systems are subjected to periodic audit of effectiveness.

3. Strategy (if relevant)

Taking into account the policy to strengthen the controls of veterinary medicines, including records of use at farm level, activities currently under the responsibilities of the LAC system should fall under the authority of veterinarians of the field animal health veterinary network.
The retail prices in the public veterinary field network should be compatible with those of the private sector in order to allow the capacity of a private veterinary network to develop.

4. Tasks to implement (chronological)

Specific tasks		- Place current LAC network under the authority and management of veterinarians from the field animal health veterinary network. - Provide specialized training [estimated at least at 6 months] in drug control for 1 central staff veterinarian. - Organize inspection and control of distribution network as part of coordination activities of central VS and DVO [estimated 20% of working time for veterinarian in charge at central level and part-time activity of DVOs]. - Remove authorization of retail „drug shops" for veterinary drug distribution. In the proposed scenario, resources are limited to storage [500 m2 at central level and 100 m2 at the 10 DVOs], cold chain at central and DVO levels, and transportation for wholesale purposes [1 cold chain truck and 1 regular truck]. No specific human resources and revolving funds are budgeted here, as current LAC activities should become financially self-sufficient and sustainable. It is expected that LAC management will be aligned with private sector management including a 3 level pricing system (wholesale, retail to veterinarians and a higher retail price to farmers). Relevant maintenance of storage facilities are budgeted at central and DVO level, see CC I.6A.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Regulations and procedures for veterinary drug distribution and usage
- Availability and accessibility to veterinary drugs
-Procedures and reports of control of drug distribution and usage

VETERINARY PUBLIC HEALTH - 3 / CC: II.9. Veterinary medicines and biologicals					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)	1 500				
Existing building to be maintained (m²)	1 500	20	1	30 000	
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Cold chain truck	1	250 000	5	50 000	
Non cold chain truck	1	200 000	5	40 000	
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
cold chain at central and district level	11	10 000	5	22 000	
Sub-total Material investments				**142 000**	
Non material expenditure					
Specialised training (man-months/ 5 years)	6	5 000			30 000
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**30 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year		0			
Km or miles 4x4 vehicle / year		0			
Km for lorries of veterinary drug transport	70 000	2,00		140 000	
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources				**140 000**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***282 000***	***30 000***
Total in Pula				***2 820 000***	***300 000***

VPH 4 - II.10. Residue testing

1. Specific objective (Critical Competency)

The capability of the VS to undertake residue testing programmes for veterinary medicines (e.g. antimicrobials and hormones), chemicals, pesticides, radionuclides, metals, etc.

2. Result (Expected level of advancement)

1. No residue testing programme for animal products exists in the country.

2. Some residue testing programme is performed but only for selected animal products for export.

3. A comprehensive residue testing programme is performed for all animal products for export and some for domestic use.

4. A comprehensive residue testing programme is performed for all animal products for export and/or internal consumption.

5. The residue testing programme is subject to routine quality assurance and regular evaluation.

3. Strategy (if relevant)

Plan to phase out foreign testing for residue sampling and develop capacity within the national laboratory.

4. Tasks to implement (chronological)

Specific tasks		- Secure adequate budget to comply with residue testing for export, estimated 250,000 € annually to send samples abroad. - Provide specialized training to staff of national laboratory in order to progressively implement control of residues in the domestic market [estimated 6 months of training]
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Residue testing capacity for BNVL
- Domestic market residue plan

VETERINARY PUBLIC HEALTH - 4 / CC: II.10. Residue testing					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)	6	5 000			30 000
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**30 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines residues analyse for export made abroad	1 000	250,00		250 000	
Sub-total Consumable resources				**250 000**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***250 000***	***30 000***
Total in Pula				***2 500 000***	***300 000***

C. Critical Competencies for Animal Health

AH 1 - II.5. Epidemiological surveillance

II.5.A. Passive epidemiological surveillance

1. Specific objective (Critical Competency)

The authority and capability of the VS to determine, verify, and report on the sanitary status of the animal populations under their mandate.

2. Result (Expected level of advancement)

1. The VS have no passive surveillance programme.

2. The VS conduct passive surveillance for some relevant diseases and have the capacity to produce national reports on some diseases.

3. The VS conduct passive surveillance in compliance with OIE standards for some relevant diseases at the national level through appropriate networks in the field, whereby samples from suspect cases are collected and sent for laboratory diagnosis with evidence of correct results obtained. The VS have a basic national disease reporting system.

4. The VS conduct passive surveillance and report at the national level in compliance with OIE standards for most relevant diseases. Appropriate field networks are established for the collection of samples and submission for laboratory diagnosis of suspect cases with evidence of correct results obtained. Stakeholders are aware of and comply with their obligation to report the suspicion and occurrence of notifiable diseases to the VS.

5. The VS regularly report to stakeholders and the international community (where applicable) on the findings of passive surveillance programmes.

3. Strategy (if relevant)

Progressive establishment of the network of veterinarians working in the field with regular involvement in farm visits is a key issue for compliance of the VS with OIE standards.
Separation between coordination activities [relevant from central and DVO staff] and field activities [relevant to field animal health staff] is key to establishing this network of veterinarians.

4. Tasks to implement (chronological)

Specific tasks		- Formalize systematic passive surveillance procedures and data management in all slaughter facilities for tuberculosis, cysticercosis, hydatid disease (echinococcosis), CBPP and FMD lesions and clinical signs. - Progressively develop procedures of passive surveillance for other specific relevant diseases, based on specific lesions and clinical signs, for implementation by veterinarians in charge of the AH field veterinary network. This is a function for the AH field veterinary and should progressively be included as part of the official delegation through relevant procedures. In the proposed scenario it is estimated that the adequate AH field veterinary network will have 65 teams each consisting of 1 veterinarian and an average of 3 veterinary para-professionals with relevant physical resources (building of 100 m2, 2 4x4 vehicles, 1 cold chain and 1 set of telecommunication, office and clinical equipment).
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	Ensure that farmers are aware of the responsibility of the field veterinarians for surveillance and their obligation to report suspected incidences of disease to them.
	I.11.Management of resources and operations	Review the current passive surveillance paperwork to ensure relevance and efficiency, concentrating on relevant diseases, lesions and clinical signs. This function should be optimized so it will not override essential technical activity. Data from passive surveillance activities should be incorporated into the global VS database and linked with traceability.
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Procedures and records for passive surveillance
- Number and distribution of field veterinarians including private veterinarians with official delegation for passive surveillance.

AH 2 - II.5. Epidemiological surveillance
II.5.B. Active epidemiological surveillance

1. Specific objective (Critical Competency)		
The authority and capability of the VS to determine,verify and report on the sanitary status of the animal populations under their mandate.		
2. Result (Expected level of advancement)		
1. The VS have no active surveillance programme.		
2. The VS conduct active surveillance for some relevant diseases (of economic and zoonotic importance) but apply it only in a part of susceptible populations and/or do not update it regularly.		
3. The VS conduct active surveillance in compliance with scientific principles and OIE standards for some relevant diseases and apply it to all susceptible populations but do not update it regularly.		
4. The VS conduct active surveillance in compliance with scientific principles and OIE standards for some relevant diseases, apply it to all susceptible populations, update it regularly and report the results systematically.		
5. The VS conduct active surveillance for most or all relevant diseases and apply it to all susceptible populations. The surveillance programmes are evaluated and meet the country's OIE obligations.		
3. Strategy (if relevant)		
4. Tasks to implement (chronological)		
Specific tasks		- Evaluate current active surveillance programmes for Salmonella in poultry, BSE at all slaughter places, FMD in free zones and FMD post-vaccination serologyin vaccination zones. - Include progressively private veterinarians in the active surveillance system as part of official delegation through development of relevant procedures.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Data from active surveillance activities should be incorporated into the global VS database and linked with traceability.
	III.3. Official representation	
5. Objectively verifiable indicators (OIE PVS or specific)		
- Audit reports for active surveillance programmes		

AH 3 - II.6. Early detection and emergency response

1. Specific objective (Critical Competency)

The authority and capability of the VS to detect and respond rapidly to a sanitary emergency (such as a significant disease outbreak or food safety emergency).

2. Result (Expected level of advancement)

1. The VS have no field network or established procedure to determine whether a sanitary emergency exists or the authority to declare such an emergency and respond appropriately.

2. The VS have a field network and an established procedure to determine whether or not a sanitary emergency exists, but lack the necessary legal and financial support to respond appropriately.

3. The VS have the legal framework and financial support to respond rapidly to sanitary emergencies, but the response is not coordinated through a chain of command.

4. The VS have an established procedure to make timely decisions on whether or not a sanitary emergency exists. The VS have the legal framework and financial support to respond rapidly to sanitary emergencies through a chain of command. They have national contingency plans for some exotic diseases.

5. The VS have national contingency plans for all diseases of concern through coordinated actions with all stakeholders through a chain of command.

3. Strategy (if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Maintain adequate procedures and resources for early detection of CBPP, RVF and HPAI in the whole country, and FMD in free zones. - Include private veterinarians in the early detection and rapid response system as part of official delegation through relevant procedures.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	Data from early detection and rapid response activities should be incorporated into the global VS database and linked with traceability.
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Procedures and contingency plans for CBPP, RVF, HPAI and FMD.

AH 4 - II.7. Disease prevention, control and eradication

1. Specific objective (Critical Competency)

The authority and capability of the VS to actively perform actions to prevent, control or eradicate OIE listed diseases and/or to demonstrate that the country or a zone are free of relevant diseases.

2. Result (Expected level of advancement)

1. The VS have no authority or capability to prevent, control or eradicate animal diseases.

2. The VS implement prevention, control and eradication programmes for some diseases and/or in some areas with little or no scientific evaluation of their efficacy and efficiency.

3. The VS implement prevention, control and eradication programmes for some diseases and/or in some areas with scientific evaluation of their efficacy and efficiency.

4. The VS implement prevention, control and eradication programmes for all relevant diseases but with scientific evaluation of their efficacy and efficiency of some programmes.

5. The VS implement prevention, control and eradication programmes for all relevant diseases with scientific evaluation of their efficacy and efficiency consistent with relevant OIE international standards.

3. Strategy (if relevant)

The VS will review relevant efficacy and efficiency of all current disease control and eradication programmes.

4. Tasks to implement (chronological)

Specific tasks		- Include private veterinarians in the disease prevention and control programmes as part of official delegation through relevant procedures. - Brucellosis in small ruminants should be analysed. In the proposed scenario, the current programmes have been reviewed as follows: - Blackleg and anthrax mass vaccination to be discontinued and transferred to private sector as voluntary joint programmes [see CC III.6]. [asmall stock of anthrax vaccine will be maintained for outbreak control]. - Rabies vaccination is strengthened and maintained free of charge targeting 150,000 cats and dogs identified by coloured collars or alternative identification of vaccinated animals [0.4 € per dose] - FMD vaccination in vaccination zones will be implemented on all cattle with new purified vaccine twice a year and with individual perennial visible identification [in addition to bolus]. Analysis of relevant FMD vaccination strategies for small ruminants will be done. [Estimated 1.4 million doses total per year at 2 € per dose] - Brucellosis programme will be carefully analysed regarding the current vaccination strategy. Vaccination of all female cattle below 7 months of age is maintained until prevalence falls below 0.5% [estimated 250,000 doses per year at0.75 € per dose]. In the proposed scenario vaccination programmes will be implemented during 3 months [may to July] on the basis of 1 day per crush in the 6,000 crushes by 65 field veterinary teams.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Data from disease prevention and control activities should be incorporated into the global VS database and linked with traceability.
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Assessment reports for all programmes
- Reports of activity with efficacy and efficiency analysis

ANIMAL HEALTH - 4 / CC: II.7. Disease prevention, control and eradication					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)	6 500				
Existing building to be maintained (m²)	6 500	20	1	130 000	
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles	130	35 000	5	910 000	
Telecommunication equipment set	65	600	3	13 000	
Office equipment set	65	750	3	16 250	
Other specific equipment					
cold chain and power supply	65	1 500	10	9 750	48 750
clinical equipment	65	1 000	5	13 000	
Sub-total Material investments				**1 092 000**	**48 750**
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special fund for…					
Sub-total non material expenditure					
Salaries / year					
Veterinarians	65	27 000		1 755 000	
Other university degree		20 000			
Veterinary para-professionals	195	14 000		2 730 000	
Support staff		3 500			
Sub-total Salaries				**4 485 000**	
Consumable resources / year					
Administration		20%		897 000	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year	1 950 000	0,30		585 000	
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
FMD vaccines	1 400	2,00		2 800 000	
Rabies, Anthrax, Brucelosis	1	250000,0		250 000	
Sub-total Consumable resources				**4 532 000**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***10 109 000***	***48 750***
Total in Pula				***101 090 000***	***487 500***

AH 5 - II.14. Animal welfare

1. Specific objective (Critical Competency)

The authority and capability of the VS to implement the animal welfare standards of the OIE as published in the Terrestrial Code.

2. Result (Expected level of advancement)

1. OIE standards are generally not implemented.

2. Some of OIE standards are implemented, e.g. primarily for the export sector.

3. All of OIE standards are implemented but this is primarily for the export sector.

4. All of OIE standards are implemented for the export and the domestic sector.

5. OIE standards are implemented and implementation is periodically subject to independent external evaluation.

3. Strategy (if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Ensure central VS and DVO staffs are able to plan and implement control of relevant activities and facilities [loading and market facilities, transportation and slaughterhouses]. - Ensure relevant external coordination with police and customs.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	- Develop supporting legislation and regulation for implementation of animal welfare standards in full comp lance with OIE guidelines
	I.3.Continuing Education	- Ensure all relevant field staff [public and private] have adequate knowledge of animal welfare
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Verifiable procedures and reports

D. Critical Competencies for Laboratory Diagnostic

LAB 1 - II.1. Veterinary laboratory diagnosis

1. Specific objective (Critical Competency)

The authority and capability of the VS to identify and record pathogenic agents, including those relevant for public health, that can adversely affect animals and animal products.

2. Result (Expected level of advancement)

1. Disease diagnosis is almost always conducted by clinical means only, with laboratory diagnostic capability being generally unavailable.

2. For major zoonoses and diseases of national economic importance, the VS have access to and use a laboratory to obtain a correct diagnosis.

3. For other zoonoses and diseases present in the country, the VS have access to and use a laboratory to obtain a correct diagnosis.

4. For diseases of zoonotic or economic importance not present in the country, but known to exist in the region and/or that could enter the country, the VS have access to and use a laboratory to obtain a correct diagnosis.

5. In the case of new and emerging diseases in the region or world, the VS have access to and use a network of national or international reference laboratories (e.g. an OIE Reference Laboratory) to obtain a correct diagnosis.

3. Strategy (if relevant)

The strategy is to maintain the current high level of the national veterinary laboratory and to progressively respond to the anticipated growing demand of the private sectors, e.g., poultry and dairy industries and private veterinarians.

4. Tasks to implement (chronological)

Specific tasks		- Ensure more appropriate budget for renewal and maintenance for equipment of the national veterinary laboratory [estimated 1,000,000 € per year] In the proposed scenario: - Human and physical resources of the current laboratory system are maintained, as well as the budget for recurrent expenditures [estimate 400,000 € per year]. - Maintenance and renewal of laboratory equipment is based on the basis of 20% of the value of the laboratory equipment [estimated at 5,000,000 € per year].
Tasks linked to cross-cutting competencies	*III.2 Consultation*	Consult with stakeholders and private veterinarians to appropriately respond to their needs.
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Continuing education is estimated on the basis of 5% of technical staff salaries.
	III.1 Communication	
	I.11.Management of resources and operations	Continue to strengthen compatibly of laboratory database and other VS databases
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Resources and activity of the laboratory

VETERINARY LABORATORIES - 1 / CC: II.1. Veterinary laboratory diagnosis					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)	3 000				
Existing building to be maintained (m²)	3 000	20	1	60 000	
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars	3	18 000	5	10 800	
4x4 vehicles	1	35 000	5	7 000	
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Total laboratory equipment	1	5 000 000	5	1 000 000	
Sub-total Material investments				**1 077 800**	
Non material expenditure					
Specialised training (man-months/ 5 years)	12	5 000			60 000
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**60 000**
Salaries / year					
Veterinarians	12	27 000		324 000	
Other university degree	28	20 000		560 000	
Veterinary para-professionals	29	14 000		406 000	
Support staff	15	3 500		52 500	
Sub-total Salaries				**1 342 500**	
Consumable resources / year					
Administration		20%		268 500	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year	60 000	0		8 400	
Km or miles 4x4 vehicle / year	15 000	0		4 500	
Specific costs					
Specific continuing education (man-days / year)	580	110		63 800	
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines	1	400000,0		400 000	
Sub-total Consumable resources				**745 200**	
Delegated activities / year					
Sub-total Delegated activities					
Total in Euro				***3 165 500***	***60 000***
Total in Pula				***31 655 000***	***600 000***

LAB 2 - II.2. Laboratory quality assurance

1. Specific objective (Critical Competency)

The quality of laboratories (that conduct diagnosis testing and analysis for chemical residues, antimicrobial residues, toxins, or tests for biological efficacy, etc.) as measured by the use of formal QA systems and participation in relevant proficiency testing programmes.

2. Result (Expected level of advancement)

1. No laboratories used by the public sector VS are using formal quality assurance systems.

2. Some laboratories used by the public sector VS are using formal quality assurance systems.

3. All laboratories used by the public sector VS are using formal quality assurance systems.

4. All the laboratories used by the public sector VS and most or all private laboratories are using formal quality assurance systems.

5. All the laboratories used by the public sector VS and most or all private laboratories are using formal quality assurance programmes that meet OIE, ISO 17025, or equivalent QA standard guidelines.

3. Strategy (if relevant)

4. Tasks to implement (chronological)

Specific tasks		In the proposed scenario, costing of laboratory quality assurance is based on 5% of recurrent laboratory expenditures [5% of 400,000 € = 20,000 € annually].
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Reports and audits of the quality assurance system

VETERINARY LABORATORIES - 2 / CC: II.2. Laboratory quality assurance					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
ty control and management (5% of consummables)	0,05	400000,0		20 000	
Sub-total Consumable resources				**20 000**	
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro				***20 000***	
Total in Pula				***200 000***	

E. Critical Competencies for Management and Regulatory

MVS 1 – I.2. Competencies of veterinarians and veterinary para-professionals

I.2.A.Professional competencies of veterinarians

1. Specific objective (Critical Competency)	
The capability of the VS to efficiently carry out their veterinary and technical functions; measured by the qualifications of their personnel in veterinary and technical positions.	
2. Result (Expected level of advancement)	
1.The veterinarians" practices, knowledge and attitudes are of a variable standard that usually allow for elementary clinical and administrative activities of the VS.	
2.The veterinarians" practices, knowledge and attitudes are of a uniform standard that usually allow for accurate and appropriate clinical and administrative activities of the VS.	
3.The veterinarians" practices, knowledge and attitudes usually allow undertaking all professional/technical activities of the VS (e.g. epidemiological surveillance, early warning, public health, etc.).	
4.The veterinarians' practices, knowledge and attitudes usually allow undertaking specialized activities as may be needed by the VS.	
5.The veterinarians" practices, knowledge and attitudes are subject to regular updating, or international harmonisation, or evaluation.	
3. Strategy(if relevant)	
Initial training of new veterinarians is key for satisfying the need of veterinarians in the field in compliance with OIE guidelines. Such training should be conducted in internationally recognized faculties.	
4. Tasks to implement (chronological)	
Specific tasks	In the proposed scenario, it is budgeted to train 10 veterinariansevery year in order to fill the shortageof veterinarians in the field and replace retiring veterinarians. Support for training should be associated with a contract for them to provide 10 years of service to the VS. The average cost for 5 years of study is estimated to be 175, 000 € per graduate [including tuition, accommodation and expenses, travel abroad].
Tasks linked to cross-cutting competencies: *III.2 Consultation*	
Tasks linked to cross-cutting competencies: *IV.1, 2, 3. Legislation*	
Tasks linked to cross-cutting competencies: *I.3. Continuing Education*	
Tasks linked to cross-cutting competencies: *III.1 Communication*	
Tasks linked to cross-cutting competencies: *I.11.Management of resources and operations*	
Tasks linked to cross-cutting competencies: *III.3. Official representation*	
5. Objectively verifiable indicators (OIE PVS or specific)	
Number of new graduate veterinarians in the VS	

MANAGEMENT OF VETERINARY SERVICES - 1 / I.2.A. Professional competencies of veterinarians					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Initial traning (number of students / 5 years)	50	175 000			8 750 000
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**8 750 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources					
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro					***8 750 000***
Total in Pula					***87 500 000***

MVS 2 - I.2. Competencies of veterinarians and veterinary para-professionals

I.2.B. Competencies of veterinary para-professionals

1. Specific objective (Critical Competency)		
The capability of VS to efficiently carry out their veterinary and technical functions; measured by the qualifications of their personnel in veterinary and technical positions.		
2. Result (Expected level of advancement)		
1.The majority of veterinary para-professionals have no formal entry-level training.		
2.The training of veterinary para-professionals is of a very variable standard and allows the development of only limited animal health competencies.		
3.The training of veterinary para-professionals is of a uniform standard that allows the development of only basic animal health competencies.		
4.The training of veterinary para-professionals is of a uniform standard that allows the development of some specialist animal health competencies (e.g. meat inspection).		
5.The training of veterinary para-professionals is of a uniform standard and is subject to regular evaluation and/or updating.		
3. Strategy(if relevant)		
Take action to avoid creating a high level of unemployment of veterinary para professionals that would lead to a loss of technical independence of the VS by having these unauthorized individuals doing veterinary activities to survive.		
4. Tasks to implement (chronological)		
Specific tasks		- Coordinate with the Ministry of Education to ensure that BCA trains an adequate number of veterinary para-professionals based on the numbers needed to replace relevant positions and demand in the market.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	
5. Objectively verifiable indicators (OIE PVS or specific)		
-Number of veterinary para professionals trained every year. - Number of veterinary para professional unemployed.		

MVS 3 - I.3. Continuing education

1. Specific objective (Critical Competency)

The capability of the VS to maintain and improve the competence of their personnel in terms of relevant information and understanding; measured in terms of the implementation of a relevant training programme.

2. Result (Expected level of advancement)

1.The VS have no access to continuing veterinary, professional or technical continuing education.

2.The VS have access to continuing education (internal and/or external programmes) on an irregular basis but it does not take into account needs, or new information or understanding.

3.The VS have access to continuing education that is reviewed annually and updated as necessary, but it is implemented only for some categories of the relevant personnel.

4.The VS have access to continuing education that is reviewed annually and updated as necessary, and it is implemented for all categories of the relevant personnel.

5.The VS have up-to-date continuing education that is implemented for all relevant personnel and is submitted to periodic evaluation of effectiveness.

3. Strategy(if relevant)

Provide appropriate CE for staff of all levels on an annual basis and develop a system to assess the impact and future needs

4. Tasks to implement (chronological)

Specific tasks		- Dedicate one central VS staff member to the plan continuing education. In the proposed scenario, some needs of continuing education have been identified and directly linked to some critical competencies. As a global estimate, 2 days per year have been budgeted for all VS technical and support staff.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	Human resource section should maintain records of continuing education in order to assess it efficiency and effectiveness.
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Budget for continuing education programme
- Continuing education programmes and implementation

MANAGEMENT OF VETERINARY SERVICES - 3 / I-3. Continuing education					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year		0			
Km or miles 4x4 vehicle / year		0			
Specific costs					
Specific continuing education (man-days / year)	720	110		79 200	
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
General continuing education (man-days / year)	480	110,00		52 800	
Sub-total Consumable resources				**132 000**	
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro				***132 000***	
Total in Pula				***1 320 000***	

MVS 4 - I.4. Technical independence

1. Specific objective (Critical Competency)

The capability of the VS to carry out their duties with autonomy and free from commercial, financial, hierarchical and political influences that may affect technical decisions in a manner contrary to the provisions of the OIE (and of the WTO SPS Agreement where applicable).

2. Result (Expected level of advancement)

1.The technical decisions made by the VS are generally not based on scientific considerations.

2.The technical decisions take into account the scientific evidence, but are routinely modified to conform to non-scientific considerations.

3.The technical decisions are based on scientific evidence but are subject to review and possible modification based on non-scientific considerations.

4.The technical decisions are based only on scientific evidence and are not changed to meet non-scientific considerations.

5.The technical decisions are made and implemented in full accordance with the country"s OIE obligations (and with the country"s WTO SPS Agreement obligations where applicable).

3. Strategy(if relevant)

Salaries and benefits for veterinarians should be adequate to attract veterinarians to the public sector and encourage development of the private sector.

4. Tasks to implement (chronological)

Specific tasks		- In the proposed scenario, average salaries of veterinarians are increased by 30% [from 20000 to 27000 € per year] in order to make them competitive with those found in the private sector.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Levels of salaries of veterinarians in the public and private sectors
- Retention rate of veterinarians in the public sector
- Revenues and growing proportion of private veterinarians in the animal health field network

MVS 5 - I.5. Stability of structures and sustainability of policies

1. Specific objective (Critical Competency)

The capability of the VS structure and/or leadership to implement and sustain policies over time.

2. Result (Expected level of advancement)

1.Substantial changes to the organisational structure and/or leadership of the public sector of the VS frequently occur (e.g. annually) resulting in lack of sustainability of policies.

2.The organisational structure and/or leadership of the public sector of the VS is substantially changed each time there is a change in the political leadership and this has negative effects on sustainability of policies.

3.Significant changes to the organisational structure and/or leadership of the public sector of the VS occur rarely, but this stability does not have a positive impact on the sustainability of policies.

4.Some changes occur in the organisational structure and/or leadership of the public sector of the VS following a change in the political leadership, but these have little or no negative effect on sustainability of policies.

5.The organisational structure and leadership of the public sector of the VS are generally stable. Modifications are based on an evaluation process, with positive effect on the sustainability of policies.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		-Reorganize VS structure to fully comply with OIE international standards by securing the chain of command, providing staff in the 10 districts for planing and control only, and adequate field staff and field veterinarians effectively supervising veterinary para-professionals. - Reorganize VS at central level based on the main technical functions [veterinary public health, animal health, laboratory, trade and movement control] and cross cutting functions [e.g., risk analysis, communication and adminstrativemanagment]. -Organize OIEPVS Pathway follow-up mission in years 3 and 5. (2 times 3 experts 2 weeks)
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Results of OIE follow-up evaluations and audits of international trading partners.

MANAGEMENT OF VETERINARY SERVICES - 5 / I-5. Stability of structures and sustainability of policies					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)	12	8 000			96 000
Special funds for…….					
Sub-total non material expenditure					**96 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year		0			
Km or miles 4x4 vehicle / year		0			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources					
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro					***96 000***
Total in Pula					***960 000***

MVS 6 - I.6. Coordination capability of the Veterinary Services

I.6.A. Internal coordination (chain of command)

1. Specific objective (Critical Competency)

The capability of the VS to coordinate its resources and activities (public and private sectors) with a clear chain of command, from the central level (the Chief Veterinary Officer) to the field level of the VS in order to implement all national activities relevant for OIE Codes (i.e. surveillance, disease control and eradication, food safety and early detection and rapid response programmes).

2. Result (Expected level of advancement)

1.There is no formal internal coordination and the chain of command is not clear.

2.There are internal coordination mechanisms for some activities but the chain of command is not clear.

3.There are internal coordination mechanisms and a clear and effective chain of command for some activities.

4.There are internal coordination mechanisms and a clear and effective chain of command at the national level for most activities.

5.There are internal coordination mechanisms and a clear and effective chain of command for all activities and these are periodically reviewed/audited and updated.

3. Strategy(if relevant)

Keeping a direct chain of command between central DVO and field staff trough 10 DVOs is key for compliance with international standards and should not be compromised in the context of decentralization

4. Tasks to implement (chronological)

Specific tasks		- Develop an internal auditing system at VS - Assign clear coordination activities to the 10 DVOs [planning and control only] - Reassign the current veterinarians working in sub-DVO to be head of veterinary field activity teams [see animal health chapter]. - Provide specialized training [estimated 10 months] for one veterinarian every year in veterinary public administration In the proposed scenario, each veterinarian from the central and district levels will control the effectiveness of field activities [e.g., through inspection of facilities, post-vaccination serologiccontrol, etc.] by traveling to the field on an average of 5 days per month.[20 x 5 x 12 = 1,200 days of domestic travel allowance]. - Relevant physical resources of central level have been budgeted to ensure they are maintained and remain autonomous [not pooled with other services]. Buildings are estimated as half for administration and half for storage on the following basis: 1,000 m2 at central level and 200 m2 at DVO level, this also includes cold room maintenance.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Clear separation of planning and control activities from implementation of field activities
- Number of staff specialized in veterinary public administration
-Results of audits of the chain of command

MANAGEMENT OF VETERINARY SERVICES - 6 /I-6.A. Coordination capability of the Veterinary Services: Internal coordination (chain of command)					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)	3 000				
Existing building to be maintained (m²)	3 000	20	1	60 000	
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars	14	18 000	5	50 400	
4x4 vehicles	13	35 000	5	91 000	
Telecommunication equipment set	20	600	3	4 000	
Office equipment set	80	750	3	20 000	
Other specific equipment					
Sub-total Material investments				**225 400**	
Non material expenditure					
Specialised training (man-months/ 5 years)	50	5 000			250 000
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**250 000**
Salaries / year					
Veterinarians	21	27 000		567 000	
Other university degree	6	20 000		120 000	
Veterinary para-professionals	17	14 000		238 000	
Support staff	81	3 500		283 500	
Sub-total Salaries				**1 208 500**	
Consumable resources / year					
Administration		20%		241 700	
Travel allowances					
staff within the country (man-days) / year	1 200	90		108 000	
drivers within the country (man-days) / year	1 200	90		108 000	
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year	280 000	0,14		39 200	
Km or miles 4x4 vehicle / year	195 000	0,30		58 500	
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources				**555 400**	
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro				***1 989 300***	***250 000***
Total in Pula				***19 893 000***	***2 500 000***

MVS 7 - I.6. Coordination capability of the Veterinary Services

I.6.B. External coordination

1. Specific objective (Critical Competency)

The capability of the VS to coordinate its resources and activities (public and private sectors) at all levels with other relevant authorities as appropriate, in order to implement all national activities relevant for OIE Codes (i.e. surveillance, disease control and eradication, food safety and early detection and rapid response programmes).

Relevant authorities include other ministries and competent authorities, national agencies and decentralised institutions.

2. Result (Expected level of advancement)

1.There is no external coordination.

2.There are informal external coordination mechanisms for some activities, but the procedures are not clear and/or external coordination occurs irregularly.

3.There are formal external coordination mechanisms with clearly described procedures or agreements for some activities and/or sectors

4.There are formal external coordination mechanisms with clearly described procedures or agreements at the national level for most activities, and these are uniformly implemented throughout the country.

5.There are national external coordination mechanisms for all activities and these are periodically reviewed and updated.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Develop and evaluate all new external coordination procedures as required, e.g., Ministry of Health for brucellosis and other zoonoses, Ministry of Education for training of veterinarians and veterinary para professionals.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	Relevance and compatibility of databases is necessary to promote external coordination especially in the field of human health.
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Relevant procedures of external coordination

MVS 8 - I.11. Management of resources and operations

1. Specific objective (Critical Competency)

The capability of the VS to document and manage their resources and operations in order to analyze, plan and improve both efficiency and effectiveness.

2. Result (Expected level of advancement)

1. The VS have some records or documented procedures, but these do not provide for adequate management of resources and operations.

2. The VS routinely use records and/or documented procedures in the management of resources and some operations, but these do not provide for adequate management, analysis, control or planning.

3. The VS have comprehensive records, documentation, and management systems and they regularly use records and documented procedures in the management of resources and operations, providing for the control of effectiveness and the conduct of analysis and planning.

4. The VS have adequate management skills, including the capacity to analyse and improve efficiency and effectiveness.

5. The VS have fully effective management systems, which are regularly audited and permit a proactive continuous improvement of efficiency and effectiveness.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Ensure compatibility of all databases related to VS activities with the support of national expertise in database development [estimated 1000 days over 5 year - Analyses the relevance of all data collection and paperwork with the intent to simplify and increase efficiency. - Provide specialized training on cost efficiency and cost/benefit analysis to veterinarians of central staff [estimated 6 man months over the next 5 years].
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Cost efficiency and cost/benefit analysis of VS activities

MANAGEMENT OF VETERINARY SERVICES - 8 / I-11. Management of resources and operations					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set	1	600	3	200	
Office equipment set	4	750	3	1 000	
Other specific equipment					
Sub-total Material investments				**1 200**	
Non material expenditure					
Specialised training (man-months/ 5 years)	6	5 000			30 000
National expertise (days/5 years)	1 000	200			200 000
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**230 000**
Salaries / year					
Veterinarians		27 000			
Other university degree	2	20 000		40 000	
Veterinary para-professionals		14 000			
Support staff	2	3 500		7 000	
Sub-total Salaries				**47 000**	
Consumable resources / year					
Administration		20%		9 400	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources				**9 400**	
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro				***57 600***	***230 000***
Total in Pula				***576 000***	***2 300 000***

MVS 9 - II.3. Risk analysis

1. Specific objective (Critical Competency)

The authority and capability of the VS to base its risk management decisions on a scientific assessment of the risks.

2. Result (Expected level of advancement)

1. Risk management decisions are not usually supported by scientific risk assessment.

2. The VS compile and maintain data but do not have the capability to systematically assess risks. Some risk management decisions are based on scientific risk assessment.

3. The VS can systematically compile and maintain relevant data and carry out risk assessment. Scientific principles and evidence, including risk assessment, generally provide the basis for risk management decisions.

4. The VS systematically conduct risk assessments in compliance with relevant OIE standards, and base their risk management decisions on the outcomes of these risk assessments.

5. The VS are consistent in basing sanitary decisions on risk analysis, and in communicating their procedures and outcomes internationally, meeting all their OIE obligations (including WTO SPS Agreement obligations where applicable).

3. Strategy(if relevant)

Risk analysis is a key technical competence needed for the progress of the VS

4. Tasks to implement (chronological)

Specific tasks		- Provide specialized training to central staff [estimated 3 man-months over the next 5 years]. - Assign risk analysis to specific staff as a cross cutting function of the central VS. - Establish procedures and reports of risk analysis in all relevant domains.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Staff in charge of risk analysis with relevant training
- Report of risk analyses performed

MANAGEMENT OF VETERINARY SERVICES - 9 / II-3. Risk analysis					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)	3	5 000			15 000
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					**15 000**
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year		0			
Km or miles 4x4 vehicle / year		0			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
Sub-total Consumable resources					
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro					***15 000***
Total in Pula					***150 000***

MVS 10 - II.11. Emerging issues

1. Specific objective (Critical Competency)

The authority and capability of the VS to identify in advance, and take appropriate action in response to likely emerging issues under their mandate relating to the sanitary status of the country, public health, the environment, or trade in animals and animal products.

2. Result (Expected level of advancement)

1. The VS do not have procedures to identify in advance likely emerging issues.

2. The VS monitor and review developments at national and international levels relating to emerging issues.

3. The VS assess the risks, costs and/or opportunities of the identified emerging issues, including preparation of appropriate national preparedness plans. The VS have some collaboration with other agencies (e.g. human health, wildlife, and environment) and with stakeholders on emerging issues.

4. The VS implement, in coordination with stakeholders, prevention or control actions due to an adverse emerging issue, or beneficial actions from a positive emerging issue. The VS have well-developed formal collaboration with other agencies (e.g. human health, wildlife and environment) and with stakeholders on emerging issues.

5. The VS coordinate actions with neighbouring countries and trading partners to respond to emerging issues, including audits of each other"s ability to detect and address emerging issues in their early stages.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Assign this function to staff in charge of risk analysis
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Job description of risk analysis staff incorporating emerging issues
-Activity reports

MVS 11 - II.12. Technical innovation

1. Specific objective (Critical Competency)

The capability of the VS to keep up-to-date with the latest scientific advances and to comply with the standards of the OIE (and Codex Alimentarius Commission where applicable).

2. Result (Expected level of advancement)

1. The VS have only informal access to technical innovations, through personal contacts and external sources.

2. The VS maintain a database of technical innovations and international standards, through subscriptions to scientific journals and electronic media.

3. The VS have a specific programme to actively identify relevant technical innovations and international standards.

4. The VS incorporate technical innovations and international standards into selected policies and procedures, in collaboration with stakeholders.

5. The VS systematically implement relevant technical innovations and international standards.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Establish formal committee including VS, appropriate research institutions, their partners, and stakeholders in order to plan relevant programmes to advance technical innovation.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Relevant programmes and committee minuets and programme planning

MVS 12 - III.1. Communications

1. Specific objective (Critical Competency)

The capability of the VS to keep stakeholders informed, in a transparent, effective and timely manner, of VS activities and programmes, and of developments in animal health and food safety.

2. Result (Expected level of advancement)

1. The VS have no mechanism in place to inform stakeholders of VS activities and programmes.

2. The VS have informal communication mechanisms.

3. The VS maintain an official contact point for communications but it is not always up-to-date in providing information.

4. The VS contact point for communications provides up-to-date information, accessible via the Internet and other appropriate channels, on activities and programmes.

5. The VS have a well developed communication plan, and actively and regularly circulate information to stakeholders.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Recruit a communication specialist to develop and manage all relevant communication tools [internet website, radio messages, posters, leaflets, etc.] In the proposed scenario, the budget for communication is estimated on a lump-sum basis of 1 € per farmer = 60,000 € per year.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

- Communication officer of VS
- Communication tools and budget for communication

MANAGEMENT OF VETERINARY SERVICES - 12 / III-1. Communications					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set	1	600	3	200	
Office equipment set	1	750	3	250	
Other specific equipment					
Sub-total Material investments				**450**	
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree	1	20 000		20 000	
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries				**20 000**	
Consumable resources / year					
Administration		20%		4 000	
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0			
Km or miles cars / year		0			
Km or miles 4x4 vehicle / year		0			
Specific costs					
Specific continuing education (man-days / year)		110			
Total specific communications / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
General communication / year	1	60000,00		60 000	
Sub-total Consumable resources				**64 000**	
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro				***84 450***	
Total in Pula				***844 500***	

MVS 13 - III.2. Consultation with stakeholders

1. Specific objective (Critical Competency)

The capability of the VS to consult effectively with stakeholders on VS activities and programmes, and on developments in animal health and food safety.

2. Result (Expected level of advancement)

1. The VS have no mechanisms for consultation with stakeholders.

2. The VS maintain informal channels of consultation with stakeholders.

3. The VS maintain a formal consultation mechanism with stakeholders.

4. The VS regularly hold workshops and meetings with stakeholders.

5. The VS actively consult with and solicit feedback from stakeholders regarding proposed and current activities and programmes, developments in animal health and food safety, interventions at the OIE (Codex Alimentarius Commission and WTO SPS Committee where applicable), and ways to improve their activities.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Organize general annual meetings in all districtswith farmers representatives - Organize specific meetings to address the needs of specific stakeholders, e.g., dairy, poultry, small holders. In the proposed scenario, consultation budget has been estimated at 20 meetings at2000€ per meeting to cover cost of the venue, food, etc.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Record of consultation meetings with farmers

MANAGEMENT OF VETERINARY SERVICES - 13 / III-2. Consultation with stakeholders					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
staff abroad (man-weeks) / year		2 750			
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Total specific consultations / year					
Specific kits / reagents / vaccines					
Global consultation / year	20	2000,00		40 000	
Sub-total Consumable resources				**40 000**	
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro				***40 000***	
Total in Pula				***400 000***	

MVS 14 - III.3. Official representation

1. Specific objective (Critical Competency)

The capability of the VS to regularly and actively participate in, coordinate and provide follow up on relevant meetings of regional and international organisations including the OIE (and Codex Alimentarius Commission and WTO SPS Committee where applicable).

2. Result (Expected level of advancement)

1. The VS do not participate in or follow up on relevant meetings of regional or international organisations.

2. The VS sporadicallyparticipate in relevant meetings and/or make limited contribution.

3. The VS actively participate in the majority of relevant meetings.

4. The VS consult with stakeholders and take into consideration their opinions in providing papers and making interventions in relevant meetings.

5. The VS consult with stakeholders to ensure that strategic issues are identified, to provide leadership and to ensure coordination among national delegations as part of their participation in relevant meetings.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Organize consultation with stakeholders to prepare for international meetings and deliver outputs from these meetings In the proposed scenario, some international meetings have been identified and linked with specific critical competencies. These meeting are in addition to regular meetings with OIE, Codex, SPS and SADC [total estimated 10 meetings per year]. The total budget is estimated on the basis of 15 man weeks per year.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Number of meetings attended
- Consultation with stakeholders relevant to these meetings

MANAGEMENT OF VETERINARY SERVICES - 14 / III-3. Official representation					
Resources and Budget lines	Required Number	Unit Cost	Nb of years for amortisation	**Annual Budget**	**Exceptional Budget**
Material investments					
Buildings (m²)					
Existing building to be maintained (m²)		20	1		
Existing building to be renovated (m²)		150	15		
Building to be built (m²)		400	25		
Transport					
Motorbikes		2 500	3		
Cars		18 000	5		
4x4 vehicles		35 000	5		
Telecommunication equipment set		600	3		
Office equipment set		750	3		
Other specific equipment					
Sub-total Material investments					
Non material expenditure					
Specialised training (man-months/ 5 years)		5 000			
National expertise (days/5 years)		200			
International expertise (weeks/5 years)		8 000			
Special funds for…….					
Sub-total non material expenditure					
Salaries / year					
Veterinarians		27 000			
Other university degree		20 000			
Veterinary para-professionals		14 000			
Support staff		3 500			
Sub-total Salaries					
Consumable resources / year					
Administration		20%			
Travel allowances					
staff within the country (man-days) / year		90			
drivers within the country (man-days) / year		90			
Total other staff abroad (man-weeks) / year	13	2 750		35 750	
Transport fees					
Km or miles Motorbikes / year		0,05			
Km or miles cars / year		0,14			
Km or miles 4x4 vehicle / year		0,30			
Specific costs					
Specific continuing education (man-days / year)		110			
Specific communication / year					
Specific consultation / year					
Specific kits / reagents / vaccines					
***OIE,Codex,SPS meetings** / year (man-weeks)*	10	2750,00		27 500	
Sub-total Consumable resources				**63 250**	
Delegated activities / year					
Specific official delegation / year					
Sub-total Delegated activities					
Total in Euro				***63 250***	
Total in Pula				***632 500***	

MVS 15 - III.4. Accreditation / authorisation / delegation

1. Specific objective (Critical Competency)

The authority and capability of the public sector of the VS to accredit / authorise / delegate the private sector (e.g. private veterinarians and laboratories), to carry out official tasks on its behalf.

2. Result (Expected level of advancement)

1. The public sector of the VS has neither the authority nor the capability to accredit / authorise / delegate the private sector to carry out official tasks.

2. The public sector of the VS has the authority and capability to accredit / authorise / delegate to the private sector, but there are no current accreditation / authorisation / delegation activities.

3. The public sector of the VS develops accreditation / authorisation / delegation programmes for certain tasks, but these are not routinely reviewed.

4. The public sector of the VS develops and implements accreditation / authorisation / delegation programmes, and these are routinely reviewed.

5. The public sector of the VS carries out audits of its accreditation / authorisation / delegation programmes, in order to maintain the trust of their trading partners and stakeholders.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Develop official accreditation to private veterinarians for all relevant animal health activities and inspection of rural slaughterhouses.
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	Develop relevant procedures for implementation and control of all delegated activities
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Data management system should incorporate data coming from official delegated activities done by either VS or officially delegated private veterinarians.
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Procedures, data, and reports of officially delegated activities

MVS 16 - III.5. Veterinary Statutory Body (VSB)

III.5.A. VSB authority

1. Specific objective (Critical Competency)		
The VSB is an autonomous authority responsible for the regulation of the veterinarians and veterinary para-professionals. Its role is defined in the Terrestrial Code.		
2. Result (Expected level of advancement)		
1. There is no legislation establishing a Veterinary Statutory Body.		
2. The VSB regulates veterinarians only within certain sectors of the veterinary profession and/or does not systematically apply disciplinary measures.		
3. The VSB regulates veterinarians in all relevant sectors of the veterinary profession and applies disciplinary measures.		
4. The VSB regulates functions and competencies of veterinarians in all relevant sectors and veterinary para-professionals according to needs		
5. The VSB regulates and applies disciplinary measures to veterinarians and veterinary para-professionals in all sectors throughout the country.		
3. Strategy(if relevant)		
As the number of veterinarians in Botswana is relatively limited and most of them will remain in the public sector for the medium term, the development of a VSB is not considered as a priority.		
4. Tasks to implement (chronological)		
Specific tasks		- Develop appropriate regulation of the veterinary profession - Implement strict administrative control of veterinary activities within the VS [e.g., general audit, effective supervision of veterinary para-professionals, controls for official delegation] and apply sanctions as necessary. - Consider support of international expertise and visits to observe appropriate models abroad to analyse the possibility of developing a VSB
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	
5. Objectively verifiable indicators (OIE PVS or specific)		
Control of veterinary activity within the VS Sanctions applied to veterinarians and veterinary para professionals as appropriate		

MVS 17 - III.5. Veterinary Statutory Body (VSB)

III.5.B. VSB capacity

1. Specific objective (Critical Competency)		
The capacity of the VSB to implement its functions and objectives in conformity with OIE standards.		
2. Result (Expected level of advancement)		
1. The VSB has no capacity to implement its functions and objectives.		
2. The VSB has the functional capacity to implement its main objectives.		
3. The VSB is an independent representative organisation with the functional capacity to implement all of its objectives.		
4. The VSB has a transparent process of decision making and conforms to OIE standards.		
5. The financial and institutional management of the VSB is submitted to external auditing.		
3. Strategy(if relevant)		
4. Tasks to implement (chronological)		
Specific tasks		Not relevant in the current organisation of VS
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	
5. Objectively verifiable indicators (OIE PVS or specific)		

MVS 18 - III.6. Participation of producers and other stakeholders in joint programmes

1. Specific objective (Critical Competency)

The capability of the VS and stakeholders to formulate and implement joint programmes in regard to animal health and food safety.

2. Result (Expected level of advancement)

1. Producers and other stakeholders only comply and do not actively participate in programmes.

2. Producers and other stakeholders are informed of programmes and assist the VS to deliver the programmes in the field.

3. Producers and other stakeholders are trained to participate in programmes and advise of needed improvements, and participate in early detection of diseases.

4. Representatives of producers and other stakeholders negotiate with the VS on the organisation and delivery of programmes.

5. Producers and other stakeholders are formally organised to participate in developing programmes in close collaboration with the VS.

3. Strategy(if relevant)

Joint programmes are key to strengthen direct contact between veterinarians of the AH field network and farmers. Meetings will be planned once a year for all relevant domains.

4. Tasks to implement (chronological)

Specific tasks		- Develop joint programmesrelated to anthrax, blackleg, ND, salmonellosis, cysticercosis, hydatid disease (echinococcosis), brucellosis and other relevant disease of economic importance with the support of the communication officer. - Ensure implementation of these programmes through the AHfield veterinary network, including participation of private veterinarians through official delegation In the proposed scenario, 1 day of training on AH and VPH per year by groups of 30 farmers [estimated 60,000 farmers/30 = equivalent to 2,000 working days throughout the year as an extension activity of the AH field veterinary network]has been considered for the design and financing of the AH field veterinary network [see relevant chapter].
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	Ensure that data management system can capture indicators relevant for their evaluation, e.g., number of doses of vaccines sold.
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

List of joint programmes and report of activities

MVS 19 - IV.1. Preparation of legislation and regulations

1. Specific objective (Critical Competency)

The authority and capability of the VS to actively participate in the preparation of national legislation and regulations in domains that are under their mandate, in order to warranty its quality with respect to principles of legal draftingand legal issues (internal quality) and its accessibility, acceptability, and technical, social and economical applicability (external quality)

2. Result (Expected level of advancement)

1. The VS have neither the authority nor the capability to participate in the preparation of national legislation and regulations, which result in legislation that is lacking or is outdated or of poor quality in most fields of VS activity.

2. The VS have the authority and the capability to participate in the preparation of national legislation and regulations, and can largely ensure their internal quality, but the legislation and regulations are often lacking in external quality.

3. The VS have the authority and the capability to participate in the preparation of national legislation and regulations with adequate internal and external quality in some fields of activity, but lack formal methodology to develop adequate national legislation and regulations regularly in all domains.

4. The VS have the authority and the capability to participate in the preparation of national legislation and regulations with a relevant formal methodology to ensure adequate internal and external quality, involving stakeholder participation in most fields of activity.

5. The VS regularly evaluate and update their legislation and regulations to maintain relevance to evolving national and international contexts.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Develop auditing procedures and reports of the auditing of all inspection activities of the VS
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

-Audit reports
- Updated regulation and implementing procedures

MVS 20 - IV.2. Implementation of legislation and regulations and stakeholder compliance

1. Specific objective (Critical Competency)

The authority and capability of the VS to ensure that stakeholders are in compliance with legislation and regulations under the VS mandate.

2. Result (Expected level of advancement)

1. The VS have no or very limited programmes or activities to ensure stakeholder compliance with relevant legislation and regulations.

2. The VS implement a programme or activities comprising inspection and verification of compliance with legislation and regulations and recording instances of non-compliance, but generally cannot or do not take further action in most relevant fields of activity.

3. Veterinary legislation is generally implemented. As required, the VS have a power to tale legal action / initiate prosecution in instance of non-compliance in most relevant fields of activity.

4. Veterinary legislation is implemented in all domains of veterinary competence and the VS work with stakeholders to minimise instances of non-compliance.

5. The compliance programme is regularly subjected to audit by the VS or external agencies.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		- Confirm establishment of the compliance unit with relevant functions of internal VS audit, especially related to inspection and control activities of the VS. - Ensure relevant training of staff in auditing methodology [see CC IV.6].
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Data management system should provide data in an appropriate format for all audit functions
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Audit reports

MVS 21 - IV.3. International harmonisation

1. Specific objective (Critical Competency)

The authority and capability of the VS to be active in the international harmonisation of regulations and sanitary measures and to ensure that the national legislation and regulations under their mandate take account of relevant international standards, as appropriate.

2. Result (Expected level of advancement)

1. National legislation, regulations and sanitary measures under the mandate of the VS do not take account of international standards.

2. The VS are aware of gaps, inconsistencies or non-conformities in national legislation, regulations and sanitary measures as compared to international standards, but do not have the capability or authority to rectify the problems.

3. The VS monitor the establishment of new and revised international standards, and periodically review national legislation, regulations and sanitary measures with the aim of harmonising them, as appropriate, with international standards, but do not actively comment on the draft standards of relevant intergovernmental organisations.

4. The VS are active in reviewing and commenting on the draft standards of relevant intergovernmental organisations.

5. The VS actively and regularly participate at the international level in the formulation, negotiation and adoption of international standards[4], and use the standards to harmonise national legislation, regulations and sanitary measures.

3. Strategy(if relevant)

4. Tasks to implement (chronological)

Specific tasks		
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Reports of meetings of intergovernmental organisations

[4] A country could be active in international standard setting without actively pursuing national changes. The importance of this element is to promote national change.

F. Critical Competencies for Resources and Budget Analysis

I.1. Professional and technical staffing of the Veterinary Services.

I.1.A. Veterinary and other professionals (university qualifications)

1. Specific objective (Critical Competency)	
The appropriate staffing of the VS to allow for veterinary and technical functions to be undertaken efficiently and effectively.	
2. Result (Expected level of advancement)	
1. The majority of veterinary and other professional positions are not occupied by appropriately qualified personnel.	
2. The majority of veterinary and other professional positions are occupied by appropriately qualified personnel at central and state / provincial levels.	
3. The majority of veterinary and other professional positions are occupied by appropriately qualified personnel at local (field) level.	
4. There is a systematic approach to defining job descriptions and formal appointment procedures for veterinarians and other professionals.	
5. There are effective management procedures for performance assessment of veterinarians and other professionals.	
3. Strategy(if relevant)	
The deployment of veterinarians to work in the field is crucial to develop and maintain compliance with OIE for the VS of Botswana. Move to separate coordination functions from field activities, in other words, field activities and coordination activities should not be assigned to the same staff members.	
4. Tasks to implement (chronological)	
Specific tasks	- Assign coordination functions exclusively to veterinarians working at central and the 10 DVOs. - Assign current veterinarians of sub-DVO to the AH field veterinary network - Recruit veterinarians to build the AH field veterinary network - Promote settlement of private veterinarians to be part of the AH field veterinary network by developing official delegation activities
Tasks linked to cross-cutting competencies: *III.2 Consultation*	
Tasks linked to cross-cutting competencies: *IV.1, 2, 3. Legislation*	
Tasks linked to cross-cutting competencies: *I.3. Continuing Education*	
Tasks linked to cross-cutting competencies: *III.1 Communication*	
Tasks linked to cross-cutting competencies: *I.11. Management of resources and operations*	
Tasks linked to cross-cutting competencies: *III.3. Official representation*	
5. Objectively verifiable indicators (OIE PVS or specific)	
- Status of AH field veterinary network - Status of officially delegated activities	

1. Analyse of Human Ressources required for the Veterinary Services (CC I.1.A and I.1.B)

	Trade		Veterinary Public Health		Animal health		Veterinary laboratories		General management and regulatory		Total Human Ressources of Public Sector		Human Ressources of Private Sector for delegated activities				Total Human Ressources of Veterinary Services			
	current	required	current	required	current	required	current	required	current	required	current	required	current number	current FTE	required number	Required FTE	current number	current FTE	required number	Required FTE
Veterinarians			10	33		65	12	12	33	21	55	131					55	55	131	131
Other university degree							28	28	6	9	34	37					34	34	37	37
Veterinary para-professionals	40	40	155	135	485	195	29	29	20	17	729	416					729	729	416	416
Support staff	1 200	810			1 602		15	15	83	83	2 900	908					2 900	2 900	908	908

I.1. Professional and technical staffing of the Veterinary Services.

I.1.B. Veterinary para-professionals and other technical personnel

1. Specific objective (Critical Competency)		
The appropriate staffing of the VS to allow for veterinary and technical functions to be undertaken efficiently and effectively.		
2. Result (Expected level of advancement)		
1. The majority of technical positions are not occupied by personnel holding technical qualifications.		
2. The majority of technical positions at central and state / provincial levels are occupied by personnel holding technical qualifications.		
3. The majority of technical positions at local (field) level are occupied by personnel holding technical qualifications.		
4. The majority of technical positions are effectively supervised on a regular basis.		
5. There are effective management procedures for formal appointment and performance assessment of veterinary para-professionals.		
3. Strategy(if relevant)		
Increase the number of veterinarians in the field to ensure adequate oversight and supervision of the activities of veterinary para professionals.		
4. Tasks to implement (chronological)		
Specific tasks		- Review oversight of veterinary para professionals - Establish clear job descriptions and assessment mechanisms
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	
5. Objectively verifiable indicators (OIE PVS or specific)		
Audit reports of field activities by veterinary para professionals		

I.7. Physical resources

1. Specific objective (Critical Competency)	
The access of the VS to relevant physical resources including buildings, transport telecommunications, cold chain, and other relevant equipment (e.g. computers).	
2. Result (Expected level of advancement)	
1.The VS have no or unsuitable physical resources at almost all levels and maintenance of existing infrastructure is poor or non-existent.	
2.The VS have suitable physical resources at national (central) level and at some regional levels, and maintenance and replacement of obsolete items occurs only occasionally.	
3.The VS have suitable physical resources at national, regional and some local levels and maintenance and replacement of obsolete items occurs only occasionally.	
4.The VS have suitable physical resources at all levels and these are regularly maintained.	
5.The VS have suitable physical resources at all levels (national, sub-national and local levels) and these are regularly maintained and updated as more advanced and sophisticated items become available.	
3. Strategy(if relevant)	
To develop an AH field veterinary network that is properly resourced through incremental development of the field teams	
4. Tasks to implement (chronological)	
Specific tasks	- Ensure that all AH field veterinary teams have the resources to properly accomplish all relevant field activities
Tasks linked to cross-cutting competencies: *III.2 Consultation*	
Tasks linked to cross-cutting competencies: *IV.1, 2, 3. Legislation*	
Tasks linked to cross-cutting competencies: *I.3.Continuing Education*	
Tasks linked to cross-cutting competencies: *III.1 Communication*	
Tasks linked to cross-cutting competencies: *I.11. Management of resources and operations*	
Tasks linked to cross-cutting competencies: *III.3. Official representation*	
5. Objectively verifiable indicators (OIE PVS or specific)	
Number of AH field veterinary networks teams in place	

2. Analyse of Physical Resources required for the Veterinary Services (CC I.7)

	Trade		Veterinary Public Health		Animal health		Veterinary laboratories		General management and regulatory		Total Physical Ressources of Public Sector		Physical ressources of Private Sector for delegated activities		Total Physical Ressources of Veterinary Services	
	current	required	current	required	current	required	current	required	current	required	current	required	current	required	current	required
Buildings (m²)	-	2 300	-	1 500	-	6 500	-	3 000	-	3 000	-	16 300			-	16 300
Existing building to be maintained (m²)	-	2 300	-	1 500	-	6 500	-	3 000	-	3 000	-	16 300			-	16 300
Existing building to be renovated (m²)	-	-	-	-	-	-	-	-	-	-	-	-			-	-
Building to be built (m²)	-	-	-	-	-	-	-	-	-	-	-	-			-	-
Transport	-	-	-	-	-	-	-	-	-	-	-	-			-	-
Motorbikes	-	-	-	-	-	-	-	-	-	-	-	-			-	-
Cars	-	-	-	-	-	-	3	3	1	14	4	17			4	17
4x4 vehicles	-	30	-	-	-	130	1	1	1	13	2	174			2	174
	-	-	-	-	-	-	-	-	-	-	-	-			-	-
	-	-	-	-	-	-	-	-	-	-	-	-			-	-
Telecommunication equipment set	-	68	-	-	-	65	-	-	-	22	-	155			-	155
Office equipment set	-	64	-	-	-	65	-	-	-	85	-	214			-	214
Other specific equipment *(amount)*		11531500		110 000		162 500		5 000 000		-		16 804 000				16 804 000

I.8. Operational funding

1. Specific objective (Critical Competency)

The ability of the VS to access financial resources adequate for their continued operations, independent of political pressure.

2. Result (Expected level of advancement)

1.Funding for the VS is neither stable nor clearly defined but depends on resources allocated irregularly.

2.Funding for the VS is clearly defined and regular, but is inadequate for their required base operations (i.e. disease surveillance, early detection and rapid response and veterinary public health)

3.Funding for the VS is clearly defined and regular, and is adequate for their base operations, but there is no provision for new or expanded operations.

4.Funding for new or expanded operations is on a case-by-case basis, not always based on risk analysis and/or cost benefit analysis.

5.Funding for all aspects of VS activities is adequate; all funding is provided under full transparency and allows for full technical independence, based on risk analysis and/or cost benefit analysis.

3. Strategy(if relevant)

Continue to secure necessary operational funding for core VS functions in the face of budget constraints. Identify mechanisms of internal audits with cost / benefit analysis and efficiency assessments to ensure continued funding of core functions.

4. Tasks to implement (chronological)

Specific tasks		
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Reports of internal audits with cost / benefit analysis

3. Analyse of Operational Budget (annual) required for the Veterinary Services (CC I.8)							
	Trade	Veterinary Public Health	Animal health	Veterinary laboratories	General management and regulatory	Total Operational Budget	%
Veterinarians		891 000	1 755 000	324 000	567 000	3 537 000	14,9
Other university degree				560 000	180 000	740 000	3,1
Veterinary para-professionals	560 000	1 890 000	2 730 000	406 000	238 000	5 824 000	24,6
Support staff	2 835 000			52 500	290 500	3 178 000	13,4
Sub-total Salaries	**3 395 000**	**2 781 000**	**4 485 000**	**1 342 500**	**1 275 500**	**13 279 000**	**56,1**
Administration	679 000	556 200	897 000	268 500	255 100	2 655 800	11,2
Travel allowances	35 750				135 500	171 250	0,7
Transport fees	1 185 000	140 000	585 000	12 900	97 700	2 020 600	8,5
Specific costs	1 515 400	250 000	3 050 000	483 800	152 800	5 452 000	23,0
Continuing education	*15 400*			*63 800*	*52 800*	*132 000*	*0,6*
Communication					*60 000*	*60 000*	*0,3*
Consultation					*40 000*	*40 000*	*0,2*
Specific kits / reagents / vaccines				*400 000*		*400 000*	*1,7*
Other	*500 000*	*250 000*	*2 800 000*	*20 000*		*3 570 000*	*15,1*
Other	*1 000 000*		*250 000*			*1 250 000*	*5,3*
Sub-total Consumable resources	**3 415 150**	**946 200**	**4 532 000**	**765 200**	**749 100**	**10 407 650**	**43,9**
Sub-total Delegated activities							**-**
TOTAL OPERATIONAL BUDGET	**6 810 150**	**3 727 200**	**9 017 000**	**2 107 700**	**2 024 600**	**23 686 650**	**100**

I.9. Emergency funding

1. Specific objective (Critical Competency)

The capability of the VS to access extraordinary financial resources in order to respond to emergency situations or emerging issues; measured by the ease of which contingency and compensatory funding (i.e. arrangements for compensation of producers in emergency situations) can be made available when required.

2. Result (Expected level of advancement)

1.No contingency and compensatory funding arrangements exist and there is no provision for emergency financial resources.

2.Contingency and compensatory funding arrangements with limited resources have been established, but these are inadequate for expected emergency situations (including emerging issues).

3.Contingency and compensatory funding arrangements with limited resources have been established; additional resources for emergencies may be approved but approval is through a political process.

4.Contingency and compensatory funding arrangements with adequate resources have been established, but in an emergency situation, their operation must be agreed through a non-political process on a case-by-case basis.

5.Contingency and compensatory funding arrangements with adequate resources have been established and their rules of operation documented and agreed with stakeholders.

3. Strategy(if relevant)

Continue to address emergencies fully and in a timely manner

4. Tasks to implement (chronological)

Specific tasks		
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11.Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Reports of emergency response to outbreaks or emerging issues

I.10. Capital investment

1. Specific objective (Critical Competency)

The capability of the VS to access funding for basic and additional investments (material and non material) that lead to a sustained improvement in the VS operational infrastructure.

2. Result (Expected level of advancement)

1.There is no capability to establish, maintain or improve the operational infrastructure of the VS.

2.The VS occasionally develops proposals and secures funding for the establishment, maintenance or improvement of operational infrastructure but this is normally through extraordinary allocations.

3.The VS regularly secures funding for maintenance and improvements of operational infrastructure, through allocations from the national budget or from other sources, but there are constraints on the use of these allocations.

4.The VS routinely secures adequate funding for the necessary maintenance and improvement in operational infrastructure.

5.The VS systematically secures adequate funding for the necessary improvements in operational infrastructure, including with participation from stakeholders as required.

3. Strategy(if relevant)

Secure adequate funding for development of the AH field veterinary network

4. Tasks to implement (chronological)

Specific tasks		- Fund appropriate means of transportation for a dedicated VS fleet for the AH field veterinary network - Ensure investment in the upgrading of the animal identification system and integration of supporting databases - Ensure adequate funding to maintain laboratory equipment
Tasks linked to cross-cutting competencies	*III.2 Consultation*	
	IV.1, 2, 3. Legislation	
	I.3.Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators (OIE PVS or specific)

Status reports for VS transportation fleet, LITS and laboratory

5. Analyse of Capital Investment required for the Veterinary Services (CC I.10)

	Trade		Veterinary Public Health		Animal health		Veterinary laboratories		General management and regulatory		Total Capital Investment		% on 5 years
	annual	exceptional	annual	exceptional	annual	exceptional	annual	exceptional	annual	exceptional	annual	exceptional	total
Buildings (m²)	46 000		30 000		130 000		60 000		60 000		326 000		4,3
Transport	660 000		90 000		910 000		17 800		141400		1819 200		24,1
Telecommunication equipment set	13 600				13 000				4 400		31000		0,4
Office equipment set	16 000				16 250				21250		53 500		0,7
Other specific equipment	2 278 800	137 500	22 000		22 750	48 750	1000 000				3 323 550	186 250	44,5
Sub-total Material investments	**3 014 400**	**137 500**	**142 000**		**1 092 000**	**48 750**	**1 077 800**		**227 050**		**5 553 250**	**186 250**	74,1
Initial training										8 750 000		8 750 000	23,2
Specialised training		60 000		90 000				60 000		295 000		505 000	1,3
National expertise		20 000								200 000		220 000	0,6
International expertise		216 000								96 000		312 000	0,8
Special funds													-
Sub-total non material expenditure		**296 000**		**90 000**				**60 000**		**9 341 000**		**9 787 000**	25,9
TOTAL CAPITAL INVESTMENT	**3 014 400**	**433 500**	**142 000**	**90 000**	**1 092 000**	**48 750**	**1 077 800**	**60 000**	**227 050**	**9 341 000**	**5 553 250**	**9 973 250**	100
% of capital investment on 5 years	*39,9*	*1,1*	*1,9*	*0,2*	*14,5*	*0,1*	*14,3*	*0,2*	*3,0*	*24,8*	*73,6*	*26,4*	*100*