

PVS Gap Analysis Mission Report

SUDAN

Trade



Veterinary
Public Health



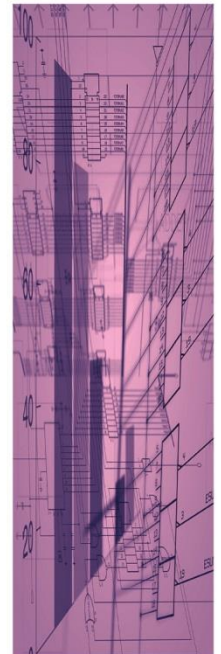
Animal Health



Veterinary
Laboratories



Management
of Veterinary
Services



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PVS Gap Analysis report

Sudan

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LIST OF ACRONYMS, ABBREVIATIONS AND/OR SPECIAL TERMS

AH&EDC	Animal Health and Epizootic Diseases Control
ARIS	Animal Resources Information System
ARRC	Animal Resources Research Corporation
AU/IBAR	African Union, Inter African Bureau of Animal Resources
BBAT	Buffered Brucella antigen test
BQ	Black quarter
CAADP	Comprehensive Africa Agriculture Development Programme
CAHW	Community Animal Health Worker
CBPP	Contagious Bovine Pleuropneumonia
CE	Continuing Education
CVL	Central Veterinary Laboratory
CVO	Chief Veterinary Officer
DG	Director General
ELISA	Enzyme-linked immunosorbent assay
EU	European Union
FAO	Food and Agriculture Organization
FMLFR	Federal Ministry of Livestock, Fisheries and Rangelands
FMD	Foot and Mouth Disease
GDP	Gross Domestic Product
HPAI	Highly Pathogenic Avian influenza
HQ	Headquarters
HS	Hemorrhagic septicaemia
IBAR	Interafrican Bureau for Animal Resources
IGAD	Intergovernmental Authority on Development
IMF	International Monetary Fund
LESP	Livestock Epidemio-surveillance Project
LSD	Lumpy skin disease
LVO	Localities Veterinary Offices
MF&NE	Ministry of Finance and National Economy
MLF&R	Ministry of Livestock, Fisheries & Rangelands
MoH	Ministry of Health
NGO	Non-governmental Organization
NLSP	National Livestock Services Project
NMPB	National Medicines and Poisons Board
OIE	World Organisation for Animal Health
OIE PVS	OIE Performance of Veterinary Services Evaluation Tool
OTC	Over-the-counter
PACE	Pan African Campaign of Epizootics
PANVAC	Pan African Veterinary Vaccine Centre
PCR	Polymerase chain reaction
PPR	Peste des Petits Ruminants
QA	Quality Assurance
QMHD	Quarantine and Meat Hygiene Department
RBT	Rose Bengal test
RVF	Rift Valley Fever
SDG	Sudanese Pound
SOP	Standard Operating Practices/Procedures
SSMO	Sudanese Standards & Metrology Organization
SPS	Sanitary and phytosanitary measures
SVMA	Sudanese Veterinary Medical Association
SVC	Sudanese Veterinary Council
SVO	State Veterinary Offices

U of K	University of Khartoum
VPH	Veterinary Public Health
VS	Veterinary Service(s)
VPH	Veterinary Public Health
VRI	Veterinary Research Institute
VS	Veterinary Statutory Body (see OIE Code definition)
WHO	World Health Organization
WTO	World Trade Organization
USAID	United States Agency for International Development

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We especially wish to express our sincere respect to Minister Faysal Hassan Ibrahim and our sincere thanks to Dr. Khadir Elfaki for all its effort in organising the mission and data collection with the support of a committed and friendly staff.

EXECUTIVE SUMMARY

The VS of Sudan requires increasing compliance to OIE standards in order to:

- Secure its exports of livestock against growing requirements/expectations of importing countries.
- Develop its exports of livestock and products of animal origin on new markets.
- Increase food security and reduce poverty amongst national population.
- Facilitate interregional trade and transhumance, which are both a fundamental factor of sustainability of the pastoral system, which remain the most cost effective and environmentally friendly sustainable production system in the arid and semiarid lands.
- Develop intensification and processing of some productions and enable those products to be exported.
- Ensure food safety for national consumers, especially regarding prudent use of veterinary medicines and chemicals, and residues testing (including imported food).

Main challenge faced by the VS is the lack of chain of command within a federal political context. Without restoring a comprehensive chain of command from Federal level up to the Locality level and field staff, there is no chance for progressing on AH and VPH programmes in a context of high and various epidemiological risks, poverty of stakeholders, variable environments, and budget limitations. Trying to reach agreements between federal, state and locality levels on strategies and operations cannot function in Sudan epidemiological context.

The Gap Analysis proposes that the public sector should link directly all resources (human, physical and financial) of central level (Federal VS), of 18 State Veterinary Offices (SVO), of 168 Localities Veterinary Offices (LVO) and of official delegation to private veterinarians, within a unique National Veterinary Service.

Second challenge is that the mandate of the VS should be expanded at least to cover food safety up to the end of processing of food of animal origin. The MoH could remain in charge of inspection of the food distribution sector. The mandate of the VS should also include control of the veterinary medicines either through a real and functional agreement (which currently does not function properly and hamper the capacity of VS to avail and use relevant veterinary medicines and vaccines) with the National Poison Board, or reincorporating this mandate under the VS.

Federal level should be responsible of strategic planning, budget and regulations.

SVO will be in charge of operational planning and control of execution in States areas.

LVO will be in charge of implementation of different public activities (active surveillance, outbreak investigation, slaughter inspection, market surveillance, transhumance certificates, etc) and during a transition period also of implementation of some AH national programmes or even private good delivery (when private sector is not present).

Private veterinarians will be in charge of delivering private good services (as veterinary medicines, diagnostic and treatment), but also be involved and paid by the VS to deliver public good activities such as specific free of charge national vaccinations programmes, public awareness, animal identification and slaughter inspection. Official delegation will be used as a major tool to develop a dense and professional veterinarians' field network, in compliance with OIE standards, able to strengthen disease surveillance by being in regular contact with animals and farmers.

If receiving relevant remuneration (estimated monthly at 600 USD/veterinarian, 400 USD/veterinary para-professional and 250 USD/support staff) and adequate specialised training and continuing education, it is estimated that public staff can represent around 400 veterinarians, 100 other professionals, 300 veterinary para-professionals, and 400 support staff. By using the official delegation appropriately, it is expected that 500 private

veterinarians employing 1000 veterinary para-professionals will network the overall countryside.

A strong effort should be made to increase competences of public staff in food safety, especially including veterinary medicine distribution, use control and residues control. This is also the case for food safety inspection. There will be a need for international expertise in different domains. The overall budget for specialised trainings and international expertise is estimated around 1,5 million over the next 5 years.

In terms of budget, the Gap Analysis estimated that the VS of Sudan could reach progressively a good level of conformity to OIE standards by means of a long term (10 years) strategy. This strategy shall include a strong political commitment to restore the chain of command, an increase of the salaries of public staff in parallel to a progressive reduction of the number of this staff, and to promote private veterinarians' field network all over the country (even in remote areas) by using official delegation funding and excluding unfair competition of public sector. When projects or NGOs want to develop activities, those should be channelled by private sector in order to avoid unfair competition.

The overall budget for the next five years is estimated around 42 000 000 USD per year. It is around 1 USD/VLU/year (equivalent to 1 USD/cattle and 0,1 USD/small ruminant), less than 1% of the national budget and of the capital value of livestock.

Out of this, around 10 million are already theoretically cost recovered through export fees (budget for tests, identification and vaccines for exported animals). Such fees could be increased progressively to allow the VS to cover other expenses linked to national protection of AH or VPH.

Within this budget, around 8 million USD / year should be dedicated to official delegation of private veterinarians.

Official programmes have been revised and re-focused on specific diseases controls, with free of charge implementation for farmers, in order to reach high level of compliance, and to be compatible with reasonable level of resources. This represents around 6 million USD per year for vaccines and identification at farmers level, which will not be cost recovered. Other diseases programmes will remain, but qualified as joint programmes, they will be only advertised through public awareness and their implementation will be cost recovered.

Physical resources for the public part of the VS, all levels included, requires less than 4 million USD / year. This represents around 300 vehicles and 800 office sets (computer, telecommunication, etc.) being renewed regularly and working properly.

The functioning of the public part of the VS, all levels included, is estimated at around 5 million USD / year, including transportation (petrol, maintenance, flights), administrative costs, communication, continuing education and travel allowances.

All these structural reforms and reorganisation of official programmes will require an in-depth legislation review, development of relevant data management systems, and review of the veterinary laboratory network suitability and sustainability. They should be supported with adequate international expertise and specialised training through an exceptional budget estimated at around 2,6 million USD over the next 5 years.

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, a follow-up evaluation of the Veterinary Services of Sudan using the OIE PVS Tool for the evaluation of Performance of Veterinary Services¹, was conducted in September 2013 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.

I.1.A Country details

Geography

Until 2012, The Republic of Sudan was the largest country in Africa and the ninth largest country in the world, with an area of approximately 1.8 million square kilometres. By public referendum, in 2011, Sudan was divided into two countries, The Republic of Sudan and the Republic of South Sudan. The Republic of Sudan now has an area of approximately 1.5 million square kilometres (third largest in Africa), which includes tropical forests, marshlands, mountains to savannah, stone and sand deserts, and mountains in the north, east and west. The Nile, runs throughout the country connecting its various parts.

¹ Section 3 of the OIE Terrestrial Animal Health Code:
http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.3.1.htm



Map 2: Republic of Sudan

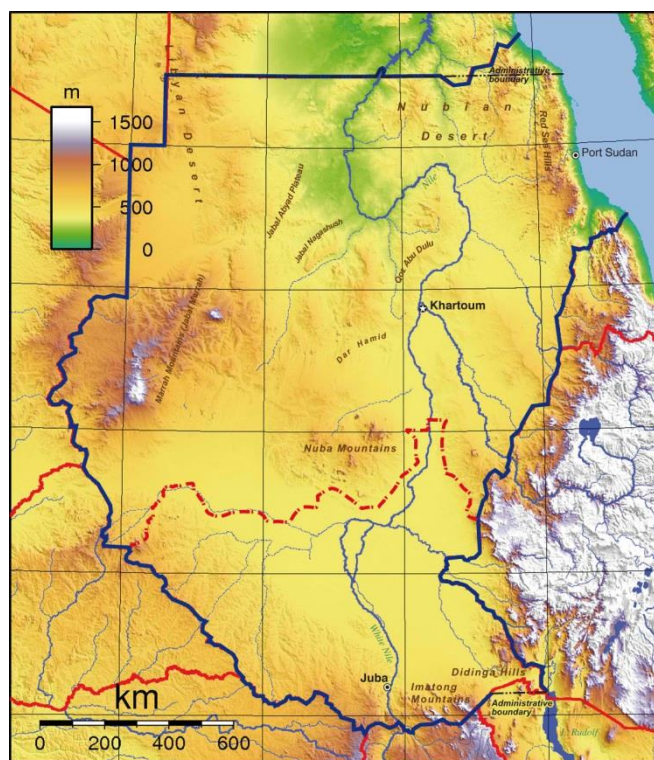
The five distinct geographic zones in the Republic of Sudan are the desert climate zone, the semi-desert zone, the dry zone, the semi dry zone and the semi wet zone. Northern Sudan, lying between the Egyptian border and Khartoum, has two distinct parts, the desert and the Nile Valley. To the east of the Nile lies the Nubian Desert, to the west, the Libyan Desert. There is virtually no rainfall in these deserts, and in the Nubian Desert there are no oases. In the west, there are a few small watering holes where the water table reaches the surface to form wells that provide water for nomads, caravans, and administrative patrols, although insufficient to support an oasis and inadequate to provide for a settled population. Flowing through the desert is the Nile Valley, whose alluvial strip of habitable land is no more than two kilometers wide and whose productivity depends on the annual flood.

Western Sudan is a generic term describing the regions known as Darfur and Kurdufan that comprise 850,000 square kilometers. Traditionally, this has been regarded as a single regional unit despite the physical differences. The dominant feature throughout this immense area is the absence of perennial streams; thus, people and animals must remain within reach of permanent wells. Consequently, the population is sparse and unevenly distributed. Western Darfur is an undulating plain dominated by the volcanic massif of Jabal Marrah; the drainage from Jabal Marrah onto the plain can support a settled population and a variety of wildlife. Western Darfur stands in contrast to northern and eastern Darfur, which are semidesert with little water either from the intermittent streams known as wadis or from wells that normally go dry during the winter months. Northwest of Darfur and continuing into Chad lies the unusual region called the *jizzu*, where sporadic winter rains generated from the Mediterranean frequently provide excellent grazing into January or even February. The southern region of western Sudan is known as the *qoz*, a land of sand

dunes that in the rainy season is characterized by a rolling mantle of grass and has more reliable sources of water with its bore holes and *hafri* than does the north.

The central clay plains (another distinct region of Sudan) stretch eastward from the Nuba Mountains to the Ethiopian frontier, broken only by the Ingessana Hills, and from Khartoum in the north to the far reaches of southern Sudan. The central clay plains provide the backbone of Sudan's economy because they are productive where settlements cluster around available water. This project grows cotton for export and has traditionally produced more than half of Sudan's revenue and export earnings.

Northeast of the central clay plains lies eastern Sudan, which is divided between desert and semidesert and includes Al Butanah, the Qash Delta, the Red Sea Hills, and the coastal plain. Al Butanah is an undulating land between Khartoum and Kassala that provides good grazing for cattle, sheep, and goats. Extending 100 kilometers north of Kassala, the whole area watered by the Qash is a rich grassland with cultivation long after the river has spent its waters on the surface of its delta. Trees and bushes provide grazing for the camels from the north, and the rich moist soil provides an abundance of food crops and cotton.



Map 3: Republic of Sudan – Topography (Source: FAO)

Main topological areas are: Alluvial soil (central), Desert, Semi desert (Northern), Wet and dry Savanna (clay soil) Torsional Hills (East, East Northern), Scattered Hills (Central, East, West), Volcanic Mountains (East, West), Rivers Valleys & Creeks.

Administration

The Republic of Sudan is a federal presidential republic, divided administratively into 18 states (wilayat, singular - wilayah). It is a decentralized system with independent governance at the state level. These are Al Bahr al Ahmar (Red Sea), Al Jazira (Gezira), Al Khartoum (Khartoum), Al Qadarif (Gedaref), An Nil al Abyad (White Nile), An Nil al Azraq (Blue Nile), Ash Shimaliyya (Northern), Gharb Darfur (Western

Darfur), Janub Darfur (Southern Darfur), Janub Kurdufan (Southern Kordofan), Western Kordofan (not shown on map), Kassala, Nahr an Nil (River Nile), Sharq Darfur (Eastern Darfur), Shimal Darfur (Northern Darfur), Shimal Kurdufan (Northern Kordofan), Sinnar, and Wasat Darfur (Central Darfur).

The States are further divided into localities and administrative units, currently there are 188 localities and 618 administrative units. With the creation of West Kordofan State there will be a future realignment of the existing localities and administrative units.



Map 4: Republic of Sudan – States

Agriculture

The Agricultural Revival Programme (ARP) is a central pillar of Sudan's economic policy in the Quarter Centennial Strategy (2007-2032) Plan and the Second Five Year Plan (2012 -2016). In the agricultural sector, Sudan has a comprehensive set of policies and strategies, which reflect the importance of the sector in the nation's development.

Historically, agriculture has been the main source of income and employment in Sudan, employing over 80 % of Sudanese, and making up a third of the economic sector. Despite this strong agricultural orientation, oil production drove most of Sudan's post-2000 growth. In 2009 livestock exports was the second largest source of foreign income for Sudan (figure 1).

Sudan continues to grapple with the macroeconomic impact of the July 2011 secession of South Sudan and plans on the growth of the agricultural sectors (crops and livestock) to offset the loss from oil production. Real gross domestic product (GDP) growth is estimated at 2.8% in 2011 compared to 11.5% from before 2011. As a result of the oil loss, the growth of both industrial and service sectors fell into the negative in 2011 and 2012 while only the agriculture sector witnessed positive growth in both years. The GDP of agriculture in Sudan was last reported at 33.1% in 2011, according to the African Economic Outlook of 2012. (Source: <http://www.afdb.org/fileadmin>). Agriculture corresponds to the International Standard Industrial Classification (ISIC) divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production.

Agriculture and livestock play important roles in food security and employment opportunities that directly contribute to poverty alleviation and social development. It is estimated that agriculture contributes 35-40% of GDP. The agriculture sector in Sudan consists of four sub-sectors; livestock, irrigated agriculture, traditional rain fed agriculture and mechanized agriculture. The farming systems of non-livestock agriculture consist of three types. The first one is irrigated agriculture mainly found in Central Sudan which is devoted to the production of cash crops such as cotton and sugarcane and lately to wheat as well for the domestic markets. The size of land under irrigation is 4.2 million feddan (4.3 million acres) while the annual cultivation varies from 1.68 to 2 million feddan (2.1 million acres) depending on market, costs and other considerations. The second, known as semi-mechanized rain-fed agriculture, is found in the central clay plains of the Sudan. In these farms as much as 95 % of the output is sorghum. The third is the traditional rain-fed agriculture which is practiced mainly in the Western regions, Kordofan and Darfur. Traditional rain-fed agriculture is the dominant system accounting for well over 50 % of the value added in agriculture and supporting about 70 % of the population. Production in this farming system is diversified and includes mainly food crops such as sorghum, millet and cash crops such as sesame and ground nuts. Land tenure differs from one system to another, each with its own unique limitations. Livestock, which could be considered as a fourth system, is mixed in all the farming systems but also stands on its own on natural pasture with herdsmen operating in the arid areas.

Livestock

Livestock supports the livelihood of 14% to 20 % of the rural people and contributes 60% of the agricultural GDP, and 16 to 20 per cent of non-oil export revenues. The livestock sector is divided into three production systems: traditional production mainly dependent on the natural pasture, semi intensive production dependent mainly on the natural pasture and complimentary feeding and intensive system. (SOURCE:

Sudan Merchandise Exports			
(US\$ millions)			
	2007	2008	2009
Petroleum Products	8348.0	10988.5	7073.6
Livestock	51.4	71.5	249.7
Sesame	79.3	167.9	147.4
Gum Arabic	64.6	69.0	61.3
Cotton	68.1	58.3	40.2
Gold	63.2	112.1	85.5
TOTAL	8674.6	11467.3	7657.7
o/w non-oil (%)	3.8	4.2	7.6

Figure 1 Source: Central Bureau of Statistics (CBS) Sudan

Figure 1: Sudan Merchandise Exports

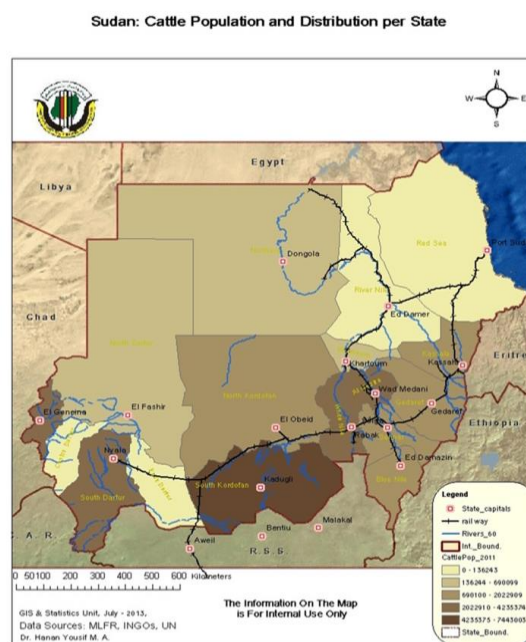
December 2012 Draft Agriculture Sector Investment Plan; Republic of Sudan Ministry of Agriculture and Irrigation)

Over one million live sheep are officially exported every year, mainly to the Gulf States, generating foreign earnings for the country. Livestock is also a key asset for some of the poorest pastoral and agro-pastoral households. Under the Interim Poverty Reduction Strategy Papers (I-PRSP) and the emergency economic recovery programme, the government has identified the agriculture and livestock sector as a priority and has committed to spending 20% of public expenditure on agriculture and livestock infrastructure and technical innovations. (SOURCE: <http://www.worldbank.org/en/country/sudan/overview>).

The last official livestock census was completed in 1976. Sudan reportedly has the 3rd largest livestock population in Africa. The cattle population is estimated to be approximately 30 million head mainly of the Baqqara and Nilotic breeds. The Ministry of Livestock, Fisheries and Rangelands is encouraging the development of the dairy sector and new “modern” dairies and dairy complexes (with as many as 15,000 head) can be found in the eastern part of the Sudan. Many of the “modern” dairies import stock from Holland.

The highest density of cattle can be found in the southern and south-eastern area of Sudan. Rinderpest epidemics had a negative effect on the cattle population until vaccination campaigns were initiated in the late 1930s, after which the cattle population rapidly expanded. Sudan followed the OIE Pathway to Rinderpest freedom and was recognized in 2011 as officially free from Rinderpest.

The sheep population is estimated to be approximately 39.2 million head. Sudan’s desert “Hamari” sheep are highly-sought after especially in Saudi Arabia and eastern Europe, where demand for kosher meat is high. More than 65% of the sheep in Sudan are of the Sudan Desert breed. Most of the sheep in Sudan are owned by traditional herders. While livestock provide villagers’ income and contribute to the Sudanese economy, they are vital to the survival of rural Sudanese. The sheep provide skins, food and milk for people living in the arid desert regions where raising crops is highly dependent on rainfall. The number of sheep has grown at 2.8% per year, and so the proportion of sheep in Sudan's livestock population has remained constant at about 36%.



Map 5: Sudan - Cattle Population and Distribution per State

Sheep therefore play an important social and economic role in the country, and are a valuable strategic resource for both local and export purposes.

Sudan sheep have been classified based on physical features and ecological distribution, four main local groups have been identified: Sudan Desert, Sudan Nilotic, Sudan Arid Upland and Sudan Equatorial Upland. Fused ecotype groups, resulting

from non-systematic crossbreeding at the boundaries of the eco-zones of the pure types, have also been recognized.

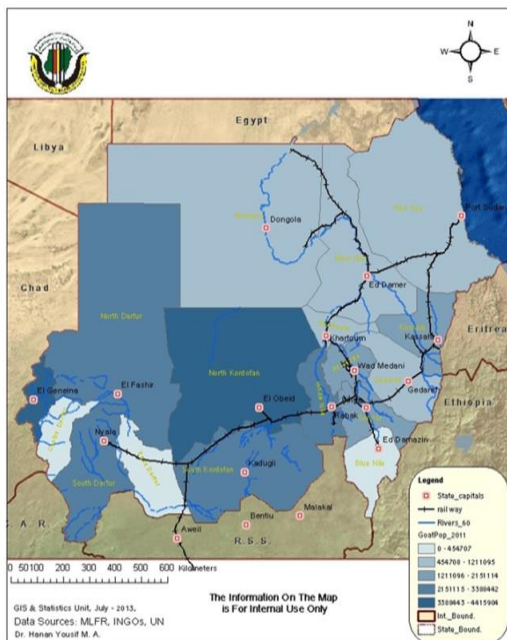
The camel population of Sudan is estimated to be about 4.7 million head according to FAO statistics, the camel population in Sudan ranks the second in the world, after Somalia. In Sudan the camel population is concentrated in an area known as the “camel belt”. This area includes the states of North and South-Darfur, North, West and South-Kordofan, Khartoum, Gezira, Kassala, Red Sea, River-Nile, Northern Sudan, White Nile, Blue Nile and Sennar State. North Kordofan state has the highest camel population with more than one million head, representing approximately 5% of the whole world camel population.

The export of camels for slaughter -mostly to Egypt, but also to the Libya and other countries, is an important source of foreign currency.

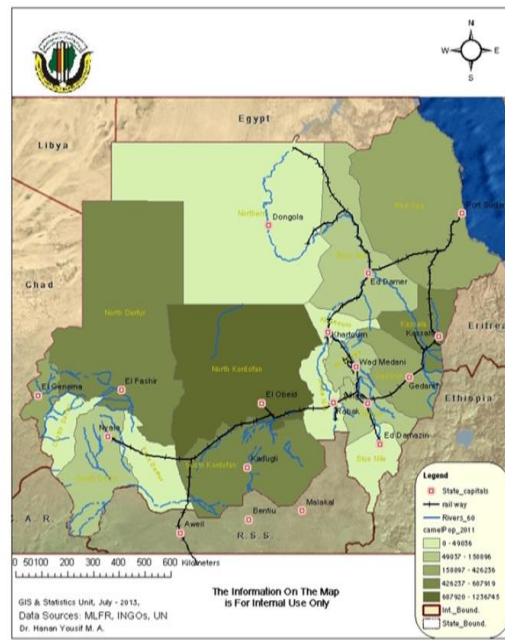
Sudan breeds distinctive types of camels. The [Anafi](#) and [Bishareen](#), are prized for their racing and riding capacities, the [Rashaidi](#), a sturdy transport camel with superior drought resistance, and the large whitish Lahaween, gives high meat yields. With a meat production of 49,880 tons and a milk production of 120,000 tons, camel production has future potential. Camel diseases such as trypanosomiasis and mastitis are the major constrains for production.

The goat population is estimated to be about 30.6 million head. Goats, of which there are three principal breeds (desert, Nubian, and Nilotic), are found throughout the country south of the northern desert areas. They were raised mainly by sedentary families for milk and meat. Goat meat, although less popular than mutton, formed part of the diet of most families, particularly those having low incomes. Goat milk is an important source of protein, and many families in urban areas keep a few goats for their milk.

Sudan: Goat Population and Distribution per State



Sudan: Camel Population and Distribution per State



Map 6: Sudan - Goat Population and Distribution per State

Map 7: Sudan - Camel Population and Distribution per State

Geographic features

Climatic and/or agro-ecological zones	Rainfall (mm/year)	Topography	Km2	%
Red Sea coastal area Desert climate	60 -80	Total area	1,881,998	100
Northern part Semi-arid to desert	0 – 30	Pasture lands	482,767.7	25.6
Eastern part (Savannah grassland)	300 -700	Arable land	7,312.8	0.4
Western part	300 – 650	Forest	187,575.5	10
Southwestern part	700–1000	Agriculture	237,408.6	12.6
Southern part (tropical rain forest)	700-1000	Highlands & Deserts	954,016.6	50.7
		Water	1,291.6	0.7

SOURCE: Ministry of Environment, Forestry and Physical Development, Metrological Authority & Sudan National Survey Authority & National Forest Authority (FAO)

Demographic data

Human population		Livestock households/farms	
Total number	36,163,778 (2013)	Total number	14,465,511
Average density / km2	19/km ²	% intensive	10%
% of urban	29.51 (2008)	% agro-pastoral (mixed)	72%
% of rural	70.49 (2008)	% extensive	90%

SOURCE: Central Bureau of Statistics (<http://www.cbs.gov.sd>) & Union pastoralists

Current livestock census data

Animals species	Total Number in 1000	Value per head	Intensive system (% or no.)	Mixed system (% or no.)	Extensive system (% or no.)
Bovines	29 840	2395	Not available	Not available	Not available
Small Ruminants	70 320	354	Not available	Not available	Not available
Pigs	-	-	Not available	Not available	Not available
Horses, Donkeys	786 - & 5257	1595 & -667	Not available	Not available	Not available
Camels	4 751	2504	Not available	Not available	Not available
Poultry	45 550	25	Not available	Not available	Not available

SOURCE: General Directorate of Planning and Livestock Economics (MLFRL)

Animal and animal product trade data

Animals and animal products	Average annual import		Average annual export		Average annual production	
	Quantity	Value	Quantity	Value (\$)	Quantity	Value ()
Poultry meat	0	0	0	0	45,000 ton	
Small rum. meat	0	0	4,455 ton	23,946,902.5 \$	1,456,000 ton	
Milk	?	?			4,318,000 ton	
Eggs	11,243,300	2,380,777.6 \$	50,200 ton	8465.8\$	40,000 ton	
TOTAL	11,243,300	2,380,777.6 \$	54,605 ton	23,955,368.3 \$	5,859,000 ton	

SOURCE: AH&EDC

Economic data (4.5 SDG = 1\$US)

National GDP	73.7 billions US \$
National budget	25.2 million SDG
Livestock GDP	20% contribution
Economic value of livestock population	312 million SDG
Annual public sector contribution to agriculture	60%
Annual budget of the Veterinary Services	28.5 million SDG

1.1.B Current organisation of the Veterinary Services

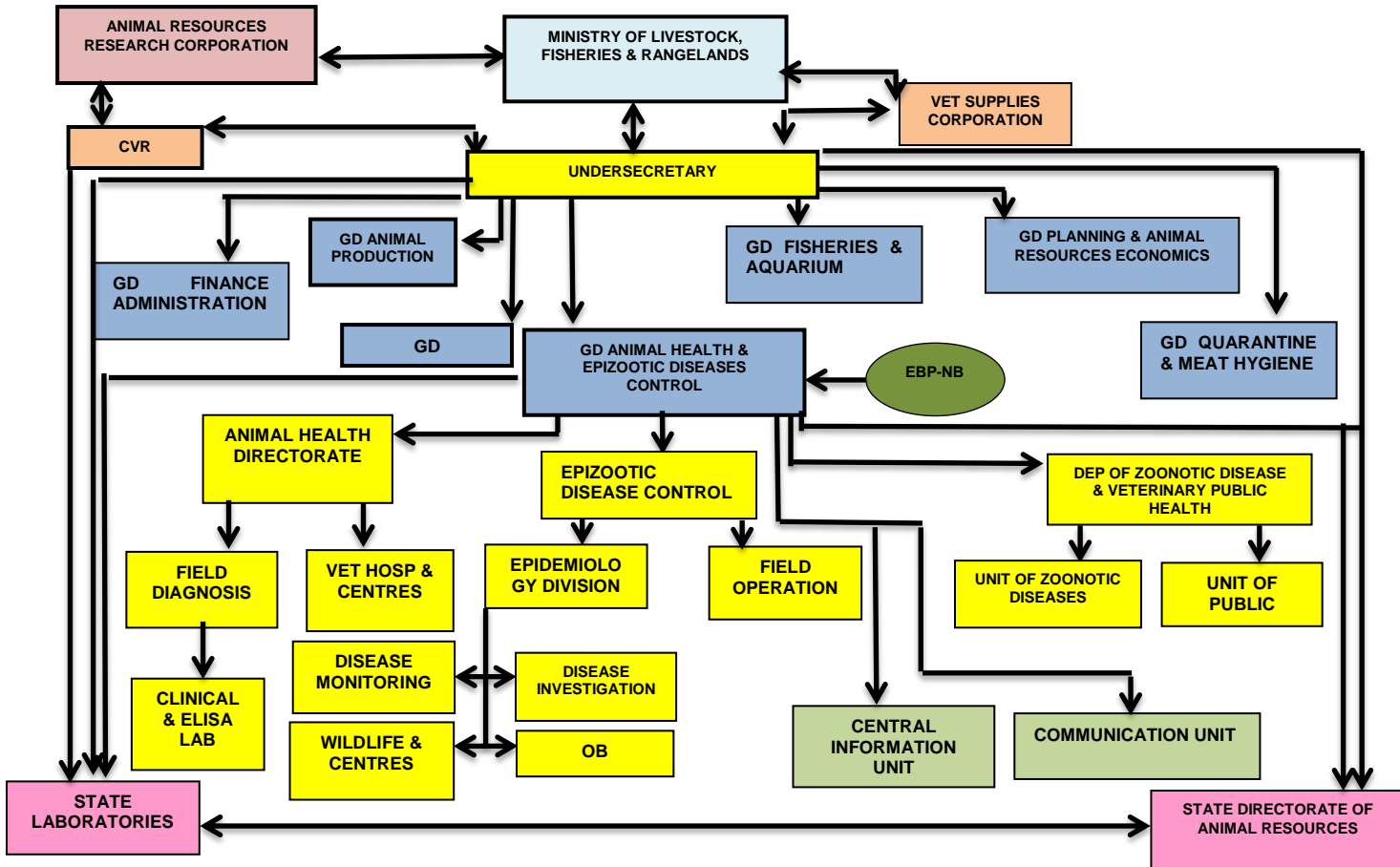


Figure 2: VS Organigramme

SOURCE: AH&EDC PRESENTATION

The Ministry of Livestock, Fisheries, and Rangelands is composed of seven (7) General Directorates: Animal Health & Epizootic Disease Control (AH&EDC), Quarantine & Meat Hygiene (QMH), Animal Production Development, Planning and Livestock Economics, Extension, Technology Transfer and Pastoralists Development, Range and Pasture, and Fishes and Aquatic.

For the purposes of this evaluation, and taking into account the scope of VS defined in the OIE code, only AHEDC and QMH General Directorates will be considered, although the role of extension and finance and administration directorates have been considered when relevant to AH and VPH. Fishes and Aquatic may be relevant to another specific OIE PVS evaluation based on Aquatic Code.

Sudan has a large number of veterinarians, most of whom work within the government sector. Statistics from MLF&R show there are 2484 federal and state Veterinarians, 2150 private veterinarians, 1658 private independent veterinarians, 821 University and Institute veterinarians and approximately 1817 veterinary para-professionals (technicians).

Ministry of Livestock, Fisheries, and Rangelands	
AH&EDC and Quarantine & Meat Hygiene	
Veterinarians	745
Animal production specialist	135
Technicians	262
Clerks	697
Workers	697
Total	2106

Figure 3: Human Resources

According to information provided by the DG of AH&EDC the role of the Veterinary Services at the federal level is to: a) develop national strategies and policies for animal disease control, b) prepare agreements for animal health and epizootic diseases control between Sudan and other countries, c) develop training plans, scientific meetings, workshops, scientific seminars and coordination with other relevant scientific institutions, d) compile, store and analyze information and reports regarding epizootic diseases and the establishment of an information bank, e) exchange information on the national animal health status with regional and international organizations, f) develop disease maps and to review information dealing with animal health status and advise on consequent actions to be taken, g) solicit foreign aid by preparation and drafting of national programme proposals for the control of epizootic diseases, h) strengthen relations with the line ministries and institutions and enhancement of coordination in the areas of infectious and communicable diseases control, i) prepare strategies and plans for the progress of the Sudan to declare freedom from priority epizootic, j) preparation, updating and review of laws and legislation regulating animal health, control and eradication of epizootic diseases, k) participation in scientific conferences, promoting the role of Sudan in regional and international organizations and maintaining close relationship with its neighboring countries, l) coordination of activities at national and states level to contain emergence of epizootic diseases, m) provide logistical support and needs to the states for the control of infectious and epizootic diseases, n) assist States in implementation of national strategies and plans to control animal diseases, o) utilization of communication technologies (extension) to facilitate procedures for the development of animal health and epizootic diseases control.

The federal VS oversee export slaughterhouses, ante and post mortem inspections only. In all other slaughterhouses and slabs, the ante and post mortem inspections are the responsibility of the state veterinarians and technicians. The role of hygienic inspections of all facilities and of animal products and byproducts belongs to the Ministry of Health.

Although data indicates that there are 100 mobile units, 100 hospitals, 225 dispensaries, the field visits completed during the mission show that these different entities are sometimes co-located or are not yet staffed or existing.

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

	Terminology or names used in the country	Number of sites
GEOGRAPHICAL ZONES OF THE COUNTRY		
Climatic zone	Desert climate ; Semi desert ; Dry ; Semi dry ; Semi wet	5
Topographical zone	<i>See description</i>	11
Agro – ecological zone	1. Tropical rain forest 2. Savannah grassland 3. Desert plant& Semi desert	3
ADMINISTRATIVE ORGANISATION OF THE COUNTRY		
1st administrative level	<i>Federal : Sudan</i>	1
2 nd administrative level	<i>States</i>	18
3rd administrative level	<i>Locality :</i>	188
4th administrative level	Administrative unit	618
VETERINARY SERVICES ORGANISATION AND STRUCTURE		
Central (Federal/National) VS	FMLFR	1
Internal division of the central VS	General Directorates Corporations (supply/AARC)	8 2
1 st level of the VS	State General Directorate	18
2 nd level of the VS	Locality “VS Directorate”	188
Veterinary organisations	SVC; SVA	2
FIELD ANIMAL HEALTH NETWORK		
Public Sector Field level of the VS (animal health)/Administrative Unites	Mobile Clinic	104
	Hospitals	115
	Veterinary Clinics	226
	Veterinary centers	9
	Diagnostics Units	54
Private veterinary sector	Private veterinarians	729
VETERINARY MEDICINES & BIOLOGICALS		
Production sector	AARC (vaccines)	1
Import and whole sale sector	Private /government	46/1
Retail sector	Private /government	737
Other partners involved	Clinics	247
	Veterinary center	9
VETERINARY LABORATORIES		
National labs	National Veterinary Research Institute (NVRI)	1
	Elisa lab	1
Regional and local labs	Regional Labs	17
	State labs	54
Associated, accredited and other labs	Private labs	5
ANIMAL AND ANIMAL PRODUCTS MOVEMENT CONTROL		
Bordering countries	Libya, Egypt, Eritrea, Ethiopia, South Sudan, Central Africa Chad	7
Airports and ports border posts	Khartoum, Kassala, Port-Sudan air ports Sawakin, Kosti,Wadi Halfa ports	5
Main terrestrial border posts	List in CCII.4 of PVS report	8
Minor terrestrial border posts	List in CCII.4 of PVS report	31
Quarantine stations for import	Khartoum airport, Sawakin, Wadi Halfa, Gelabat, Hamdaite, Kosti	6
Internal check points	List in CC II.12.A of PVS report	58
Live animal markets	List in CC II.12 A of PVS report	83
Zones, compartments, export quarantines	export quarantines, Khartoum air port, Sawakin, Wadi Halfa, Kassala, Dongla, Shalatain	6

PUBLIC HEALTH INSPECTION OF ANIMALS AND ANIMAL PRODUCTS		
Export slaughter house	Elkadaro, Ganawa, Elsabaloga, Gimco, National Karary, Nyala, Elgadarif, Adbara, Radwan	9
National market slaughter houses	-	0
Local market slaughterhouse	Elsalam, Elmowelih, Sinnar, Elobaied, Madani, Rabakk Madani, Rabak, Elmowelih, Nyala, Sinnar, Senja, Port Sudan, Elkhowi, Elnehood, Elfashir	16
Slaughter areas/slabs/points		343
On farm or butcher's slaughtering sites	Integrated poultry slaughterhouse and production companies	17
Processing sites (milk, meat, eggs, etc)	Milk production companies	10
	Meat companies	15
	Table eggs companies	22
Retail outlets (butchers, shops, restaurants)	food shops and restaurants :	
	Gazeira	22376
	Khartoum	37710
	White Nile	6600
	Blue Nile	2831
	River Nile	4560
	Northern	3453
	Gadarif	5407
	South Darfur	3000
	South Kordofan	2918
	Red Sea	854
TRAINING AND RESEARCH ORGANISATIONS		
Veterinary university	Universities of Veterinary Medicine: Khartoum, Sudan, Butana, Bahri Kordufan, Nyala	6
Veterinary paraprofessional schools	Technical College for Animal Health and Animal Production Sciences in River Nile state	1
Veterinary research organisations	Animal Resources Research Corporation (ARRC) at the Federal Ministry of Livestock, Fisheries and Range Lands compile many research bodies :	
	Veterinary Research Institute in Khartoum state (soba)	1
STAKEHOLDERS' ORGANISATIONS		
Agricultural Chamber / organisation	Livestock Agricultural/ Chamber	17
National livestock farmers organisations	Federal Farmers union Poultry Union	1
Local livestock farmers organisations	States Pastoralist Union	17
Other stakeholder organisations	Livestock Policy Hub	13
Consumer organisations	The Association for the protection of Consumer	1

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

Evaluation of Human, physical and financial resources

Sudan's Veterinary Services are composed of a large number of qualified veterinarians and technicians but analyses have not been conducted to determine the optimum numbers and distribution of the federal and state animal health workforce (veterinarians and technicians/veterinary para-professionals). There does not appear to be a standardized process to determine which animal health positions (field and laboratory) truly have the need for a qualified veterinarian and which competencies are required for specific positions.

Sudan's veterinary faculties and the Sudanese Veterinary Council developed a programme for veterinary education to ensure that it responded to the needs of Sudan. Although technical training may be received via the veterinary faculties the activities of public sector veterinarians are mainly dedicated to administrative activities and vaccination. The activities of the veterinarians in the private sector are mainly related to the sale and distribution of veterinary drugs and products.

Although VS have a training plan and a national budget for training, many training needs are met based on external funds from donor-financed projects. There is no continuing education (CE) programme or a requirement for CE for private veterinarians.

The Sudan VS have demonstrated some level of technical independence by establishing a successful export certification programme to neighbouring countries. However, concern was expressed about the absence of science in some VS decisions, especially in relation to imports. VS's lack of resources or ineffective use of existing resources does not allow them to fully comply with international standards. The low level of advancement of many critical competencies and the lack of resources in several fields does not provide the VS the means to be technically independent. In addition, the low level of remuneration for VS staff makes it difficult to sustain their technical independence when there is a need to seek additional income to sustain basic living expenses. The fact that the Chief Veterinary Officer (CVO) must manage animal production and rangeland management and extension in addition to animal health and veterinary public health, obligates the CVO to balance the duties and mandates of VS with other interests (commercial, financial, hierarchical and political aspects) which may influence the technical independence of decisions made by VS.

There have been numerous changes in the administrative structure of the country with the creation of new States and new localities, these changes, due to the division of Sudan, have negatively impacted the stability of the VS. Most current activities and planning of the VS are influenced by donor funding and Non-governmental organizations (NGOs) with little consideration of alignment with international standards. This externally driven system does not allow the VS to develop a comprehensive strategic plan for the development of their activities nor address adequately their needs and weaknesses.

The VS does well with the internal coordination of resources and activities related to import and export control. In contrast, the degree of coordination of resources and activities related to animal health and veterinary public health between federal and state levels varies according to the state. There appears to be no detailed formal MOUs/written cooperative agreements which would aid in coordinating federal/state activities for the control/eradication of animal diseases. Although the legislation tends to provide understanding of power sharing between federal and state level, the implementation is difficult as it lacks detailed regulations and procedures, adequate resources and technical competences.

The VS does well with the external coordination in some domains (coordination with the Ministry of Health, the National Medicines & Poisons Board and the Ministry of Trade). VS are also represented on several multi-sectorial ministerial committees but there is no legislative framework to support such coordination. Although there are formal and informal external coordination with some Ministries or agencies, there is a lack of formal procedures, data management and data analysis for governing the external coordination.

The Federal VS headquarters in Soba appears to have adequate physical resources, but all other levels (State and Federal outside Soba) do not have adequate resources, except with special support from external funds. A comprehensive inventory system does not exist.

VS budget requests to the Ministry of Finance and National Economy (MF&NE) are never fully allocated. Often improvements/investments are based on receipt of donor funding (lab, vehicles, buildings), thus long term planning cannot be undertaken. The mission had access to the federal and some state operational budgets for the VS but the federal VS did not provide a comprehensive (line item) operational budget for the veterinary services (state & federal) of the country.

The July 18, 2012 “Policy Document of the Ministry of Livestock, Fisheries and Rangelands” emphasizes supporting the privatization of VS as a livestock sector development policy but there is no specific strategic plan for the development of the national VS. There was little evidence in the field for the effective facilitation of privatisation nor evidence of a clear understanding of privatisation policy for some VS activities.

The existing documentation system captures information from the field units on animal health and human and physical resources but there appears to be little or no internal analysis/compilation of the data. Collection of data is hampered by the level of competency of veterinary para-professionals and the lack of uniform procedures (standard operating procedures) and lack of resources.

Evaluation of Technical authority and capability

Sudan’s animal health laboratories (Veterinary Research Institute, ELISA laboratory, laboratories of veterinary universities and state laboratories) have established a network. The recent transfer of the Veterinary Research Institute laboratories (VRI) back to the Ministry of Livestock, Fisheries and Rangelands is an excellent step in strengthening the national laboratory network. However the insignificant number of diagnostic samples entering this extensive laboratory system highlights the underutilization of the laboratories and the lack of field activities to determine the animal health status of the country.

The physical infrastructure of most laboratories is poorly maintained and was commonly observed to be in a poor state, with minimum equipment. Due to political sanctions most equipment and supplies have not been replenished. Although new investments are planned for the laboratories they are being done without consideration of the true needs of the animal health programmes, which leads to a waste of resources (human and financial). Laboratory resources (human, physical and financial) are not managed effectively. The Central VRI and the ELISA laboratories have initiated a Quality Assurance (QA) system, but it is currently not implemented. All state laboratories and most of the VRI satellite laboratories lack a QA system and effective standard operating procedures. There are also no standards for the compilation and sharing of laboratory data between and amongst the Federal and the State laboratories in order to provide a credible analysis of information, at the national level, on diseases and field activities.

Although Sudan has not yet developed policies and a legislative framework relating to risk assessment, the export certification process, agreed to by Sudan and importing countries, is a good example of utilizing informal risk analysis to design risk management activities. But the current legislation, lack of risk assessment capability, and distribution of human resources (veterinarians and technicians) does not provide assurance that the VS can prevent the entry and spread of diseases.

VS Federal level (Central) maintains a network for the collection of information from the States which is compiled by the Information Unit and partially analysed by the Epidemiology Unit and the DG of AH&EDC. Nevertheless, the scarcity of veterinarians in the field with regular contact with livestock owners and their animals hampers the ability of the VS to establish a passive surveillance network in compliance with the OIE standards. Data is regularly compiled on “outbreak investigations” although reports do not clearly discriminate between what may qualify as an outbreak and early detection from regular clinical disease diagnostics and routine surveillance. There are very few reports from the field compared to the number of animals in the epidemiological context for passive surveillance and early detection. Active surveillance has been implemented for some priority diseases but the activities (which resemble basic disease surveys) depend on donor funding. Long term (multi-year) detailed budgets have not been developed to ensure continuation, monitoring, and success of programmes for the five priority diseases. In addition, the legislative framework/regulations have not been developed to ensure that control of these diseases can be maintained or that successful eradication programmes can be achieved for these diseases or other diseases. Currently disease control programmes are implemented on a voluntary basis and against cost recovery for a wide range of diseases (irrespective of their respective importance).

VS’s mandate on food safety is restricted to ante and post mortem inspections while the Ministry of Health has jurisdiction over food/meat hygiene. The ante and post mortem inspections and the infrastructure in the export slaughterhouses met requirements of the importing country where these plants were functioning. The non-export slaughterhouses and slabs collect data (number slaughtered, number condemned) but the data is not analysed. Also the quality of the veterinary inspection varies between establishments. All slaughterhouses visited had very poor hygienic practices for handling of carcasses as well as for the premise/facility (lack of good sanitary practices). Although outside of the mandate of this mission and Sudan VS, the infrastructure related to collection, processing and distribution of foods of animal origin do not meet appropriate hygienic standards.

The importation, registration and licensing of veterinary drugs are successfully regulated by the National Medicines and Poisons Board (NMPB). However once veterinary drugs enter the marketing chain there is a lack of compliance and enforcement to ensure their responsible and prudent distribution and use. Many private veterinary pharmacies/pharmacists act as merchants and do not respect professional veterinary training and ethics which requires providing oversight for drug use and the prevention of drug residues in food animals.

The Veterinary Research Institute produces 13 types of vaccines, some of which are produced or reconstituted at local vaccine production units. The production units visited demonstrated very poor quality management and inadequate labelling of the vaccines plus physical facilities were not adequate.

Although there is an OIE contact point for animal welfare issues, animal welfare legislation has not been developed and there does not appear to be plans for training VS staff on animal welfare.

Evaluation of Interaction with interested parties

Sudan's VS has established an in-house Communication Unit to keep interested parties informed of VS activities and to provide information and training materials to explain the programmes and activities of AH&EDC. Even with the existence of the Communication Unit stakeholders voiced concerns that VS had not informed them of disease outbreaks in their areas.

VS consultations and communications with stakeholders during the HPAI eradication campaign were cited as an example of how the stakeholders would appreciate VS interactions for future development of disease control programmes. VS collaboration with other agencies or line Ministries does take place but it appears there are no formal memorandums of understanding or protocols for such collaborations.

Currently there is no official delegation of authority to private veterinarians or private laboratories. This norm does not support the MLF&R's policy for livestock sector development, which encourages privatization of some services of the Federal VS.

The Veterinary Council of Sudan (veterinary statutory body for Sudan) cannot act as an autonomous, independent body as it receives funds from the government and members of its board are appointed by the government. The VSB does not have clear legal procedures for penalties/disciplinary measures.

Formally there are no joint programmes with farmers, but as all disease programmes are voluntary, based on cost recovery, and supported by the training of farmers/livestock owners as Community Animal Health Workers (CAHWs), they might be qualified as joint programmes if formalised.

Evaluation of Access to markets

Currently VS's export certification programme to the Gulf States meets the importing countries requirements.

Preparation of national legislation follows Sudan's License of Law². There is a variety of legislation, but it is insufficient or inadequate compared to the usual amount of national veterinary legislation required, and it does not take into account international standards. It appears the only stage at which the proposed law is open for consultation with stakeholders is at the initial discussion with the competent authority, before the proposed law is drafted.

Additionally, impact studies (social and economic) are not conducted for new laws/legislation. Lack of such studies affect how well VS can implement compliance or enforce laws/legislation. Currently VS does not have the capability to implement compliance or enforcement policies.

VS regularly notifies the OIE of its sanitary status but; 1) the poor distribution of veterinarians in the field, 2) the lack of regular disease/surveillance programmes, 3) reliance on tests from laboratories which are not accredited nor implementing quality assurance systems, leads to VS not being able to certify the health status of livestock outside the quarantine export station.

Zoning and compartmentalisation are not relevant in the current context.

² License of Law refers to Sudan's process for developing legislation

Recommendations on Human, physical and financial resources

The Sudanese VS should:

- Analyse the personnel staffing patterns within VS to ensure the optimum number and distribution of the veterinary workforce at headquarters as well as in the field in all domains (AH, VPH, laboratories).
- Clarify roles and responsibilities of veterinarians and veterinary para-professionals (including effective supervision of activities by veterinarians) in VS (public or private sector).
- Develop defined work/job descriptions for each position and clarify the necessary competencies, skills and knowledge for optimum performance of duties. A clear understanding of the knowledge, skills and abilities needed for a position will provide guidelines to develop a quality training programme which will strengthen the VS.
- Liaise with the VSB, the Veterinary Colleges and the Ministry of Higher Studies to perform a critical review of the future veterinary workforce needs, including establishing procedures for the accreditation process of all Veterinary Colleges. The same should be implemented for the institutes, which train veterinary para-professional.
- Improve technical independence by improving education and revenues of staff, as well as legislation, procedures and data management in all domains.
- Restore the internal chain of command for all VS activities as well as changing the structure of the VS for better compliance to OIE standards.
- Develop a clear presentation of the VS physical and financial resources, with their geographical and functional distribution, in order to be more transparent and to better plan for future activities.
- Develop and implement systems for document management, data management, inventory management and standard operating procedures for all field activities.

Recommendations on Technical authority and capability

There is a critical need to develop a strategic plan for the reorganization of the national laboratory infrastructure. All laboratories need to develop quality assurance for official tests.

The laboratories are underutilized, this may be corrected by (a) developing national animal health and veterinary public health programmes with clearer targets in terms of laboratory analysis, (b) communicating with the private sector (industry and private veterinarians) about the need for laboratory analysis, (c) developing accreditation procedures for private laboratories and having the national laboratory provide oversight of accredited laboratories, (d) reassess the network structure to make it more efficient – e.g. merge some laboratories if needed.

VRI Central (Khartoum) should stop vaccine production at the VRI branches and concentrate investments on improving vaccine quality with Pan African Veterinary Vaccine Centre (PANVAC) support. VRI may also wish to focus on initiating residue analysis activities. Undertake a survey on residues in the different animal production systems to assess the situation in the country. VRI should work in collaboration with VS to develop residue control plans for live animals and animal product exports and poultry and poultry products.

It is essential that Sudan's VS have the appropriate policies and legislative framework for risk assessment in order to support the Sudan Investment Plan's strategy of

increasing areas which can be classified with different sanitary status. Effective databases need to be built to support risk assessment activities.

Clear procedures should be established for passive surveillance and early detection programmes, with robust strengthening of the veterinarian field network consistent with OIE standards. Clear & technically sound national active surveillance programmes need to be developed in order to ascertain the animal health status of the country. The priority disease action plans, which have been developed should be reassessed to ensure that a clear & technically sound national operational plan with adequate resources is in place. Emergency contingency plans should be reviewed on a regular basis.

If Sudan plans to continue the export of meat and meat products there is a need to strengthen procedures, data management and continuing education at all levels for ante and post mortem inspections, as well as meat hygiene. VS should seek to restore their chain of command on meat inspection and the authority of VS to supervise the hygiene of the slaughter process. VS should work to improve coordination with the MoH in order to guarantee appropriate uniform control over the whole food chain and to ensure compliance with OIE and Codex Alimentarius standards.

The Federal Ministry of Livestock, Fisheries and Rangeland (FMLF&R) & VS could consider proposing an extension of their slaughterhouse meat inspection mandate to cover milk and meat collection, processing and distribution, in order to cover the relevant food safety aspects of the food chain. The VS should also develop competencies, regulations, procedures and data management for accreditation of production premises relevant to the VS in the sense of OIE.

The VS should develop animal welfare legislation and regulations and implement them progressively.

Recommendations on Interaction with interested parties

VS should develop and implement documented formalized consultation processes for stakeholders at all levels. Completion and maintenance of the VS website will be an excellent tool for keeping stakeholders aware of national programmes on animal health and veterinary public health.

In support of the MLF&R and Ministry of Agriculture's strategic plan, develop regulations, procedures and compliance and enforcement capabilities for effective delegation of authority to private veterinarians for official activities (vaccination, surveillance, early detection and food safety) and to private laboratories for selected testing.

Remove "veterinary pharmacies" from the list of authorised premises held by veterinarians and promote "veterinary dispensary/practice/clinic" with a clearer link between clinical examination, advice, diagnosis and prescription by veterinarians who are required to be present on site for the provision and delivery of veterinary medicines.

The Veterinary Statutory Body should reform to become an autonomous and independent organization based on an elective process.

Clearly establish the role of CAHWs as belonging to their community and not as part of the VS, ensure their commitment and responsibility lies within their community or farmers' group, which itself should comply with veterinary legislation.

Recommendations on Access to markets

Strengthen the authority and capability of the VS to provide support to the livestock sector in order to access, expand and retain regional and international markets for animals and animal products.

In order to ascertain the national livestock health status, the surveillance systems (active and passive) should be strengthened by developing an efficient network of veterinarians in the field who have access to quality laboratory diagnostics.

To support Sudan's strategy to replace revenues from oil with revenues from agriculture and livestock exports, the VS must develop mechanisms to certify the health status of the nation's animal population.

To maintain current markets and for future expansion of export markets VS and stakeholders should collaborate to develop legislation and programmes to meet future needs. This should be detailed partially during a PVS Gap Analysis.

1.2 Methodology

1.2.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 18th to 30th November 2014 by a team of independent OIE certified experts: Dr Eric Fermet-Quinet as team leader, Dr Alberto Mancuso and Dr Patrice Gautier as technical experts.

Day (D)	Purpose of the meeting	Participants
D1 morning	Opening meeting Definition of the national priorities and unit costs	OIE Delegate and heads of technical department
D1 afternoon	Technical meeting on trade chapter	OIE Delegate and heads of technical department
D3	Technical meeting on Veterinary Public Health	Heads of relevant departments, including quarantine and meat hygiene department, National Medicine and Poison Board, Residues laboratory
D4 D5	Weekend working on two first chapters and preparing animal health chapter discussions	The experts
D5	Technical meeting on Animal Health programmes Technical meeting on the veterinary services field network	OIE Delegate and heads of all technical departments
D6	Technical meeting on laboratories Technical meeting on VS management and organisation	OIE Delegate and heads of all technical departments
D8	Collection of additional information & finalisation of the PVS Gap Analysis.	The experts
D9	Feed-back meeting with Minister Plenary meeting for the preliminary presentation of the proposed objectives and activities	Minister OIE Delegate and heads of all technical departments
D10	Final individual meetings	Minister(s), OIE Delegate, heads of relevant departments

I.2.B Estimation of resources needed

A logical approach to estimating the budget for strengthening the Veterinary Services 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 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.

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 some chapters, the specific additional resources required are described in more detail: for instance about animal identification and export systems.

In other chapters, the additional resources required may appear very low as most costs are covered elsewhere: for instance a part of slaughter inspection being done by Local Veterinary Officer which are budgeted in chapter V and not in VPH chapters.

The overall budget analysis (Chapter VI) synthesises the different budget lines: on-going investment, salaries, repairs and maintenance, operations, etc. This budget analysis demonstrates the effectiveness of the PVS Gap Analysis, its sustainability and also allows incorporating 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 US Dollars (USD) which a rate of 1 USD = 6 SDG (Sudanese Pound).

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

- 25 years for construction of building
- 15 years for renovation of building
- 5 years for cars and 4x4
- 10 years for cold chain and incinerators
- 3 years for telecommunication and computer equipment sets

The figures proposed there are the most common ones. However, depending on the situation prevailing in the country, they may be modified accordingly.

Levels of revenues have been increased in order to fit with requirements of expertise (effective presence 8 hours/day and 210 days/year) and technical independence (see CC I.4 and chapter V).

UNIT COST SPREAD SHEET

Unit costs (estimates)				
1- Currencies				
Currency used for this report (USD or EUR)		Currency	Conversion rate (exchange rate)	
National currency		USD	Number of SDG per USD	
		SDG	6	
2- Material investments				
		Supply cost / unit		Years of amortisation
		Local currency	International currency	
Buildings	Unit of surface (m ²) or (ft ²)	m ²		
	Maintenance cost per m ²	180	30	
	Renovation cost per m ²	1200	200	15
	Building cost per m ²	3600	600	25
Transport (purchasing cost)				
	Motorbikes	15 000	2 500	5
	Cars	150 000	25 000	5
	4x4 vehicles	300 000	50 000	5
Equipment set				
	Staff office equipment set (desk, office chair, telephone, computer and standard peripherals)	9 000	1 500	3
	Other specific office equipment set			
3- Non material expenditure				
Training				
Initial training (per student)				
	Veterinarians (DVM, BVS) total training cost			
	Veterinary paraprofessionals total training cost			
Specialised training (short courses, certificates, Masters degree, PhD, etc.)				
	Accommodation per month	12 000	2 000	
	Training fees per month	12 000	2 000	
	Travel per month	3 000	500	
	Cost of specialised training per month	27 000	4 500	
Continuing education (daily cost per person on a basis of a group of 15 people)				
	Per diem 15 participants	2 700	450	
	Room rental and educational tools per day	930	155	
	Daily cost for a national expert consultant	900	150	
	Daily cost per trainee	302	50	
National expertise (cost per day)				
	Daily fees	600	100	
	Per diem	300	50	
	Total cost per day and per expert	900	150	
International expertise (cost per week)				
	Daily fees	6 000	1 000	
	Per Diem	1 800	300	
	Average cost of an international flight	11 400	1 900	
	Total cost per week	66 000	11 000	
4- Salaries (salaries, bonuses and social benefits)				
	Veterinarians	50 400	8 400	
	Other university degree	50 400	8 400	
	Veterinary para-professionals	28 800	4 800	
	Support staff	18 000	3 000	
5- Consumable resources				
Travel allowances				
	Per diem for technical staff	180	30	
	Per diem for drivers	120	20	
	Per diem for technical staff travelling abroad	2 100	350	
	Average cost of an international flight	9 300	1 550	
	Travel and per diem for one week abroad	24 000	4 000	
Transport fees				
	Price of fuel (average between petrol, diesel or mixt) per unit	6,0	1	Unit
	Average number of km/miles per year			litre
	Average distance per year by motorbike in km	10 000		Unit
	Average distance per year by car in km	15 000		km
	Average distance per year by 4x4 in km	20 000		km
	Fuel consumption per 100 km/miles			km
	Km or mileage cost (motorbike)	2,5		Running (fuel + maintenance + insurance = consumption x 2)
	Km or mileage cost (car)	10		0,05
	Km or mileage cost (4x4 vehicle)	15		0,20
				0,30
6- National economic indicators				
GDP				Sources
	National GDP	390 000 000 000	65 000 000 000	PVS report
	Agriculture GDP	156 000 000 000	26 000 000 000	"
	Livestock GDP	31 200 000 000	5 200 000 000	"
	Total value of National Herd	300 000 000 000	50 000 000 000	"
	Value of exported animals and animal products	1 800 000 000	300 000 000	"
	Value of imported animals and animal products			"
	Number of VLU	40 000 000		calculation
Country budget				
	National Budget	24 000 000 000	4 000 000 000	"
	Agriculture and Livestock Budget			
	Veterinary Services Current Budget			
	Current budget for salaries of public staff of VSs			
	Current operational budget			
	Current capital investment of VS			
	Current budget of VSs 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 Sudan. 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.

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 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 biological and residues;
- 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 (Veterinary Public Health pillar) or under Chapter III (Animal 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 its indicative analysis, 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

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	<p>LD1: Increase productivity for food security & poverty alleviation.</p> <p>LD2: Secure and develop export of live animals and food of animal origin</p>	<p>Summary of progress on CAADP roundtables an implementation (2010)</p> <p>Poverty Reduction Strategic Paper (2011)</p> <p>Comprehensive national food security policies (Food Security Technical Secretariat. 2011)</p> <p>Country programming framework for the Republic of Sudan 2012-2016 (FAO 2011)</p> <p>The contribution of Livestock to the Sudanese Economy (IGAD 2012)</p> <p>Regional guidelines on livestock identification & traceability in the IGAD region (IGAD 2014)</p>
Technical priorities in Veterinary Public Health (VPH)	<p>VPH1: Develop competence and activities related to food safety and residues in order to improve compliance to international standards</p> <p>VPH2: Develop control of quality, distribution and prudent use of veterinary medicines and biologicals</p>	<p>Draft Programme on monitoring the residues.</p> <p>Draft Programme for improvement of slaughterhouses.</p>
Technical priorities in Animal Health (AH)	<p>AH1: Develop passive surveillance programmes on 4 syndrome complexes</p> <p>AH2: Implement national control programmes on 5 diseases</p>	<p>Actions plans for control strategy of PPR, SG pox, FMD and brucellosis and consultancy on epidemio-surveillance (MLFR & EU LESP 2012)</p> <p>PPR, FMD, RVF – Standard Methods & Procedures for Control in the Greater Horn of Africa (AU-IBAR & USAID)</p>
Policy on organisational structure and management of the Veterinary Services (VS)	<p>VS1: Restore the chain of command between central and state levels of the VS</p> <p>VS2: Promote private veterinarians' field network through official delegation in order comply with international standards</p>	<p>Regional policy framework on animal health in the context of trade and vulnerability of the member States of IGAD. (IGAD 2009)</p> <p>Strengthening of the Public Private Partnerships (PPP) in the delivery of Veterinary Services in Sudan (MLFR 2014)</p>

II.2 Level of advancement

The VS will increase level of advancement of most competencies in the next five years, but only if fundamental changes occur in restoring the chain of command, strengthening technical independence of staff, and using official delegation to develop private veterinarians' field network.

Table n°2 - Levels of advancement

Critical competencies	Level of advancement	
	current	expected
Human, physical and financial resources		
I.1.A. Veterinarians and other professionals	2	3
I.1.B. Veterinary para-professionals and other technical personnel	2	3
I.2.A. Professional competencies of veterinarians	3	3
I.2.B. Competencies of veterinary para-professionals	2	4
I.3. Continuing education	2	3
I.4. Technical independence	3	4
I.5. Stability of structures and sustainability of policies	2	3
I.6.A. Internal coordination (chain of command)	3	4
I.6.B. External coordination	3	4
I.7. Physical resources	2	4
I.8. Operational funding	2	3
I.9. Emergency funding	3	3
I.10. Capital investment	2	3
I.11. Management of resources and operations	2	4
Technical authority and capability		
II.1.A. Access to veterinary laboratory diagnosis	2	3
II.1.B. Suitability of national laboratory infrastructures	2	3
II.2 Laboratory quality assurance	1	3
II.3 Risk analysis	2	3
II.4 Quarantine and border security	2	3
II.5.A. Passive epidemiological surveillance	2	3
II.5.B. Active epidemiological surveillance	3	4
II.6 Emergency response	3	4
II.7 Disease prevention, control and eradication	2	3
II.8.A. Regulation, authorisation and inspection of establishments	2	3
II.8.B. Ante and post mortem inspection	2	3
II.8.C. Inspection of collection, processing and distribution	2	3
II.9 Veterinary medicines and biologicals	2	3
II.10 Residue testing	1	2
II.11 Animal feed safety	1	2
II.12.A. Animal identification and movement control	2	3
II.12.B. Identification and traceability of products of animal origin	1	2
II.13 Animal welfare	1	3
Interaction with interested parties		
III.1 Communication	3	4
III.2 Consultation with interested parties	2	3
III.3 Official representation	3	4
III.4 Accreditation / authorisation / delegation	2	4
II.5.A. Veterinary Statutory Body authority	2	4
II.5.B. Veterinary Statutory Body capacity	2	3
III.6 Participation of producers and other interested parties in joint programmes	3	3
Access to market		
IV.1 Preparation of legislation and regulations	2	4
IV.2 Implementation of legislation and regulations and compliance thereof	2	3
IV.3 International harmonisation	1	2
IV.4 International certification	3	4
IV.5 Equivalence and other types of sanitary agreements	3	3
IV.6 Transparency	3	4
IV.7 Zoning	2	2
IV.8 Compartmentalisation	1	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.12, 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 animal health or in the 3rd pillar on veterinary public health.

I.1 Strategy and activities

Confronted to regional and national conflicts, Sudan VS cannot expect to tackle all illegal activities related to import and border control. Thus, the strategy will focus in developing import inspection of legal trade in compliance with international standards in selected Border Inspection Posts (BIPs): Khartoum airport, Sawakin seaport, Wadi Halfa river port (Egypt), and 8 main terrestrial border posts. Trade of animals and animal products will be prohibited from all other border points, in coordination with customs and police.

Regional transhumance with neighbouring countries will be organised formally through sanitary agreements signed with IGAD, Chad and Centrafrique. As long as such agreements are not signed, the VS could impose vaccinations and identification of transhumant animals at the cost of owners if necessary. Any official veterinarians of Locality Veterinary Office (or private veterinarians with official delegation) should implement all sanitary measures linked to transhumance at the nearest place of the point of entry and within a given time after border crossing, and deliver the required certification.

Sudan has an important share of regional export of livestock and its strategy is to open new export markets in Asia and Africa. International certification should be compliant with international standards in any instance. All exported animals (estimated 5 million per year) will be individually identified at the moment of vaccination or testing. Such identification will be cost recovered. It could be implemented in quarantine stations, but progressively as much as possible in the field by private veterinarians.

It is expected to implement progressively compulsory individual and permanent identification of all cattle in the 4 northern states (Northern, River Nile, Red Sea, and Khartoum) representing around 550 000 cattle. There is a dual purpose for identification:

- (i) To start with intensive dairy sector (estimated 100 000 cattle and 5000 farms) in order to control brucellosis and tuberculosis and protect consumers.
- (ii) To identify all cattle of the 4 northern States as a step in the fight against FMD in this area. The feasibility to consider this area as a FMD-free zone in the future will be studied, although its geographical characteristics and the trade routes passing through will probably hamper any possibility to secure such approach.

It is not realistic to implement such identification system based on cost-recovery, as there are no direct short-term benefits for farmers, so it should be free of charge. It is also expected to test the implementation of a comprehensive traceability system with data management, using the estimated 100 000 intensive dairy cattle and 5000 farms.

Finally, once the chain of command is re-established (Pillar V) and national AH programmes are harmonised and implemented, movement and sanitary controls at internal check points and live markets places will be re-assessed, lightened and progressively dismantled, in order to facilitate internal trade and to save resources for more professional and efficient operations.

1.2 Human resources

Human resources are calculated with the table below.

Border inspection staff will need around 30 veterinarians.

Sanitary measures linked to transhumance could be implemented either by public veterinarians or veterinary para-professionals working in LVO (see chapter V and Critical Competency Card I.6.A) or by private veterinarians with relevant official delegation, thus these human resources are not budgeted here.

As long as a reorganisation of the internal checkpoints system is not implemented, there is still a need of around 300 veterinarians and 300 veterinary-paraprofessionals. However, as this system will be restructured over-time and is considered as to be inefficient, the respective staff is only budgeted as a lump-sum budget delegated to State authorities on the basis of their current salaries levels (150 USD/month for a veterinarian and 100 USD/month for a veterinary paraprofessional) whose total amount is estimated 1 000 000 USD / year.

Live market inspection of animals represents an equivalent of 40 Full Time Equivalent (FTE), it could be implemented by public staff of LVO and is not budgeted here (see chapter V and Critical Competency Card I.6.A).

Identification of exported animals represents around 200 FTE of veterinary-para professionals (on the basis of 3 minutes per animal, including ear-tagging, documentation, relevant vaccinations and blood sampling) under direct supervision of veterinarians managing the quarantines. It will be implemented progressively also by private veterinarians during field vaccinations campaigns order to avoid to duplicate vaccinations as it is the case now, and to facilitate trade flow. However it is expected that most of these identifications will still be done at export quarantine by public staff when testing animal against brucellosis as it is required by importing countries. As it is explicitly related to international trade, these staff are budgeted here (and not in AH chapter). Veterinarians working as managers in export quarantine stations could be estimated at 10 with 10 support staff as secretaries. Support staff taking care of animals in quarantines is paid directly by traders and are not budgeted.

Identification of cattle in the 4 northern States will be officially delegated to private veterinarians as part time activity within relevant AH control programmes on dairy cattle, representing only around 6 FTE (based on 50% new born in dairy cattle and 30 % new born in other cattle and 3 minutes per identification all included) and thus is not budgeted here (see in chapter III). Data management of intensive dairy cattle identification will require 4 support staff (based on 1 minute data entry twice a year for each animal), distributed in each 4 State Veterinary Office participating in the programme.

Table n°3 - Trade Tool

Trade Tool												
Number of working days per year per employee in the country					210							
Number of working hours per day per employee in the country					8							
PVS Critical Competency	Veterinary inspection and control				Human resources							
	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 graduates		Veterinary para-professionals		Support staff	
					on site	total in Full time equivalent	on site	total in Full time equivalent	on site	total in Full time equivalent	on site	total in Full time equivalent
II-4.	Quarantine and border security					27,9						
	<i>Khartoum airport</i>	1	365	24,0	2	10,43						
	<i>Sawakim seaport</i>	1	365	8,0	2	3,48						
	<i>Wadi Halfa river port</i>	1	52	2,0	1	0,06						
	<i>Main terrestrial</i>	8	365	8,0	1	13,90						
II-12.A	Animal identification and movement control					349,5				302,4		2,4
	Internal check points											
	<i>internal road check points</i>	58	365	24,0	1	302,43			1	302,43		
	<i>live markets checks</i>	83	104	8,0	1	41,10						
	Animal identification											
	<i>export identification (see IV.4)</i>											
	<i>100000 dairy intensive cattle</i>	50000	1	0,05	1	1,49						
	<i>450 000 cattle of northern states</i>	150000	1	0,05	1	4,46						
	Data management for animal ID											
	<i>100000 dairy cattle data</i>	100000	2	0,02							1	2,38
IV-4	International certification					9,7				208,3		10,4
	<i>identification, sampling & vaccination</i>	7000000	1	0,05					1	208,33		
	<i>Khartoum airport,</i>	1	365	12,0	1	2,61						
	<i>Sawakim seaport</i>	1	365	24,0	1	5,21					2	10,43
	<i>Wadi Halfa, Dongla, Kassala, Shalatain</i>	4	100	8,0	1	1,90						

1.3 Physical resources

Each BIP will be provided with a 20-m² office, a computer and telecommunications (3 for Khartoum and Sawakin). Each BIP will be equipped with incinerators.

Internal checkpoints will only be renewed and equipped with computers when the new movement control strategy will be designed. By restoring the chain of command of the VS between federal to state levels and thus harmonising AH and VPH programmes, it is expected that most of the internal check points will disappear or will become organised by provincial authorities. No budget is thus provided to these infrastructures.

Each export quarantine facility will be provided with computers (estimated to be 6 in Sawakin and 1 for each of other 4 quarantines). Buildings and infrastructures will be maintained with a lump sum budget estimated at 120 000 USD / year.

1.4 Financial resources

Continuing education should be developed for border staff, private veterinarians about identification and for support staff in charge of data management.

15 months of specialised trainings for central staff of the VS are considered necessary:

- On border management control (estimated 6 months including visits to other countries).
- On animal identification system will be provided to two central staff in charge of developing the system (estimated 6 months each over the next five years, in order to include visits to different countries that have a recent history of identification system development).
- On traceability of products (estimated 2 months).

- On compartmentalisation (estimated 1 month).

Technical assistance will be required for establishing relevant ID system (estimated 24 weeks of international expertise) and for the feasibility study about zoning (estimated 2 weeks international expertise and 30 days national expertise).

The VS will need to purchase ear-tags every year, of different types: simple plastic serial numbers for animal exports (5 000 000) and PPR vaccinated young females (6 000 000), temper-proof for dairy and Northern cattle (estimated 200 000 per year on the basis of 500 000 animals) with first number being state Identification. The overall estimated budget for ear-tags is around 1,2 million USD / year. Ear-tags for export will be cost recovered through export quarantine fees.

In addition, at the special request of importing countries, all animals are vaccinated against different diseases (see table below) and, although the cost of vaccination is recovered from the traders, the VS need a global budget estimated at around 4,5 million USD / year for required vaccines of around 5 million animal exported. This expenditure should also be cost recovered through export fees.

Vaccines	Unit cost	Exported camels	Exported Shoat	Exported Cattle	Amount for export
Anthrax	0,15	150000	4500000	20000	700500
RVF	0,50	150000	4500000	20000	2335000
SGPox	0,15		4500000		675000
Camel pox	0,15	150000			22500
PPR	0,15		4500000		675000
CBPP	0,15			20000	3000
HS	0,15	150000		20000	25500
FMD	3,00			20000	60000

Identification of cattle in the 4 northern states is estimated on the basis of 4 EFT paid to private veterinarians under official delegation.

A budget of 1 million USD will be delegated to States authorities to maintain their internal check points as long as necessary.

The overall budget related to trade is around 8 500 000 USD/year, out of which it is expected that the export fees will cover at least 5 million.

The exceptional investment budget for incinerators, specialised training and technical assistance is estimated around 500 000 USD over the next five years.

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

SUB-TOTAL TRADE						
Resource and cost lines	Current Number	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments						
Buildings ()		4220				
Maintenance cost per (m2)		4000	30	1	120 000	
Renovation cost per (m2)		110	200	15	1 467	14 667
Building cost per (m2)		110	600	25	2 640	52 800
Transport (Purchasing cost)						
Motorbikes			2 500	5		
Cars			25 000	5		
4x4 vehicles			50 000	5		
Other specific vehicle for Trade*						
Other specific vehicle for Trade*						
Staff office equipment set		29	1 500	3	14 500	
Other specific office equipment set						
Other specific equipment						
Other specific equipment for trade*					25 500	82 500
Other specific equipment for trade*						
Sub-total Material investments					164 107	149 967
Non material investments						
Training						
Specialised training (person-months/5 years)		15,0	4 500			67 500
Continuing education (person-days/year)		220,0	50		11 073	
National expertise (days/5 years)		30,0	150			4 500
International expertise (weeks/5 years)		26,0	11 000			286 000
Special funds (/ 5 years) for ...						
Sub-total non material expenditure					11 073	358 000
Salaries						
Veterinarians		40,0	8 400		336 000	
Other university degree		-	8 400			
Veterinary para-professionals		204,0	4 800		979 200	
Support staff		10,0	3 000		30 000	
Sub-total Salaries					1 345 200	
Consumable resources						
Administration			20%		269 040	
Travel allowances						
staff within the country (person-days) / year		-	30			
drivers within the country (person-days) / year		-	20			
staff abroad (person-weeks) / year		10	4 000		40 000	
Transport costs						
Km or miles Motorbikes / year		-	0,05			
Km or miles cars / year		-	0,20			
Km or miles 4x4 vehicle / year		-	0,30			
Other transport fees*						
Other transport fees*						
Specific costs						
Targeted specific communication						
Consultation (number of 1 day meetings)						
Kits / reagents / vaccines					560 000	
Other costs for trade*					5 100 000	
Other costs for trade*						
Sub-total Consumable resources					5 969 040	
Delegated activities						
identification of cattle of northern states					50 400	
Internal check points delegated to States					1 000 000	
Sub-total Delegated activities					1 050 400	
Total in	USD				8 539 820	507 967
Total in	SDG				51 238 920	3 047 800

II Strengthening competencies for veterinary public health

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

This will chiefly include the activities presented in the Critical Competency Cards II.8, II.9, II.10 and II.11. 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

The VS of Sudan need to develop its competence and mandate about VPH during the next five years.

The mandate of the VS should be expanded up to the end of processing of food of animal origin (currently under the mandate of MoH), and focus also on control of import and export. It appears necessary, in the context of Sudan, to be able to simplify the control system from farm to fork, although it is accepted that the MoH will remain in charge of control of the distribution sector (food markets, restaurants, supermarkets, etc.).

Slaughtering, collecting and processing establishments will be systematically registered with relevant classification of categories depending on products and area of commercialisation. Sanitary requirement for each type of infrastructures will be progressively developed.

Slaughter inspection will be harmonised, progressively implemented by veterinarians and passive surveillance data management will be developed on major zoonosis (hydatidosis, cysticercosis, tuberculosis) in order to be able to develop new programmes after 5 years.

Food processing establishments will be required to have a quality control management and specialised public veterinarians will implement regular control of such process and facilities.

The control of veterinary medicines distribution and use should be a high priority of the VS, in order both to eliminate illegal trade (no authorised distributors and fake drugs) and to develop prudent use (to decrease the level of residues in food of animal origin and the development of antimicrobial resistance of pathogens). This will require the development of new regulations strengthening mandatory prescription, restricting over-the-counter (OTC) sales, and progressively registering usage at producer level (starting with intensive productions).

In addition, ensure that all veterinary products (being imported or locally produced) comply with international standards and meet the needs of the VS, either by transferring the relevant mandate from the National Medicines and Poison Board to the VS or by establishing adequate and efficient external coordination procedures between the VS.

A residues testing survey will be implemented during the next 5 years in order to get an appropriate picture of the national situation and to strengthen advocacy for strict control of distribution and use of veterinary medicines. This will also be the base for the development of a risk based residues control plan after five years. In addition, a residues control plan will be established for imported foods of animal origin. Additionally, residues testing should also meet importers requirements (e.g.: ivermectin for Saudi Arabia).

Feed safety will need the development of a legislation framework. A survey will be initiated, starting with registration of premises, and feed laboratory analysis will be done by existing private laboratories which should be accredited for this purpose.

II.2 Human resources

Slaughter inspection should be conducted by veterinarians who directly supervise meat inspectors (veterinary para-professionals), if they are needed on the chain taking into account the number of animals slaughtered.

In export slaughterhouses, national market slaughterhouses and industrial poultry slaughterhouses, slaughter inspection will be conducted by public staff. This represents around 40 veterinarians and 80 veterinary para-professionals (meat inspectors).

In the estimated 350 slaughter slabs, such inspection will be carried-out as a part time activity (estimated 6 hours/ week) either by public veterinarians working in Locality Veterinary Office (probably around 200 sites) or by private veterinarians under official delegation (probably around 150 sites in other administrative units where there will be no LVO).

In order to develop registration, standards and inspection of processes in all establishments, it is estimated that 3 specialised veterinarians should be appointed at central level. The small number of establishments does not allow dispersing such high level of competences within the different states.

Development of regulations, procedures, data management and inspection control plan of the distribution and use of veterinary medicines, and future control of residues need at least 4 specialised veterinarians at central level, in addition to the estimated 5 veterinarians and 1 pharmacist potentially transferred from the NMPB for registration and authorisation function.

Public veterinarians of SVO and LVO will implement randomly inspection of approximately 750 veterinary pharmacies and human pharmacies selling veterinary medicines as well as conducting sampling for residues in slaughterhouses or processing facilities. The number of premises is estimated based on the information collected during different meetings.

Finally, the development of feed safety programme will also require one specialised veterinarians at central level.

II.3 Physical resources

The 6 veterinarians in charge of developing regulations and programmes about food safety, veterinary medicines, residues and feed safety, will need to be able to travel all over the country. Their task will require availability of vehicles, budget for internal flights to different states, and office equipment, as well as support staff.

II.4 Financial resources

Continuing education will be provided to all veterinarians involved in inspection of slaughter slabs on the basis of 2 days / year.

Specialised training will be provided to each of the specialised veterinarians and veterinarians involved in slaughter inspection of export, national and poultry slaughterhouses, according to needs. The total estimate is around 88 months.

A total of 7 weeks of international expertise is budgeted for regulations and inspection of food establishments.

Laboratory analyses for residues are budgeted in the laboratory chapter.

The overall budget for VPH is around 1 400 000 USD / year, including around 220 000 USD for official delegation to private veterinarians (slaughter inspection) and laboratory (feed analysis). However, it does not include residue testing (see Laboratory Chapter) and slaughter inspection made by the 200 veterinarians of LVO (see Management Chapter).

Table n°5 - Veterinary Public Health Tool

Veterinary Public Health Tool												
Number of working days per year per employee in the country											210	
Number of working hours per day per employee in the country											8	
PVS Critical Competency	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	Human resources							
					Veterinarians		Other university graduates		Veterinary para-professionals		Support staff	
					on site	total in Full time equivalent	on site	total in Full time equivalent	on site	total in Full time equivalent	on site	total in Full time equivalent
II-8.A	Regulation, autorisation and inspection of establishments					0,7						
	<i>slaughterslabs</i>	350	1	1,0	1	0,21						
	<i>slaughterhouses (export+poultry+national)</i>	50	1	8,0	1	0,24						
	<i>processing plants</i>	50	1	8,0	1	0,24						
II-8.B	Ante & post mortem inspection					90,3				77,0		
	<i>Export slaughterhouses</i>	9	100	8,0	2	8,57			2	8,57		
	<i>National market slaughterhouses (average 50 cattle & 100 shoat /day)</i>	16	210	8,0	1	16,00			2	32,00		
	<i>Poultry integrated slaughterhouses</i>	17	150	8,0	1	12,14			3	36,43		
	<i>Slaughter slabs (2 cattle+10 shoats/day)</i>	200	100	3,0	1	35,71						
	<i>" of small administrative units</i>	100	100	3,0	1	17,86						
II-8.C	Inspection of products of animal origin					0,9						
	Meat processing											
	<i>Meat companies</i>	15	4	8,0	1	0,29						
	Dairy processing											
	<i>Milk production companies</i>	10	4	8,0	1	0,19						
	Eggs processing											
	<i>Table eggs companies</i>	22	4	8,0	1	0,42						
	Fishery or aquatic sector											
	Other food processing											
	Distribution sector											
	<i>Gazeira</i>	22500										
	<i>Khartoum</i>	38000										
	<i>White Nile</i>	6600										
	<i>Blue Nile</i>	3000										
	<i>Rivers Nile</i>	4500										
	<i>Northern</i>	3500										
	<i>Gadaref</i>	5500										
	<i>South Darfour</i>	3000										
	<i>South Khordofan</i>	3000										
	<i>Red Sea</i>	1000										
II-9	Veterinary medicines & biologicals					3,6						
		750	2	2,0	2	3,57						
II-10	Residue testing											
II-11	Animal feed safety											

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

SUB-TOTAL VETERINARY PUBLIC HEALTH						
Resource and cost lines	Current Number	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments						
Buildings ()						
<i>Maintenance cost per (m2)</i>		-	30	1		
<i>Renovation cost per (m2)</i>		-	200	15		
<i>Building cost per (m2)</i>		-	600	25		
Transport (Purchasing cost)						
<i>Motorbikes</i>		-	2 500	5		
<i>Cars</i>		-	25 000	5		
<i>4x4 vehicles</i>		7	50 000	5	70 000	
<i>Other specific vehicle for Vet. Public Health*</i>						
<i>Other specific vehicle for Vet. Public Health*</i>						
Staff office equipment set		14	1 500	3	7 000	
Other specific office equipment set		-				
Other specific equipment						
<i>Other equipment for Vet. Public Health*</i>						
<i>Other equipment for Vet. Public Health*</i>						
Sub-total Material investments					77 000	
Non material investments						
Training						
<i>Specialised training (person-months/5 years)</i>		88,0	4 500			396 000
<i>Continuing education (person-days/year)</i>		700,0	50		35 233	
National expertise (days/5 years)		-	150			
International expertise (weeks/5 years)		7,0	11 000			77 000
Special funds (/ 5 years) for ...						
Sub-total non material expenditure					35 233	473 000
Salaries						
Veterinarians		53,0	8 400		445 200	
Other university degree		1,0	8 400		8 400	
Veterinary para-professionals		80,0	4 800		384 000	
Support staff		1,0	3 000		3 000	
Sub-total Salaries					840 600	
Consumable resources						
Administration			20%		168 120	
Travel allowances						
<i>staff within the country (person-days) / year</i>		200	30		6 000	
<i>drivers within the country (person-days) / year</i>		50	20		1 000	
<i>staff abroad (person-weeks) / year</i>		-	4 000			
Transport costs						
<i>Km or miles Motorbikes / year</i>			0,05			
<i>Km or miles cars / year</i>			0,20			
<i>Km or miles 4x4 vehicle / year</i>		140 000	0,30		42 000	
<i>Other transport fees*</i>					15 500	
<i>Other transport fees*</i>						
Specific costs						
<i>Targeted specific communication</i>						
<i>Consultation (number of 1 day meetings)</i>						
<i>Kits / reagents / vaccines</i>						
<i>Other costs for Vet. Public Health*</i>						
<i>Other costs for Vet. Public Health*</i>						
Sub-total Consumable resources					232 620	
Delegated activities						
<i>Production of 150 slaughter slabs (private vets)</i>					168 000	
<i>Feed analysis in accredited lab</i>					50 000	
Sub-total Delegated activities					218 000	
Total in	USD				1 403 453	473 000
Total in	SDG				8 420 720	2 838 000

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.13. 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

With the support of different institutions (EU, IGAD, IBAR, USAID, FAO), the VS have developed a set of strategic plans for priority diseases, and initiated operational plans. For several diseases these plans are targeting different populations or areas with different activities. For some diseases, such plans will be incorporated in regional or international specific programmes.

During the gap analysis, an effort was made to detail these operations according to potential capacity of the VS and local constraints and needs, as it was done for identification of animals (see chapter Trade).

First of all, a clear distinction is made between diseases which are relevant from different programmes:

- (i) National compulsory programmes, with a clear objective of coverage and further eradication, and thus implemented free of charge
- (ii) Voluntary programmes, with effort on public awareness, aiming at limiting economic impact for farmers, and implemented on cost recovery basis.

AH and identification activities related to requirement of importing countries are defined and budgeted in the Trade chapter, and are not considered here.

Passive surveillance will be implemented on ruminants, based on 4 syndrome complexes: stomatitis-enteritis, pneumonia, abortion and pox, according to standards, methods and procedures of IBAR and IGAD.

The VS will promote the development of a field veterinarians' network in compliance with OIE requirements to be in direct contact with farmers and animals in order to establish a sensitive passive surveillance system (see III.2. Human resources).

A specific network may be established within the intensive poultry sector for specific diseases (e.g. Newcastle disease versus HPAI).

Active surveillance will be implemented to monitor FMD virus circulation and post-vaccination serological control, CBPP in not vaccinated zone and HPAI, and RVF. Official veterinarians of the SVOs and LVOs will implement it.

Emergency response will target RVF and HPAI, in order to update contingency plans and to implement simulation exercises involving public and private staff of the VS, relevant stakeholders and other institutions and authorities.

Disease control, prevention and eradication programmes, implemented free of charge, will be focused on:

- annual CBPP vaccination of cattle in vaccination and buffer zones
- annual PPR vaccination of young female small ruminants. However, the national strategy is currently to vaccinate male and female, but for the sake of the Gap Analysis exercise it was seen as being much more realistic to consider first vaccination of all young female systematically over a period of 5 years; however this strategy may evolve within the context of the regional PPR eradication plan.
- bi-annual FMD vaccination of cattle in 4 northern states
- annual Brucellosis vaccination of young female intensive dairy cattle

- annual TB testing of intensive dairy cattle
- anthrax in pre-identified focus areas

Other diseases programmes will be voluntary and implemented on cost recovery basis: pox diseases, LSD, rabies (except identified focus), Newcastle and poultry diseases, HS, BQ, etc.

III.2 Human resources

Human resources allocated for planning and control of AH programmes are budgeted in chapter V (see Critical Competency Card I.6A).

In conformity with the national policy of Sudan, field activities related to AH should be implemented by private veterinarians under official delegation. In order to be compliant with OIE standards, there should be enough veterinarians working in the field in direct and regular contact with farmers and animals, and disease surveillance cannot over-rely on veterinary para-professionals.

Currently, the distribution of private veterinarians does not comply with such standards: more than half of them are in Khartoum State, others are present only in major localities, and most of private veterinarians are only selling veterinary medicines and rely on veterinary para-professionals or even non-qualified persons without effective supervision.

In order to size the relevant distribution of private veterinarians, the following 3 tables represent: the repartition of animals (step A), the workload estimated to implement the defined AH programmes (step B) and a possible relevant distribution (step C). This last table allows to estimate that around 500 private veterinary practices (each of them employing two veterinary para-professionals) could cover the workload of the AH programmes, with a satisfactory accessibility for farmers. On average, each veterinarian would cover 1,5 administrative unit, 80 000 VLU, 33 villages and 70 000 habitants, within an average 70 km maximum accessibility.

Finally, compared to the current distribution of private veterinarians, this would represent the resettlement or new settlement of around 250 private veterinarians and their staff over the next five years. An average of 50 settlements per year is quite possible within the context of Sudan, where 1500 veterinarians are already settled in poor conditions and many more not working, if an adequate incentive is deployed with the strategic use of official delegation. A special team is budgeted in chapter V (see Critical Competency Card III.4) to develop official delegation.

In addition, one public veterinarian at central level has been budgeted to develop an animal welfare programme.

III.3 Physical resources

The advantage of official delegation is that physical resources are not managed by public sector, as they would belong to the private veterinarians.

The budget of official delegation covers the use, maintenance and depreciation of physical resources of private veterinarians, but only partially and related to delegated activities. This should be progressively estimated during negotiations of tariffs at SVO levels with private veterinarians.

However, in order to implement the expected AH officially delegated activities, each private veterinarian will be required to operate with a vehicle (sustainability calculated on the basis of a pick-up), a fridge (electric or gas preferably) and its field cold chain, and other relevant equipment.

The veterinarian in charge of animal welfare will need a vehicle and office equipment, and access internal flights to travel to different states.

	A	B	C	D	E	F	G	H
152	Kassala	36697	87598	72636	29806	1 038 540	55 549	81 667
153	West Kassala	93023	222050	184125	75556	173 090	14 770	157 215
154	new halfa	64007	152786	126691	51988	519 270	39 423	118 029
155	Nahr atbra	127968	305464	253292	103939		25 476	214 923
156	Aroma	65714	156861	130070	53374		19 121	111 575
157	Hasham Algirba	69981	167047	138516	56840		18 410	118 429
158	wadachelew	138255	330019	273653	112294		15 757	229 847
159	hamshakoirb	46085	110006	91218	37431		47 503	85 066
160	talkok	50367	120228	99694	40909		51 167	92 820
161	north aldalta	59755	142637	118275	48534		17 091	101 398
162	Rural Kassala	101573	242458	201046	82500		28 773	172 302
163	KASSALA	853 424	2 037 155	1 689 216	693 171	1 730 900	333 038	1 483 270
164	Elroseiris	382138	738336	85780	2672	1 070 425	74 097	490 741
165	Eldamazin	636899	1230565	142967	4454	1 070 425	73 202	800 710
166	Eltadamon	382138	738336	85781	2674		27 115	470 641
167	Baw	127379	246111	28593	890		44 105	163 893
168	Geisan	254759	492227	57188	1781		30 331	316 212
169	Alkurmuk	254759	492224	57187	1782		37 797	317 705
170	BLUE NILE	2 038 072	3 937 799	457 496	14 253	2 140 850	286 647	2 559 903
171	Sinja	95965	83166	99243	7042	683 250	36 686	130 136
172	Sennar	207928	180193	215023	15255	911 000	70 410	274 455
173	Sharg Sennar	95965	83168	99241	7041		54 279	126 822
174	Eldindir	463832	401970	479667	34031	455 500	46 097	574 278
175	Elsuki	143948	124749	148862	10561	227 750	49 562	186 139
176	Abuhajar	367867	318804	380426	26991		31 122	450 762
177	Eldali & almazmoum	223919	194055	231563	16429		17 138	274 016
178	SENNAR	1 599 424	1 386 105	1 654 025	117 350	2 277 500	305 294	2 016 608
179	Wad Madani	50191	49878	43286	2480	2 687 450	109 573	108 916
180	South Gezeira	301147	299273	259719	14881		145 934	389 953
181	Elmanageil	727767	723245	627649	35960	537 490	238 425	924 906
182	Elkamlin	250954	249393	216430	12400	537 490	105 179	327 047
183	East Gezeira	552099	548666	476147	27280	537 490	121 656	691 106
184	Um Elgura	301146	299272	259718	14880	537 490	57 537	377 647
185	Elshahisa	326240	324212	281360	16120	537 490	159 032	428 009
186	GEZEIRA	2 509 544	2 493 939	2 164 309	124 001	5 374 900	937 336	3 247 585
187	Halfa	2013	47327	40226	10346	419 060	8 403	19 226
188	Dalga	3914	92004	78199	20038		10 527	28 049
189	Elburgig	6775	159262	135364	34799		21 817	49 301
190	Dongola	12467	293036	249065	64002	838 120	37 518	98 562
191	Elgolid	5217	122635	104233	26793		19 875	38 577
192	Eldaba	4885	114827	97597	25079		37 114	39 820
193	Marawi	14139	332245	282391	72583	838 120	39 409	110 011
194	NORTHERN	49 410	1 161 336	987 075	253 640	2 095 300	174 663	383 547
195	Sharg elneel	15429	40000	46000	826	2 587 240	1 498	50 407
196	Bahary	5626	3452	9562	62	2 587 240	1 050	33 025
197	Karari	20455	73281	92242	3246	2 587 240	1 232	63 938
198	Jablawlia	28013	51349	100873	568	2 587 240	1 626	69 575
199	Omdurman	13578	31072	37575	1000		885	20 870
200	Ombedda	133067	319377	305880	3200	2 587 240	1 705	222 606
201	Khartoum	23515	3200	3228			1 103	24 378
202	KHARTOUM	239 683	521 731	595 360	8 902	12 936 200	9 098	484 799
203	Eldamer	34704	380038	431061	32738	127 540	42 923	133 858
204	Atabra	29173	210778	259067	6603	382 620	20 331	85 701
205	Berber	20599	169257	202740	54132	127 540	23 018	77 211
206	Shendi	8094	118044	89418	11713	637 700	40 702	46 286
207	Elmatama	6863	26196	72608	2589		22 944	21 980
208	Elbhera	1517	101441	117046	6819		21 247	29 320
209	Abuhamed	506	33825	46583	381		19 335	12 509
210	RIVER NILE	101 456	1 039 579	1 218 523	114 975	1 275 400	190 500	406 864
211	Total	29 060 705	40 303 769	30 606 717	4 957 468	45 550 000	8 918 792	39 630 380
212	Animal census	Cattle	Sheep	Goats	Camels	Poultry	Horses and Donkeys	VLU

Including rural poultry, usually estimated between 1 and 2 per person in Sahelian countries, one can globally estimate that **Sudan has a total of 40 million VLU**. However, it should be noted that the last census dates from the 70's. So these figures would need to be confirmed through either a national census or a random census.

Table n°8 - Estimation of the minimum number of Field veterinary Stations to implement official activities

	A	B	C	D	E	F	G
1	Step B - Estimation of the minimum number of Field Veterinary Stations to implement official activities						
2							
3							
4	Step B1: Estimation of the workload required to implement all official activities related to animals per FVS						
5	Campaign or dates (duration)	Activity	Species	Targeted number of animals <i>b</i>	Average animals per day <i>c</i>	Total number of days <i>d = (b/c)</i>	
6							
7		FMD vaccination twice a year on 550000 northern states bovines	Cattle	1 100 000	300	3 667	
8		PPR vaccination of young female (6 millions) & exported males (5 millions)	Sheep/goat	11 000 000	1 500	7 333	
9		CBPP vaccination once a year	Cattle	11 000 000	300	36 667	
10		TB testing and Brucella vaccination/testing on intensive dairy cattle	Cattle	100 000	150	667	
11							
12							
13							48 333
14							
15							
16							
17	Step B2: Estimation of the workload required for conducting official visits to sites (food inspection, village training, farm surveys, etc.)						
18	Campaign or dates (duration)	Activity	Type of sites to visit	Number of visits per year <i>e</i>	Number of days per visit <i>f</i>	Total number of days <i>g = (e*f)</i>	
19							
20		visite of each village once a year for public awareness	village	15000	0,50	7500	
21		slaughter inspection in 150 slabs of administrative units twice a week 3 hours	slabs	15000	0,30	4500	
22							
23							
24							12 000
25							
26		Total number of working days required to implement all official activities			$h = (d+g)$		60333
27							
28		Number of working days available per year & per FVS to implement all official activities			<i>i</i>		120
29							
30		Minimum number of Field Veterinary Stations			$j = (h/i)$		503
31							
32		Maximum number of VLU per Field Veterinary Station			$k = (a/j)$		78 823

Calculation of the workload is made including all delegated activities (VPH and AH) as an average, although not all private veterinarians will carry out the same activities.

Moreover, for vaccinations, it is estimated that **a team will include one veterinarian and two veterinary para-professionals** (approved after discussion on the basis of current practice within a context of much less field teams).

Finally, it is estimated that those delegated activities should be implemented within two campaigns of 60 days (120 days in total) and the rest should be available for private practice.

In such conditions, the workload would represent around 500 “field veterinary stations” being, within the context of Sudan, 500 private veterinarians employing 1000 veterinary para-professionals.

In the next pages, step C gives an estimate of different parameters, with a correction of distribution of private veterinarian’s network to cover adequately the territory that would increase the number up to 520 veterinary practices. However this adjustment is negligible taking into account the level of confidence of current data.

One should remind that, from the current situation, this represent an effort of around 250 new settlement or re-settlement of private veterinarians within the national territory over the next five years, which should be possible taking into account the important number of veterinarians working in poor conditions.

Such a network would increase accessibility of farmers to a reasonable level during the next five years. The same simulation done for a national campaign against FMD would need to double such number, up to around 1000, and this could be reached within 10 years.

III.4 Financial resources

The following table “Step D” gives an estimate of the number of kilometres to implement the different activities, based on the assumption that each team will carry out a round-trip every day (which is the maximal option as usually the teams stay in the field for some days). The total represents around **5 million kilometres per year**.

Table n°10 - Estimation of the annual distances necessary to implement official activities

	A	B	C	D	E	F	G	H	I	
1	Step D - Estimation of the annual distances necessary to implement official activities									
2										
3										
4		Type of official activity	Type of site to visit	Number of visits per year	Average return distance FVS to site	Vehicles involved in the visit		Total number of Km or miles		
5			x	y = (d)	z	Type	Number			
6						aa	ab	ac = (y*z*ab)		
7	Official activities related to individual animals									
8		FMD vaccination twice a year on 550000 northern states bovines	village	3 667	120	pick-up	1	440 000		
9		PPR vaccination of young female (6 millions) & exported males (5 millions)	village	7 333	75	pick-up	1	550 000		
10		CBPP vaccination once a year	village	36 667	75	pick-up	1	2 750 000		
11		TB testing and Brucella vaccination/testing on intensive dairy cattle	farms	667	50	pick-up	1	33 333		
12										
13										
14	Official activities related to visiting sites									
15		visite of each village once a year for public awareness	village	15 000	75	pick-up	1	1 125 000		
16		slaughter inspection in 150 slabs of administrative units twice a week 3 hours	slabs	15 000		none				
17										
18										
19	Total annual distance to be covered by the Field Veterinary Network						ad = total (ac)		4 898 333	
20	National average distance to be covered per Field Veterinary Station						ae = (ad/s)		9 402	
21										
22										

Based on unit costs, the following table “Step E” indicates that the cost of each private veterinary practice would be around 25 000 USD / year. This means around 13.5 million USD / year for the network of 500 private veterinary practices. This would be the cost to maintain a public network with civil servants.

Table n°11 - Estimation of the human and financial resources

	A	B	C	D	E	F	G	H
1	Step E - Estimation of the human, physical and financial resources							
2								
3								
4	Resource and cost lines	Designation of units	Number of units	Unit cost	Years of amortisation	Annual cost per FVS	Total for field veterinary network	
5			af	ag	ah	ai = (af*ag/ah)		
6	Human resources (Full Time Equivalent)					12 000	Total staff	aj = (af*s)
7	Veterinarian	net income per year	1	6 000	-	6 000	521	
8	Veterinary para-professional	net income per year	2	3 000	-	6 000	1042	
9	Support staff	net income per year			-			
10	Physical resources					6 550	Total units	ak = (af*s)
11	Buildings	m² to maintain	40	30	-	1 200	20840	
12	Transport	car	1	50 000	10	5 000	521	
13								
14	Staff office set	mobile phone	3	50	3	50	1563	
15	Other equipment set				3			
16	Cold chain	gaz fridge	1	1 500	10	150	521	
17	Other Equipment	small technical equipment	1	1 500	10	150	521	
18								
19	Functioning					7 101	Total amounts	al = (ai*s)
20	Transport fees	km or mile	9 402	0,50	-	4 701	2 449 167	
21					-			
22	Administrative/social costs	lump sum % on net income	20%		-	2 400	1 250 400	
23	Other				-			
24					-			
25	Total cost of a Field Veterinary Station					am = total (ai)	25 651	
26	Total cost of the Field Veterinary Network					an = (am*s)	13 364 117	
27								

However, private veterinary practices could rely on private income to ensure their sustainability. Apart from fees for diagnostic, which may be difficult to assess, the majority of private income corresponds to veterinary medicines sales.

Data from the NMPB shows that the total value of imported veterinary medicines and vaccines is estimated at 60 million USD / year.

During meetings, it was agreed that the average margin applied by wholesalers and retailers (currently veterinary pharmacies) are 20 and 15%, respectively. This means that the gross revenue of private veterinarians is around 10 million USD/year.

This calculation is coherent with the expected level of annual animal health expenditure of a Sahelian country (often between 0,7 and 1,5 USD/year), and shows that export of extensive productions and the growing intensive production sector are the driving force of Animal Health development.

	A	B	C	D	E	F	G	H	I
49									
50		Annual value of veterinary medicines sold on the national market (without vaccines or reagents used for official campaigns)				be		60 000 000	
51									
52		Average margin obtained by wholesaler				bf		0,2	
53									
54		Average margin obtained by retailer				bg		0,15	
55									
56		Number of Veterinary Field Stations				bh = (s)		521	
57									
58		Total income at national level				bi = be*(1+bf)*bg		10 800 000	
59									
60		Income per Field Veterinary Station				bj = (bi/s)		20 729	
61									
62		Income per VLU				bk = (bi/a)		0,27	
63									
64		Annual Animal Health Expenditure				bl=be*(1+bf)*(1+bg)/a		2,09	

As there are currently 1500 private veterinarians, it could be estimated that the network of 500 could at least get 60% of such income in the next five years, as it will be distributed throughout the territory and more accessible to farmers. It is thus proposed that the official delegation scheme provides around 7,5 million USD per year to private veterinarians. As around 500 000 USD are been budgeted for official delegation in Trade (identification of cattle in 4 northern states), VPH (ante and post mortem inspection in 150 slaughter slabs) and Management (annual visit of 15 000 villages every year to develop joint programmes and public awareness), the budget for official delegation in AH is estimated at 7 million USD / year.

The table “G” shows an example of distribution of the budget per delegated activity. In reality, the fees of each activity should be negotiated at State level between farmers, veterinarians and public VS, in order to take into account local context (landscape, herd sizes, etc.) and need to support settlements in remote areas.

Table n°12 - Official delegated activities

Step G - Estimation of the income generated by delegated activities

Income generated by the Field Veterinary Network	bm	6 000 000
Income generated by a Field Veterinary Station	bn = bm / s	11 516
Cost of the Field Veterinary Network	bo = (an)	13 364 117
Cost of a Field Veterinary Station	bp = (am)	25 651
Minimum budget for the Field Veterinary Network	bq = (bo-bm)	7 364 117
Minimum budget for a Field Veterinary Station	br = (bp-bn)	14 135

Official delegated activities	Target bs	Number of animals bt	Application rate bu	Possible unit cost bv	Total bw = (bt*bu*bv)
Passive surveillance (II-5.A)					50 000
Tb testing of dairy farms	dairy cows	100 000	100,0%	0,25	25 000
Brucella testing of dairy farms	dairy cows	100 000	100,0%	0,25	25 000
Active surveillance (II-5.B)					-
<i>done by LVO during next five years</i>					-
Emergency response (II-6)					-
<i>done by LVO during next five years</i>					-
Disease prevention, control and eradication (II-7)					3 370 000
FMD vaccination	cattle	550 000	200,0%	0,2	220 000
PPR vaccination	young female	7 000 000	100,0%	0,1	700 000
CBPP vaccination	cattle	11 000 000	100,0%	0,2	2 200 000
PPR vaccination for export (paid by traders)		5 000 000	50,0%	0,1	250 000
Food safety (II-8)					750 000
slaughter inspection in 150 adm. units slabs	3 hours twice a week	15 000	200,0%	25	750 000
Identification and traceability (II-12)					55 000
identification of northern states cattle	cattle	550 000	50,0%	0,2	55 000
Participation of producers and other interested parties in joint programmes (III-6)					16 500
annual training in villages	village	550	100,0%	30	16 500
Other delegated activities					-
Annual distances traveled	km or miles	4 898 333		0,65	3 183 917
Total					7 425 417

In addition, AH programmes will also require a budget estimated at 7 million USD / year for vaccines of national programmes.

Vaccines	Unit cost	National program	Amount for AH program
Anthrax	0,15	1 000 000	150 000
RVF	0,50	voluntary	0
SG pox	0,15	voluntary	0
Camel pox	0,15	voluntary	0
PPR	0,15	6 500 000	975 000
CBPP	0,15	16 000 000	2 400 000
HS	0,15	voluntary	0
FMD	3,00	1 100 000	3 300 000
Brucellosis	1,00	100 000	100 000
Amount			6 925 000

The budget should also include continuing education for private veterinarians (estimated 2 days/year) regarding official delegated activities to implement.

The veterinarian in charge of animal welfare will access to specialised training (estimated 3 months).

The total budget for AH is around 14 million USD / year (this does not include laboratory tests and samples kits budgeted in the Laboratory chapter).

Table n°13 - Sub-Total for strengthening competencies for animal health

SUB-TOTAL ANIMAL HEALTH						
Resource and cost lines	Current Number	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments						
Buildings ()						
Maintenance cost per (m2)		-	30	1		
Renovation cost per (m2)		-	200	15		
Building cost per (m2)		-	600	25		
Transport (Purchasing cost)						
Motorbikes		-	2 500	5		
Cars		-	25 000	5		
4x4 vehicles		1	50 000	5	10 000	
Other specific vehicles for Animal Health*						
Other specific vehicles for Animal Health*						
Staff office equipment set		1	1 500	3	500	
Other specific office equipment set		-				
Other specific equipment						
Other equipment for Animal Health*						
Other equipment for Animal Health*						
Sub-total Material investments					10 500	
Non material investments						
Training						
Specialised training (person-months/5 years)		3,0	4 500			13 500
Continuing education (person-days/year)		1 000,0	50		50 333	
National expertise (days/5 years)		-	150			
International expertise (weeks/5 years)		-	11 000			
Special funds (/ 5 years) for ...						
Sub-total non material expenditure					50 333	13 500
Salaries						
Veterinarians		1,0	8 400		8 400	
Other university degree		-	8 400			
Veterinary para-professionals		-	4 800			
Support staff		-	3 000			
Sub-total Salaries					8 400	
Consumable resources						
Administration			20%		1 680	
Travel allowances						
staff within the country (person-days) / year		-	30			
drivers within the country (person-days) / year		-	20			
staff abroad (person-weeks) / year		-	4 000			
Transport costs						
Km or miles Motorbikes / year			0,05			
Km or miles cars / year			0,20			
Km or miles 4x4 vehicle / year		20 000	0,30		6 000	
Other transport fees*						
Other transport fees*						
Specific costs						
Targeted specific communication		-				
Consultation (number of 1 day meetings)		-				
Kits / reagents / vaccines					7 000 000	
Other costs for Animal Health*					50 000	
Other costs for Animal Health*						
Sub-total Consumable resources					7 057 680	
Delegated activities						
AH programs					7 000 000	
Sub-total Delegated activities					7 000 000	
Total in	USD				14 126 913	13 500
Total in	SDG				84 761 480	81 000

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 Cards II.1 and II.2.

IV.1 Strategy and activities

The OIE PVS evaluation mentioned many deficiencies in the infrastructure and quality of laboratory services. Meetings held during the PVS Gap Analysis mission showed that new investments have been done (in a residues laboratory) without clear analysis of the sustainability and availability of other laboratories able to provide the same type of analysis.

As a consequence, the experts could not pretend to assess the suitability and sustainability of the national veterinary laboratory network during the time allowed for a PVS Gap Analysis mission. It was thus agreed that the VS will require a specific OIE Laboratory Mission.

The strategy is thus to secure the relevant budget for the VS to access to correct and timely laboratory diagnostic, based on the demand derivate from Trade, VPH and AH programmes.

IV.2 Human resources

Relevant human resources for national veterinary laboratory network will be determined through a specific OIE Laboratory Mission.

IV.3 Physical resources

Relevant physical resources for national veterinary laboratory network will be determined through a specific OIE Laboratory Mission.

IV.4 Financial resources

The annual budget is based on international market prices of the laboratory analysis required by national programmes, and is estimated 4,5 million USD / year. However, around 3 million USD should be cost recovered from export fees.

Test	unit	cost	Purpose	Number	Amount
ELISA	8,00		active surveillance	50000	400000
ELISA	8,00		post vaccination control	100000	800000
PCR	50,00		active surveillance	500	25000
BBAT	0,50		export brucellosis	5000000	2500000
Chemistry	65,00		residues program	10000	650000
others			miscellaneous		125000
				TOTAL	4500000

An exceptional budget (estimated around 320 000 USD over the next five years) is required for international expertise (OIE Laboratory Mission and quality assurance accreditation).

Table n°14 - Sub-Total for strengthening competencies for veterinary laboratory

SUB-TOTAL VETERINARY LABORATORIES						
Resource and cost lines	Current Number	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments						
Buildings ()						
<i>Maintenance cost per (m2)</i>		-	30	1		
<i>Renovation cost per (m2)</i>		-	200	15		
<i>Building cost per (m2)</i>		-	600	25		
Transport (Purchasing cost)						
<i>Motorbikes</i>		-	2 500	5		
<i>Cars</i>		-	25 000	5		
<i>4x4 vehicles</i>		-	50 000	5		
<i>Other specific vehicles for Vet. Laboratories*</i>						
<i>Other specific vehicles for Vet. Laboratories*</i>						
Staff office equipment set		-	1 500	3		
Other specific office equipment set		-				
Other specific equipment						
<i>Other equipment for Vet. Laboratories*</i>						
<i>Other equipment for Vet. Laboratories*</i>						
Sub-total Material investments						
Non material investments						
Training						
<i>Specialised training (person-months/5 years)</i>		-	4 500			
<i>Continuing education (person-days/year)</i>		-	50			
National expertise (days/5 years)		-	150			
International expertise (weeks/5 years)		29,0	11 000			319 000
Special funds (/ 5 years) for ...						
Sub-total non material expenditure						319 000
Salaries						
Veterinarians		-	8 400			
Other university degree		-	8 400			
Veterinary para-professionals		-	4 800			
Support staff		-	3 000			
Sub-total Salaries						
Consumable resources						
Administration			20%			
Travel allowances						
<i>staff within the country (person-days) / year</i>		-	30			
<i>staff within the country (person-days) / year</i>		-	20			
<i>staff abroad (person-weeks) / year</i>		-	4 000			
Transport costs						
<i>Km or miles Motorbikes / year</i>			0,05			
<i>Km or miles cars / year</i>			0,20			
<i>Km or miles 4x4 vehicle / year</i>			0,30			
<i>Other transport fees*</i>						
<i>Other transport fees*</i>						
Specific costs						
<i>Targeted specific communication</i>		-				
<i>Consultation (number of 1 day meetings)</i>		-				
<i>Kits / reagents / vaccines</i>		1			4 500 000	
<i>Other costs for Vet. Laboratories*</i>						
<i>Other costs for Vet. Laboratories*</i>						
Sub-total Consumable resources					4 500 000	
Delegated activities						
Sub-total Delegated activities						
Total in	USD				4 500 000	319 000
Total in	SDG				27 000 000	1 914 000

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, 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

In order to progress and improve compliance with OIE standards, the organisation of the VS should be reformed and there has to be an important shift of paradigm in three major subjects:

- Restoring the chain of command from central to field level
- Expand its legal mandate on veterinary public health to include all processing of food of animal origin, as well as the control of veterinary medicines and residues
- Developing a strong private veterinarians' field network in charge of implementing most of animal health national programmes through official delegation.

V.1.A Technical independence

Technical independence is a fundamental factor of quality of VS. It will heavily depend on the restoration of the chain of command, development of legislation, procedures and data management, and on increased professional competences.

However, the level of revenues has also a major impact on technical independence of all staff. Currently, this level does not allow working 8 hours a day and 210 days a year, as revenues cannot ensure a sustainable level of life and basic needs for a family. As the Gap Analysis calculations are made on the basis of effective work, the revenues are estimated to be coherent with such calculation.

The estimate is based on different interviews regarding quality of life (cost of housing, food, school fees, clothing, etc.) and on the necessity to get social recognition. It is also based on comparison with other professions or staff, who earn 2 to 6 times more on average, through different allowances, in the public sector (e.g.: NMPB, lawyers, engineers, etc.). The estimate also includes the social benefits (retirement, insurances and taxes) in the cost.

It should be clearly mentioned that such an increase of remunerations will be progressive and applied to a reduced number of public staff (compared to current staffing). This shall be a long-term policy, without stressing personnel with an unrealistic "staff reduction plan". However, it should be applied immediately to calculate, the cost of official delegation, to all new specialised staff recruited in the public sector, as well as to key positions at Federal and State levels.

The following average monthly cost of remunerations have been defined: 700 USD for a veterinarian or other university degree, 400 USD for a veterinary para-professional and 250 USD for support staff.

V.1.B Coordination

Restoring the chain of command of the VS is a key reform to comply with international requirements. In a federal system, it may be a political challenge, as Local governments (States and Localities) will tend to refuse to give back such power.

It should be understood that, although animal production development is a function that fits well with decentralisation and federalism, the VS activities are hampered by such organisation in most developing countries. A decentralised VS system may be adapted to developed countries, where diseases are rare and competences and

resources are important. In a country facing huge challenges regarding AH and VPH, within a very large territory, a context of regional trade and transhumance, and with a limited level of resources and competences, it appears unrealistic to try to overcome decentralisation of the VS through permanent procedures of consultation and coordination between federal, state and locality levels. This will only result in waste of time and resources.

It is thus proposed to recentralise the VS of Sudan and the current constitutional reform may be an opportunity. It is of vital importance to present the VS as a national security function, which cannot be decentralised in the current context.

The VS will be organised as a National VS, with a central level, 18 State Veterinary Offices and 168 Locality Veterinary Offices.

Central level VS will be in charge of strategic planning, regulations, finances, as well as overall inspection and control. Border posts and quarantine stations shall be under its direct authority.

State Veterinary Offices will be in charge of operational planning and supervision of AH and VPH staff and programmes, including control of LVOs and official delegation to private veterinarians.

Locality Veterinary Offices will be in charge of implementing specific aspects of Trade, VPH and AH programmes. In particular, they will be in charge of implementing sanitary control and certificates regarding transhumance and animal markets, managing data for identification, ante and post mortem inspection in slaughter slabs of their locality, active surveillance on specific disease, reporting on passive surveillance, animal welfare and veterinary medicines, outbreak investigation, and part of post vaccination serological control.

Finally, the chain of command ends with private veterinarians under official delegation.

V.1.C Veterinary practice organisation and policy

For more than 15 years, the national policy has been to promote the privatisation of veterinary practice. However, it has never been understood, used and sustained as a major factor for the development of the VS.

The public sector of the VS and the VSB have accepted a situation where veterinarians are usually restricted to veterinary medicines sales in main cities. The public sector of the VS continues to deliver most of AH activities such as vaccinations and testing. NGOs and projects permanently deliver free treatment or support the public sector, without any consideration for the unfair competition created against the private sector. The VSB has accepted to entitle “veterinary pharmacies” without any link to veterinary practice and diagnostic. Moreover, many veterinarians are not present in those premises and use non-qualified staff without any supervision.

It is of the highest importance to operate a change of paradigm for the veterinary profession in Sudan, in order to achieve credibility in the international community.

The VSB will start by changing the denomination of “veterinary pharmacies” for “veterinarian, veterinary practice or veterinary clinic”. This will be a first strong communication factor for the profession. Progressively, the regulations for distribution and usage of veterinary medicines will be strengthened in order to establish a clear link between veterinary diagnostic and prescription of veterinary medicines.

The public sector will stop implementing most of field activities related to animal health, and delegate them officially to private veterinarians. NGOs and projects will

be submitted to the same principle, obliged to pass through private veterinarians even to deliver free care or treatments in case of emergency.

V.1.D Official delegation

Official delegation will be the main tool to develop a private veterinarians' field network all over the country, even in remote areas.

Official delegation will be used for identification of animals, official AH programmes and development of joint programmes. It will also be used for the implementation of ante and post mortem inspection in remote slaughter slabs (estimated around 150).

Furthermore, official delegation will be used to accredit private laboratories for food and feed safety.

Specific staff will be in charge of developing regulations and procedures for official delegation from central level. Key principles should be applied, such as clear procedures for each activity, requirement of continuing education, modalities of payment per head or task, and clear control of implementation, including penalties. It will establish guidance for post-vaccination serological control.

Official delegation should be issued and renewed yearly on ad-hoc basis by SVO, which should be in charge of the control of its implementation, including establishment of post-vaccination serological random sampling plan.

LVOs will be in charge of implementing an important part of post-vaccination serological surveillance.

On the one hand, official delegation should not lead to a situation of monopoly within specific certain areas: ideally, farmers or villages should be able to choose their veterinarian implementing official activities.

On the other hand, official delegation should be linked with effective residence and establishment of the veterinary practice in the area. The veterinarian in charge of official activities should be in regular contact with animals and farmers, in order to be able to implement relevant passive surveillance for early detection.

V.2 Cross-cutting competencies of the VS

V.2.A Qualification of VS staff

Initial training of veterinarians and veterinary para-professionals should be reassessed according to needs. It will require international and national expertise. Veterinary Education Curriculum should be modified, and the number of graduates should be revised in order to avoid levels of unemployment that hamper the credibility and social recognition of this profession, impacting negatively in their technical independence.

International recognition, harmonisation and collaboration should be developed.

V.2.B Management of operation and resources

There is a need to drastically increase the competences related to management in the public sector of the VS.

Formal procedures and data management systems should be developed for most activities.

All relevant data system should be progressively created and be compatible: identification, border post, AH, VPH, resources, laboratory analysis.

V.2.C Communication

The communication unit of the VS should be maintained and its budget increased, in order to support the important reforms and new programmes that will be implemented.

Its operational budget is estimated on the basis of 3 USD / year / village. This should allow developing enough posters, leaflets, booklets and radiobroadcasting messages.

V.2.D Consultation with stakeholders and joint programme

Consultation will be essential to develop new programmes, such as identification or joint programmes. It will also be necessary to organise the development of the private veterinarians network and official delegation at local level.

Its operational budget is estimated on the basis of one meeting per year in each locality, two meetings at state level, and ten meetings at federal level. Each meeting is supposed to congregate on average 10 persons, and each person to receive an allowance of 20 USD to compensate their travel fees and loss of working time.

V.2.E Official representation

The central level of the VS should be able to attend all relevant meetings of OIE, SPS, Codex, AU-IBAR, IGAD and COMESA.

In addition, meetings about border security and equivalence agreement have also been budgeted in relevant Critical Competency Cards.

V.2.F Legislation

A comprehensive review of veterinary legislation is necessary, in all domains. This will be undertaken with the support of an OIE Legislation mission over the next five years.

Better compliance will be organised progressively when developing Trade, VPH and AH programmes. Data management will play a key role in analysing instances of non-compliance, and penalties applied.

Harmonisation of this legislation with the context of IGAD has been initiated during the mission, and is supposed to be supported by AU-IBAR.

V.3 Human resources

Most of human resources necessary for the management of the VS are budgeted in this chapter, although some of them have been already budgeted in VPH (veterinary medicines, residues, feed safety) or AH (animal welfare).

In total, it represents approximately 300 veterinarians, 100 other university degree, 230 veterinary para-professionals and 325 support staff.

This does not include public inspection staff on the field, implementing border control, quarantine export certification and slaughter inspection, all budgeted in chapters I,II and III.

Table 16 does not include central or state staff that has already been budgeted in previous chapter.

Table n°15 - Staff working at central and state offices levels

PVS Critical competency	Positions identified	No of administrative levels	Human resources (Full Time Equivalent)			
			Veterinarians	Other university degree	Veterinary para-professionals	Support staff
I-6.A	Internal coordination (chain of command)		281	113	204	298
	Central level		41	23	0	22
	General Directorate		6	16	0	11
	<i>Director of FVS</i>		1			1
	<i>Deputy Director of FVS</i>		1			1
	<i>Management of information, resources & operations (CCC III.4)</i>		1	9		2
	<i>Organisation of official delegation (CCC III.4)</i>		1	1		1
	<i>Legislation (CCC IV.1)</i>			2		2
	<i>Communication (CCC III.1)</i>		1	2		2
	<i>Human resource and continuing education (CCC I.3)</i>		1	2		2
	Animal health		10	2	0	3
	<i>Director</i>		1			1
	<i>Epidemiology</i>		4	1		1
	<i>Disease control</i>		4	1		1
	<i>Animal Welfare (CCC II.13)</i>		1			
	Veterinary Public Health		16	1	0	4
	<i>Director</i>		1			1
	<i>Slaughter inspection</i>		2			1
	<i>Processing inspection</i>		3			1
	<i>Veterinary medicines (CCC II.9)</i>		7	1		1
	<i>Residues (CCC II.10)</i>		2			
	<i>Feed safety (CCC II.11)</i>		1			
	Trade, Border control and Traceability		9	4	0	4
	<i>Director</i>		1			1
	<i>Animal Identification</i>		2	2		1
	<i>Export and certification</i>		4	1		1
	<i>Import control</i>		2	1		1
	Field level of coordination		240	90	204	276
	1st level of field coordination (SVO=State Veterinary Office)	18	72	90	36	108
	<i>State VO Director</i>		1			1
	<i>State VO AH director</i>		2		1	1
	<i>State VO VPH director</i>		1	1	1	1
	<i>Management of information, resources & operations (CCC III.4)</i>			2		1
	<i>Legal advisor (CCC IV.1)</i>			1		1
	<i>Human resource and continuing education (CCC I.3)</i>			1		1
	2nd level of field coordination (LVO=Locality Veterinary Office)	168	168	0	168	168
	<i>Official veterinarian coordinator</i>		1		1	1

Table 15 represents the overall staff working at central and state offices levels, including those already budgeted in the previous chapter.

V.4 Physical resources

In order to implement their function, the public staff should have relevant physical resources, which are regularly maintained, estimated as follows:

- 12 500 m² of buildings (60 m² per LVO, 100 m² per SVO, 500 m² at central level)
- 300 pick-up 4x4 (average one per veterinarian)
- 950 office equipment (average one per staff except drivers)
- Cold chain for all SVOs and LVOs
- Electric energy production for all LVOs

V.5 Financial resources

The annual budget for management of the VS is around 13 million USD / year.

In addition to human and physical resources, other annual financial resources are estimated as follows:

- Around 2 days continuing education per veterinarian and veterinary para-professional
- Around 10 days travel allowance (supervision) per veterinarian and university degree
- Around 25% of mission travel with a driver
- Relevant number of missions abroad for official representation of the VS and VSB
- 300 000 USD / year for official delegation targeting joint programmes with farmers
- 45 000 USD / year for communication
- 50 000 USD / year for consultation

An exceptional budget estimated around 1,25 million USD is also required over the next five years for:

- Specialised training of 5 veterinarians in public veterinary administration (10 months each)
- Specialised training in risk analysis for 3 veterinarians (1 month each)
- International and national expertise (OIE PVS follow-up evaluations, initial training of veterinarians and veterinary para-professionals, VSB support, data management and official delegation development).

Table n°16 - Sub-Total for strengthening general management and regulatory services

SUB-TOTAL MANAGEMENT OF VETERINARY SERVICES						
Resource and cost lines	Current Number	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments						
Buildings ()		12 500				
<i>Maintenance cost per (m2)</i>		12 500	30	1	375 000	
<i>Renovation cost per (m2)</i>		-	200	15		
<i>Building cost per (m2)</i>		-	600	25		
Transport (Purchasing cost)						
<i>Motorbikes</i>		-	2 500	5		
<i>Cars</i>		-	25 000	5		
<i>4x4 vehicles</i>		301	50 000	5	3 010 000	
<i>Other specific vehicles for management of VS*</i>						
<i>Other specific vehicles for management of VS*</i>						
Staff office equipment set		954	1 500	3	477 000	
Other specific office equipment set		-				
Other specific equipment						
<i>Other equipment for management of VS*</i>					40 000	
<i>Other equipment for management of VS*</i>					33 000	165 000
Sub-total Material investments					3 935 000	165 000
Non material investments						
Training						
<i>Initial training</i>						
<i>Specialised training (person-months/5 years)</i>		53,0	4 500			238 500
<i>Continuing education (person-days/year)</i>		1 000,0	50		50 333	
National expertise (days/5 years)		90,0	150			13 500
International expertise (weeks/5 years)		77,0	11 000			847 000
Special funds (/ 5 years) for ...						
Sub-total non material expenditure					50 333	1 099 000
Salaries						
Veterinarians		302,0	8 400		2 536 800	
Other university degree		112,0	8 400		940 800	
Veterinary para-professionals		231,0	4 800		1 108 800	
Support staff		324,0	3 000		972 000	
Sub-total Salaries					5 558 400	
Consumable resources						
Administration			20%		1 111 680	
Travel allowances						
<i>staff within the country (person-days) / year</i>		4 060	30		121 800	
<i>drivers within the country (person-days) / year</i>		1 000	20		20 000	
<i>staff abroad (person-weeks) / year</i>		40	4 000		160 000	
Transport costs						
<i>Km or miles Motorbikes / year</i>			0,05			
<i>Km or miles cars / year</i>			0,20			
<i>Km or miles 4x4 vehicle / year</i>		6 020 000	0,30		1 806 000	
<i>Other transport fees*</i>					6 250	
<i>Other transport fees*</i>						
Specific costs						
<i>Targeted specific communication</i>		15 000			45 000	
<i>Consultation (number of 1 day meetings)</i>		250			50 000	
<i>Kits / reagents / vaccines</i>		-				
<i>Other costs for VS management*</i>						
<i>Other costs for VS management*</i>						
Sub-total Consumable resources					3 320 730	
Delegated activities						
<i>annual visit of each village for joint programs</i>					300 000	
Sub-total Delegated activities					300 000	
Total in	USD				13 164 463	1 264 000
Total in	SDG				78 986 780	7 584 000

VI Resources analysis

The total budget is presented in table 17.

It amounts around 42 million USD / year, with an exceptional budget of 2,6 million.

Table n°17 - Total budget

TOTAL COST								
Resource and cost lines	Current Number	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost	Total cost for 5 years	% annual cost
Material investments								
Buildings ()	-	16 720						
<i>Maintenance cost per (m2)</i>	-	16 500	30	1	495 000		2 475 000	1,2%
<i>Renovation cost per (m2)</i>	-	110	200	15	1 467	14 667	22 000	0,0%
<i>Building cost per (m2)</i>	-	110	600	25	2 640	52 800	66 000	0,0%
Transport (Purchasing cost)								
<i>Motorbikes</i>	-	-	2 500	5				
<i>Cars</i>	-	-	25 000	5				
<i>4x4 vehicles</i>	-	309	50 000	5	3 090 000		15 450 000	7,4%
<i>Other vehicles</i>								
<i>Other vehicles</i>								
Staff office equipment set	-	998	1 500	3	499 000		2 495 000	1,2%
Other specific office equipment set	-	-						
Other specific equipment								
<i>Other equipment</i>					65 500	82 500	410 000	0,2%
<i>Other equipment</i>					33 000	165 000	330 000	0,1%
Sub-total Material investments					4 186 607	314 967	21 248 000	10,0%
Non material investments								
Training								
<i>Initial training</i>								
<i>Specialised training (person-months/5 years)</i>	-	159,0	4 500			715 500	715 500	
<i>Continuing education (person-days/year)</i>	-	2 920,0	50		146 973		734 867	0,4%
<i>National expertise (days/5 years)</i>		120,0	150			18 000	18 000	
<i>International expertise (weeks/5 years)</i>		139,0	11 000			1 529 000	1 529 000	
Special funds								
Sub-total non material expenditure					146 973	2 262 500	2 997 367	0,4%
Salaries								
Veterinarians	-	396,0	8 400		3 326 400		16 632 000	8,0%
Other university degree	-	113,0	8 400		949 200		4 746 000	2,3%
Veterinary para-professionals	-	515,0	4 800		2 472 000		12 360 000	5,9%
Support staff	-	335,0	3 000		1 005 000		5 025 000	2,4%
Sub-total Salaries					7 752 600		38 763 000	18,6%
Consumable resources								
Administration			20%		1 550 520		7 752 600	3,7%
Travel allowances								
<i>staff within the country (person-days) / year</i>	-	4 260	30		127 800		639 000	0,3%
<i>staff within the country (person-days) / year</i>	-	1 050	20		21 000		105 000	0,1%
<i>staff abroad (person-weeks) / year</i>	-	50	4 000		200 000		1 000 000	0,5%
Transport costs								
<i>Km or miles Motorbikes / year</i>			0,05					
<i>Km or miles cars / year</i>			0,20					
<i>Km or miles 4x4 vehicle / year</i>		6 180 000	0,30		1 854 000		9 270 000	4,4%
<i>Other transport fees</i>					21 750		108 750	0,1%
<i>Other transport fees</i>								
Specific costs								
<i>Targeted specific communication</i>	-	15 000			45 000		225 000	0,1%
<i>Consultation (number of 1 day meetings)</i>	-	250			50 000		250 000	0,1%
<i>Kits / reagents / vaccines</i>	-	1			4 500 000		22 500 000	10,8%
<i>Other costs</i>					7 560 000		37 800 000	18,1%
<i>Other costs</i>					5 150 000		25 750 000	12,3%
Sub-total Consumable resources					21 080 070		105 400 350	50,5%
Delegated activities								
<i>Specific delegated activities</i>					7 518 400		37 592 000	18,0%
<i>Other activities or global estimation</i>					1 050 000		5 250 000	2,5%
Sub-total Delegated activities					8 568 400		42 842 000	20,5%
Total in	USD				41 734 650	2 577 467	211 250 717	100%
Total in	SDG				250 407 900	15 464 800	1 267 504 300	

VI.1 Human resources analysis

The required number of staff is estimated 400 veterinarians, 110 other university degree, 515 veterinary para-professionals and 335 support staff in the public sector. One should note that there is a need for the recruitment of other university degree staff in relevant domains (management, communication, legislation, human resources, etc.).

Further 300 veterinarians and 300 veterinary para-professionals will to continue to work during the next five years at internal check points under the State authorities.

In addition, the staff of laboratories has not been incorporated in this analysis, as there is a need for a specific mission.

This represents an important reduction of staff compared to the estimated 2500 veterinarians and 1800 veterinary para-professionals employed in public VS at all levels. This should be linked with the proposed increased level of remuneration allowing staff to really work 8 hours a day and 210 days a year. It is also linked to the strategic development of official delegation, using the network of private veterinarians to implement most AH activities.

Obviously, such a change should not be applied without analysing its social impact. It should be implemented progressively, according to the pyramid of age, facilitating transfer of public staff into the private sector, and increasing salaries only for new, specialised or essential staff relevant to the new organisation.

Finally, salaries representing less than 20% of the annual budget will allow the VS to invest and function regularly.

VI.2 Physical resources analysis

The physical resources of the VS are essential to ensure regular operations. The proposed budget allows maintaining and renewing them regularly, for a total amount representing 10% of the annual budget. This will allow maintaining buildings (including export quarantine), around 300 vehicles and 900 offices equipment (computers, telecommunications, etc), as well as specific equipment such as cold chain and sources of energy at local level.

Official delegation to private veterinarians of most field activities allows saving an important budget for physical resources from the public sector.

However, it should be noted that laboratory equipment has not been budgeted, as it was not possible to assess the needs during this mission. It could be done during an OIE PVS Pathway Laboratory Mission.

VI.3 Financial resources analysis

VI.3.A Operational funding

Apart from salaries, the operational funding amounts around 30 million USD / year (75% of annual budget).

It includes around:

- 8 million USD for official delegation (1 million to State Authority for check points)
- 5 million USD for laboratory analysis
- 12,7 million USD for vaccines and ear-tags
- 1,9 million USD for transportation
- 1,55 million USD for administration (utilities, documentation, etc.)
- 350 000 USD for travel allowance
- 100 000 USD for consultation and communication

VI.3.B Emergency funding

Emergency funding has not been budgeted, as it will remain under political authority within the current context.

VI.3.C Capital investment

Capital investment is equivalent to the maintenance and renewal of physical resources and represents around 10% of the budget.

An exceptional budget of around 2,6 million USD is however estimated necessary over the next five years to boost investment in specialised training (700 000 USD), international and national expertise (1,6 million USD) and some physical resources (300 000 USD).

VI.4 Profitability and sustainability

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

The annual budget appears coherent with the national economy, representing:

- 1 USD / year and per VLU (1 USD per cattle or 0,1 USD per small ruminant)
- 1 % of the national budget
- Less than 1% of the estimated value of the livestock, and could be presented as an insurance cost to protect it.

Moreover, out of this budget, around 10 million USD should be cost recovered through export fees for related activities (vaccinations, identification and testing).

Because of the break in the chain of command between Federal, State and Locality levels, it is not possible to determine the exact current budget of the VS. However, the OIE PVS Evaluation report states that it could be estimated to be around 20 million USD in 2013. Adding all other sources of financing from State and Locality authorities, it is probable that the current overall budget is approximately 30 million USD.

As a consequence, it could be said that strengthening compliance of the VS with OIE standards would not require much more financial resources, but rather a complete reorganisation of its distribution.

VI.4.B Analysis of distribution per pillar

The respective distribution of the annual budget through the different pillars reflects the predominance of activities of Trade and AH, respectively around 8,5 and 14 million USD / year, compared to VPH estimated 1,5 million USD / year.

The exceptional budget reflects the investment that will be made respectively in VPH (500 000 USD) and Management (1 million USD) to modernise the VS

CONCLUSION

The Gap Analysis mission was implemented with a strong commitment of the VS headquarters in Khartoum and the participation of some States VS.

Discussions were very open and a global understanding of the need for change was acknowledged.

Specific missions on laboratory network and legislation should complete this expertise.

As a major conclusion, it could be stated that the major constraint faced by the VS of Sudan is not the level of resources, but rather its current inadequate distribution undermined by the lack of a chain of command, of a veterinarians' field network, overstaffing and lack of specialised competences due to poor level of remuneration.

Restoring the chain of command, developing official delegation to private practitioners and laboratories, increasing specialised competence and remunerations for a reduced number of public staff, and building-up a comprehensive legislation and data management systems will require a strong and long-term political commitment. The driving force of export could back such commitment. It should be organised on such a way that it helps the efforts towards poverty eradication and food security of the nation.

Most of the reforms and proposals included in this report are not new: they have been proposed by international experts since early 2000's, and have not been implemented. The loss of exports markets of the whole Eastern Africa has been a consequence of neglecting VS reforms and particularly of the absence of investments in developing a professional field network of private veterinarians, even in remote areas.,

APPENDICES

Appendix 1: Critical Competency Cards and corresponding Cost Estimation Cards

A. Critical Competencies for International Trade

Trade 1 – II-4. Quarantine and border security

1. Definition of this PVS 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. Desired Level of Advancement (DLA)

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 activities³ relating to the import of animals and animal products.

4. The VS can establish and apply quarantine and border security procedures 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 to reach the Desired Level of Advancement (if relevant)

The various conflicts within the sub region make it impossible to address some illegal activities (crossing of animals outside official border posts) within the coming 5 years. The VS will concentrate their efforts by authorizing and controlling effectively import of animals and animal products through 11 posts: Khartoum airport, Swakin seaport, Wadi Halfa river port and 8 main terrestrial border posts (out of a total of 45 border posts).

Regional cross-boundary transhumance will be managed through regional (IGAD countries) and bilateral (Chad & Central Africa) sanitary agreements.

4. Activities to implement (chronological)

	Specific activities	<ul style="list-style-type: none"> - Equip with adequate physical resources the 11 BIPs (20 m² buildings; half renovated and half to build, 15 computers and telephones sets, and 11 incinerators of different levels.). - Establish agreements and training of police and custom officers in minor border posts to prevent illegal trade. - Establish sanitary agreements with neighbouring countries for transhumance. - Specialised training about border control organisation for 1 central staff (estimated 6 months)
Activities linked to cross-cutting competencies	III.2 Consultation	With neighbouring countries and representatives of pastoralists about sanitary agreement procedures.
	IV.1, 2, 3. Legislation	Include control of import of veterinary products and all food of animal origin under the VS mandate.
	I.3. Continuing Education	Estimated 5 days per staff per year (estimated 30 veterinarians)
	III.1 Communication	Secure relevant information at BP (e.g. posters ...), especially about ban of import in not authorised BP
	I.11. Management of resources and operations	Establish all relevant SOP and data management for effective work.
	III.3. Official representation	Ensure 5 regular meetings (1 person week each) for border issues with IGAD and neighbouring countries about transhumance and border control

5. Objectively verifiable indicators

- Activity reports of designated BP (including resources allocated).
- Minutes of meetings with neighbouring countries.
- Sanitary agreements.
- SOPs
- Legislation indicating that the VS mandate has been extended.

³ 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					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()	220				
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>	110	200	15	1 467	14 667
<i>Building cost per (m2)</i>	110	600	25	2 640	52 800
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set	15	1 500	3	7 500	
Other specific office equipment set					
Other specific equipment					
<i>incinerators of different levels</i>	11	10 000	20	5 500	82 500
Sub-total Material investments				17 107	149 967
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	6,0	4 500			27 000
<i>Continuing education (person-days/year)</i>	150,0	50		7 550	
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for study tour					
Sub-total non material expenditure				7 550	27 000
Salaries					
Veterinarians	30,0	8 400		252 000	
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries				252 000	
Consumable resources					
Administration		20%		50 400	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>	5	4 000		20 000	
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				70 400	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			347 057	176 967
Total in	SDG			2 082 340	1 061 800

Trade 2 – II-12. Identification and traceability

A. Animal identification and movement control

1. Definition of this PVS Critical Competency

The authority and capability of the VS, normally in coordination with producers and other interested parties, 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. Desired Level of Advancement (DLA)

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 systems.

3. Strategy to reach the Desired Level of Advancement (if relevant)

The priority is to ensure the individual & temporary identification of all exported animals (estimated 5 million per year) to comply with importing countries requirements and relevant standards of international certification.

Young females small ruminants vaccinated against PPR will also be identified individually without registration.

In addition and for purpose of disease control (TB & Brucellosis), the VS will develop individual & permanent identification of cattle in the four northern states (Khartoum, River Nile, Red Sea, Northern) starting with intensive dairy cattle.

Group identification will be formally established and recorded for transhumant animals of neighbouring countries either by making a registry of branding codes or developing other systems (nitrogen, colour tags, tattoo etc.).

Internal checkpoints network and procedures will be re-assessed and re-organised in order to lower the costs and facilitate trade movement. They will remain under responsibility and financing of State authority.

Movement and sanitary control at live animal markets should also be re-assessed and re-organised with regards to animal health disease control programmes.

4. Activities to implement (chronological)

Specific activities		<ul style="list-style-type: none"> - Individual identification with simple serial ear-tag and no registration: <ul style="list-style-type: none"> (a) For all exported animals (5 million) under a cost recovery system with establishment of relevant sanitary certificates. This will be done in quarantine stations by public staff or in the field by private veterinarians under official delegation. (b) For all young female small ruminants vaccinated against PPR, free of charge and with establishment of relevant sanitary certificates. This will be done in the field by private veterinarians under official delegation. - Individual permanent identification for 550 000 cattle of the four northern states with tamper proof ear tags, with the identification of the relevant State. Free of charge. - Identification, registration and traceability of the 100 000 intensive dairy cattle of the same States, free of charge. Recruitment of 4 dedicated veterinary para-professionals for data management (international technical assistance estimated 24 weeks and investment in data base software) - Register brandings codes of farmers and develop group traceability system for transhumant animals. - Sanitary and movement control at market level will continue to be implemented by LVO public staff - Delegated budget to States to maintain internal check points with current level of staff and salaries
Activities linked to cross-cutting competencies	III.2 Consultation	With representatives of the dairy sector and of the traders (export) to design ID and traceability system compliant also with their needs for animal production management
	IV.1, 2, 3. Legislation	Develop relevant legislation
	I.3. Continuing Education	Estimated 5 days per dedicated staff on registration Will be organised for each technical staff involved in identification including private veterinarians
	III.1 Communication	Communication should promote identification of animals as a tool for security
	I.11. Management of resources and operations	Establish adequate data system for dairy sector. 4 technicians for data management ID. Plus equivalent 6 FTE delegated activities for ID in northern States. Develop registry of branding codes.
	III.3. Official representation	

5. Objectively verifiable indicators

Number of ear tags purchased.

Identification reports, SOPs, Data base for identification of dairy cattle and management

TRADE - 2					
CC: II-12. Identification and traceability					
A. Animal identification and movement control					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set	4	1 500	3	2 000	
Other specific office equipment set					
Other specific equipment					
<i>Database and software for ID system</i>	1	100 000	5	20 000	
Sub-total Material investments				22 000	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	6,0	4 500			27 000
<i>Continuing education (person-days/year)</i>	20,0	50		1 007	
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	24,0	11 000			264 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure				1 007	291 000
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals	4,0	4 800		19 200	
Support staff		3 000			
Sub-total Salaries				19 200	
Consumable resources					
Administration		20%		3 840	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>staff within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>Tags and documents for northern states cattle</i>	200 000	0,30		60 000	
<i>Ear tags of PPR vaccinated young females</i>	6 000 000	0,10		600 000	
Sub-total Consumable resources				663 840	
Delegated activities					
<i>Equivalent 6 FTE for identification of dairy cattle</i>	6	8 400,00		50 400	
<i>Internal check points delegation to States</i>	1	1 000 000,00		1 000 000	
Sub-total Delegated activities				1 050 400	
Total in	USD			1 756 447	291 000
Total in	SDG			10 538 680	1 746 000

Trade 3 – II-12. Identification and traceability

B. Identification and traceability of products of animal origin

1. Definition of this PVS Critical Competency

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

2. Desired Level of Advancement (DLA)

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 and 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 to reach the Desired Level of Advancement (if relevant)

As long as national individual ID of animals is not in place, traceability of animal products can only be done by some private stakeholders for commercial purposes. The VS should ensure that such initiatives are nationally harmonized and complied with international standards. The VS should also be prepared for potential new requests from importing countries in the future regarding traceability of meat to be exported.

4. Activities to implement (chronological)

Specific activities	Provide specific training to one staff of the central VS on traceability of products (estimated 2 months over 5 years).	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	Ensure that the VS have the legal mandate over the control of the traceability of animal products.
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	
<i>III.3. Official representation</i>		

5. Objectively verifiable indicators

Mandate and legislation about traceability of food products of animal origin
Official validation and control activities over private systems of product traceability.

TRADE - 3					
CC: II-12. Identification and traceability					
B. Identification and traceability of products of animal origin					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	2,0	4 500			9 000
<i>Continuing education (person-days/year)</i>		50			
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>		11 000			
<i>Special funds (/ 5 years) for ...</i>					
Sub-total non material expenditure					9 000
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				9 000
Total in	SDG				54 000

Trade 4 – IV-4. International certification⁴

1. Definition of this PVS Critical Competency		
<i>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.</i>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
Taking into account the export strategy of Sudan, all export certificates issued by the VS will comply with relevant international standards. The overall cost of international certification should be covered by export inspection fees, and these fees could be increased to cover other activities of the VS, such as payment of official delegation to private veterinarians in the field, for example.		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Provide relevant human and physical resources to export quarantine facilities. - Implement all required vaccinations, tests and identification in export quarantine (purchase budget) - Progressively develop the implementation of vaccination and identification in the field by private veterinarians under official delegation (e.g. PPR vaccination of exported males), prior to quarantine, in order to reduce the quarantine time, reduce internal check point's controls and facilitate trade. 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consultation with traders will be implemented to facilitate trade flows and cost recovering of fees all over the process
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	5 days of CE per year for the vets doing international certification in quarantine.
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Develop detailed SOPs and database to support certification, including in export quarantine facilities.
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Export certificates and processes. SOPs. Development of official delegation to private veterinarians involved in certification process (eg PPR vaccination and identification) Resources of export quarantine facilities and sustainability (fees)		

⁴ Certification procedures should be based on relevant OIE and Codex Alimentarius standards.

TRADE - 4					
CC: IV-4. International certification					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()	4 000				
<i>Maintenance cost per (m2)</i>	4 000	30	1	120 000	
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set	10	1 500	3	5 000	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				125 000	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>	50,0	50		2 517	
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>		11 000			
<i>Special funds (/ 5 years) for ...</i>					
Sub-total non material expenditure				2 517	
Salaries					
Veterinarians	10,0	8 400		84 000	
Other university degree		8 400			
Veterinary para-professionals	200,0	4 800		960 000	
Support staff	10,0	3 000		30 000	
Sub-total Salaries				1 074 000	
Consumable resources					
Administration		20%		214 800	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>Ear tags for exported animals</i>	5 000 000	0,10		500 000	
<i>Vaccines required by importers</i>	1	4 500 000,00		4 500 000	
Sub-total Consumable resources				5 214 800	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			6 416 317	
Total in	SDG			38 497 900	

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

1. Definition of this PVS Critical Competency

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

2. Desired Level of Advancement (DLA)

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 interested parties and take account of developments in international standards, in pursuing equivalence and other types of sanitary agreements with trading partners.

3. Strategy to reach the Desired Level of Advancement (if relevant)

The VS will develop sanitary agreements with IGAD countries as well as Indonesia, Malaysia, China, Turkey, Gulf countries, Oman, Egypt and Lybia in order to strengthen exports and control transhumance.

4. Activities to implement (chronological)

Specific activities		
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	
	<i>III.3. Official representation</i>	Conduct missions abroad to the relevant countries. Estimated 5 man-week per year.

5. Objectively verifiable indicators

Mission reports.
New sanitary agreements.

TRADE - 5					
CC: IV-5. Equivalence and other types of sanitary agreements					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>		11 000			
<i>Special funds (/ 5 years) for ...</i>					
Sub-total non material expenditure					
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>	5	4 000		20 000	
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				20 000	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			20 000	
Total in	SDG			120 000	

Trade 6 – IV-6. Transparency

1. Definition of this PVS Critical Competency

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

2. Desired Level of Advancement (DLA)

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 interested parties 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 interested parties, carry out audits of their transparency procedures.

3. Strategy to reach the Desired Level of Advancement (if relevant)

The strategy of the VS is to strengthen its veterinarians' field network in order to increase drastically the sensitivity of its passive surveillance system which is the base for gathering relevant data prior to notification.

4. Activities to implement (chronological)

Specific activities		
Activities linked to cross-cutting competencies	III.2 Consultation	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	Provide regular information to relevant stakeholders about notification and neighbouring countries' status.
	I.11. Management of resources and operations	
	III.3. Official representation	

5. Objectively verifiable indicators

Notification made to OIE

Information sent and discussed with stakeholders about notifications of Sudan and relevant countries

Trade 7 – IV-7. Zoning

1. Definition of this PVS 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. Desired Level of Advancement (DLA)

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 producers and other interested parties to define responsibilities and execute actions that enable it to 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 to reach the Desired Level of Advancement (if relevant)

The northern part of Sudan (Northern State; River Nile State; Red Sea State; part of Khartoum State) may be relevant for zoning strategy on FMD.

4. Activities to implement (chronological)

Specific activities		Implement a feasibility study about FMD zoning (including cost-benefit and sociological analysis) with competent national and international expertise
Activities 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

Report of the feasibility study.

TRADE - 7					
CC: IV-7. Zoning					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)	30,0	150			4 500
International expertise (weeks/5 years)	2,0	11 000			22 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					26 500
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				26 500
Total in	SDG				159 000

Trade 8 – IV-8. Compartmentalisation

1. Definition of this PVS 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. Desired Level of Advancement (DLA)

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 ensure that biosecurity measures to be implemented enable it to establish and maintain disease free compartments for selected animals and animal products, as necessary.

4. The VS collaborate with producers and other interested parties 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 to reach the Desired Level of Advancement (if relevant)

Should some private poultry companies be willing to establish compartments, the VS will be able to validate and control their compliance with international standards.

4. Activities to implement (chronological)

Specific activities		Provide specialised training on compartmentalization to one central staff (estimated 1 month).
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Inform private companies about international standards.
	<i>IV.1, 2, 3. Legislation</i>	Ensure adequate legislation for compartmentalization.
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Secure relevant SOPs and data management are available.
	<i>III.3. Official representation</i>	

5. Objectively verifiable indicators

Number of compartments approved by VS and by importing partners.

TRADE - 8					
CC: IV-8. Compartmentalisation					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	1,0	4 500			4 500
<i>Continuing education (person-days/year)</i>		50			
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					4 500
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				4 500
Total in	SDG				27 000

B. Critical Competencies for Veterinary Public Health

VPH 1 – II-8. Food safety

A. Regulation, authorisation and inspection of establishments for production, processing and distribution of food of animal origin

1. Definition of this PVS Critical Competency

The authority and capability of the VS to establish and enforce sanitary standards for establishments that produce, process and distribute food of animal origin.

2. Desired Level of Advancement (DLA)

1. Regulation, authorisation and inspection of relevant establishments are generally not undertaken in conformity with international standards.

2. Regulation, authorisation and inspection of relevant establishments are undertaken in conformity with international standards in some of the major or selected premises (e.g. only at export premises).

3. Regulation, authorisation and inspection of relevant establishments are undertaken in conformity with international standards in all premises supplying throughout the national market.

4. Regulation, authorisation and inspection of relevant establishments (and coordination, as required) are undertaken in conformity with international standards for premises supplying the national and local markets.

5. Regulation, authorisation and inspection of relevant establishments (and coordination, as required) are undertaken in conformity with international standards at all premises (including on-farm establishments).

3. Strategy to reach the Desired Level of Advancement (if relevant)

The VS will recover a complete mandate to authorize and regulate all establishments collecting, slaughtering and processing food of animal origin. Priority for the next 5 years will be to set up relevant standards for export premises and premises which distribute all over the national market. Establishments which distribute only to the local market, will only be identified and registered as a first step.

4. Activities to implement (chronological)

	Specific activities	<ul style="list-style-type: none"> - Provide specialised training to 3 veterinarians of the central VS level on official control over food producing establishments, specifically regarding registration and authorisation (estimated 3 months per person over 5 years, including visits to some relevant countries), including the requirements for designing building of premises. These staff and its relevant equipment are budgeted in CC II.8.C. - Determine the different categories of establishments per type of product and type of market. - Implement an official control plan of premises (e.g. annual inspection). - Provide 3 weeks of international expertise to assist on regulations, standards of SH etc.
Activities linked to cross-cutting competencies	III.2 Consultation	AHEDC to work with municipalities for plan to upgrade slaughtering premises. Elaborate these changes in consultation with the food industry.
	IV.1, 2, 3. Legislation	Ensure that the VS have the legal mandate to authorize, register and control relevant establishments. Issue the different standards of establishments.
	I.3. Continuing Education	
	III.1 Communication	Make information available to existing & potential investors in such premises (municipalities, private sector).
	I.11 .Management of resources and operations	Develop SOPs for registration, authorization and inspection of establishments.
	III.3. Official representation	

5. Objectively verifiable indicators

- Relevant legislation, standards, SOPs ...
- List of establishments according to categories.
- Annual activity reports. Reports following visit of premises.
-

VETERINARY PUBLIC HEALTH - 1					
CC: II-8. Food safety					
A. Regulation, autorisation and inspection of establishments					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	9,0	4 500			40 500
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	3,0	11 000			33 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					73 500
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				73 500
Total in	SDG				441 000

VPH 2 – II-8. Food safety

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

1. Definition of this PVS 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.

2. Desired Level of Advancement (DLA)

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 to reach the Desired Level of Advancement (if relevant)

The VS will implement relevant ante and post mortem inspection in all export slaughterhouses and in slaughterhouses of national importance by ensuring the presence of competent staff (public veterinarians directly supervising meat inspectors).

The inspection of the slaughtering slabs will progressively be done by veterinarians depending on possibilities. In most of slaughter slabs (estimated 200) this inspection could be done as a part-time activity by the public veterinarian in charge of the LVO. In other slaughter-slabs of remote administrative units, it will be done by private veterinarians under official delegation.

At central level, the team dedicated to registration and control of food producing establishments (see previous CC) will also be in charge of designing, coordinating and evaluating all ante and post mortem activities nation-wide.

4. Activities to implement (chronological)

Specific activities		<ul style="list-style-type: none"> - Appoint 12 public veterinarians and 12 meat inspectors to the 9 export slaughterhouses (currently working half-time). 1 month specialised training for each veterinarian. - Appoint 1 full-time public veterinarian and 2 veterinary paraprofessionals (meat inspectors) for each of the 16 national slaughterhouses. 1 month specialised training for each veterinarian. - Appoint 1 full-time public veterinarian and 3 veterinary paraprofessionals for each of the 17 poultry slaughterhouses (1 month specialised training for each veterinarian) - Assign inspection of the slaughter slabs in localities to the public veterinarian in charge of the locality veterinary office (LVO) - Assign inspection of other slaughter slabs (estimated 150 minimum) to 150 private veterinarians working in the relevant administrative unit through official delegation (Equivalent 20 FTE). - Provide differentiated stamps (category of slaughterhouse, n° for locality) for inspectors (not budgeted)
Activities linked to cross-cutting competencies	III.2 Consultation	
	IV.1, 2, 3. Legislation	Regulations will be updated.
	I.3. Continuing Education	Ensure 2 days of continuing education to all public and private veterinarians involved in slaughter slabs inspection (estimated 350 veterinarians)
	III.1 Communication	
	I.11. Management of resources and operations	Data from both ante and post mortem inspections will be strictly collected, channelled to the central VS office, analysed and shared. This will include data regarding passive surveillance to be transmitted to the epidemiology staff of the VS.
	III.3. Official representation	

5. Objectively verifiable indicators

Inspection reports (ante and post mortem).
 List of personnel.
 Evidence of CE conducted.
 Procedures.
 Database.
 Evidence of resources (stamps, etc.).
 Agreements with municipalities and other slaughterhouses owners.

VETERINARY PUBLIC HEALTH - 2					
CC: II-8. Food safety					
B. Ante and post mortem inspection at abattoirs and associated premises					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	40,0	4 500		35 233	180 000
<i>Continuing education (person-days/year)</i>	700,0	50			
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>		11 000			
<i>Special funds (/ 5 years) for ...</i>					
Sub-total non material expenditure				35 233	180 000
Salaries					
Veterinarians	40,0	8 400		336 000	
Other university degree		8 400			
Veterinary para-professionals	80,0	4 800		384 000	
Support staff		3 000			
Sub-total Salaries				720 000	
Consumable resources					
Administration		20%		144 000	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				144 000	
Delegated activities					
<i>equivalent 20 FTE, estimated 150 private vets</i>	20	8 400,00		168 000	
Sub-total Delegated activities				168 000	
Total in	USD			1 067 233	180 000
Total in	SDG			6 403 400	1 080 000

VPH 3 – II-8. Food safety

C. Inspection of collection, processing and distribution of products of animal origin

1. Definition of this PVS Critical Competency		
<i>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.</i>		
2. Desired Level of Advancement (DLA)		
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 establishments)		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
The VS should become the competent authority over collection and processing of food of animal origin (distribution will remain under Ministry of Health). Taking into account the limited number of food processing establishments, official control will be implemented by specialized central staff (estimated 3 specialized veterinarians).		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Provide specialised training to the 3 central veterinarians (estimated 6 months per person over 5 years). - Provide adequate resources to the 3 national inspectors (equipment, means of travelling etc.) - Implement official control in all establishments on a regular basis (at least twice a year and based on risks). - Establish formal coordination with MoH agencies in charge of the food distribution. - International expertise estimated 4 weeks is budgeted 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consultation with the food industry and support with specific training to be provided to quality control staff of the food companies.
	<i>IV.1, 2, 3. Legislation</i>	Issue new regulations and recover the mandate from the MoH to include food processing in the mandate of VS
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Design relevant official control plan (including SOPs, data management etc.) to be implemented by staff responsible of quality management inside the processing plants (private staff). Develop relevant procedures to control the implementation of regulations and plans
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Revised regulations. Official control plan. Reports.		

VETERINARY PUBLIC HEALTH - 3					
CC: II-8. Food safety					
C. Inspection of collection, processing and distribution of products of animal origin					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>	3	50 000	5	30 000	
Staff office equipment set	3	1 500	3	1 500	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				31 500	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	18,0	4 500			81 000
<i>Continuing education (person-days/year)</i>		50			
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>	4,0	11 000			44 000
<i>Special funds (/ 5 years) for ...</i>					
Sub-total non material expenditure					125 000
Salaries					
Veterinarians	3,0	8 400		25 200	
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries				25 200	
Consumable resources					
Administration		20%		5 040	
Travel allowances					
<i>staff within the country (person-days) / year</i>	200	30		6 000	
<i>drivers within the country (person-days) / year</i>	50	20		1 000	
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>	60 000	0,30		18 000	
<i>Internal flights</i>	30	200,00		6 000	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				36 040	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			92 740	125 000
Total in	SDG			556 440	750 000

VPH 4 – II-9. Veterinary medicines and biologicals

1. Definition of this PVS Critical Competency

The authority and capability of the VS to regulate veterinary medicines and veterinary biological, in order to ensure their responsible and prudent use, i.e. the marketing authorisation, registration, import, manufacture, quality control, export, labelling, advertising, distribution, sale (includes dispensing) and use (includes prescribing) of these products.

2. Desired Level of Advancement (DLA)

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

2. The VS have some capability to exercise regulatory and administrative control over veterinary medicines and veterinary biological in order to ensure their responsible and prudent use.

3. The VS exercise effective regulatory and administrative control for most aspects related to the control over veterinary medicines and veterinary biological in order to ensure their responsible and prudent use.

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

5. The control systems are regularly audited, tested and updated when necessary.

3. Strategy to reach the Desired Level of Advancement (if relevant)

Regulatory and administrative control of import and local production of veterinary products will be organized so that relevant products are available for efficient fight against animal diseases, ensuring that all imported or local products comply with international standards.

The main efforts should be put on effective regulation of the distribution of veterinary products and prudent use.

4. Activities to implement (chronological)

Specific activities	<ul style="list-style-type: none"> - Ensure that all veterinary products (being imported or locally produced) comply with international standards and meet the needs of the VS (quantity, diversity, safety, efficacy, price) either by transferring the relevant mandate from the National Medicines and Poison Board to the VS (or by establishing adequate and efficient external coordination procedures between the VS and the NMPB till this mandate and relevant staff -estimated 5 veterinarians and 1 pharmacist-are not recovered from the NMPB) - Provide specialized training on the regulation and control distribution and use of veterinary medicines & biological to 2 central veterinarians (estimated 6 month each over 5 years). - Implement relevant official control in pharmacies and private veterinary practices by staff of State Veterinary Offices. - SVO or LVO staff coordinates with the security forces the confiscation of products sold outside authorised premises / distributors. E.g. markets. - Stop production of vaccines in State branches of RVI 	
Activities linked to cross-cutting competencies	III.2 Consultation	
	IV.1, 2, 3. Legislation	Develop appropriate & comprehensive legislation for distribution and use of veterinary products, including prescription, revision of OTC list etc.
	I.3. Continuing Education	Organize ad-hoc CE for private veterinarians about new regulations of distribution & prudent use. Organize ad-hoc CE for SVO-LVO staff to implement inspections in authorised premises and confiscation in non-authorised premises.
	III.1 Communication	Develop communication about prudent use dedicated to livestock owners.
	I.11. Management of resources and operations	Initiate relevant data management on distribution & use.
	III.3. Official representation	

5. Objectively verifiable indicators

Revised and new regulations.

List of approved veterinary products.

Reports following inspection of premises (manufacturing, importers, veterinarians etc.).

Reports about illegal distribution.

Evidence of CE conducted.

VETERINARY PUBLIC HEALTH - 4					
CC: II-9. Veterinary medicines and biologicals					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>	2	50 000	5	20 000	
Staff office equipment set	9	1 500	3	4 500	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				24 500	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	12,0	4 500			54 000
<i>Continuing education (person-days/year)</i>		50			
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>		11 000			
<i>Special funds (/ 5 years) for ...</i>					
Sub-total non material expenditure					54 000
Salaries					
Veterinarians	7,0	8 400		58 800	
Other university degree	1,0	8 400		8 400	
Veterinary para-professionals		4 800			
Support staff	1,0	3 000		3 000	
Sub-total Salaries				70 200	
Consumable resources					
Administration		20%		14 040	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>	40 000	0,30		12 000	
<i>Internal flights</i>	20	200,00		4 000	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				30 040	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			124 740	54 000
Total in	SDG			748 440	324 000

VPH 5 – II-10. Residue testing

1. Definition of this PVS 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. Desired Level of Advancement (DLA)

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 consumption.

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

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

3. Strategy to reach the Desired Level of Advancement (if relevant)

Over the coming 5 years, the strategy will be 3-fold:

- Be able to meet the requirements of the importing countries (e.g. Saudi Arabia: ivermectin).
- Develop a risk-based residue control plan on imported products.
- Implement a survey to analyse the risks of residues in the different types of production systems and geographical areas. The objective here is to raise awareness and support stricter regulations on the distribution and use of veterinary medicines, before pretending the implementation of a national residue control plan.

4. Activities to implement (chronological)

Specific activities	<ul style="list-style-type: none"> - Provide specialised training on residues for 2 central staff (3 months each). - Develop a residue control plan for import and export of livestock and products of animal origin - Develop a survey for assessing the situation at national level on different production systems and areas - Secure relevant budget for required laboratory analyses (for the next 5 years it is not expected to perform more than 10000 tests per year), sampling being done by official veterinarians of SVO or LVO (cost of tests are budgeted in CC II.1.A in chapter Laboratory) 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	With private poultry producers (meat & egg), with cattle exporters etc.
	<i>IV.1, 2, 3. Legislation</i>	Legislation on residues should be progressively developed
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	Strong communication with the stakeholders, including consumers, should be developed about residues
	<i>I.11. Management of resources and operations</i>	Proper data management and SOP should be established for different plans
	<i>III.3. Official representation</i>	

5. Objectively verifiable indicators

Activity reports, control plans and surveys

VETERINARY PUBLIC HEALTH - 5					
CC: II-10. Residue testing					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>	1	50 000	5	10 000	
Staff office equipment set	2	1 500	3	1 000	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				11 000	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	6,0	4 500			27 000
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					27 000
Salaries					
Veterinarians	2,0	8 400		16 800	
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries				16 800	
Consumable resources					
Administration		20%		3 360	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>rivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>	20 000	0,30		6 000	
<i>internal flights</i>	20	200,00		4 000	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>tests are budgeted in CC II.1.A laboratory</i>					
Sub-total Consumable resources				13 360	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			41 160	27 000
Total in	SDG			246 960	162 000

VPH 6 – II-11. Animal feed safety

1. Definition of this PVS Critical Competency

The authority and capability of the VS to regulate animal feed safety e.g. processing, handling, storage, distribution and use of both commercial and on-farm produced animal feed and feed ingredients.

2. Desired Level of Advancement (DLA)

1. The VS cannot regulate animal feed safety.

2. The VS have some capability to exercise regulatory and administrative control over animal feed safety.

3. The VS exercise regulatory and administrative control for most aspects of animal feed safety.

4. The VS exercise comprehensive and effective regulatory and administrative control of animal feed safety.

5. The control systems are regularly audited, tested and updated when necessary.

3. Strategy to reach the Desired Level of Advancement (if relevant)

Currently feed safety is not addressed by the VS. In the next five years the VS will initiate activities to cover this specific sector, taking advantage of the availability of private laboratories already involved in this domain.

4. Activities to implement (chronological)

Specific activities	<ul style="list-style-type: none"> - Provide specialised training 3 months to one central staff in charge of feed safety - Register the different feed establishments with description of types and GPS references - Develop a national survey on feed safety to assess the situation, sampling being done by official veterinarians of SVO or LVO - Secure relevant budget for feed safety laboratory analyses in accredited private labs (estimated 1000 tests per year at unit cost of 50 USD per test). - Delegate feed analysis to private accredited labs. 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consultation should be established with the fed industry in order to develop new legislation and to establish a control system in the future
	<i>IV.1, 2, 3. Legislation</i>	Develop appropriate legislation giving the mandate to VS about feed safety
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	
	<i>III.3. Official representation</i>	

5. Objectively verifiable indicators

New legislation
Reports about the National survey

VETERINARY PUBLIC HEALTH - 6					
CC: II-11. Animal feed safety					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>	1	50 000	5	10 000	
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				10 000	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	3,0	4 500			13 500
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					13 500
Salaries					
Veterinarians	1,0	8 400		8 400	
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries				8 400	
Consumable resources					
Administration		20%		1 680	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>	20 000	0,30		6 000	
<i>Internal flights</i>	10	150,00		1 500	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				9 180	
Delegated activities					
<i>Feed analyses to private accredited labs</i>	1 000	50,00		50 000	
Sub-total Delegated activities				50 000	
Total in	USD			77 580	13 500
Total in	SDG			465 480	81 000

C. Critical Competencies for Animal Health

AH 1 – II-5. Epidemiological surveillance and early detection

A. Passive epidemiological surveillance

1. Definition of this PVS Critical Competency		
<i>The authority and capability of the VS to determine, verify and report on the sanitary status of the animal populations, including wildlife, under their mandate.</i>		
2. Desired Level of Advancement (DLA)		
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. Producers and other interested parties 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 producers and other interested parties and the international community (where applicable) on the findings of passive surveillance programmes.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
The VS will promote the development of field veterinarians' network in compliance with OIE requirements to be involved in direct contact with farmers and animals in order to establish a sensitive passive surveillance network. This network will progressively implement 4 passive surveillance programmes in ruminants, based on 4 syndrome complexes: stomatitis-enteritis, pneumonia, abortion and pox, according to standards, methods and procedures of IBAR and IGAD. A specific network may be established within the intensive poultry sector for specific diseases (e.g. Newcastle disease versus HPAI).		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Promote the establishment of private veterinarians in the field to ensure an adequate network. - Develop procedures for suspicion, sampling and confirmation of syndrome complexes and related diseases. - Implement public awareness campaigns at village level about reporting syndromes to field veterinarians and train one farmer per village to act as a focal point for the veterinarian. - Implement passive surveillance of CBPP, TB, hydatidosis & cysticercosis lesions in all slaughter places. 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	With farmers and local authorities when designing the network of field private veterinarians
	<i>IV.1, 2, 3. Legislation</i>	Develop official delegation to allow private veterinarians conduct passive surveillance.
	<i>I.3. Continuing Education</i>	Train field veterinarians on procedures for surveillance: suspicion criteria, sampling for confirmation and reporting. It is estimated at 1 day/year.
	<i>III.1 Communication</i>	Provide communication tools to field veterinarians in order to allow them inform stakeholders.
	<i>I.11. Management of resources and operations</i>	Establish an overall data management with procedures for passive surveillance, including suspicion for private veterinarians, primary confirmation and sampling for LVO, official confirmation by SVO
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Number of field veterinarians and their distribution. Procedures about passive surveillance programmes. Reports about passive surveillance (per State and national).		

ANIMAL HEALTH - 1					
CC: II-5. Epidemiological surveillance and early detection					
A. Passive epidemiological surveillance					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>	500,0	50		25 167	
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure				25 167	
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD			25 167	
Total in	SDG			151 000	

AH 2 – II-5. Epidemiological surveillance and early detection

B. Active epidemiological surveillance

1. Definition of this PVS Critical Competency		
<i>The authority and capability of the VS to determine, verify and report on the sanitary status of the animal populations, including wildlife, under their mandate.</i>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
The VS will use active surveillance to establish national prevention and control of selected animal diseases in compliance with OIE standards and scientific principles.		
4. Activities to implement (chronological)		
Specific activities	<p>According to current operational planning, active surveillance will be implemented by LVO veterinarians, on a random basis according to risk analysis done by VS:</p> <ul style="list-style-type: none"> - 25 000 samples for PPR (50 animals in each of 500 epidemiological units). - Estimated 10 000 samples to monitor FMD virus circulation. - Estimated 10 000 samples to survey RVF. - Estimated 1 000 samples to survey HPAI. - Estimated 10 000 samples to monitor CBPP in buffer areas. - All exported animals (estimated 5 million heads) will be tested for brucellosis with RBT (cost recovered from animal owner / trader). - Active surveillance will also be implemented to control effectiveness of vaccination programmes (estimated maximum 100 000 tests on the basis of 2/1000 random sampling of the 50 000 000 vaccinations of different diseases programmes – compulsory and voluntary - for post-vaccination serological control). - All tests are budgeted in chapter Laboratory, All implementation costs are budgeted in chapter Management (as this activity is implemented by LVO) 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	LVO will benefit from ad-hoc training (budgeted in CC I.6.A)
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Strict SOPs should be established for random sampling, transport of samples and testing
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<p>Reports of active surveillance, SOPs. Reports on post vaccinations serological controls</p>		

AH 3 – II-6. Emergency response

1. Definition of this PVS Critical Competency

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

2. Desired Level of Advancement (DLA)

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. They may have national contingency plans for some exotic diseases but they are not updated / tested.

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 that are regularly updated / tested.

5. The VS have national contingency plans for all diseases of concern; including coordinated actions with relevant Competent Authorities, all producers and other interested parties through a chain of command. These are regularly updated, tested and audited.

3. Strategy to reach the Desired Level of Advancement (if relevant)

The VS will re-establish a chain of command between federal and State levels.

4. Activities to implement (chronological)

Specific activities		Update contingency plans for HPAI & RVF. Conduct emergency exercises for outbreak simulation.
Activities 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

Contingency plans.
Reports about the management of sanitary emergencies.
Reports about simulation exercises

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

1. Definition of this PVS 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. Desired Level of Advancement (DLA)

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

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

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

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

3. Strategy to reach the Desired Level of Advancement (if relevant)

Existing and new programmes will be implemented with a focus on their scientific evaluation to improve efficacy and efficiency.

4. Activities to implement (chronological)

Specific activities	<ul style="list-style-type: none"> - implement annual free of charge TB testing on dairy animals of intensive farms (estimated 100 000 animals) and advise owners to remove positive animals. - implement free of charge vaccination against brucellosis of young dairy females of intensive farms (estimated 30 000 animals per year). Blood samples will be taken on adult dairy animals and farmers will be advised to remove positive animals once level of prevalence will be below 1%. - implement free of charge FMD vaccination twice a year on all cattle (estimated 550 000) of the 4 northern states (with identification according to CC II.12.A) - implement annual free of charge CBPP vaccination of 16 million animals according to strategy: <ul style="list-style-type: none"> * In zone A (States: Northern, River Nile, Red Sea, Khartoum, north of North Darfur, north of West Darfur, north of North Kordofan): no vaccination. * In zone B (States: Kassala, Gedarif, Gezira, northern part of White Nile, Sennar and south Darfur, southern parts of North / West Darfur and North Kordofan). Targeted vaccination. 5 million vaccinated annually. * In zone C (States: Blue Nile, south Kordofan, southern areas of South Darfur, Sennar and White Nile). 11 million vaccinated annually (out of 16 million). - implement free of charge PPR vaccination of all young female small ruminants (estimated 6 million) and cost recovered vaccination of males to be exported (estimated 5 million). The cost of implementation is budgeted as official delegation for the network of private veterinarians and estimated around 6 000 000 million USD / year (see chapter Animal Health) - implement voluntary vaccination programmes (ND, BQ, HS,ect.) under joint programmes (see Critical Competency Card III.6) 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	With livestock owners to convince them comply with compulsory programmes.
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Private veterinarians should receive adequate training (estimated 1 day / year)
	<i>III.1 Communication</i>	To livestock owners on the objectives and methods of these control programmes.
	<i>I.11. Management of resources and operations</i>	Issue / update and evaluate annual action plans for each related disease.
	<i>III.3. Official representation</i>	

5. Objectively verifiable indicators

- Documents on the programme and annual actions plans for each disease.
- Evaluation reports.
- Evidence of CE.
- Laboratory results.
- Vaccination results.
- Surveillance reports.

ANIMAL HEALTH - 4					
CC: II-7. Disease prevention, control and eradication					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>	500,0	50		25 167	
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure				25 167	
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>FMD,PPR,CBPP,Brucellosis vaccines</i>	1	7 000 000,00		7 000 000	
<i>Tuberculin</i>	100 000	0,50		50 000	
Sub-total Consumable resources				7 050 000	
Delegated activities					
<i>vaccination PPR, CBPP, FMD,Brucellosis</i>	1	7 000 000,00		7 000 000	
Sub-total Delegated activities				7 000 000	
Total in	USD			14 075 167	
Total in	SDG			84 451 000	

AH 5 – II-13. Animal welfare

1. Definition of this PVS Critical Competency		
<i>The authority and capability of the VS to implement the animal welfare standards of the OIE as published in the Terrestrial Code.</i>		
2. Desired Level of Advancement (DLA)		
1. There is no national legislation on animal welfare.		
2. There is national animal welfare legislation for some sectors.		
3. In conformity with OIE standards, animal welfare is implemented for some sectors (e.g. for the export sector).		
4. Animal welfare is implemented in conformity with all relevant OIE standards.		
5. Animal welfare is implemented in conformity with all relevant OIE standards and programmes are subjected to regular audits.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
The legislation will be finalised and applied to the exported ruminants to Saudi Arabia.		
4. Activities to implement (chronological)		
Specific activities	Provide specialised training 3 months 1 person. Prepare a control plan for animal welfare in demanding sectors (export etc.). Conduct regular visits to sites concerned by the application of the new legislation.	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	Continue and finalize the legislation on animal welfare.
	<i>I.3. Continuing Education</i>	To the people involved in the transport, handling and slaughtering of animals to be exported.
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Produce a clear job description for the OIE focal point. Issue procedures related to animal welfare for exported animals.
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Annual report on animal welfare. Job description. Control plan.		

ANIMAL HEALTH - 5					
CC: II-13. Animal Welfare					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>	1	50 000	5	10 000	
Staff office equipment set	1	1 500	3	500	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				10 500	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	3,0	4 500			13 500
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					13 500
Salaries					
Veterinarians	1,0	8 400		8 400	
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries				8 400	
Consumable resources					
Administration		20%		1 680	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>staff within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>	20 000	0,30		6 000	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				7 680	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			26 580	13 500
Total in	SDG			159 480	81 000

D. Critical Competencies for Laboratory

LAB 1 – II-1. Veterinary laboratory diagnosis

A. Access to veterinary laboratory diagnosis

1. Definition of this PVS Critical Competency

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

2. Desired Level of Advancement (DLA)

1. Disease diagnosis is almost always conducted by clinical means only, with no access to and use of a laboratory to obtain a correct diagnosis.

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 to reach the Desired Level of Advancement (if relevant)

Taking into account the political context of Sudan, subject to international sanctions, access to veterinary laboratory analyses will rely on the strengthening of the National laboratory network. However, as long as the sustainability and the efficiency of the national laboratory network has not been analysed, the VS should secure the budget of laboratory analysis based on international market price.

4. Activities to implement (chronological)

Specific activities	Secure budget for laboratory analysis, based on the international market price (including sampling kits) for around 50 000 ELISA for AH programmes, 100 000 Elisa for post vaccination serological controls, 5 million BBAT, 10 000 residues tests and 500 PCR per year.
Activities 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

Number of analysis conducted.

VETERINARY LABORATORIES - 1					
CC: II-1.A Access to veterinary laboratory diagnosis					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>	1	4 500 000,00		4 500 000	
Sub-total Consumable resources				4 500 000	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			4 500 000	
Total in	SDG			27 000 000	

LAB 2 – II-1. Veterinary laboratory diagnosis

B. Suitability of national laboratory infrastructures

1. Definition of this PVS Critical Competency		
The sustainability, effectiveness and efficiency of the national (public and private) laboratory infrastructures to service the needs of the VS.		
2. Desired Level of Advancement (DLA)		
1. The national laboratory infrastructure does not meet the need of the VS.		
2. The national laboratory infrastructure meets partially the needs of the VS, but is not entirely sustainable, as organisational deficiencies with regard to the effective and efficient management of resources and infrastructure (including maintenance) are apparent.		
3. The national laboratory infrastructure generally meets the needs of the VS. Resources and organisation appear to be managed effectively and efficiently, but their regular funding is inadequate to support a sustainable and regularly maintained infrastructure.		
4. The national laboratory infrastructure generally meets the needs of the VS and is subject to timely maintenance programmes but needs new investments in certain aspects (e.g. accessibility to laboratories, number or type of analyses).		
5. The national laboratory infrastructure meets the needs of the VS, and is sustainable and regularly audited.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
The VS will develop a strategy to establish a sustainable national veterinary network. This will include an OIE PVS Pathway Laboratory Mission that would evaluate the current veterinary public laboratory network, existing private veterinary laboratories, laboratories of other institution such as National Bureau of Standards, laboratories of MoH related to food safety, etc.		
4. Activities to implement (chronological)		
Specific activities	Request OIE (3 experts x 3 weeks) a specific laboratory mission to reassess the sustainability of the National laboratory network (2 central laboratories + 16 regional laboratories doing only RBT, private laboratories and food safety laboratories of MoH, laboratory of Bureau of Standards, residue laboratory, etc.) including a training need assessment.	
Activities 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 laboratory mission report implementation of new strategy of development and sustainability for the laboratory network		

VETERINARY LABORATORIES - 2					
CC: II-1.B Suitability of the national veterinary network					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	9,0	11 000			99 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					99 000
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				99 000
Total in	SDG				594 000

LAB 3 – II-2. Laboratory quality assurance

1. Definition of this PVS Critical Competency

The quality of laboratories (that conduct diagnosis testing or analysis for chemical residues, antimicrobial residues, toxins, or tests for biological efficacy, etc.) as measured by the use of formal QA systems including, but not limited to, participation in relevant proficiency testing programmes.

2. Desired Level of Advancement (DLA)

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

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

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

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

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

3. Strategy to reach the Desired Level of Advancement (if relevant)

Laboratory quality assurance is fundamental to secure the export market in relation with requested laboratory analyses

4. Activities to implement (chronological)

Specific activities	Provide international expertise for accreditation of the laboratory system (estimated 40 weeks of international expertise over the next 5 years) Develop a twinning programme with an OIE parent laboratory
Activities 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

Quality system in place
Accreditation obtained for tests related to export and possibly official control

VETERINARY LABORATORIES - 3					
CC: II-2. Laboratory quality assurance					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	20,0	11 000			220 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					220 000
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				220 000
Total in	SDG				1 320 000

E. Critical Competencies for Management of Veterinary Services
General Competencies

MVS – I-4. Technical independence

1. Definition of this PVS Critical Competency		
<i>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).</i>		
2. Desired Level of Advancement (DLA)		
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 made and implemented in general accordance with the country's OIE obligations (and with the country's WTO SPS Agreement obligations where applicable).		
5. The technical decisions are based only on scientific evidence and are not changed to meet non-scientific considerations.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
Technical independence is a fundamental value of quality of VS which will be considered as a priority for the next five years		
4. Activities to implement (chronological)		
Specific activities	- increase level of revenues of staff in order to cover fundamental needs, allow them to work 8 hours / day and recover social recognition. It should also be compatible with national budget/economy and the increase should be coherent with level of revenues of comparable other professionals - re-establish direct chain of command from federal level to all staff of SVOs and LVOs	
Activities linked to cross-cutting competencies	III.2 Consultation	
	IV.1, 2, 3. Legislation	Technical independence should be backed by appropriate legislation, including restoring the chain of command and allowing staff to work within a clear legislative framework
	I.3. Continuing Education	Level of competence of staff has a direct impact on their technical independence
	III.1 Communication	Communication can support technical independence of staff in front of stakeholders and gain support from consumers
	I.11. Management of resources and operations	Procedures and data management are key to support technical independence
	III.3. Official representation	
5. Objectively verifiable indicators		
Level of salaries, legislation, procedures, data management, initial training and continuing education, chain of command		

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

1. Definition of this PVS Critical Competency	
<i>The capability of the VS structure and/or leadership to implement and sustain policies over time.</i>	
2. Desired Level of Advancement (DLA)	
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. Sustainability of policies is affected by changes in the political leadership and/or the structure and leadership of the VS.	
3. Sustainability of policies is not affected or slightly affected by changes in the political leadership and/or the structure and leadership of the VS.	
4. Policies are sustained over time through national strategic plans and frameworks and are not affected by changes in the political leadership and/or the structure and leadership of VS.	
5. Policies are sustained over time and the structure and leadership of the VS are stable. Modifications are based on an evaluation process, with positive effects on the sustainability of policies.	
3. Strategy to reach the Desired Level of Advancement (if relevant)	
VS structure will be modified in order to restore the chain of command from federal level to the field on most activities	
4. Activities to implement (chronological)	
Specific activities	<ul style="list-style-type: none"> - restore the chain of command from federal to field level of the VS - include food safety and the control of processing of food of animal origin in the mandate of VS - define new organisation charts at Federal, State and Locality levels of the VS according to policy - verify compliance of VS and programmes to OIE standards with follow-up OIE PVS missions
Activities 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	
New organisations charts of the VS	
New mandates of the VS	

MANAGEMENT OF VETERINARY SERVICES - General competencies					
CC: I-5. Stability of structures and sustainability of policies					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	18,0	11 000			198 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					198 000
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				198 000
Total in	SDG				1 188 000

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

A. Internal coordination (chain of command)

1. Definition of this PVS Critical Competency		
<i>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 the Codes (i.e. surveillance, disease control and eradication, food safety and early detection and rapid response programmes).</i>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
This is the main reform to implement in the next five years that will impact all programmes.		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Restore direct chain of command between Federal VS (strategic planning, regulations, budgeting, international relations, etc.), State Veterinary Offices (operational planning and control), Locality Veterinary Offices (control of implementation, data entry, etc.) and public sector staff or private veterinarians with official delegation. - Provide adequate physical resources and human resources at all levels: <ul style="list-style-type: none"> * buildings estimated 12 500 m² to maintain (50m²*20 LVO + 100*20 SVO + 500m² for FVS) * vehicles (usually pick-up 4x4) estimated 300 (1 per veterinarian of all level) * office equipment for all staff except drivers: estimated 800 * solar panel or generator for each LVO * cold chain for each LVO and SVO - Provide relevant budget for supervision, coordination and control (estimated on average 20 days / year for 100 veterinarians of Federal and State Levels who are accompanied half of time with drivers, and 10 days / year for 200 veterinarians of LVO) - provide specialised training on veterinary public administration (10 month per person) to 5 central staff 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	Legislation should be modified to restore chain of command
	<i>I.3. Continuing Education</i>	Continuing education will be needed for all staff with new functions (estimated 2 days/year for 500 technical staff)
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Procedures and data management for all relevant activities are key for chain of command
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Organisations charts and legislation Level of resources Reporting systems		

MANAGEMENT OF VETERINARY SERVICES - General competencies					
CC: I-6.A. Coordination capability of the Veterinary Services: Internal coordination (chain of command)					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()	12 500				
<i>Maintenance cost per (m2)</i>	12 500	30	1	375 000	
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>	300	50 000	5	3 000 000	
Staff office equipment set	800	1 500	3	400 000	
Other specific office equipment set					
Other specific equipment					
<i>solar pannel for LVO</i>	200	1 000	5	40 000	
<i>solar or gaz fridges congelators</i>	220	1 500	10	33 000	165 000
Sub-total Material investments				3 848 000	165 000
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	50,0	4 500			225 000
<i>Continuing education (person-days/year)</i>	1 000,0	50		50 333	
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure				50 333	225 000
Salaries					
Veterinarians	297,0	8 400		2 494 800	
Other university degree	24,0	8 400		201 600	
Veterinary para-professionals	231,0	4 800		1 108 800	
Support staff	261,0	3 000		783 000	
Sub-total Salaries				4 588 200	
Consumable resources					
Administration		20%		917 640	
Travel allowances					
<i>staff within the country (person-days) / year</i>	4 000	30		120 000	
<i>drivers within the country (person-days) / year</i>	1 000	20		20 000	
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>	6 000 000	0,30		1 800 000	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				2 857 640	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			11 344 173	390 000
Total in	SDG			68 065 040	2 340 000

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

B. External coordination

1. Definition of this PVS Critical Competency		
<p><i>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).</i></p> <p><i>Relevant authorities include other ministries and competent authorities, national agencies and decentralised institutions.</i></p>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
External coordination is essential with MoH to cover food safety from farm to fork, as MoH will remain in charge of distribution sector (restaurants, cantins, outlets, supermarkets and markets..)		
4. Activities to implement (chronological)		
Specific activities		
Activities 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	<ul style="list-style-type: none"> - Establish relevant procedures and data management interface for external coordination with MoH regarding food safety. It is very important to pave the bridge between the final step of food processing inspection (VS) and the initial step of inspection of the distribution sector (MoH). - Establish more detailed procedures of border inspection/entry between VS and customs and police - Establish relevant detailed and efficient procedures between VS and NMPB
	III.3. Official representation	
5. Objectively verifiable indicators		
Existing procedures and data management for external coordination		

MVS – II-3. Risk analysis

1. Definition of this PVS Critical Competency		
<i>The authority and capability of the VS to base its risk management measures on risk assessment.</i>		
2. Desired Level of Advancement (DLA)		
1. Risk management measures are not usually supported by risk assessment.		
2. The VS compile and maintain data but do not have the capability to carry out risk analysis. Some risk management measures are based on risk assessment.		
3. The VS compile and maintain data and have the capability to carry out risk analysis. The majority of risk management measures are based on risk assessment.		
4. The VS conduct risk analysis in compliance with relevant OIE standards, and base their risk management measures on the outcomes of risk assessment.		
5. The VS are consistent in basing sanitary measures on risk assessment, and in communicating their procedures and outcomes internationally, meeting all their OIE obligations (including WTO SPS Agreement obligations where applicable).		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
Risk analysis will be applied especially on import control (food safety) and development of strategic plan for AH programmes		
4. Activities to implement (chronological)		
Specific activities	Provide specialised training to 3 veterinarians at central staff (estimated 1 month)	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Organise specific course about risk analysis for each of AH and VPH directors of SVOs
	<i>III.1 Communication</i>	Risk communication is a specific issue that should be prepared
	<i>I.11. Management of resources and operations</i>	Proper data management is essential for risk analysis and management. Detailed procedures should be established for risk analysis and management when relevant
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Training on risk analysis Procedures Examples of risk analysis formally implemented (reports, letters, meetings)		

MANAGEMENT OF VETERINARY SERVICES - General competencies					
CC: II-3. Risk analysis					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>	3,0	4 500			13 500
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					13 500
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				13 500
Total in	SDG				81 000

MVS – III-4. Accreditation / authorisation / delegation

1. Definition of this PVS Critical Competency		
<i>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.</i>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
Official delegation will be the main tool used by the VS to boost the establishment of a private veterinarians' field network in compliance with OIE quality standards and able to implement required AH national programmes, as far as the task does not represent a full time job. Official accreditation will also be developed with food safety & feed safety private laboratories.		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - accredit one private laboratory on feed safety analysis - accredit private veterinarians with official delegation on relevant AH or VPH activities (see AH and VPH chapters) under the condition of relevant continuing education (if needed), permanent residence and personal work as private practitioner (see VSB) in a given administrative unit within the limit of at least the area of the Locality or the area of all neighbouring administrative units. - entitle the farmers (individually, or group, or village representatives) to choose the veterinarian in charge - develop per head or per task payment by SVO - implement strict random control of implementation by SVO staff before payment (LVO staff may be too close to private veterinarians to implement such control) including post vaccination serology control (estimated 100 000 for all AH programmes compulsory and voluntary vaccinations) - secure relevant annual budget for official delegation (estimated around 7 million USD / year) - 1 million USD / year is budgeted here for delegation of internal check point control to State authorities (see chapter Trade and Critical Competency Card II.12.A) - appoint a special team (one veterinarian, one university degree and one support staff) to develop the official delegation system - international expertise may be required to develop the procedures (estimated 3 months) 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with private veterinarians (VSB) about fees to be paid for different delegated activities
	<i>IV.1, 2, 3. Legislation</i>	Develop relevant regulations allowing official delegation
	<i>I.3. Continuing Education</i>	Continuing education of private veterinarians is essential to implement official delegated activities
	<i>III.1 Communication</i>	Communication about the new role of private veterinarians will be necessary
	<i>I.11. Management of resources and operations</i>	Data management and procedures are key to the success of official delegation. It includes detailed description of each task, of reporting, of payment and of control of execution
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Private laboratory accredited for feed analysis		
Number of private veterinarians accredited for official delegation		
Activity reports including control, payment, training, sanctions, etc		

MANAGEMENT OF VETERINARY SERVICES - General competencies					
CC: III-4. Accreditation / Authorisation / Delegation					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>	1	50 000	5	10 000	
Staff office equipment set	3	1 500	3	1 500	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				11 500	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	12,0	11 000			132 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					132 000
Salaries					
Veterinarians	1,0	8 400		8 400	
Other university degree	1,0	8 400		8 400	
Veterinary para-professionals		4 800			
Support staff	1,0	3 000		3 000	
Sub-total Salaries				19 800	
Consumable resources					
Administration		20%		3 960	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>	20 000	0,30		6 000	
<i>internal flights</i>	15	150,00		2 250	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				12 210	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			43 510	132 000
Total in	SDG			261 060	792 000

Total of delegated activities costed elsewhere

8 568 400

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

A. VSB authority

1. Definition of this PVS Critical Competency		
<i>The VSB is an autonomous regulatory body for veterinarians and veterinary para-professionals. Its role is defined in the Terrestrial Code.</i>		
2. Desired Level of Advancement (DLA)		
1. There is no legislation establishing a VSB.		
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 to reach the Desired Level of Advancement (if relevant)		
VSB is key for the development of a professional and competent veterinarians' field network in the country, by avoiding unfair competition between public and private sector, and developing professional attitude rather than pure commercial behaviour.		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Eliminate the concept of “veterinary pharmacy” and replace by “veterinary practice/clinic/dispensary”, with a direct link between clinical examination, advice, diagnostic and prescription by veterinarians who are required to be present on site for the delivery of veterinary medicines. - Register all veterinarians - Establish census of veterinary para-professionals employed by private veterinarians - Establish clear definition of categories of veterinary para-professionals with level of education, authorised activities and direct modalities of supervision by veterinarians - Apply disciplinary measures on a regular basis 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	Develop relevant legal procedures for imposing penalties which are in line with the legal principles of Sudan.
	<i>I.3. Continuing Education</i>	Develop programmes and organise continuing education of private veterinarians
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Relevant registry of veterinarians and census of veterinary para-professionals needs adequate data management and procedures Develop detailed procedures of effective supervision of veterinary paraprofessionals.
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Registry, Census, procedures, penalties Categories of veterinary para-professionals and effective supervision procedures by veterinarians		

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

B. VSB capacity

1. Definition of this PVS Critical Competency		
<i>The capacity of the VSB to implement its functions and objectives in conformity with OIE standards.</i>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
The VSB should be re-established as an independent body to comply with international standards		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Organise an election process (all members to be electors) to designate a National VSB and its States VSB branches - Institute an adequate level of member fees in order to cover needed resources for VSB - Maintain unity between national VSB and State branches. - Provide a fund for international and national expertise, including travel abroad, about new organisation (each estimated around 2 weeks/year) 	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consultation with all private veterinarians is necessary to reform the VSB
	<i>IV.1, 2, 3. Legislation</i>	New regulations should be developed and officially published
	<i>I.3. Continuing Education</i>	Improve resources for development of CE, code of ethics etc.
	<i>III.1 Communication</i>	Improvement of communication of the VSB will be necessary
	<i>I.11. Management of resources and operations</i>	Data management need to be improved drastically regarding registration of members
	<i>III.3. Official representation</i>	VSB should be able to participate to relevant international meeting
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> - Elective process - Financial resources and fees 		

MANAGEMENT OF VETERINARY SERVICES - General competencies					
CC: III-5. Veterinary Statutory Body B. VSB capacity					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)	30,0	150			4 500
International expertise (weeks/5 years)	4,0	11 000			44 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					48 500
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>	2	4 000		8 000	
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				8 000	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			8 000	48 500
Total in	SDG			48 000	291 000

MVS – III-6. Participation of producers and other interested parties in joint programmes

1. Definition of this PVS Critical Competency		
<p><i>The capability of the VS and producers and interested parties to formulate and implement joint programmes in regard to animal health and food safety.</i></p> <p><i>This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas.</i></p>		
2. Desired Level of Advancement (DLA)		
1. Producers and other interested parties only comply and do not actively participate in programmes.		
2. Producers and other interested parties are informed of programmes and assist the VS to deliver the programmes in the field.		
3. Producers and other interested parties are trained to participate in programmes and advise of needed improvements, and participate in early detection of diseases.		
4. Representatives of producers and other interested parties negotiate with the VS on the organisation and delivery of programmes.		
5. Producers and other interested parties are formally organised to participate in developing programmes in close collaboration with the VS.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
<p>In each village, at least on farmer or villager shall be trained every year to be the focal point of the private veterinarian in order to facilitate its work. Such focal point could be chosen according to personal capacities, could be member of a pastoral or farmer group, could change over the years, or there could be several focal points in the same village. Its function is not official; it is up to the community and to the veterinarian to agree on specific functions. He should not be covered by any veterinary legislation. Farmers groups could be covered by relevant legislation if needed. Within this context, joint disease control programmes will be developed.</p>		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Secure public funds to ensure a yearly visit in each village by a private veterinarian under official delegation (estimated one visit of half day / village / year) - Implement voluntary vaccination programmes with support of relevant public awareness for diseases of economical or zoonotic importance for the farmers or citizens (eg: rabies, Pox diseases, LSD, BQ, HS, etc) - Implement public awareness about relevant VPH issues such as hydatidosis at backyard slaughtering 	
Activities linked to cross-cutting competencies	III.2 Consultation	Consultation is the basis for development of joint programmes
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Specific continuing education should be provided to private veterinarians for this very specific task
	III.1 Communication	Provide adequate communication tools for public awareness when needed
	I.11. Management of resources and operations	Detailed procedures and data management should be available to implement such task and control its implementation
	III.3. Official representation	
5. Objectively verifiable indicators		
Results of programmes (number of vaccinations, visits, etc), tools, procedures, etc		

MANAGEMENT OF VETERINARY SERVICES - General competencies					
CC: III-6. Participation of producers and other interested parties in joint programmes					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
<i>annual visit to each village (half day)</i>	15 000	20,00		300 000	
Sub-total Delegated activities				300 000	
Total in	USD			300 000	
Total in	SDG			1 800 000	

E. Critical Competencies for Management of Veterinary Services
Cross-cutting issues

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

A. Professional competencies of veterinarians including the OIE Day 1 competencies

1. Definition of this PVS Critical Competency	
<i>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.</i>	
2. Desired Level of Advancement (DLA)	
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 to reach the Desired Level of Advancement (if relevant)	
4. Activities to implement (chronological)	
Specific activities	Conduct an analysis of the needs of veterinarians for the different veterinary domains / sectors (estimated one month national and international expertise) Liaise with Ministry for Higher Studies, with the Sudanese Veterinary Council and the Veterinary Colleges to better define future needs. Establish an accreditation process for all Veterinary Colleges / Universities.
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>
	<i>IV.1, 2, 3. Legislation</i>
	<i>I.3. Continuing Education</i>
	<i>III.1 Communication</i>
	<i>I.11. Management of resources and operations</i>
	<i>III.3. Official representation</i>
5. Objectively verifiable indicators	
Report of expertise New curriculum and estimate of number of students International accreditation and twinning	

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: I-2.A. Professional competencies of veterinarians					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Initial training (nb of students / year)</i>		4 500			
<i>Specialised training (person-months/5 years)</i>		50			
<i>Continuing education (person-days/year)</i>		150			4 500
National expertise (days/5 years)	30,0	150			4 500
International expertise (weeks/5 years)	4,0	11 000			44 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					48 500
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				48 500
Total in	SDG				291 000

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

B. Competencies of veterinary para-professionals

1. Definition of this PVS Critical Competency	
<i>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.</i>	
2. Desired Level of Advancement (DLA)	
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 basic competencies.	
3. The training of veterinary para-professionals is of a uniform standard that allows the development of only basic specific competencies.	
4. The training of veterinary para-professionals is of a uniform standard that allows the development of some advanced 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 to reach the Desired Level of Advancement (if relevant)	
4. Activities to implement (chronological)	
Specific activities	Analyse the needs in the different domains / sectors of veterinary professionals (estimated 4 weeks national and international expertise) Ensure standardized training programmes are developed for all veterinary paraprofessionals, through the Sudanese Veterinary Council as per the OIE Code Chapter 3. Clearly define the roles and responsibilities of the veterinary paraprofessionals with different categories if required (i.e. meat inspectors, animal health technicians etc.) and the required knowledge, skills and abilities.
Activities 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	
Study report Modification and harmonisation of curriculum Clear categories of veterinary para-professionals with relevant level of education	

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: I-2.B. Competencies of veterinary para-professionals					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Initial training (nb of students / year)</i>		4 500			
<i>Specialised training (person-months/5 years)</i>		50			
<i>Continuing education (person-days/year)</i>		150			4 500
National expertise (days/5 years)	30,0	11 000			44 000
International expertise (weeks/5 years)	4,0				
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					48 500
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources					
Delegated activities					
Sub-total Delegated activities					
Total in	USD				48 500
Total in	SDG				291 000

MVS – I-3. Continuing education

1. Definition of this PVS Critical Competency		
<i>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.</i>		
2. Desired Level of Advancement (DLA)		
1. The VS have no access to continuing veterinary, professional or technical CE.		
2. The VS have access to CE (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 CE 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 CE 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 CE that is implemented for all relevant personnel and is submitted to periodic evaluation of effectiveness.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
An important effort of continuing education is required by the VS in order to ensure an in-depth reform of the institution and its organisation.		
4. Tasks to implement (chronological)		
Specific tasks	<ul style="list-style-type: none"> - Appoint two university degree at Federal level and 1 university degree professional in each SVO in charge of human resources management including organisation of continuing education - Involve VSB & Veterinary Associations to organize CE to private vets. - Reinforce the CE programmes organized by the Universities. <ul style="list-style-type: none"> - Number of days of CE have been estimated in different Critical Competency Cards and the total is around 3000 person-day per year for an estimated amount of expenditures of 150 000 USD. 	
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		
CE reports, budget and development tools		

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: I-3. Continuing education					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set	40	1 500	3	20 000	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				20 000	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					
Salaries					
Veterinarians	1,0	8 400		8 400	
Other university degree	20,0	8 400		168 000	
Veterinary para-professionals		4 800			
Support staff	20,0	3 000		60 000	
Sub-total Salaries				236 400	
Consumable resources					
Administration		20%		47 280	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				47 280	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			303 680	
Total in	SDG			1 822 080	
Total of continuing education programmes costed elsewhere	2 920	50		146 973	

MVS – I-11. Management of resources and operations

1. Definition of this PVS Critical Competency		
<i>The capability of the VS to document and manage their resources and operations in order to analyse, plan and improve both efficiency and effectiveness.</i>		
2. Desired Level of Advancement (DLA)		
1. The VS do not have adequate records or documented procedures to allow appropriate management of resources and operations.		
2. The VS have adequate records and/or documented procedures, but do not use these for management, analysis, control or planning.		
3. The VS have adequate records, documentation, and management systems and use these to a limited extent for the control of efficiency and effectiveness.		
4. The VS regularly analyse records and documented procedures to 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 to reach the Desired Level of Advancement (if relevant)		
Data management and procedures are key to improve compliance of the VS with international standards		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Recruit university staff for information, data and resources management (9 at central VS & 2 in each SVO) - Develop the overall data management system with support of international technical assistance (estimated 6 months over the next 5 years) 	
Activities 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		
Resources for data management and procedures Data, procedures and reports		

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: I-11. Management of resources and operations					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set	66	1 500	3	33 000	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				33 000	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	25,0	11 000			275 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					275 000
Salaries					
Veterinarians	1,0	8 400		8 400	
Other university degree	45,0	8 400		378 000	
Veterinary para-professionals		4 800			
Support staff	20,0	3 000		60 000	
Sub-total Salaries				446 400	
Consumable resources					
Administration		20%		89 280	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				89 280	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			568 680	275 000
Total in	SDG			3 412 080	1 650 000

MVS – III-1. Communication

1. Definition of this PVS Critical Competency

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

This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas.

2. Desired Level of Advancement (DLA)

1. The VS have no mechanism in place to inform interested parties 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 interested parties.

3. Strategy to reach the Desired Level of Advancement (if relevant)

4. Activities to implement (chronological)

Specific activities	<ul style="list-style-type: none"> - Secure current staff in the communication unit with relevant equipment and travel possibilities - Secure relevant national budget for communication (estimated 3 USD/village/year) - Develop communication tools relevant for AH, VPH etc. - Complete the development of a VS website.
Activities 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

Communication tools and effective use

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: III-1. Communication					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set	5	1 500	3	2 500	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				2 500	
Non material investments					
Training					
<i>specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					
Salaries					
Veterinarians	1,0	8 400		8 400	
Other university degree	2,0	8 400		16 800	
Veterinary para-professionals		4 800			
Support staff	2,0	3 000		6 000	
Sub-total Salaries				31 200	
Consumable resources					
Administration		20%		6 240	
Travel allowances					
<i>staff within the country (person-days) / year</i>	60	30		1 800	
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
<i>internal flight</i>	20	200,00		4 000	
Specific costs					
<i>General communication</i>	15 000	3,00		45 000	
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				57 040	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			90 740	
Total in	SDG			544 440	

Total of communications programmes
costed elsewhere

MVS – III-2. Consultation with interested parties

1. Definition of this PVS Critical Competency

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

This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas.

2. Desired Level of Advancement (DLA)

1. The VS have no mechanisms for consultation with interested parties.

2. The VS maintain informal channels of consultation with interested parties.

3. The VS maintain a formal consultation mechanism with interested parties.

4. The VS regularly hold workshops and meetings with interested parties.

5. The VS actively consult with and solicit feedback from interested parties 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 to reach the Desired Level of Advancement (if relevant)

The expected important changes in structure (development of private veterinarians' field network with official delegation) and activities (new programmes) of the VS will require local consultation with stakeholders.

4. Activities to implement (chronological)

Specific activities	Secure relevant budget for at least one meeting every year at LVO, 2 per year at SVO and 10 per year at central level (on average 10 persons with support for travel and accommodation based on support staff per diem (20 USD) estimated 250 meetings*10 persons * 20 = 50 000 USD/year.
Activities 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

Meetings reports and decisions

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: III-2. Consultation with interested parties					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
<i>National expertise (days/5 years)</i>		150			
<i>International expertise (weeks/5 years)</i>		11 000			
<i>Special funds (/ 5 years) for ...</i>					
Sub-total non material expenditure					
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>	250	200,00		50 000	
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				50 000	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			50 000	
Total in	SDG			300 000	

Total of consultations with stakeholders
costed elsewhere

MVS – III-3. Official representation

1. Definition of this PVS Critical Competency		
<i>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).</i>		
2. Desired Level of Advancement (DLA)		
1. The VS do not participate in or follow up on relevant meetings of regional or international organisations.		
2. The VS sporadically participate in relevant meetings and/or make limited contribution.		
3. The VS actively participate ⁵ 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 to reach the Desired Level of Advancement (if relevant)		
4. Activities to implement (chronological)		
Specific activities	Secure budget for : - 2 OIE meeting for 2 persons - 6 OIE meetings of focal points per year - 1 SPS meeting for 2 persons - 5 Codex meetings for 1 person - 5 AU-IBAR meetings for 2 persons - 5 IGAD meetings for 2 persons - 1 COMESA meeting for 1 person Total of 38 meetings.	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Active consultation and reporting to stakeholders about these international meetings
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Minutes of relevant meetings Evidence of meeting with stakeholders and talks about international meetings		

⁵ Active participation refers to preparation in advance of, and contributing during the meeting in question, including exploring common solutions and generating proposals and compromises for possible adoption.

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: III-3. Official representation					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set		1 500	3		
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments					
Non material investments					
Training					
<i>specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)		11 000			
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					
Salaries					
Veterinarians		8 400			
Other university degree		8 400			
Veterinary para-professionals		4 800			
Support staff		3 000			
Sub-total Salaries					
Consumable resources					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>	38	4 000		152 000	
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				152 000	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			152 000	
Total in	SDG			912 000	

Total for official representations costed elsewhere

12 4 000

48 000

MVS – IV-1. Preparation of legislation and regulations

1. Definition of this PVS 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 guarantee its quality with respect to principles of legal drafting and legal issues (internal quality) and its accessibility, acceptability, and technical, social and economical applicability (external quality).

This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas.

2. Desired Level of Advancement (DLA)

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 participation of interested parties 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 to reach the Desired Level of Advancement (if relevant)

4. Activities to implement (chronological)

Specific activities		Progressively develop all the required legislation with the support of a dedicated OIE legislation mission (estimated international expertise equivalent to 2 week per year during 5 years).
Activities 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

Legislation, regulations, procedures
Human resources
OIE mission reports

MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues					
CC: IV-1. Preparation of legislation and regulations					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
Material investments					
Buildings ()					
<i>Maintenance cost per (m2)</i>		30	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		600	25		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		25 000	5		
<i>4x4 vehicles</i>		50 000	5		
Staff office equipment set	40	1 500	3	20 000	
Other specific office equipment set					
Other specific equipment					
Sub-total Material investments				20 000	
Non material investments					
Training					
<i>Specialised training (person-months/5 years)</i>		4 500			
<i>Continuing education (person-days/year)</i>		50			
National expertise (days/5 years)		150			
International expertise (weeks/5 years)	10,0	11 000			110 000
Special funds (/ 5 years) for ...					
Sub-total non material expenditure					110 000
Salaries					
Veterinarians	1,0	8 400		8 400	
Other university degree	20,0	8 400		168 000	
Veterinary para-professionals		4 800			
Support staff	20,0	3 000		60 000	
Sub-total Salaries				236 400	
Consumable resources					
Administration		20%		47 280	
Travel allowances					
<i>staff within the country (person-days) / year</i>		30			
<i>drivers within the country (person-days) / year</i>		20			
<i>staff abroad (person-weeks) / year</i>		4 000			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,05			
<i>Km or miles cars / year</i>		0,20			
<i>Km or miles 4x4 vehicle / year</i>		0,30			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
Sub-total Consumable resources				47 280	
Delegated activities					
Sub-total Delegated activities					
Total in	USD			303 680	110 000
Total in	SDG			1 822 080	660 000

MVS – IV-2. Implementation of legislation and regulations and compliance thereof

1. Definition of this PVS Critical Competency													
<i>The authority and capability of the VS to ensure compliance with legislation and regulations under the VS mandate.</i>													
2. Desired Level of Advancement (DLA)													
1. The VS have no or very limited programmes or activities to ensure 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 take 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 to reach the Desired Level of Advancement (if relevant)													
4. Activities to implement (chronological)													
Specific activities	<ul style="list-style-type: none"> - Analyse of non-compliance episodes and develop pro-active programmes - Evaluate the possibility of establishing fines for specific non-compliance in relevant domains 												
Activities linked to cross-cutting competencies	<table border="1"> <tr> <td style="width: 15%;"><i>III.2 Consultation</i></td> <td>Consultation with stakeholders about penalties to be applied is essential, and this consultation should reduce instances of non-compliance</td> </tr> <tr> <td><i>IV.1, 2, 3. Legislation</i></td> <td>Legislation needs to be amended to enable the VS to establish fines and sanctions and avoid legal problems and delay</td> </tr> <tr> <td><i>I.3. Continuing Education</i></td> <td>Continuing education of staff in charge of inspection is a requisite to be able to apply sanctions</td> </tr> <tr> <td><i>III.1 Communication</i></td> <td>Communication about sanctions and fines to be applied is essential for acceptability and transparency.</td> </tr> <tr> <td><i>I.11. Management of resources and operations</i></td> <td>Data management is necessary for analysis of compliance and non-compliance</td> </tr> <tr> <td><i>III.3. Official representation</i></td> <td> </td> </tr> </table>	<i>III.2 Consultation</i>	Consultation with stakeholders about penalties to be applied is essential, and this consultation should reduce instances of non-compliance	<i>IV.1, 2, 3. Legislation</i>	Legislation needs to be amended to enable the VS to establish fines and sanctions and avoid legal problems and delay	<i>I.3. Continuing Education</i>	Continuing education of staff in charge of inspection is a requisite to be able to apply sanctions	<i>III.1 Communication</i>	Communication about sanctions and fines to be applied is essential for acceptability and transparency.	<i>I.11. Management of resources and operations</i>	Data management is necessary for analysis of compliance and non-compliance	<i>III.3. Official representation</i>	
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<i>I.11. Management of resources and operations</i>	Data management is necessary for analysis of compliance and non-compliance												
<i>III.3. Official representation</i>													
5. Objectively verifiable indicators													
Evidence of compliance and implementation: reports, certificates, penalties, judgements, etc													

MVS – IV-3. International harmonisation

1. Definition of this PVS Critical Competency	
<i>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.</i>	
2. Desired Level of Advancement (DLA)	
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 ⁶ , and use the standards to harmonise national legislation, regulations and sanitary measures.	
3. Strategy to reach the Desired Level of Advancement (if relevant)	
4. Activities to implement (chronological)	
Specific activities	Harmonise progressively all veterinary legislation within the IGAD, with support of AU-IBAR
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>
	<i>IV.1, 2, 3. Legislation</i>
	<i>I.3. Continuing Education</i>
	<i>III.1 Communication</i>
	<i>I.11. Management of resources and operations</i>
	<i>III.3. Official representation</i>
5. Objectively verifiable indicators	
Harmonisation reports Legislation, regulations and procedures	

⁶ 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.

A. Veterinary and other professionals (university qualifications)

1. Definition of this PVS Critical Competency		
<i>The appropriate staffing of the VS to allow for veterinary and technical functions to be undertaken efficiently and effectively.</i>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
The strategy of the VS is to develop official delegation to build progressively a field network of private veterinarians able to survey animal disease in conformity with OIE standards (accessibility of veterinarians to farmers and animals on a regular basis) and to be available to implement any AH programmes. It is not expected that the overall network could be established all over the territory within the next five years, but at least this network should be completed in the 4 northern states and slightly densified in all other states.		
4. Activities to implement (chronological)		
Specific activities	Produce job descriptions for all staff. Institutionalise a transparent system of merit-based recruitment and promotion with the public VS.	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Data management of human resources should allow to describe the geographical and functional distribution of veterinarians in the country
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Number and distribution of private and public veterinarians in the country		

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

B. Veterinary para-professionals and other technical personnel

1. Definition of this PVS Critical Competency		
<i>The appropriate staffing of the VS to allow for veterinary and technical functions to be undertaken efficiently and effectively.</i>		
2. Desired Level of Advancement (DLA)		
1. The majority of technical positions are not occupied by personnel holding appropriate qualifications.		
2. The majority of technical positions at central and state / provincial levels are occupied by personnel holding appropriate qualifications.		
3. The majority of technical positions at local (field) level are occupied by personnel holding appropriate 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 to reach the Desired Level of Advancement (if relevant)		
During the next five years, the number of public veterinary para-professionals working alone and without direct supervision of veterinarians should be drastically reduced and limited to areas where there is not yet a private veterinarian.		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> - Private veterinary para-professionals should work under direct supervision of a veterinarian - Public veterinary para-professionals should work under direct supervision of a veterinarian in all border posts, in national and export slaughterhouses - Clearly define the categories of veterinary paraprofessionals including their level of education, their detailed activities (knowledge, skills and abilities) and effective modalities of supervision by veterinarians. 	
Activities 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 of human resources should allow to describe the geographical and functional distribution of veterinary para-professionals in the country Clear procedures and activities of effective supervision
	III.3. Official representation	
5. Objectively verifiable indicators		
Number and distribution of veterinary para-professionals Presence of veterinarians to ensure their direct supervision for different tasks		

I-7. Physical resources

1. Definition of this PVS Critical Competency		
<i>The access of the VS to relevant physical resources including buildings, transport, telecommunications, cold chain, and other relevant equipment (e.g. computers).</i>		
2. Desired Level of Advancement (DLA)		
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 to reach the Desired Level of Advancement (if relevant)		
The Gap analysis budget is established in order to sustain maintenance and renewal of physical infrastructure		
4. Activities to implement (chronological)		
Specific activities	Develop and implement an inventory system of the overall VS, including geographical and functional distribution which allows for efficient and effective control and monitoring of VS resources.	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Detailed management and financial procedures should be established to plan for adequate maintenance and renewal of physical resources. Gap analysis budget is established to give guidance in this regard
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Geographical and functional distribution of physical resources, and their level of maintenance		

I-8. Operational funding

1. Definition of this PVS Critical Competency	
<i>The ability of the VS to access financial resources adequate for their continued operations, independent of political pressure.</i>	
2. Desired Level of Advancement (DLA)	
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 to reach the Desired Level of Advancement (if relevant)	
The Gap analysis provide operational budget in order to support regular functioning of the VS. It is not expected that the VS can expand its operations in the next five years.	
4. Activities to implement (chronological)	
Specific activities	Be able to produce clearly the annual budget of the VS with geographical and functional distribution.
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>
	<i>IV.1, 2, 3. Legislation</i>
	<i>I.3. Continuing Education</i>
	<i>III.1 Communication</i>
	<i>I.11. Management of resources and operations</i>
	<i>III.3. Official representation</i>
5. Objectively verifiable indicators	
Geographical and functional distribution of operational budget of the VS	

I-9. Emergency funding

1. Definition of this PVS Critical Competency		
<i>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.</i>		
2. Desired Level of Advancement (DLA)		
1. No funding arrangements exist and there is no provision for emergency financial resources.		
2. Funding arrangements with limited resources have been established, but these are inadequate for expected emergency situations (including emerging issues).		
3. Funding arrangements with limited resources have been established; additional resources for emergencies may be approved but approval is through a political process.		
4. 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. Funding arrangements with adequate resources have been established and their rules of operation documented and agreed with interested parties.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
Taking into account national and international context, it is expected that the VS should be able to maintain this level of advancement, but not to reach level 4 in the next 5 years		
4. Activities to implement (chronological)		
	Specific activities	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	
	<i>IV.1, 2, 3. Legislation</i>	Develop clear procedures and record management for emergency funding.
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
Evidence of emergency funding or procedures in place		

I-10. Capital investment

1. Definition of this PVS Critical Competency	
<i>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.</i>	
2. Desired Level of Advancement (DLA)	
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 interested parties as required.	
3. Strategy to reach the Desired Level of Advancement (if relevant)	
Taking into account national and international context, the Gap analysis provides a budget to secure renewal of investments, but it is not expected to have new investments in the next five years for new infrastructures	
4. Activities to implement (chronological)	
Specific activities	Be able to produce clearly the capital budget of the VS with geographical and functional distribution.
Activities 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	
Geographical and functional distribution of capital investment budget	

Appendix 2: Glossary of terms

Terms defined in the Terrestrial Code that are used in this publication are reprinted here for ease of reference. Moreover, several key terms used in this document have also been defined.

Activities

means the general actions enabling the expected result for the critical competencies to be achieved, according to the defined national priorities. These activities may be related to general recommendations contained in the OIE PVS Evaluation report of the country.

Border post

means any airport, or any port, railway station or road check-point open to international trade of commodities, where import veterinary inspections can be performed.

Compartment

means an animal subpopulation contained in one or more establishments under a common biosecurity management system with a distinct health status with respect to a specific disease or specific diseases for which required surveillance, control and biosecurity measures have been applied for the purposes of international trade.

Competent Authority

means the Veterinary Authority or other Governmental Authority of a Member, having the responsibility and competence for ensuring or supervising the implementation of animal health and welfare measures, international veterinary certification and other standards and recommendations in the Terrestrial Code and the Aquatic Animal Health Code in the whole territory.

Critical competencies

means the individual sub-components of the four fundamental components of the OIE PVS Tool: I Human, Physical and Financial Resources; II Technical Authority and Capability; III Interaction with Stakeholders; and IV Access to Markets.

Decentralisation

means transfer (authority) from central to local government

Deconcentration

means the system in which the administration of a region is executed by local authority subject to a central authority

Emerging disease

means a new infection or infestation resulting from the evolution or change of an existing pathogenic agent, a known infection or infestation spreading to a new geographic area or population, or a previously unrecognised pathogenic agent or disease diagnosed for the first time and which has a significant impact on animal or public health.

Equivalence of sanitary measures

means the state wherein the sanitary measure(s) proposed by the exporting country as an alternative to those of the importing country, achieve(s) the same level of protection.

Expected results

means the level of advancement of a critical competency that the Veterinary Services of the country are aiming to reach. This level of advancement is chosen by the Veterinary Services and the experts at the start of the mission. A critical competency corresponds to a requirement in terms of OIE standards for the organisation and competence of the Veterinary Services. The level of advancement corresponds to the extent to which this requirement has been met and is measured using the OIE PVS indicators

International veterinary certificate

means a certificate, issued in conformity with the provisions of Chapter 5.2., describing the animal health and/or public health requirements which are fulfilled by the exported commodities.

Laboratory

means a properly equipped institution staffed by technically competent personnel under the control of a specialist in veterinary diagnostic methods, who is responsible for the validity of the results. The Veterinary Authority approves and monitors such laboratories with regard to the diagnostic tests required for international trade.

National priorities

Each country has its own national priorities regarding livestock, veterinary public health and animal health, as well as on structuring policies regarding Veterinary Services. These priorities are taken into account during the PVS Gap Analysis mission.

Notifiable disease

means a disease listed by the Veterinary Authority, and that, as soon as detected or suspected, must be brought to the attention of this Authority, in accordance with national regulations.

Objectively verifiable indicators

means evidence on which to measure the advancement of the activities included in the programme

Official control programme

means a programme which is approved, and managed or supervised by the Veterinary Authority of a country for the purpose of controlling a vector, pathogen or disease by specific measures applied throughout that country, or within a zone or compartment of that country.

Official Veterinarian

means a veterinarian authorised by the Veterinary Authority of the country to perform certain designated official tasks associated with animal health and/or public health and inspections of commodities and, when appropriate, to certify in conformity with the provisions of Chapters 5.1. and 5.2. of the Terrestrial Code.

Official veterinary control

means the operations whereby the Veterinary Services, knowing the location of the animals and after taking appropriate actions to identify their owner or responsible keeper, are able to apply appropriate animal health measures, as required. This does not exclude other responsibilities of the Veterinary Services e.g. food safety.

OIE PVS indicators

means evidences on which to determine objectively the level of advancement of the Veterinary Services for each critical competency, as defined in the OIE PVS Tool.

PVS Gap Analysis

means the determination of the activities and resources needed to sustainably strengthen Veterinary Services, in order to achieve the expected results for the relevant critical competencies of the PVS Tool which are relevant to the national context.

Risk analysis

means the process composed of hazard identification, risk assessment, risk management and risk communication.

Sanitary measure

means a measure, such as those described in various Chapters of the Terrestrial Code, destined to protect animal or human health or life within the territory of the OIE Member from risks arising from the entry, establishment and/or spread of a hazard.

Surveillance

means the systematic ongoing collection, collation, and analysis of information related to animal health and the timely dissemination of information so that action can be taken.

Task

means the detailed sub-component of an activity

Terrestrial Code

means the OIE Terrestrial Animal Health Code.

Veterinarian

means a person with appropriate education, registered or licensed by the relevant veterinary statutory body of a country to practice veterinary medicine/science in that country.

Veterinary Authority

means the Governmental Authority of an OIE Member, comprising veterinarians, other professionals and para-professionals, having the responsibility and competence for ensuring or supervising the implementation of animal health and welfare measures, international veterinary certification and other standards and recommendations in the Terrestrial Code in the whole territory.

Veterinary para-professional

means a person who, for the purposes of the Terrestrial Code, is authorised by the veterinary statutory body to carry out certain designated tasks (dependent upon the category of veterinary para-professional) in a territory, and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary para-professional should be defined by the veterinary statutory body depending on qualifications and training, and according to need.

Veterinary Services

means the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and recommendations in the Terrestrial and Aquatic Codes in the territory. The Veterinary Services are under the overall control and direction of the Veterinary Authority. Private sector organisations,

veterinarians, veterinary paraprofessionals or aquatic animal health professionals are normally accredited or approved by the Veterinary Authority to deliver the delegated functions.

Veterinary statutory body

means an autonomous regulatory body for veterinarians and veterinary paraprofessionals.

VLU

means “Veterinary Livestock Unit”. This is a livestock unit used to quantify veterinary activities for a given animal population, calculated by establishing equivalence between species using a coefficient. The number of VLUs in a country is calculated as being equivalent to the number of cattle + 0.1 x the number of small ruminants + 0.3 x the number of equids and camelids + 0.3 x the number of pigs + 0.01 x the number of poultry. This unit is different from the Livestock Standard Unit (LSU), which determines the equivalence between species according to their production potential.

Appendix 3: List of documents gathered in the PVS Gap Analysis mission

E = Electronic version

H = Hard copy version

P= Digital picture

Ref	Title
PRE-MISSION DOCUMENTS	
E	<i>OIE PVS Evaluation mission report of the Veterinary Services of the Republic of Sudan – September, 2013</i>
E	<i>OIE PVS Evaluation mission report of the Veterinary Services of Sudan – January 2009</i>
MISSION DOCUMENTS	