

# PVS Gap Analysis Mission Report

**Timor-Leste**

Trade



Veterinary  
Public Health



Animal Health



Veterinary  
Laboratories



Management  
of Veterinary  
Services



**September  
2014**

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# **PVS Gap Analysis report**

**Timor-Leste**

**1 – 11 September 2014**

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## List of acronyms, abbreviations and/or special terms

AH	Animal Health
ASEAN	Association of Southeast Asian Nations
BIP	Border Inspection Point
CC	Critical Competency
CSF	Classical Swine Fever
DAD	District Agriculture Directorate
DLA	District Livestock Assistant
DLO	District Livestock Officer
DVO	District Veterinary Officer
EMS	Emergency Management System
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMD	Foot and Mouth Disease
FTE	Full Time Equivalent
GDP	Gross Domestic Product
HPAI	Highly Pathogenic Avian influenza
HS	Haemorrhagic Septicaemia
LD	Livestock Development
MoU	Memorandum of Understanding
ND	Newcastle Disease
NVDL	National Veterinary Diagnostic Laboratory
NDQB	National Directorate of Quarantine and Biosecurity
NDV	National Directorate of Veterinary Services
NDL	National Directorate of Livestock
OIE	World Organisation for Animal Health
PVS	Performance of Veterinary Services (OIE PVS Tool)
SOP	Standard Operating Procedure
t	metric tonnes (1000kg)
UN	United Nations
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
USAID	United States Agency for International Development
USD	United States Dollar
VICH	International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products
VS	Veterinary Services
VPH	Veterinary Public Health
VSB	Veterinary Statutory Body
WHO	World Health Organisation

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## ACKNOWLEDGEMENT

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***John Weaver***

***Jarunee Siengsan***

***Emily Tagliaro***



## EXECUTIVE SUMMARY

### Background

Under its international mandate to set international standards for animal health, the OIE has developed the Performance of Veterinary Services (PVS) Pathway. The PVS Pathway seeks to assess and then strengthen national Veterinary Services. In the first stage an OIE PVS Evaluation Mission visits a country and assesses the strength of the Veterinary Services against critical competencies of the OIE PVS Tool; an Evaluation Mission was conducted in Timor-Leste in August 2011. In the second stage a PVS Gap Analysis Mission is undertaken during which a five year development plan for strengthening the Veterinary Services (VS) with cost estimates are prepared; this development plan is prepared in close coordination with the national VS. This is the report of the PVS Gap Analysis Mission carried out in Timor-Leste from 1 -11 September 2014.

The overall assessment of the OIE PVS Evaluation Mission in 2011 was that the VS of Timor-Leste were seriously under-resourced. There were insufficient veterinarians to deliver a national veterinary service that addressed that key issues of livestock development, veterinary public health and animal health. The ability to deliver coherent programmes was further limited by inadequate operating funding, poor facilities and limited equipment. Considerable funds were being expended on disease control programmes but these were inadequately managed and not being monitored or reviewed. The quarantine services were active at border entry points but were not using risk assessment to mitigate risk pre-border.

Since the OIE PVS Evaluation Mission in 2011 there has been little change to the organisation of the Timor-Leste VS – funding continues to be inadequate and there are no veterinarians in the field; some additional legislation has been developed. The Ministry of Agriculture and Fisheries has a strategic plan which recognises that improving livestock production will improve food security and promote economic development.

The PVS Gap Analysis Mission worked with the VS:

- To determine national priorities and constraints
- To identify a strategy for each of the five PVS Gap Analysis Pillars: (i) Trade, (ii) Veterinary Public Health, (iii) Animal Health,(iv) Laboratories and(v) Management of Veterinary Services including Regulatory Services.
- To determine the desired 'Level of Advancement' required to achieve the national priorities with improved compliance with international standards for each of the Critical Competencies– to be reached over the next five-years
- To define the activities to be implemented by the Veterinary Services to achieve the desired Levels of Advancement – to be reached over the next five-years.
- To estimate the cost of the human and physical resources required to implement the identified activities.

### Mission summary

National priorities identified for Timor-Leste are:

- Livestock Development: to increase livestock production to improve food security, to re-establish export of live cattle and to strengthen quarantine and border control to better protect Timor-Leste's livestock industries and animal health
- Veterinary Public Health: to improve food safety by reducing food borne zoonoses, to promote the safe and effective use of veterinary medicines and biologicals and to develop a programme for the control of brucellosis
- Animal Health: to strengthen programmes for disease surveillance, diagnosis, emergency preparedness and response for priority exotic and endemic diseases, to

strengthen national programmes for the control of priority diseases including haemorrhagic septicaemia, classical swine fever and Newcastle disease, and to implement an animal welfare programme

- Management and organisation of the Veterinary Services: to improve funding and resourcing of the Veterinary Services so that they can implement programmes to expand livestock production, promote animal health and reduce adverse veterinary public health impacts, to recruit veterinarians so that districts have direct veterinary supervision, to prepare detailed plans of animal health programmes with a monitoring and review process, and to develop the additional legislation required.

Following the identification of the national priorities, the 47 critical competencies of the OIE PVS Tool were assessed and the necessary level of advancement determined. For each critical competency, a strategy for advancement was defined with the necessary activities and recommendations on what indicators should be used for monitoring progress; cross-cutting requirements with other competencies such as communication, training, and legislation were identified. A cost estimate was then prepared covering additional staff, equipment and operating costs; an estimate for capital expenditure was developed to cover exceptional expenditure.

Detailed strategic plans, activities and cost estimates are included in the main body of this report. In summary the plan for strengthening the Timor-Leste VS over the next five years identified the following priorities:

### **Staff**

The senior staff of VS are competent, committed and have a strong vision for the future development of livestock production in Timor-Leste. The major limitation to the development of the VS is the lack of veterinarians centrally, to design, deliver and manage programmes, and the total absence of any district veterinarians to provide veterinary supervision and management in the field.

In the next five years it is proposed to increase the number of veterinarians centrally and to recruit five District Veterinary Officers. There are currently ten veterinary students from Timor-Leste studying overseas and expected to graduate in the next two years. Every effort should be made to recruit these students to form part of the VS. A significant problem to be overcome is the low remuneration paid to veterinarians by the Ministry of Agriculture and Fisheries compared with those employed by the National University of Timor-Leste, under the Ministry of Education. This imbalance is unsustainable and needs to be addressed urgently through the Public Services Commission.

The VS have a large number of veterinary para-professionals working for the districts and sub-districts; this number should be increased over the next five years to form the mainstay of programme delivery. The capability of this large technical resource should be developed further to provide improved disease detection and initial field investigations, to improve awareness and commitment to disease control programmes, to develop animal/animal product identification and traceability, to implement a veterinary public health programme that will register all slaughter premises, and to undertake ante and post mortem inspections. The tasks to be undertaken by the veterinary para-professionals should be defined in a number of work categories and then appropriate training provided. The veterinary para-professionals' role should be strengthened by the passing of legislation for the Timor-Leste Veterinary Association which should allow for their registration. All veterinary para-professional activities must be supervised by veterinarians – this will be a major task for the district and central veterinarians.

A programme for continuing education should be provided for all veterinary, professional and technical staff.

## ***Budget and resources***

The total five year cost estimate proposed for the VS of Timor-Leste is USD 10,660,000 which is made up of five annual cost estimates of USD1,843,000 and provision for capital investment over five years amounting to USD 1,445,000. This is a significant cost but can be justified by the opportunities that improving livestock production and the safety of food present.

The current field programmes of the VS focus on delivering the three major national animal disease control programmes (haemorrhagic septicaemia, classical swine fever and Newcastle disease). The VS programme, for the next five years, developed in the PVS Gap Analysis, recommends dramatically expanding field activities. The VS will introduce programmes for the national identification and traceability of animals and animal products, promote food safety and the prudent use of veterinary medicines, strengthen disease surveillance, develop emergency preparedness and response and implement an animal welfare programme. In addition, the existing disease control programmes need to be delivered more rigorously with regular reviews to assess effectiveness; veterinary supervision should be provided to all field activities. This significant increase in VS programmes justifies the significant annual cost estimated for operations.

In addition investment is required to improve the VS infrastructure and resources. The VS of Timor-Leste currently have inadequate facilities, equipment and materials to deliver their programme of activities and no funding to develop the infrastructure and purchase the equipment required and to maintain existing buildings and equipment.

The central VS offices are to be redeveloped as part of the new Ministry of Agriculture and Fisheries; district VS offices are provided by the District Agriculture Directorates. No activity or costs are included to support these facilities in this PVS Gap Analysis.

The PVS Gap Analysis mission makes a number of recommendations to improve the capabilities of the VS. To support the delivery of animal and veterinary public health programmes it is proposed to build a further 21 Animal Health Service Centres at an estimated cost of USD 840,000; these centres will provide the focus for field delivery services. Further investment in infrastructure (cold stores, fridges and cold boxes) is recommended to ensure an effective cold chain is available for vaccine delivery. The Border Inspection Posts of the National Directorate of Quarantine and Biosecurity should be developed with facilities (quarantine pens, cold stores, incinerators) to hold live animals and store animal products prior to entry, rejection or destruction. The expanded VS will also require additional 4WD vehicles and motorbikes.

## ***Animal Health***

Animal health programmes form the core activity of any Veterinary Services and this is reflected in the large annual estimated cost provided for this activity of USD 6.0 million, over the five years of this strategic plan. This amount may seem high but is justified by the potential of the livestock sector to provide food security and economic development. The increased funding proposed will allow the existing disease control programmes (haemorrhagic septicaemia, classical swine fever and Newcastle disease) to be implemented more rigorously, effectively and sustainably.

Emergency and emerging infectious disease continue to threaten Timor-Leste and the region. Emergency preparedness and response systems need to mitigate the risk of disease incursions. Activities and costs are estimated to strengthen quarantine and border security, to develop emergency preparedness and response and to develop contingency plans for high risk diseases, such as rabies and FMD.

Animal welfare is increasingly recognised as a priority for any country and a programme should be established in Timor-Leste to enforce the legislation that has already been passed.

Veterinarians and veterinary para-professionals will require training in animal welfare standards and enforcement.

### ***Veterinary Public Health***

The Ministry of Agriculture and Fisheries have responsibility for food safety from production through processing to the point of retail. The Timor-Leste Veterinary Services need to work collaboratively with the Ministry of Health to develop and deliver coherent veterinary public health programmes.

The main focus of the veterinary public health programme over the next five years is to improve food safety. This will be achieved by implementing a programme to register, with upgrades as necessary; all slaughter sites in the country and with the regular supervision of animal slaughter and meat hygiene. All sites should be subjected to ongoing or periodic (if low throughput) ante and post mortem inspections.

In addition to support the production of safe food a residue testing programme should be developed to target high risk suppliers of the domestic market, including imported goods.

Greater control is required over the import, distribution and use of veterinary medicines and biologicals; the Veterinary Services should develop a programme (working with the Ministry of Health and the Ministry of Commerce, Industry and Environment) to register veterinary medicines and biologicals, and then to manage imports, improve distribution of veterinary medicines and promote the prudent use of veterinary medicines by the VS and producers/owners.

Brucellosis is recognised as major disease concern both for public health and as it restricts reproduction rates in cattle and buffalo. A control programme should be developed and piloted in the next five years.

### ***Quarantine and biosecurity***

The primary focus to improve national biosecurity is to improve border controls – this will reduce the risk of unwanted and illegal importation of animals and animal products and also veterinary medicines and biologicals.

The Border Inspection Posts should be strengthened with better facilities and increased staff numbers. The additional facilities required include quarantine holding yards and cold stores at the main entry points – to hold live animals/animal products whilst investigations/testing is undertaken to decide whether to reject, allow entry or require destruction of the consignment. Incinerators should be provided for the safe destruction of the condemned consignments.

### ***Legislation***

The draft Animal Health Act should be reviewed and updated as necessary, and then finalised and enacted as rapidly as possible. Legislation also should be developed for the Timor-Leste Veterinary Association – effectively the Veterinary Statutory Body that sets standards and is responsible for the registration of veterinarians and veterinary para-professionals.

Enforcement of legislation should be strengthened in cooperation with other enforcement agencies such as the police. A communication programme to increase public awareness will support increased compliance, and this should be supported by enforcement and publication of fines and confiscations imposed.

### ***Conclusion***

The VS of Timor-Leste have made considerable progress since the PVS Evaluation mission undertaken in 2011 but considerable challenges remain. The VS of Timor-Leste have identified priorities to develop livestock production, promote human health and to improve animal health. To undertake the extensive programme proposed requires strong leadership and support from the Minister and senior managers of the Ministry of Agriculture and

Fisheries, and support from other key ministries, particularly the Ministry of Finance, the Ministry of Health and the Ministry of Commerce, Industry and Environment. With this support the VS can confidently undertake the proposed development plan and deliver against the national priorities identified.

More details of the strategies and activities proposed by the PVS Gap Analysis and the cost estimates are provided in this report.



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## METHODOLOGY OF THE PVS GAP ANALYSIS MISSION

### I The PVS Gap Analysis process

A PVS Gap Analysis mission works with the Veterinary Services to determine the national objectives considering compliance with OIE quality standards, and national constraints and priorities. The country PVS Gap Analysis report includes an indicative annual cost and a one-off exceptional cost (for exceptional capital investments), consolidated into an indicative five-year cost for the Veterinary Services.

In practice, this means:

- Defining the Veterinary Services priorities for each of the following categories: Livestock Development and Trade; Veterinary Public Health, Animal Health and Organisation and Management of Veterinary Services including Regulatory Services.
- Identifying a strategy for each of the five PVS Gap Analysis Pillars: (i) Trade, (ii) Veterinary Public Health, (iii) Animal Health, (iv) Laboratories and (v) Management of Veterinary Services including Regulatory Services. These strategies make up the Veterinary Services' five-year plan towards meeting its priorities based on national priorities and improved compliance with international standards.
- Determining the Desired Level of Advancement towards meeting national priorities and improved compliance with international standards for each of the Critical Competencies to be reached over the next five-years.
- Defining the activities to be implemented by the Veterinary Services over the next five years in order to reach their desired Level of Advancement.
- Estimating the cost of the human and physical resources required to implement the identified activities.

#### ***1.1 Background information***

Following a request to the OIE from its government, an evaluation of the Veterinary Services of Timor-Leste using the OIE PVS Tool, based on OIE international standards on quality of Veterinary Services<sup>1</sup>, was conducted in August 2011 by a team of independent OIE certified experts.

In order to understand the objectives of the country, as well as the figures presented in the PVS Gap Analysis report, some background information is provided here. Part of this information comes from the country OIE PVS evaluation report; other parts come from other sources.

##### ***1.1.A Country details***

The Democratic Republic of Timor-Leste (Timor-Leste) is located in Southeast Asia and comprises the eastern half of the island of Timor, the nearby islands of Atauro and Jaco, and Oecusse, an enclave on the north-western side of the island, within Indonesian West Timor. It has 15,410 km<sup>2</sup> of area, administratively divided in 13 districts, 65 sub-districts and 442 villages, as shown at Figure 1. The country has a total perimeter of 934km – 228km land border with Indonesia, the rest is sea coast.

Timor-Leste weather is tropical hot and dry/humid, with distinct seasons: rainy from December to March and dry from April to November. Rainfall is well distributed across the country, as shown at the Figure 2.

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<sup>1</sup> 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](http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.3.1.htm)



Figure 1. Timor-Leste administrative map

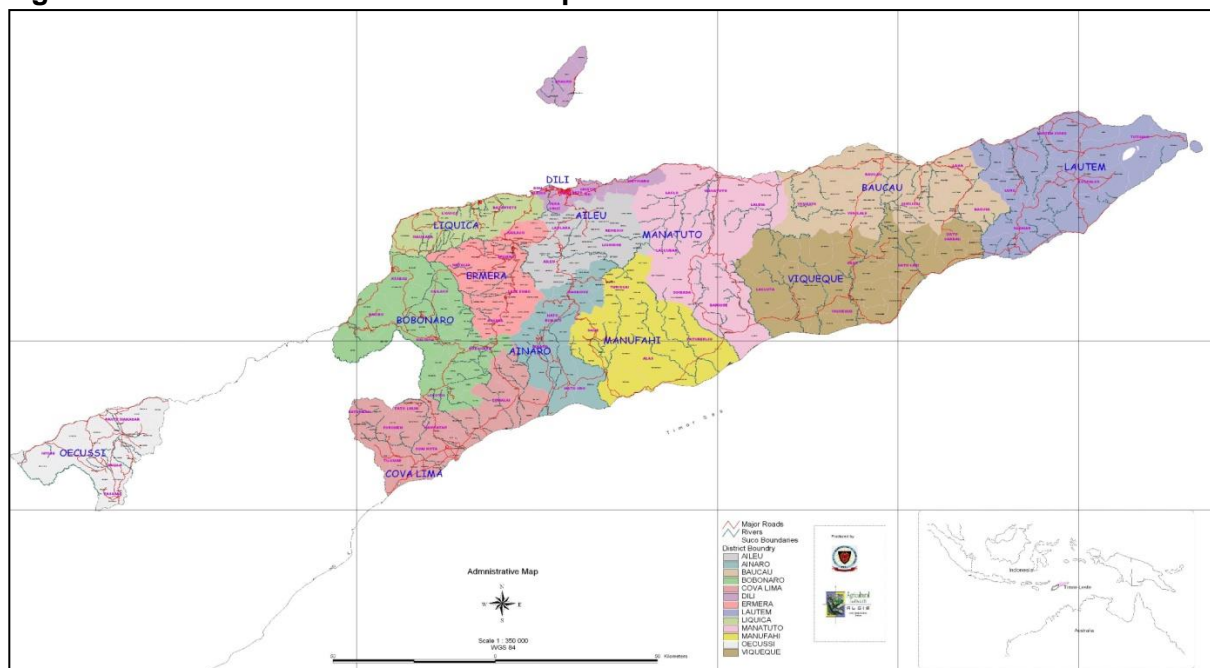
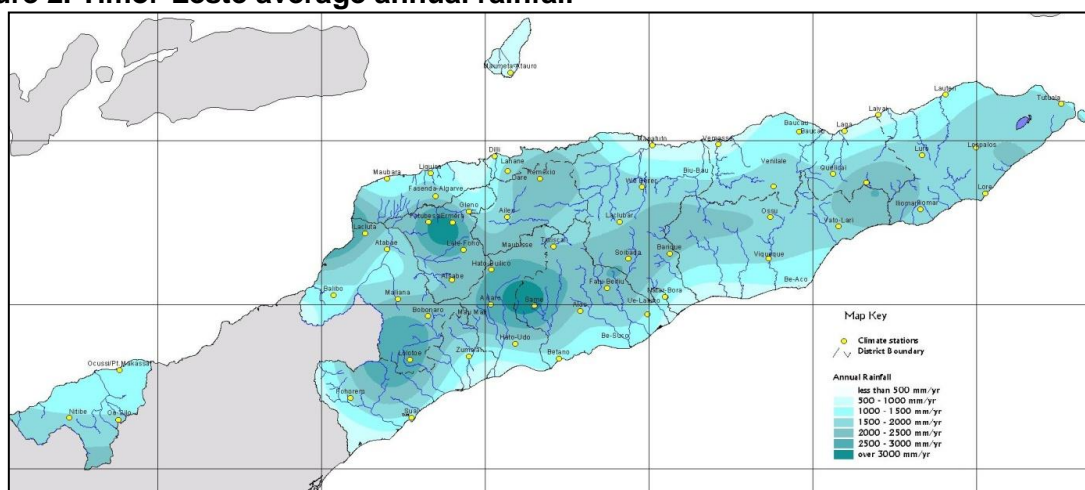


Figure 2. Timor-Leste average annual rainfall



Timor-Leste is classified as a lower middle income economy. The national currency is the United States Dollar (USD). The national GDP in 2013 was estimated to be USD 1.6 billion

The human population of Timor-Leste is 1,177,834<sup>2</sup>, with 12% living in the capital, Dili. Timor-Leste was officially recognised internationally as an independent country in 2002. The government system is now a parliamentary republic. Official languages are Tetum and Portuguese, Indonesian Bahasa is widely spoken; there are a number of ethnic minority languages.

Domestic agricultural production supports national food security but considerable quantities of the rice, the dietary staple, are imported. Local production is largely subsistence and practised by an estimated 76%<sup>2</sup> of the population. The husbandry of buffaloes, cattle, chickens, goats, sheep and pigs is ubiquitous and small scale.

<sup>2</sup> CIA World Factbook, available at <https://www.cia.gov/library/publications/the-world-factbook/geos/tt.html>



There is no industrial livestock production sector in the country. There are no regulated slaughterhouses operating and few facilities at all - informal slaughter for commercial sale is mainly of cattle and pigs. There is some small scale egg production which has no inspection or regulation by the VS. The slaughter of buffaloes is rare as these animals are traditionally used for draught and as wedding dowries. There are no dairy processing plants and the consumption of dairy products is very low.

**Table n°1 - Livestock population by district**

District	Households	Chicken	Pig	Sheep	Goat	Horse	Cattle	Buffalo
Ainaro	9,664	32,142	16,466	1,095	6,317	6,382	6,435	4,958
Aileu	6,965	23,687	12,638	830	5,928	2,462	4,697	1,782
Baucau	21,255	84,482	35,490	23,121	25,831	12,040	6,165	14,566
Bobonaro	16,883	76,602	40,565	2,060	18,010	3,345	29,235	7,559
Covalima	11,105	47,457	31,609	716	7,038	1,591	22,378	2,545
Dili	35,224	69,310	28,571	1,784	14,486	1,430	3,597	1,467
Ermera	19,280	65,229	27,501	1,229	9,230	3,525	11,255	3,728
Liquica	10,351	47,554	22,317	744	16,391	1,492	8,018	2,355
Lautem	11,447	67,394	24,816	2,454	8,570	6,046	16,874	15,378
Manufahi	7,856	36,396	16,471	359	5,013	4,235	7,559	5,893
Manatutu	6,925	24,635	14,363	4,048	8,575	3,115	6,204	8,551
Oecusse	13,890	46,158	25,004	1,027	13,344	1,372	16,562	1,791
Viqueque	13,807	81,428	34,624	2,387	13,627	10,784	22,675	25,911
<b>Total</b>	<b>184,652</b>	<b>702,474</b>	<b>330,435</b>	<b>41,854</b>	<b>152,360</b>	<b>57,819</b>	<b>161,654</b>	<b>96,484</b>

**Table n°2 - Topography/agriculture**

Land type	km <sup>2</sup>	
Arable land	1,294	(8%)
Forest	8,400	(56%)
Highlands	5,265	(36%)
<b>Total area</b>	<b>14,874</b>	

**Table n°3 - Human population**

<b>Total</b>	<b>1,178,000</b>
Density / km <sup>2</sup>	79
% urban	27
% of rural	83

**Table n°4 - Economic data (USD)**

National GDP <sup>1</sup>	1.6 billion
Agricultural GDP <sup>1</sup>	201 million
Animal and animal products import <sup>2</sup>	10,311,383
Animal and animal products export <sup>2</sup>	57,608
National budget <sup>1</sup>	11,300 million
Ministry of Agriculture and Fisheries budget <sup>3</sup>	21,538,809
'Animal husbandry' budget <sup>3</sup>	1,710,890
Quarantine and Biosecurity <sup>3</sup>	322,442
Agricultural services in districts <sup>3</sup>	5,224,868
Secretary of State for livestock <sup>3</sup>	97,755

<sup>1</sup>Worldbank; <sup>2</sup> Ministry of Agriculture and Fisheries; <sup>3</sup> Timor-Leste Budget Transparency Portal

### 1.1.B Current organisation of the Veterinary Services

In Timor-Leste the VS operate under the Ministry of Agriculture and Fisheries which has responsibility for animal health and production, food security/food safety and the

control of zoonotic diseases. The Ministry of Agriculture and Fisheries is the leader in rural economic development.

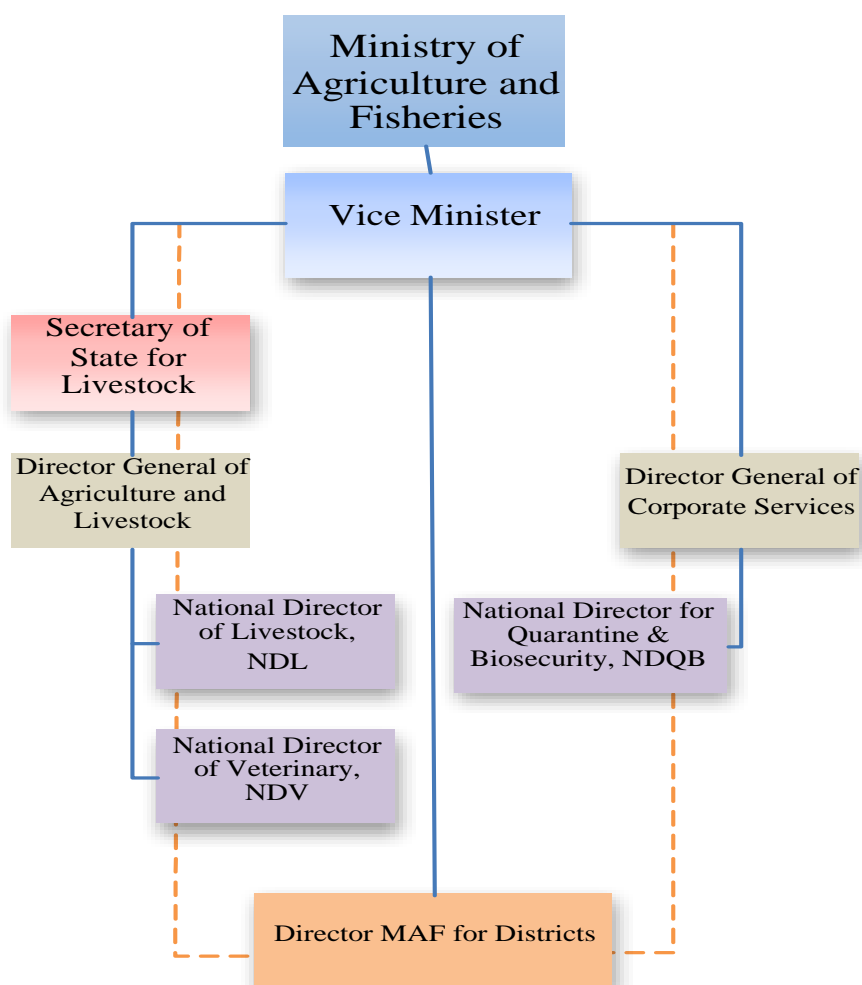
The Secretary of State for Livestock, through the Director General of Agriculture and Livestock, has responsibility for the central veterinary and livestock services; these are provided by the, 'soon to be created', National Directorate of Veterinary Services (NDV) and the National Directorate of Livestock (NDL). The Director General of Corporate Services is responsible for animal and animal product quarantine, delivered both centrally and at the border inspections posts, by the National Directorate of Quarantine and Biosecurity (NDQB).

The field Veterinary Services are decentralised and delivered directly by the 13 districts of Timor-Leste. The head of each district, the District Agricultural Director (DAD), reports directly to the Vice-Minister of the Ministry of Agriculture and Fisheries. Veterinary para-professionals operating as District Livestock Officers (DLOs) and District Livestock Assistants (DLAs) provide the field veterinary service; there are currently no veterinarians based in the field.

There are currently 62 livestock technicians operating in the 65 sub-districts. These livestock technicians support the DLOs and DLAs in delivering the field veterinary service, particularly animal vaccination as part of the disease control programmes. Extension workers operate at village level providing all agricultural extension activities.

There are two private veterinary practices in Timor-Leste. The Ministry of Agriculture and Fisheries also provides a clinical veterinary service in Dili.

The organisational chart of the VS is shown below:



### 1.1.C Description of entities or sites related to Veterinary Services activities

List of entities and sites	Details
<b>GEOGRAPHICAL ZONES OF THE COUNTRY</b>	
Climatic zones	Tropical with wet/dry seasons
Topographic zones	Steep hills with extensive grazing; river valleys with cropping/intensive cropping/grazing
Agro-ecological zones	Southern Lowlands, Southern Slopes, Southern Highlands, Northern Lowland, Northern Slopes, Northern Highland
<b>ADMINISTRATIVE ORGANISATION OF THE COUNTRY</b>	
1st administrative level	<i>Central</i>
2nd administrative level	<i>District (13)</i>
3rd administrative level	<i>Sub-district (65)</i>
4th administrative level	<i>Village (442)</i>
<b>VETERINARY SERVICES ORGANISATION AND STRUCTURE</b>	
Central VS	<i>Secretary of State for Livestock</i>
Internal division of the central VS	<i>NDV, NDL, NDQB</i>
Veterinary organisations (VSB, unions...)	<i>Timor-Leste Veterinary Association</i>
<b>FIELD ANIMAL HEALTH NETWORK</b>	
Field level of the VS for animal health	<i>District</i>
Private veterinary sector	<i>Two private veterinary practices</i>
<b>VETERINARY MEDICINES &amp; BIOLOGICALS</b>	
Import and wholesale sector	<i>7</i>
Retail sector	<i>Government, private retailers</i>
<b>VETERINARY LABORATORIES</b>	
National labs	<i>Central Veterinary Laboratory</i>
Associated, accredited and other labs	<i>None</i>
<b>ANIMAL AND ANIMAL PRODUCTS MOVEMENT CONTROL</b>	
Bordering countries	<i>Land border – Indonesia; sea border – Australia</i>
Airports and port border posts	<i>6</i>
Main terrestrial border posts	<i>2</i>
Minor terrestrial border posts	<i>6</i>
Internal check points	<i>4</i>
Live animal markets	<i>Every sub-district</i>
<b>PUBLIC HEALTH INSPECTION OF ANIMALS AND ANIMAL PRODUCTS</b>	
National market slaughterhouses	<i>1</i>
Local market slaughterhouse	<i>None</i>
Slaughter areas/slabs/points	<i>None</i>
Retail outlets (butchers, shops, restaurants)	<i>Not available</i>
<b>TRAINING AND RESEARCH ORGANISATIONS</b>	
Veterinary university	<i>None</i>
Veterinary paraprofessional schools	<i>1</i>
Veterinary research organisations	<i>None</i>
<b>STAKEHOLDERS' ORGANISATIONS</b>	
Agricultural Chamber / room /organisation	<i>Chamber of Commerce</i>
National livestock farmers organisations	<i>One national</i>
Local (livestock) farmers organisations	<i>Village level</i>
Consumers organisations	<i>None</i>

### 1.1.D Summary results of the OIE PVS evaluation

The PVS Evaluation was conducted in The Democratic Republic of Timor-Leste from 30 July to 13 August 2011. Despite the recent tempestuous history of the country, Timor-Leste had made solid progress in developing its damaged economy but many problems remained. The national VS had a clear vision of the development required but were seriously under-resourced. The vision for the development of the national VS was strongly endorsed and commended.

Key findings of the evaluation were:

The human, physical and financial resources available to the VS were generally inadequate. Nationally there were only 15 veterinarians which were insufficient to provide a field service to the country. There were no veterinarians in any district and only two practising privately. There were veterinary para-professionals (technical staff) working both centrally and in the districts. These staff had received mixed training which was inadequate to provide an effective clinical field service of either diagnosis or treatment.

The quarantine service was well structured with staff at all major border crossings/international gateways. The quarantine veterinary staff supervised the activities of their inspectors, who were trained mainly in the management of documentation and certificates but could not monitor animal health or the safety of animal products.

The physical resources of the VS were largely inadequate. Offices were run down, over-crowded, with unreliable power supplies and little or no internet access. The vehicles were obsolete and poorly maintained. Cold chain equipment for the storage of vaccine and its distribution was available centrally and in the districts but not reliably in the sub-districts and villages. The recently opened diagnostic laboratory however was constructed to a high standard and had been provided with a good range of equipment.

The budget for the VS was inadequate for baseline activities and there was little ability to develop staff skills or improve facilities and equipment. Recently, the budget had been stable, but there was no secured funding for any emergency response and no budget for veterinary staff, equipment and operations at the district clinics.

Technical authority had been developing well but there were a number of areas that were not being addressed and others that were likely to be difficult to sustain. The newly opened laboratory was well constructed and able to provide basic diagnostic tests for pathology, parasitology, bacteriology and serology; no capability to undertake virology was planned. At the time no laboratory quality assurance programme was being considered. The National Directorate of Quarantine and Biosecurity had a separate laboratory facility that was not in use. A fundamental weakness of the VS was the absence of veterinarians in the field. Animal health surveillance and response was provided by veterinary para-professionals with no direct veterinary supervision.

Some sponsored survey work had been undertaken to detect major disease risks – such as Foot and Mouth Disease (FMD) and Highly Pathogenic Avian Influenza (HPAI). The major disease control activities in Timor-Leste were the annual vaccination programmes against three major diseases: Haemorrhagic Septicaemia (HS), Classical Swine Fever (CSF) and Newcastle disease (ND). The impact of these programmes was considered to be negligible and sustainable. There was no food safety programme.

The import of veterinary medicines and biologicals was controlled by the National Directorate of Livestock and Veterinary Services (NDLVS). NDLVS then distributed the medicines and biologicals to the districts where they were used by non-veterinarians. There was no residue testing programme and no animal welfare legislation or programme.

The VS had limited communication capacity with no specific plan, dedicated department or staff. An HPAI awareness campaign (posters, leaflets and extension activities) had been developed and implemented throughout the country by a donor. Concerns over HPAI also led to the establishment of a whole of government, national commission on HPAI. There was little other external consultation – in part as the livestock industry was extensive and under-developed with no producer groups or

industry associations. Pilot activities in one village had demonstrated that there was a strong commitment by local leaders and communities to 'joint programmes' to improve animal production and health.

Timor-Leste only recently became a member of the OIE but had been represented at a number of regional meetings over recent years. There was no Veterinary Statutory Body, nor any plans on introducing one. There was no ability to delegate veterinary activities with no private veterinarians and no defined veterinary standards. There was no core animal health and veterinary legislation other than the 'organic law' which appoints the Secretary of State for Livestock. Draft legislation to international standards had been prepared but it was not clear when this legislation would be enacted. The quarantine services had appropriate legislation defining their role and providing the power to act. Quarantine legislation also provided for animal and animal product movement control between districts. There was no process of international equivalence or certification - other than that provided by quarantine and no ability to establish zones or compartments for disease management.

## **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 1 – 11 September 2014 by a team of independent OIE certified experts: Dr John Weaver as team leader and Dr Jarunee Siengsan and Emily Tagliaro as technical experts.

The PVS Gap Analysis mission met the Director General for Agriculture and Livestock of the Ministry of Agriculture and Fisheries for an informal meeting with the Chief of the VS; this meeting was followed by a further informal meeting with Secretary of State for Livestock of the Ministry of Agriculture and Fisheries. An informal opening meeting was then held with the Chief and staff of the VS and member of NDQB; at this meeting the methodology, objectives and plan of the mission were presented and discussed.

The mission team then held intensive discussions with staff from the VS (veterinary service and quarantine divisions) to identify the national priorities for the VS considering livestock development, veterinary public health, animal health and the organisation, operations and resourcing of the VS. Following determination of the national priorities the strategies for each pillar were developed with supporting activities and estimated costs – the pillars were addressed in logical order – Trade, Veterinary Public Health, Animal Health, Laboratories and the structure, operations and resourcing of the Veterinary Services. Preliminary findings of the mission were presented, discussed and reviewed with senior staff.

The mission team had an informal meeting with the Minister of Agriculture and Fisheries to report on key findings of the mission. The Timor-Leste mission concluded with a closing presentation to staff from the VS (veterinary services and quarantine directorates) and policy and planning division.

### **1.2.B Estimation of resources needed**

A logical approach to estimating the cost 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 funding for field activities 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, priorities and trends in animal health and changes of animal health status.

Cost estimates are developed for specific activities so that the identified strategy for each of the five PVS Gap Analysis pillars can be implemented and the desired level of advancement may be achieved as required by the objectives, situation and characteristics of the country. These will need to be finalised by the Veterinary Services during operational planning.

In some Critical Competency Cards, the specific resources required are described in detail: for instance under the Trade pillar more details are provided for quarantine/border control, under the Veterinary Public Health pillar for food safety with registration of slaughter premises, ante and post mortem inspections and veterinary drug control, and under the Animal Health pillar for surveillance and disease control.

In other Critical Competency Cards, the additional resources required are zero or very low as the activities and costs are covered elsewhere: for instance consultation, communication and the stability of programmes are mainly covered under the management and resources pillars.

The overall resources analysis (Chapter VI) collates the different cost estimates: ongoing investment, salaries, repairs and maintenance, operations, etc. This analysis assesses the strategy and priorities of the PVS Gap Analysis and its sustainability.

### **Notes**

The international currency used in this report for the estimation of costs is the USD.

According to the information provided by VS, it was considered that a full time employee effectively works 240 days (excluding holidays, vacations, weekends, etc.) and for eight hours a day.

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

- 20 years for construction of building
- 20 years for renovation of building
- 10 years for cars and 4x4
- 5 years for motorbikes
- 5 years for cold chain
- 5 years for laboratory equipment
- 3 years for office equipment

Veterinary salaries vary but are in the range of USD 300 to USD 500 per month when paid by the National Directorate of Veterinary Services; in comparison the National University of Timor-Leste, under the Ministry of Education, pays veterinarians in the range of USD 800 to USD 1,000. This imbalance is unsustainable and is resulting in few veterinarians being willing to work for the National Directorate of Veterinary Services. A formal request must be made urgently to the Public Service Commission to resolve this issue. The PVS Gap Analysis mission has costed the salaries of veterinarians at USD 1000 per month.



## UNIT COST SPREAD SHEET

Unit costs (estimates)				
<b>1- Currencies</b>				
Currency used for this report (USD or EUR)		Currency	Conversion rate (exchange rate)	
National currency		USD	Number of 1 per USD	
		1	1	
<b>2- Material investments</b>				
		Supply cost / unit		Years of amortisation
		Local currency	International currency	
Buildings	Unit of surface (m <sup>2</sup> ) or (ft <sup>2</sup> )	m <sup>2</sup>		
	Maintenance cost per m <sup>2</sup>	18	18	
	Renovation cost per m <sup>2</sup>	200	200	15
	Building cost per m <sup>2</sup>	350	350	20
Transport (purchasing cost)				
	Motorbikes	2 500	2 500	5
	Cars	45 000	45 000	10
	4x4 vehicles	48 000	48 000	10
Equipment set				
	Staff office equipment set (desk, office chair, telephone, computer & standard peripherals)	1 700	1 700	3
	Other specific office equipment set	600	600	3
<b>3- Non material expenditure</b>				
<b>Training</b>				
Initial training (per student)				
	Veterinarians (DVM, BVS) total training cost	50 400	50 400	
	Veterinary paraprofessionals total training cost	600	600	
Specialised training (short courses, certificates, Masters degree, PhD, etc.)				
	Accommodation per month	500	500	
	Training fees per month	850	850	
	Travel per month	100	100	
	<b>Cost of specialised training per month</b>	<b>1 450</b>	<b>1 450</b>	
Continuing education (daily cost per person on a basis of a group of 15 people)				
	Per diem 15 participants	600	600	
	Room rental and educational tools per day	50	50	
	Daily cost for a national expert consultant	240	240	
	<b>Daily cost per trainee</b>	<b>59</b>	<b>59</b>	
National expertise (cost per day)				
	Daily fees	200	200	
	Per diem	40	40	
	<b>Total cost per day and per expert</b>	<b>240</b>	<b>240</b>	
International expertise (cost per week)				
	Daily fees	500	500	
	Per Diem	250	250	
	Average cost of an international flight	2 000	2 000	
	<b>Total cost per week</b>	<b>7 250</b>	<b>7 250</b>	
<b>4- Salaries (salaries, bonuses and social benefits)</b>				
	Veterinarians	12 000	12 000	
	Other university degree	2 700	2 700	
	Veterinary para-professionals	2 700	2 700	
	Support staff	2 400	2 400	
<b>5- Consumable resources</b>				
<b>Travel allowances</b>				
	Per diem for technical staff	40	40	
	Per diem for drivers	40	40	
	Per diem for technical staff travelling abroad	200	200	
	Average cost of an international flight	2 000	2 000	
	<b>Travel and per diem for one week abroad</b>	<b>3 400</b>	<b>3 400</b>	
Transport costs				
	Price of fuel (average between petrol, diesel or mixt) per unit	1,5	1,5	Unit litres
	Average number of km/miles per year			Unit
	Average distance per year by motorbike in km	5 000		km
	Average distance per year by car in km	9 000		km
	Average distance per year by 4x4 in km	9 000		km
	Fuel consumption per 100 km/miles			Running cost (fuel + maintenance + insurance = consumption x 2)
	Km or mileage cost (motorbike)	4,00	4,00	0,12
	Km or mileage cost (car)	8,00	8,00	0,24
	Km or mileage cost (4x4 vehicle)	12,00	12,00	0,36
<b>6- National economic indicators</b>				
<b>GDP</b>				
	<b>National GDP</b>	<b>1 615 000 000</b>	<b>1 615 000 000</b>	<b>Sources</b> World Bank 2013
	Agriculture GDP			VS
	Livestock GDP			
	Total value of National Herd			
	Value of exported animals and animal products	57 608	57 608	VS
	Value of imported animals and animal products	11 311 383	11 311 383	VS
	<b>Number of VLU</b>			
Country budget				
	National Budget			
	Agriculture and Livestock Budget	13 300 000	13 300 000	
	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			

### *1.2.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 Timor-Leste. 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 section of this report sets out the levels of advancement to be reached as indicated by the Veterinary Services in discussion with the PVS Gap Analysis mission team.

The second part of this report sets out the objectives to be achieved, taking into consideration the need to strengthen the technical independence and coordination of the Veterinary Services, for each PVS Gap Analysis pillar:

- Chapter I sets the standards required for international trade in animals and animal products, establishing the levels of advancement required for imports and exports as targeted by the national policy.
- Chapter II considers veterinary public health, including food safety and the management of veterinary medicines and biologicals.
- Chapter III addresses animal health issues.
- Chapter IV considers the capability and capacity of veterinary laboratories, as required by the three preceding chapters.
- Chapter V makes recommendations on the general management of the Veterinary Services and the related regulatory services. The organisational structure of the public Veterinary Services is considered. This chapter also identifies the development of cross-cutting skills (communication, consultation, legislation, education, etc.) required to run effective Veterinary Services.
- Chapter VI presents the estimated cost for strengthening the Veterinary Services with an indicative analysis to assess sustainability, including a breakdown by main cost component (investments, operations, emergency) and sub-component (salaries, materials, etc).



## II National priorities and expected levels of advancement

### II.1 National priorities

Table n°5 - National priorities

Category	National Priorities	Comment
Policy on <b>livestock development (LD)</b> and trade	<p>LD1: Develop national livestock productivity to improve food security and support economic development</p> <p>LD2: Develop an export industry for live cattle</p> <p>LD3: Strengthen animal quarantine to protect Timor-Leste's high health status</p>	<p>Improve livestock production through better animal health with an emphasis on dairy goats and cattle, laying chickens and ducks</p> <p>Aim is to export 5000 cattle heads p.a. by 2020 (Strategic Development Plan)</p> <p>Timor-Leste is free of FMD and HPAI</p>
Technical priorities in <b>veterinary public health (VPH)</b>	<p>VPH1: Improve food safety by reducing food-borne zoonoses</p> <p>VPH2: Promote the safe and effective use of veterinary medicines and biologicals</p> <p>VPH3: Reduce the brucellosis risk to people</p>	<p>Food safety is a policy mandate of Ministry of Agriculture and Fisheries to the point of retail</p> <p>Currently little control of import and use of veterinary medicines; reduce the development of resistance and residues in food</p> <p>Brucellosis is present at high prevalence and reduces cattle fertility; there is no data on human infections</p>
Technical priorities in <b>animal health (AH)</b>	<p>AH1: Improve surveillance, diagnosis and reporting</p> <p>AH2: Strengthen prevention and control of priority animal diseases</p> <p>AH3: Develop emergency preparedness, response contingency planning</p> <p>AH4: Implement an animal welfare programme</p>	<p>Field activities are managed by para-professionals - there are no field veterinarians</p> <p>The impact of major disease programmes is not known</p> <p>Contingency plans only exist for HPAI</p> <p>There is animal welfare legislation but no programme</p>
Policy on organisation & management of the <b>veterinary services (VS)</b>	<p>VS1: Strengthen and expand human resources</p> <p>VS2: Improve funding resources</p> <p>VS3: Prepare detailed plans for all animal health programmes and report progress regularly</p> <p>VS4: Develop required veterinary legislation</p>	<p>Need additional veterinarians to design, develop, implement and review programmes – both centrally and in the districts</p> <p>Funding of operations is insufficient for baseline operations; there is little provision of a maintenance budget and no investment plan</p> <p>Animal health activities are not well defined or funded, programmes are not regularly reviewed or reported</p> <p>Revised and strengthened legislation is required</p>

## II.2 Level of advancement

Table n°6 - Critical Competencies: Level of advancement

Human, physical and financial resources	2011	Expected
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	2	3
I.2.B. Competencies of veterinary para-professionals	2	4
I.3. Continuing education	2	3
I.4. Technical independence	1	3
I.5. Stability of structures and sustainability of policies	2	3
I.6.A. Internal coordination (chain of command)	2	4
I.6.B. External coordination	2	3
I.7. Physical resources	1	2
I.8. Operational funding	2	3
I.9. Emergency funding	2	3
I.10. Capital investment	2	3
I.11. Management of resources and operations	1	3

### Technical authority and capability

II.1.A. Access to veterinary laboratory diagnosis	1	2
II.1.B. Suitability of national laboratory infrastructures*		4
II.2 Laboratory quality assurance	1	3
II.3 Risk analysis	1	2
II.4 Quarantine and border security	2	2
II.5.A. Passive epidemiological surveillance	2	2
II.5.B. Active epidemiological surveillance	2	3
II.6 Emergency response	2	3
II.7 Disease prevention, control and eradication	2	3
II.8.A. Regulation, authorisation and inspection of establishments*		3
II.8.B. Ante and post mortem inspection	1	3
II.8.C. Inspection of collection, processing and distribution	1	3
II.9 Veterinary medicines and biologicals	2	2
II.10 Residue testing	1	2
II.11 Animal feed safety*		2
II.12.A. Animal identification and movement control	1	3
II.12.B. Identification and traceability of products of animal origin	1	3
II.13 Animal welfare	1	3

### Interaction with interested parties

III.1 Communication	2	3
III.2 Consultation with interested parties	2	3
III.3 Official representation	2	3
III.4 Accreditation / authorisation / delegation	1	3
II.5.A. Veterinary Statutory Body authority	1	2
II.5.B. Veterinary Statutory Body capacity	1	2
III.6 Participation of producers and other parties in joint programmes	2	3

### Access to market

IV.1 Preparation of legislation and regulations	1	3
IV.2 Implementation of legislation and regulations and compliance thereof	1	3
IV.3 International harmonisation	2	3
IV.4 International certification	1	2
IV.5 Equivalence and other types of sanitary agreements	1	3
IV.6 Transparency	1	3
IV.7 Zoning	1	1
IV.8 Compartmentalisation	1	3

\*New or changed CC - not assessed in 2011

### **II.3 Impact and significance**

After a long period of unrest Timor-Leste was only recognised internationally as an independent country in 2002; this was followed by further unrest that was only resolved in 2007. Considering this history it is not surprising that Timor-Leste is relatively undeveloped – though it is now developing rapidly.

The livestock sector mirrors the national stage of development. Almost livestock production is extensive with very low off-take of animals; there is limited intensive production of poultry and some small feedlots. Food security is poor with extensive malnutrition. The majority of animal products are imported.

A number of major animal diseases are present and limit livestock production. There is no food safety programme and little preparedness to address any emergency animal disease events.

The VS have the opportunity to support economic development, community wellbeing and rural livelihoods. There are opportunities to develop export markets, to promote food security, to decrease imports, to develop a food safety programme, to reduce zoonoses and to promote animal health and welfare.

To achieve this, disease detection/surveillance needs to be improved and the disease control programmes delivered effectively and efficiently. There is an ongoing threat of emerging/emergency animal diseases and this needs to be recognised and preparedness measures undertaken with contingency planning. The most critical transboundary animal disease is rabies which is present on nearby Indonesian islands.

Veterinary public health is compromised by the presence of a number of zoonoses and the lack of a food safety programme. Improved disease control and the establishment of a food safety programme will promote public health and confidence in animal products.

By undertaking the PVS Gap Analysis, the VS will support the achievement of the national priorities: increased livestock production, reduced risk to human health, improved animal health and the strengthening of an effective and efficient VS that has increased compliance with international standards as determined by OIE.



## PVS GAP ANALYSIS

### I Strengthening competencies for international trade

The purpose of this section is to present the strategies and proposed activities for international trade development, for both imports and exports. This section includes the activities presented in Critical Competency Cards II-4, II-12, IV-4, IV-5, IV-6, IV-7 and IV-8. Links are also made with cross-cutting competencies from the other pillars including the Management of Veterinary Services, Animal Health, Veterinary Public Health and Laboratory Services.

#### I.1 Strategy and activities

The VS of Timor-Leste, under the Ministry of Agriculture and Fisheries, have identified a series of national priorities under livestock development. These priorities are to improve food security, to re-establish exports of live cattle and so to promote economic development; a further national priority is to protect the high animal health status of the country by strengthening quarantine and border security.

The strategy to achieve the identified national priority of promoting livestock development is to target activities in the following key areas:

- Strengthen quarantine and border control.
- Establish a comprehensive programme for animal and animal product identification and traceability.
- Develop international certification and sanitary agreements with trading countries and transparency of animal health status reporting to international agencies.

##### I.1.A Quarantine and border control

Quarantine and border control should be strengthened to reduce the risk from imported animals, animal products and materials. Activities required to strengthen border control should include the revision of import protocols to ensure all imports are notified prior to dispatch from their point of origin, and the recruitment and training of additional veterinary para-professionals so that the Border Inspection Posts (BIPs) can be manned for the necessary number of hours. The veterinary officer in charge should ensure the import protocols have been implemented effectively.

As the level of advancement (Level 3) expected is restricted to the reduction in risk from the formal import of animals and animal products then these movements can be controlled to allow entry at specific times of day/days of the week. This restriction will reduce the number of staff required by combining human resources with other activities; the veterinary para-professionals that will man the BIPs can then take on other activities such as food safety and the implementation of animal health programmes. The development of multi-tasking will need to be negotiated and agreed between National Directorate of Veterinary Services and National Directorate of Quarantine and Biosecurity. Though a rational approach in an under-resourced situation, it will be critical to develop clear 'Memoranda of Understanding' between National Directorate of Veterinary Services and National Directorate of Quarantine and Biosecurity to ensure that priorities are undertaken as needed – for example if an emergency disease outbreak response was required.

The major BIPs should be provided with additional infrastructure – quarantine holding yards/pens for live animals, cold storage facilities, incinerators and fridges; in addition office equipment is required (computers, mobile phones) and motorbikes for staff travel. Staff will need to be provided with basic protective clothing (boots, overalls,

gloves and masks). Such facilities and equipment will allow the safe holding of live animals pending testing/approval to enter or return to origin, and also the safe disposal of any culled animals or the disposal of animal products.

A risk assessment approach should be taken to identify imported animals and animal products and their routes of entry; such a risk assessment should utilise data available from National Directorate of Quarantine and Biosecurity and any other enforcement activities (customs, police). Regulations and Standard Operating Procedures (SOPs) should be prepared for all quarantine and border control operations and implemented at all border inspection posts. Monthly and annual reports on the movement and origin of animals and animal products should be prepared and provided to the Ministry of Agriculture and Fisheries, particularly NDV, and the Ministry of Commerce, Industry and Environment.

Following development of the enhanced border control programme, an awareness campaign should be implemented to address the high risk activities and be supported by increased vigilance at these entry points.

The legislation for animal quarantine needs updating. A programme for the enforcement of legislation should be developed, along with the imposition of appropriate penalties.

### *1.1.B Animal and animal product identification and traceability*

Animal identification is critical to managing livestock, promoting animal breeding and husbandry, reducing the risk of disease and enabling effective disease control.

The established policy, with supporting regulations, on livestock identification and traceability should be implemented progressively across the country for all livestock species; note that the programme will not include poultry.

The programme should develop a work plan for the implementation of livestock identification, which should include public consultation and awareness, staff training and delegation of identification to local communities and the ongoing supply of identification tags. The central database should be further developed with the support of an international consultant to allow efficient programme management and, over time, upgraded to an on-line system of data entry from the districts; a central server will be required and computers purchased for each district; staff will need to be trained in data entry.

The number of tags required over five years is estimated to be 565,000 for cattle, buffalo, sheep and goats (cost USD 0.40) and 400,000 for pigs (cost USD 0.20)

Movement control will be managed by establishing four checkpoints – three on the main routes into Dili and one in Covalima; these checkpoints will be under the management of the District Veterinary Officers and staff, on a periodic, as required basis, and staffed by veterinary para-professionals. Movement control will be enforced through a programme of public awareness and random checks at both these established checkpoints and of other animal movements into markets and slaughterhouses.

The Ministry of Agriculture and Fisheries now has the responsibility of managing animal product safety to the end-user. The VS should work with Ministry of Health and Ministry of Commerce, Industry and Environment to establish a coherent national programme for product identification and tracing; a technical commission within the Ministry of Agriculture and Fisheries should be established to lead this programme. The legislation should be reviewed and revised as necessary to achieve this goal – this will require stakeholder consultation and communication.

### 1.1.C International certification, sanitary agreements and reporting

The national priorities identify cattle exports as a major development opportunity. To re-establish export markets sanitary agreements should be developed with trading partners, particularly Indonesia. Such agreements should build on evidence-based certification of Timor-Leste's animal health status.

Sanitary agreements should also be used to mitigate the risk posed by countries supplying animals and animal products to Timor-Leste. Such agreements should be developed between the supplying country and the VS to identify and mitigate any risk posed by trade in these products.

More broadly other potential export markets should be identified and a process of 'international certification' used to demonstrate Timor-Leste's high animal health status.

The Director of National Directorate of Veterinary Services should lead the development of sanitary agreements and manage all international certifications.

VS are regarded as an 'international public good' and so transparency of animal health status is required. This process of transparent reporting of the national animal health situation should comply with international standards – annual status and change of status reporting are regarded as a mandatory commitment. Annual, six-monthly and 'real-time', exceptional event reports should be provided to OIE and ASEAN.

## 1.2 Human resources

To strengthen border control staff numbers have been estimated.

**Table n°7 - Staff required for quarantine and border inspection**

Quarantine and border security	Number	Number of days of work per year	Number of hours per day	Veterinarians		Veterinary para-professionals		Support staff	
				OnSite	Total FTE	OnSite	Total FTE	OnSite	Total FTE
Dili:NDQB	1	240	8	3	3.00	2	2.00	2	2.00
Dili:Airport	1	365	6			2	2.28		
Dili:Seaport	2	240	8			2	2.00		
Dili:PostOffice	1	365	8			1	1.00		
Bobanaro:Main	1	365	8			1	1.52		
Bobanaro:Others	2	312	8			1	2.60		
Covalima	1	312	8			1	1.30		
Oecusse:Seaport	1	365	8			1	1.52		
Oecusse:Airport	1	240	4			1	0.50		
Oecusse:Other	2	312	4			1	1.30		
Lautem:Seaport	1	365	8			1	1.52		
Baucau:Seaport	1	365	8			1	1.52		
<b>TOTAL</b>					<b>3.00</b>		<b>19.06</b>		<b>2.00</b>

The table indicates by each site the number of days that the site will operate each year and the number of hours worked per day. The number of FTEs (Full Time Equivalents) is calculated from the number of days worked per staff member per year (240) and the number of hours worked per day (8).

Staffing of the central National Directorate of Quarantine and Biosecurity should be reduced from current levels by two veterinary para-professionals to a total of three veterinarians, two veterinary para-professionals and two support staff. Specialist training in risk analysis at Masters degree level should be provided to one staff member, most probably a veterinarian.



Staff numbers at the border inspection posts vary according to the number of animal and animal movements entering Timor-Leste through the entry point. A total of 19 veterinary para-professional staff is required to manage these entry points. This programme and these veterinary para-professional staff should be managed by the district and central veterinarians. These veterinarians must establish clear operating guidelines and SOPs, and monitor performance against established standards.

An international consultant should be recruited to support the development of a programme for compartmentalisation – estimated time required is five weeks. The development of compartmentalisation should be led by a veterinarian – estimated at 0.4 (to also cover international certification and the development of sanitary agreements)

### 1.3 Physical resources

The border inspection posts should be upgraded with improved facilities and additional equipment.

**Table n°8 - Physical resources required for quarantine and border inspection**

Quarantine and border security	#	Motorbikes		4x4 Vehicles		Staff office equipment		Other specific equipment
		per unit	total	per unit	total	per unit	total	
Dili: NDQB	1	2		1	1.00	7	7.00	
Dili: Airport	1	1				1	1.00	Cold storage, Incinerator, Fridge, Holding pen
Dili: Seaport	2	1				1	2.00	
Dili: Post Office	1	1				1	1.00	
Bobanaro: Main	1	1				1	1.00	Cold storage, Incinerator, Fridge
Bobanaro: Others	2	1				1	2.00	Manual Incinerator
Covalima	1	1				1	1.00	Cold storage, Incinerator, Fridge, Holding pen
Oecusse: Seaport	1	1				1	1.00	Cold storage, Incinerator, Fridge, Holding pen
Oecusse: Airport	1	1				1	1.00	
Oecusse: Other	2	1				1	2.00	Manual Incinerator
Lautem: Seaport	1	1				1	1.00	Manual Incinerator, Fridge
Baucau: Seaport	1	1				1	1.00	Manual Incinerator, Fridge
<b>Total</b>	<b>16</b>			<b>1</b>			<b>21</b>	

The border inspection posts should be strengthened by providing necessary infrastructure and equipment. Incinerators should be provided in Dili and other border inspection posts; it is recommended that a large commercial incinerator is provided for Dili (USD 10,000) and that eight locally built incinerators (cost USD 100 each) should be provided at other locations (as shown in the table). In addition it is recommended that four cold storage facilities are provided (cost USD 1,000) for the temporary holding of animal products before rejection, destruction or testing/permitted entry, six fridges (USD 500 each) for the storage of samples and sample collection materials and three live animal quarantine holding pens (USD 2,500).

To strengthen the quarantine service staff need to be mobile and so should be provided with transport – one 4WD should be allocated to the central veterinary team and 16 motorbikes for border inspection post staff. At each site staff will require office equipment (computers, printers and telephones) – 35 sets should be provided.

### 1.4 Financial resources

The total financial resources for this pillar are presented in Table 9.

The annual cost is estimated to be USD 303,000; this should be provided to the National Directorate of Quarantine and Biosecurity and the National Directorate of Veterinary Services for the animal and animal product identification programme. The estimated annual cost is made up of salaries of USD 110,000, ear tags USD 75,000, office equipment (USD 12,000), building/vehicle maintenance and minor equipment purchases (USD 13,000).



To improve the physical resources available for the Trade Pillar a five year cost estimated for exceptional expenses of USD 170,000 is recommended. The exceptional cost estimated is made up from the purchase of one 4WD vehicle (USD 24,000), a two year overseas Masters course on risk analysis (USD 35,000) and international consultancies to develop the animal identification programme (USD 73,000) and compartmentalisation (USD 36,000).

Note: no cost estimate is provided for providing live animal and animal product holding facilities.

Table n°9 - 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
<b>Material investments</b>						
Buildings ( )		350				
<i>Maintenance cost per (m2)</i>		350	18	1	6 300	
<i>Renovation cost per (m2)</i>			200	15		
<i>Building cost per (m2)</i>			350	20		
Transport (Purchasing cost)						
<i>Motorbikes</i>		16	2 500	5	8 000	
<i>Cars</i>			45 000	10		
<i>4x4 vehicles</i>		1	48 000	10	4 800	24 000
<i>Other specific vehicle for Trade*</i>						
<i>Other specific vehicle for Trade*</i>						
Staff office equipment set		22	1 700	3	12 467	
Other specific office equipment set			600	3		
Other specific equipment						
<i>Other specific equipment for trade*</i>					2 900	
<i>Other specific equipment for trade*</i>					2 160	
<b>Sub-total Material investments</b>					<b>36 627</b>	<b>24 000</b>
<b>Non material investments</b>						
Training						
<i>Specialised training (person-months/5 years)</i>		24,0	1 450			34 800
<i>Continuing education (person-days/year)</i>		-	59			
<i>National expertise (days/5 years)</i>		-	240			
<i>International expertise (weeks/5 years)</i>		15,0	7 250			108 750
<i>Special funds (/ 5 years) for ...</i>						
<b>Sub-total non material expenditure</b>						<b>143 550</b>
<b>Salaries</b>						
Veterinarians		3,6	12 000		43 200	
Other university degree		-	2 700			
Veterinary para-professionals		21,0	2 700		56 700	
Support staff		4,0	2 400		9 600	
<b>Sub-total Salaries</b>					<b>109 500</b>	
<b>Consumable resources</b>						
Administration			20%		21 900	
Travel allowances						
<i>staff within the country (person-days) / year</i>		-	40			
<i>rivers within the country (person-days) / year</i>		-	40			
<i>staff abroad (person-weeks) / year</i>		-	3 400			
Transport costs						
<i>Km or miles Motorbikes / year</i>		80 000	0,12		9 600	
<i>Km or miles cars / year</i>		-	0,24			
<i>Km or miles 4x4 vehicle / year</i>		9 000	0,36		3 240	
<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>					26 000	
<i>Kits / reagents / vaccines</i>						
<i>Other costs for trade*</i>					77 000	
<i>Other costs for trade*</i>					19 500	
<b>Sub-total Consumable resources</b>					<b>157 240</b>	
<b>Delegated activities</b>						
<b>Sub-total Delegated activities</b>						
<b>Total in</b>	<b>USD</b>				<b>303 367</b>	<b>167 550</b>

## II Strengthening competencies for veterinary public health

The purpose of this section is to present the strategies and proposed activities for strengthening veterinary public health and food safety. This section includes the activities presented in the Critical Competency Cards II-8, II-9 and II-10. Links are also made with cross-cutting competencies from the other pillars including the Management of Veterinary Services, Trade, Animal Health, and Laboratory Services.

### II.1 Strategy and activities

In Timor-Leste, the Ministry of Agriculture and Fisheries has responsibility for the management of food safety to the point of retail and also the control of zoonoses in animals. Within the Ministry of Agriculture and Fisheries, veterinary public health is delivered by the National Directorate of Veterinary Services with support from the National Directorate of Livestock Services and National Directorate of Quarantine and Biosecurity.

The strategy for the VS to achieve the identified national priorities to promote veterinary public health is to target activities in the following key areas:

- Regulate all premises used for livestock slaughter.
- Introduce ante and post mortem inspection at all commercial slaughter sites.
- Improve management of veterinary medicines and biologicals.

#### II.1.A Regulation of slaughter premises

To promote food safety, all slaughter premises should be identified, registered and assessed against a set of standards.

The roles of the Ministry of Agriculture and Fisheries, Ministry of Health and Ministry of Commerce, Industry and Environment need to be clearly defined in the programme to register slaughter premises. An inter-ministerial working group should be established as a coordinating committee to identify and address any arising issues.

To enable the registration of small slaughter sites, minimum requirements should be defined for the facility and the slaughter operations, which can vary according to throughput; staff training will be required in the inspection of slaughter facilities and their operating arrangements including the management of live animals and animal products. It will be necessary to identify all such places by consulting with the stakeholders, district authorities and other interested parties.

To register the premises site visits should be undertaken by trained staff to assess compliance with the predetermined minimum standards. Allowance should be made for provisional registration of premises pending upgrading to the minimum standards.

A programme of public awareness should also be implemented to promote the use of the licensed slaughter sites and to reduce the illegal slaughter and retail of animals/animal products. Implementation and enforcement of the Slaughter House and Animal Product Movement Legislation should also be introduced.

#### II.1.B Ante and post mortem inspection

With the current low numbers of veterinarians available in Timor-Leste most ante and post mortem inspections will need to be undertaken by veterinary para-professionals; this situation does not comply with international standards and so must be viewed as an interim arrangement, acceptable only until the number of veterinarians has increased sufficiently. In the interim, the qualifications and knowledge of veterinary para-professionals, undertaking this role, will first need to be defined and then training programmes developed and delivered.

All registered slaughter places should be brought under the supervision of veterinary para-professionals. The ante and post mortem inspection programme should be under veterinary supervision with regular on site visits, *ad hoc* audits and reviews.

This need will require trained staff in every sub-district. Staff will require equipment and materials to be able to carry out their duties, including motorbikes, mobile phones, protective clothing, autopsy equipment, sample collection bottles and swabs, detergents and disinfectants.

### *II.1.C Improved management of veterinary medicines and biologicals*

The management and use of veterinary medicines and biologicals should be improved with more rigorous control of their import, distribution and use. The Veterinary Authority (National Directorate of Veterinary Services) should take control over the management of veterinary medicines and biologicals – currently with the Ministry of Health.

Legislation for the registration of veterinary medicines and biologicals is required. This legislation should be developed in liaison with the Ministry of Health. The legislation should define a process for registration (an SOP should be prepared) and the product standards required. These standards should use accepted international standards and might use the registration of products by other countries/areas as guidance on their quality and efficacy; for example –VICH, EU, USA or Australia.

Imports should be restricted to only registered veterinary medicines and biologicals; penalties should be imposed on any illegally imported products.

The legislation governing veterinary medicines and biologicals should also control their distribution and use (a further SOP should be prepared). Veterinary medicines and biologicals should be classified as ‘veterinary only use’ (only to be used under direct veterinary supervision), ‘restricted use’ (only to be sold through registered outlets, ‘farm-shops’, pharmacies, etc) and ‘general use’ (open sale). Importers and distribution outlets should be registered with the Ministry of Agriculture and Fisheries.

A public awareness programme advocating the prudent use of veterinary medicines and biologicals should be developed and implemented. Such a programme should advise on the proper storage and use of medicines and the need to comply with withholding periods.

In developing a programme to promote the effective and prudent use of veterinary medicines and biologicals the VS should consult with the Ministry of Health and the Ministry of Commerce, Industry and Environment and the National Directorate of Quarantine and Biosecurity.

### *II.1.D Other activities*

Brucellosis is present at high prevalence in cattle and buffalo in Timor-Leste and so is a threat to human health and reduces reproductive efficiency. It is proposed that a brucellosis control programme is developed and piloted in the next five years. Australia has shown interest in supporting brucellosis control and this support should be encouraged. This programme is further presented, developed and costed in the Animal Health Pillar.

## **II.2 Human resources**

The veterinary public health programme requires strong leadership with ongoing management of the operations. Initially there will be no veterinarians based in the districts and so the task of veterinary supervision will need to be undertaken centrally by the National Directorate of Veterinary Services. As additional veterinarians are recruited, the management of veterinary public health should be assigned to one centrally based veterinarian with field

supervision being provided by the District Veterinary Officers; it is expected that five district veterinarians will be recruited in the next five years with each officer responsible for two districts; the remaining three districts will be supervised directly from headquarters.

For implementation of the veterinary public health programmes it is proposed that all district veterinary para-professional staff support this activity along with their other field work including disease surveillance, disease control, animal identification and animal welfare. The National Directorate of Veterinary Services expects the combined number of district veterinary para-professional staff after five years to increase to 100; this is a large number but is justified by cross cutting tasks that will be undertaken and the national socialist policy of recruiting district and village based staff. For costing purposes one veterinary manager and 35 veterinary para-professional staff are included in the Veterinary Public Health Pillar to lead, manage and implement slaughterhouse and slaughter site registration, ante and post mortem inspections and develop a programme for improved control of veterinary medicines and biologicals. The balance of 65 veterinary para-professional staff is costed under the Animal Health Pillar. To support the central veterinarian one driver and one 'support staff' should be provided.

### **II.3 Physical resources**

To support delivery of veterinary public health additional physical resources will be required. The physical resources assigned to the Veterinary Public Health Pillar include the purchase of one 4WD vehicle for the managing central veterinarian and 15 motorbikes to support field operations. To enable staff to carry out their work, 37 mobile phones with cameras (one for each technical officer and one for the driver) and 16 sets of office equipment (computers and printers) should be provided. Staff should be provided with equipment required to carry out their role (such as examination and diagnosis, autopsy knife and axe, and animal holding), uniforms and protective clothing.

No provision is made for office accommodation as this is provided by the decentralised district budget.

### **II.4 Financial resources**

The total financial resources for this pillar are presented in Table 10.

The annual cost required to implement the proposed veterinary public health programme is estimated to be around USD 195,000. It covers transport and equipment for staff, staff salaries and travel costs (fuel).

Cross cutting costs such as Communication, Consultations, Legislation and Continuing Education are provided under the specific competency cards.

Exceptional costs are estimated at approximately USD 40,000 is recommended for capital investment in veterinary public health over the next five years. Budget for district staff and equipment, and the development of an integrated database with a server and computers is included under the Animal Health Pillar.

Table n°10 - Sub-Total for strengthening competencies for veterinary public health

<b>SUB-TOTAL VETERINARY PUBLIC HEALTH</b>						
<b>Resource and cost lines</b>	<b>Current Number</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>						
Buildings ( )						
<i>Maintenance cost per (m2)</i>		-	18	1		
<i>Renovation cost per (m2)</i>		-	200	15		
<i>Building cost per (m2)</i>		-	350	20		
Transport (Purchasing cost)						
<i>Motorbikes</i>		15	2 500	5	7 500	
<i>Cars</i>		-	45 000	10		
<i>4x4 vehicles</i>		1	48 000	10	4 800	24 000
<i>Other specific vehicle for Vet. Public Health*</i>						
<i>Other specific vehicle for Vet. Public Health*</i>						
Staff office equipment set		16	1 700	3	9 633	
Other specific office equipment set		-	600	3		
Other specific equipment						
<i>Other equipment for Vet. Public Health*</i>					1 480	
<i>Other equipment for Vet. Public Health*</i>					3 600	
<b>Sub-total Material investments</b>					<b>27 013</b>	<b>24 000</b>
<b>Non material investments</b>						
Training						
<i>Specialised training (person-months/5 years)</i>		12,0	1 450			17 400
<i>Continuing education (person-days/year)</i>		175,0	59		10 383	
<i>National expertise (days/5 years)</i>		-	240			
<i>International expertise (weeks/5 years)</i>		-	7 250			
<i>Special funds (/ 5 years) for ...</i>						
<b>Sub-total non material expenditure</b>					<b>10 383</b>	<b>17 400</b>
<b>Salaries</b>						
Veterinarians		1,0	12 000		12 000	
Other university degree		-	2 700			
Veterinary para-professionals		35,0	2 700		94 500	
Support staff		2,0	2 400		4 800	
<b>Sub-total Salaries</b>					<b>111 300</b>	
<b>Consumable resources</b>						
Administration			20%		22 260	
Travel allowances						
<i>staff within the country (person-days) / year</i>		60	40		2 400	
<i>rivers within the country (person-days) / year</i>		60	40		2 400	
<i>staff abroad (person-weeks) / year</i>		-	3 400			
Transport costs						
<i>Km or miles Motorbikes / year</i>		75 000	0,12		9 000	
<i>Km or miles cars / year</i>			0,24			
<i>Km or miles 4x4 vehicle / year</i>		9 000	0,36		3 240	
<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>						
<i>Other costs for Vet. Public Health*</i>					6 500	
<i>Other costs for Vet. Public Health*</i>						
<b>Sub-total Consumable resources</b>					<b>45 800</b>	
<b>Delegated activities</b>						
<b>Sub-total Delegated activities</b>						
<b>Total in</b>	<b>USD</b>				<b>194 497</b>	<b>41 400</b>

### III Strengthening competencies for animal health

The purpose of this section is to present the strategies and the proposed activities for strengthening competencies in animal health. This section includes the activities presented in the Critical Competency Cards II-5, II-6; II-7 and II-13. Links are also made with cross-cutting competencies from the other pillars including the Management of Veterinary Services, Trade, Veterinary Public Health, and Laboratory Services.

#### III.1 Strategy and activities

Timor-Leste has a high health status considering the number of major transboundary animal diseases that are present in the region; particularly the country is free of foot and mouth disease (FMD) and highly pathogenic avian influenza (HPAI). The country has control programmes against a number of major endemic diseases including haemorrhagic septicaemia (HS), classical swine fever (CSF) and Newcastle disease (ND). It also to be noted that rabies is considered the highest risk emergency disease as it is present on some neighbouring islands of Indonesia.

Key strategies to promote animal health are to improve the efficiency and effectiveness of the disease control programmes and to strengthen surveillance and emergency preparedness and response in case there is an incursion of an exotic animal disease.

The strategy for the VS to achieve the identified national priorities of promoting animal health is to target activities in the following areas:

- Strengthen passive and active surveillance.
- Enhance preparedness and response for animal health emergencies.
- Improve efficiency and effectiveness of the disease control programmes.
- Implement an animal welfare programme.

##### III.1.A Surveillance

The VS recognise the critical importance of developing a 'passive surveillance' programme for the early detection of disease outbreaks. Progress has been made with developing such a programme but a number of limitations remain which should be addressed as a matter of urgency.

The major weakness of the current passive surveillance programme is the absence of any veterinarians based in the districts; district based veterinary para-professionals have the responsibility to undertake the initial investigation and are supported when necessary by veterinarians from headquarters. This situation will improve as the ten veterinary students graduate and return to Timor-Leste over the next three years (expected 2016, 2017). The Government has committed to employing these graduates and placing them in the districts. In the framework of the PVS Gap Analysis mission, it was considered that 8 out of these 10 will return from their overseas studies (five will be placed in the districts and three will be working centrally). A review should be undertaken of the management and support of these young graduates who will need the support of their more experienced colleagues; the remuneration of these veterinarians should also be reviewed to ensure that they are able to commit completely to district-level veterinary work. (See also note on veterinary remunerations under I.2.B Estimation of resources.)

Pending the return of the additional veterinarians the existing system of district veterinary para-professionals, supported by headquarters veterinarians, should be continued and strengthened. Additional training of the veterinary para-professionals should be provided to improve their skills in first assessment, field investigation and syndromic surveillance, their ability to make a provisional diagnosis and to support



disease control programmes. International standards as declared by OIE require direct veterinary supervision of field investigations and diagnoses; Timor-Leste will not be able to meet these standards until field veterinarians are generally available.

There is some community participation and support for disease detection and reporting. Timor-Leste is developing the 'Animal Lovers Association', which is expected to support VS programme delivery at the village level; for example villagers are expected to assist in vaccination programmes under the supervision of the local veterinary para-professionals. Following establishment of these associations, regular consultations and engagement should take place.

The current list of 'notifiable' diseases should be reviewed and updated with clear case definitions to support the veterinary para-professionals and veterinarians who are carrying out the field investigations and for confirmatory testing at the National Veterinary Diagnostic Laboratory. The Animal Disease Response System should be further developed recognising that it is disease syndromes that trigger surveillance alerts and investigations; high risk diseases and priority endemic diseases should be defined as disease syndromes that can be identified by veterinary para-professionals. The syndromes of interest should also be used as a basis to promote public support and early reporting through industry and public communication campaigns.

The Animal Disease Response System database should be enhanced with the introduction of 'syndromes' and reduced use of free text fields to make analysis and reporting easier and more meaningful. Increased use should also be made of the Food Security Monitoring System database that also records livestock numbers, basic disease signs and the sale of animals. Currently data is entered into the Animal Disease Response System database from paper reports delivered to the National Directorate of Veterinary Services in Dili; as soon as possible this database should be developed to allow district level entry of data – this arrangement is already in place for the Food Security Monitoring System.

SOPs should be developed that define the reporting system ('chain of command') and the timelines required for the reporting of significant animal health events to the National Directorate of Veterinary Services.

There should be close liaison with the National Directorate of Livestock Services programmes and staff to develop synergies of service delivery to the field through the District Agriculture Department offices. Note that there should be clear differentiation of roles and monitoring of staff activities to ensure that multitasking does not compromise service delivery or the ability to act independently, that is to avoid any 'conflict of interest'.

Veterinary para-professionals and veterinarians should be appropriately equipped to provide biosecurity/biosafety for the producer and themselves and to allow collection of diagnostic samples.

All active surveillance programmes should be well structured with defined methodology, target populations, target disease/pathogen/immune response, sample size, diagnostic testing and design sensitivity. All surveillance activities should be well documented with clear analysis and reporting of findings. Consideration should be given as to what sampling methodology to undertake – random, risk based, sentinel, etc. Additional information may be drawn from working with the National Directorate of Quarantine and Biosecurity on likely high risk populations. This approach will allow the ongoing review of active surveillance, its efficiency and effectiveness and how it might need to be revised in future work.

Active surveillance programmes are required to monitor disease control programmes (HS, CSF, ND) to assess changes in disease prevalence (supported by passive



surveillance detections of incident disease) and to evaluate the efficacy of the vaccination programmes (pre and post vaccination monitoring).

Brucellosis of cattle and buffalo has been recognised as a priority disease and so cross sectional surveys will be required to validate the current understanding of the disease prevalence and determine the priority control activities (vaccination or test and slaughter).

Laboratory capacity may limit the undertaking of surveillance and should be reviewed. This issue is considered more fully under the laboratory pillar. In brief, to conduct effective passive surveillance an array of appropriate tests must be available to test for high risk disease incursions. For active surveillance there must be adequate laboratory capacity for the proposed programmes. Additional laboratory equipment and materials will need to be provided and staff trained as necessary.

Australia continues to support surveillance activities in Timor-Leste and this support is gratefully acknowledged. Timor-Leste should encourage surveillance support for diseases identified as its national priority. The VS should collaborate with the University of Timor-Leste to utilise their veterinary resources such as to undertake a technical review of surveillance programme design and development of the national notifiable disease list.

### *III.1.B Emergency preparedness and response*

The threat of emergency disease incursions into Timor-Leste will increase as trade in animal and animal products develops when the country becomes a member of ASEAN, with its policy of free movement of agricultural products. There are also increasing risks worldwide from emerging infectious diseases. To mitigate the risks from emergency animal diseases the strategy is to have a well prepared and practiced emergency response plans.

The strategy to strengthen Timor-Leste's capability emergency preparedness and response capability is to define and develop the following:

- The Director of National Directorate of Veterinary Services should take the lead in developing an emergency preparedness and response programme
- The remit of the national commission established for HPAI should be extended formally to cover all emergency animal diseases
- An 'Emergency Management System' (EMS) should be developed to organise, guide and direct emergency preparedness and response. The EMS should define the policies for emergency preparedness and response, the cross government roles and responsibilities and lines of reporting and coordination.
- Within the Ministry of Agriculture and Fisheries, the EMS should develop a response management framework – commonly this is based on an 'Incident Command System' which is a 'scaleable' approach to emergency response
- SOPs for the release of emergency funds should be developed in consultation with Ministry of Finance; sources of emergency equipment and materials should be identified
- Contingency plans should be developed for diseases identified as high risk – particularly those in the region such as FMD, HPAI and rabies
- Staff capabilities should be developed as required
- The VS should hold emergency response simulation exercise to test and further develop their preparedness and response systems.
- International agencies should be approached for support.

### *III.1.C Disease control*

Current disease control programmes are focused on the need to control three priority endemic diseases that threaten livestock production, food security and rural development in Timor-Leste – haemorrhagic septicaemia (HS), classical swine fever (CSF) and Newcastle disease (ND). Resource limitations have limited these programmes with concerns over the vaccine cold chain, low rates of vaccine coverage and insufficient programme monitoring. In addition it is proposed to develop a control programme for brucellosis in cattle and buffalo – controlling brucellosis will reduce the threat to human health and promote reproduction rates. Whilst conducting these disease control programmes, the VS will support animal production by providing advice and treatment for the control of endo- and ecto-parasites

The immediate strategy to strengthen the existing animal disease control programmes is to continue with all the existing priority programmes but to undertake critical evaluations of the programme activities, costs/benefits, impact and sustainability. An international consultant should be recruited to support this task.

The enhanced Animal Disease Response System should include fields to record disease control activities such as vaccinations, testing and treatments. The proposed brucellosis control programme should have clearly defined objectives and a detailed, costed operational plan; it is understood that Australia may support brucellosis control and this should be encouraged. Following the review of the existing and proposed programmes the available resources should be allocated to achieve the greatest impact and maximum sustainability. The VS should prepare cost-benefit analyses to advocate for increased resources from the ministers and senior managers of the Ministry of Agriculture and Fisheries and the Ministry of Finance.

In general the VS should:

- Clearly define each disease control programme.
- Develop detailed work plans with budgets, operational, monitoring and evaluation activities and provide the necessary logistics.
- Work with villages and communities to ensure their awareness and support of the control programmes.
- Review the impact of the disease control programmes and revise to address the programme limitations.

To support the delivery of disease control programmes, the objective is that all districts should have DVOs so that adequate veterinary supervision can be provided. In the next five years, it is expected that five district veterinary officers will be appointed. Staff should be trained in control programme principles, management, implementation and evaluation.

A public awareness campaign should be implemented to promote understanding and compliance of livestock owners and communities with the requirements of relevant disease control programmes.

### *III.1.D Animal welfare*

In addition to the basic principle of avoiding harm to animals, animal welfare is increasingly recognised as a critical limitation in supplying high value export markets. A veterinarian at the National Directorate of Veterinary Services should be assigned the role of leading the animal welfare programme; field activities will be provided by the District Veterinary Officers and veterinary para-professionals.

The VS should implement the existing national decree law on animal welfare. Consultations should be undertaken with industry stakeholders to alert them to the new legislation, to discuss any issues of concern and of the compliance required. A

programme to promote public awareness and compliance should be implemented. The VS should work with other stakeholders such as the 'Animal Lovers Association' to promote animal welfare.

VS staff should be trained in the welfare legislation and a programme of enforcement developed, initially targeting high risk activities such as animal transport and slaughter.

### **III.2 Human resources**

The current delivery of animal health programmes is severely limited by insufficient staff.

Most acutely the major human resource issue is the absence of any veterinarians in the districts – *ad hoc* support is provided by the veterinarians from the central National Directorate of Veterinary Services but this supervision is inadequate. It is proposed to recruit five of the returning ten sponsored, international veterinary graduates (due 2015 and 2016) as District Veterinary Officers. Each District Veterinary Officer will be responsible for two districts; the remaining three districts, including Dili, will be managed directly by the National Directorate of Veterinary Services. Centrally there will be two veterinarians, one as the overall manager for disease surveillance and control programmes, the other as a supporting officer. An international consultant will be required to review and revise disease surveillance and control programmes (10 weeks).

In addition, veterinary para-professionals graduates from the University of Timor-Leste should be recruited to support the delivery of field services in the districts. The National Directorate of Veterinary Services proposes to recruit 100 veterinary para-professionals over the next five years – of which 65 are costed here (and 35 against the Veterinary Public Health Pillar). A cost estimate is provided for 66 support staff - 60 'Livestock Technicians'<sup>3</sup> and six drivers. These 'livestock technicians' will support the delivery of disease surveillance and animal disease control programmes at the village level. It is expected that over time the village animal health service will be provided by the community-based groups, the 'Animal Lovers Association'. This village level organisation is intended to provide local leadership and understanding of the need for livestock development, veterinary public health and animal health. The Animal Lovers Associations are expected to work with the VS to support and deliver animal health services (surveillance and control) in the villages. Though visionary it is not clear how easy it will be to establish these organisations nationally. These local groups are expected to develop, over time, to provide field level reporting of disease outbreaks and also to implement field level disease control, with reporting to and supervision by the DVOs.

The animal health programme should be managed by one veterinarian in the National Directorate of Veterinary Services supported by seven veterinary para-professionals and one support staff.

### **III.3 Physical resources**

The physical resources of the VS are inadequate to deliver an effective and efficient animal health service with cost-effective programmes. Key investments are required to improve office buildings, provide cold chains for vaccine delivery, transport and general equipment. It is recommended that:

- Five of the existing nine 'Animal Health Service Centres' are upgraded and 21 new centres built for a total of 30
- 5 4WD vehicles for the five District Veterinary Officers
- 65 motorbikes are provided for staff
- A central cold store is built – it is recommended that this cold store is collocated with

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<sup>3</sup>Livestock technicians have minimal training at local colleges

- the National Veterinary Diagnostic Laboratory as this has back up power
- General staff equipment is provided – 50 'office sets' of computers and printers and 70 mobile phones with cameras
  - Additional equipment required by technical staff to deliver the animal health programmes including vaccination guns, protective clothing, and veterinary equipment to undertake clinical examination, autopsy and sample collection.

### **III.4 Financial resources**

The total financial resources for the Animal Health pillar are presented in Table 12.

The annual operating cost is estimated at USD1,020,000. This will address the current major factors that limit service delivery - insufficient staff and inadequate operating funds. Staff salaries will cost an estimated USD 420,000.

Consumable resources are estimated at USD 440,000 of which USD295,000 is provided for the cost of vaccine, USD 55,000 for fuel and transport costs and USD 4,200 for general equipment; USD 80,000 is a set percentage of salaries that covers general administration and service costs.

**Table n°11 - Estimate of vaccine costs by disease control programme**

<b>Disease control programme</b>	<b>Number of doses</b>	<b>Cost (USD)</b>	<b>Total (USD)</b>
Haemorrhagic septicaemia	230,000	0.25	57,500
Classical swine fever	300,000	0.25	75,000
Newcastle disease	760,000	0.07	109,000

Capital items are estimated at USD 960,000, for the five years and include the upgrading or the building of Animal Health Service Centres and the purchase of five new 4WD vehicles.

Ongoing education and staff development under the Animal Health pillar is provided under the specific Critical Competency for Continuing Education. Additional postgraduate training is also included under Continuing Education.

Table n°12 - 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
<b>Material investments</b>						
Buildings ( )		3 702				
<i>Maintenance cost per (m2)</i>		312	18	1	5 616	
<i>Renovation cost per (m2)</i>		390	200	15	5 200	52 000
<i>Building cost per (m2)</i>		3 000	350	20	52 500	787 500
Transport (Purchasing cost)						
<i>Motorbikes</i>		65	2 500	5	32 500	
<i>Cars</i>		-	45 000	10		
<i>4x4 vehicles</i>		5	48 000	10	24 000	120 000
<i>Other specific vehicles for Animal Health*</i>					14 300	
<i>Other specific vehicles for Animal Health*</i>					700	
Staff office equipment set		50	1 700	3	28 333	
Other specific office equipment set		-	600	3		
Other specific equipment						
<i>Other equipment for Animal Health*</i>					2 800	
<i>Other equipment for Animal Health*</i>						
<b>Sub-total Material investments</b>					<b>165 949</b>	<b>959 500</b>
<b>Non material investments</b>						
Training						
<i>Specialised training (person-months/5 years)</i>		-	1 450			
<i>Continuing education (person-days/year)</i>		-	59			
<i>National expertise (days/5 years)</i>		-	240			
<i>International expertise (weeks/5 years)</i>		10,0	7 250			72 500
<i>Special funds (/ 5 years) for ...</i>						
<b>Sub-total non material expenditure</b>						<b>72 500</b>
<b>Salaries</b>						
Veterinarians		7,0	12 000		84 000	
Other university degree		-	2 700			
Veterinary para-professionals		65,0	2 700		175 500	
Support staff		66,0	2 400		158 400	
<b>Sub-total Salaries</b>					<b>417 900</b>	
<b>Consumable resources</b>						
Administration			20%		83 580	
Travel allowances						
<i>staff within the country (person-days) / year</i>		-	40			
<i>rivers within the country (person-days) / year</i>		-	40			
<i>staff abroad (person-weeks) / year</i>		-	3 400			
Transport costs						
<i>Km or miles Motorbikes / year</i>		325 000	0,12		39 000	
<i>Km or miles cars / year</i>			0,24			
<i>Km or miles 4x4 vehicle / year</i>		45 000	0,36		16 200	
<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>					295 000	
<i>Other costs for Animal Health*</i>					5 200	
<i>Other costs for Animal Health*</i>						
<b>Sub-total Consumable resources</b>					<b>438 980</b>	
<b>Delegated activities</b>						
<b>Sub-total Delegated activities</b>						
<b>Total in</b>	<b>USD</b>				<b>1 022 829</b>	<b>1 032 000</b>



## **IV Strengthening competencies for veterinary laboratory diagnostic**

The purpose of this section is to present the strategies and the proposed activities for strengthening veterinary laboratories. This section includes the activities presented in the Critical Competency Cards II-1 and II-2. Links are also made with cross-cutting competencies from the other pillars including the Management of Veterinary Services, Trade, Animal Health, and Veterinary Public Health.

The role of the Veterinary Laboratory Services is to support livestock production, animal health and food safety by delivering veterinary diagnostic procedures. The services offered should be updated and expanded as technology and expectations change.

### **IV.1 Strategy and activities**

There is a need for the National Veterinary Diagnostic Laboratory to increase their capacity to support Timor-Leste's animal health and livestock production programmes. The National Veterinary Diagnostic Laboratory should play a major role in the monitoring of the major disease control programmes – HS, CSF and ND.

The National Veterinary Diagnostic Laboratory is currently under-utilised and under-resourced. On average very few samples are being tested as there is a lack of funding to purchase test kits or reagents and few samples are being submitted.

A formal commitment should be made between the National Directorate of Quarantine and Biosecurity and National Veterinary Diagnostic Laboratory so that the laboratory supports quarantine requirements. National Directorate of Quarantine and Biosecurity should not develop its own laboratory – the one national laboratory should be well supported and used by all aspects of the VS.

The National Veterinary Diagnostic Laboratory is adequately equipped for basic testing (no virology, no molecular biology) and has an excessive number of technical staff for the number of tests being conducted. To achieve the desired level of advancement (Level 2), the National Veterinary Diagnostic Laboratory is required to identify and record major zoonoses and diseases of national economic importance (such as HS, CSF, ND and brucellosis). The strategy for the VS to achieve the identified priorities of strengthening laboratory capacity is to target activities in the following key areas:

- Secure sufficient funding to cover maintenance and operating costs, including providing transport to provide training and improve sample collection.
- Strengthen/implement laboratory quality assurance.
- Develop staff skills and competence.

#### **IV.1.A Increase funding and resources**

The National Veterinary Diagnostic Laboratory should ensure sufficient annual funding from the VS. The allocated funds should be enough to cover maintenance and operating costs including the necessary reagents and test kits. In disease investigations, routine differential diagnosis should be undertaken using skills in gross pathology, parasitology, bacteriology and serology; the recently acquired fluorescent microscope should be used to test any suspect rabies cases using the Fluorescent Antibody Test (FAT). Funding for outsourcing samples to regional laboratories for virology and molecular biology tests should also be allocated.

To achieve the increase in funding required a detailed costing for the laboratory operations should be prepared and used to advocate for the necessary funds to National Directorate of Veterinary Services, National Directorate of Livestock Services and National Directorate of Quarantine and Biosecurity and the senior



managers of Ministry of Agriculture and Fisheries. Funds should be provided for laboratory maintenance including equipment calibration, the expected number of tests that will be conducted (for disease diagnostic testing, the monitoring of the disease control programmes, food safety testing and any tests required by NDL and National Directorate of Quarantine and Biosecurity), staff training and continuing education.

#### *IV.1.B Develop quality assurance*

Formal quality assurance requires the development of a 'Quality Assurance Manual', which will guide the operation of the laboratory and the conduct and reporting of tests. Each laboratory activity will need to be documented using a system of endorsed SOPs – these will need to cover laboratory operations (maintenance, calibration, cleaning, waste disposal), sample management (reception, handling, documentation), testing (test methodology, use of positive and negative controls, proficiency testing) and reporting (timeliness, content, recipients).

A programme for the maintenance, replacement, and calibration of laboratory equipment should be developed and implemented/reviewed annually. Laboratory quality assurance for testing should be strengthened in collaboration with Australia and other regional laboratories. Proficiency Tests for key diseases and tests should be performed regularly.

The implementation of a quality assurance system also implies the development of staff skills and competencies. An analysis should be undertaken to identify the need for technical training. Such a review should consider the type of competence required, assess staff skills against these and make recommendations on the staff training required. Options for the training of laboratory staff should be costed and developed into a work plan for staff development. The costs of training should be consolidated into the overall laboratory budget, as above.

#### **IV.2 Human resources**

Human resources included in this pillar are the staff of the National Veterinary Diagnostic Laboratory. Current staff total ten without veterinarians, seven technical staff and two support staff. This number is considered excessive for the amount of testing that will be required; it is suggested that three of the technical staff are allocated to other activities, leaving a total staff of seven (one veterinarian and four veterinary para-professionals). There is a need to develop staff skills by providing training in laboratory quality assurance, diagnostic testing, case management and the collation and reporting of data.

#### **IV.3 Physical resources**

The National Veterinary Diagnostic Laboratory facility is well constructed and adequate to support the proposed animal and veterinary public health programmes. No expansion of the laboratory is proposed.

The facility is rather cramped and would benefit from a 'spring clean' with the removal/storage of unnecessary equipment and assorted clutter.

A formal commitment/Memorandum of Understanding should be developed with National Directorate of Quarantine and Biosecurity so that they also support and use National Veterinary Diagnostic Laboratory. There is no good rationale to establish a quarantine laboratory.

The estimated cost covers maintenance of the laboratory facility and its equipment including calibration and routine replacement of HEPA filters etc.

#### IV.4 Financial resources

The total financial resources for the Laboratory pillar are presented in Table 14.

The annual cost is estimated at USD 138,000. This figures covers salaries of USD 27,000 for staff of the National Veterinary Diagnostic Laboratory, consumables of USD 90,000 and maintenance/minor equipment of USD 20,000.

This cost estimate will provide the funding for the laboratory tests needed to implement the strategies and activities identified in this PVS Gap Analysis for the next five years.

Laboratories require considerable maintenance. The annual cost for equipment maintenance is estimated at USD 10,000 with a further USD 10,000 for equipment calibration. Maintaining the laboratory building is estimated to cost USD 2,700 annually. In addition funding required for capital items is estimated to require USD 10,000 – to purchase replacement equipment or to upgrade existing equipment.

The operating costs for diagnostic testing were calculated based on estimated costs per test (as estimated by the Director of the National Veterinary Diagnostic Laboratory) and the number of diagnostic tests estimated for the official programmes of the first three pillars of the PVS Gap Analysis (Trade, Veterinary Public Health and Animal Health). The total annual cost of official programme diagnostic testing is estimated at USD 60,000.

**Table n°13 - Estimate of laboratory tests required by programme**

Type of analyses	Number	Unit cost	Programmes						Total cost (USD)
			HS	CSF	ND	Brucellosis	Food safety	Surveillance	
Agglutination or haemagglutination	1300	5			1300				6,500
Complement fixation	1300	5				1300			6,500
ELISA and ELISA-based assays	2600	10	1300	1300					26,000
Post mortem: large animals	25	50						25	1,250
Post mortem: medium animals	65	25						65	1,625
Post mortem: poultry	130	10						130	1,300
Direct microscopic examination	1300	5						1300	6,500
Blood test	260	5						260	1,300
Culture/isolation	260	10					260		2,600
Standard 5 bacteria	650	10					650		6,500
<b>Totals</b>	<b>7890</b>	<b>~</b>	<b>1300</b>	<b>1300</b>	<b>1300</b>	<b>1300</b>	<b>910</b>	<b>1780</b>	<b>60,075</b>

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
<b>Material investments</b>						
Buildings ( )		150				
Maintenance cost per (m2)		150	18	1	2 700	
Renovation cost per (m2)		-	200	15		
Building cost per (m2)		-	350	20		
Transport (Purchasing cost)						
Motorbikes		1	2 500	5	500	
Cars		-	45 000	10		
4x4 vehicles		1	48 000	10	4 800	24 000
Other specific vehicles for Vet. Laboratories*						
Other specific vehicles for Vet. Laboratories*						
Staff office equipment set		2	1 700	3	1 133	
Other specific office equipment set		-	600	3		
Other specific equipment						
Other equipment for Vet. Laboratories*					10 000	
Other equipment for Vet. Laboratories*						
<b>Sub-total Material investments</b>					<b>19 133</b>	<b>24 000</b>
<b>Non material investments</b>						
Training						
Specialised training (person-months/5 years)		-	1 450			
Continuing education (person-days/year)		25,0	59		1 483	
National expertise (days/5 years)		-	240			
International expertise (weeks/5 years)		-	7 250			
Special funds (/ 5 years) for ...						
<b>Sub-total non material expenditure</b>					<b>1 483</b>	
<b>Salaries</b>						
Veterinarians	1,0	1,0	12 000		12 000	
Other university degree		-	2 700			
Veterinary para-professionals	7,0	4,0	2 700		10 800	
Support staff	2,0	2,0	2 400		4 800	
<b>Sub-total Salaries</b>					<b>27 600</b>	
<b>Consumable resources</b>						
Administration			20%		5 520	
Travel allowances						
staff within the country (person-days) / year		-	40			
drivers within the country (person-days) / year		-	40			
staff abroad (person-weeks) / year		-	3 400			
Transport costs						
Km or miles Motorbikes / year		5 000	0,12		600	
Km or miles cars / year		-	0,24			
Km or miles 4x4 vehicle / year		9 000	0,36		3 240	
Other transport fees*						
Other transport fees*						
Specific costs						
Targeted specific communication		-				
Consultation (number of 1 day meetings)		-				
Kits / reagents / vaccines		60 000			60 000	
Other costs for Vet. Laboratories*					10 000	
Other costs for Vet. Laboratories*					10 000	
<b>Sub-total Consumable resources</b>					<b>89 360</b>	
<b>Delegated activities</b>						
<b>Sub-total Delegated activities</b>						
<b>Total in</b>	<b>USD</b>				<b>137 577</b>	<b>24 000</b>

## V Strengthening competencies for general management and regulatory services

The purpose of this section is to present the strategies and the proposed activities for strengthening general management, operations and regulatory support of the Veterinary Services. This section includes the activities presented in 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. Links are also made with cross-cutting competencies from the other pillars including the Trade, Animal Health, Veterinary Public Health, and Laboratory Services.

### V.1 General organisation of the Veterinary Services

The organisation of the Ministry of Agriculture and Fisheries is being restructured (September 2014) under the approved “Organic Law”. The revised organisation will divide the current National Directorate of Livestock and Veterinary Services into a National Directorate of Livestock Services and a National Director of Veterinary Services under the management of Directorate General of Livestock and Agriculture, within the Secretary of State for Livestock.

Timor-Leste VS are expecting to increase capabilities including their staffing, operations and infrastructure at the district and sub-district levels. Over the next five years, it is expected that an additional 21 Animal Health Services Centres will be established at the district level and staff increased with the recruitment of five District Veterinary Officers and 100 veterinary para-professionals. District staff will be dedicated to providing field veterinary services including animal disease surveillance, disease control, animal identification, registration of slaughter sites, food safety operations and animal welfare under the direct management of the District Agriculture Directorates. In time, each district should have a District Veterinary Officer supported by an appropriate number of veterinary para-professionals (up to five, depending on the geography and livestock economy of the district); the Animal Health Services Centres will be staffed by veterinary para-professionals in the foreseeable future.

The delivery of field services is decentralised and managed by the District Agriculture Directorates which work directly under the Minister of Agriculture and Fisheries; technical guidance is provided by the National Directorate of Livestock and Veterinary Services of the Directorate General of Livestock and Agriculture. The chain of command between the central and district directorates needs to be clearly defined and documented. SOPs with templates should be developed for the timely reporting of animal health activities and events.

#### V.1.A Technical independence

There is no evidence of political interference in VS activities. The approved ‘Organic Law’ has provided some supporting policies with a commitment to improve funding of the VS. However, there are a number of limitations in the technical independence of the VS in Timor-Leste.

A major concern is the insufficient number of veterinarians working in the VS with, consequentially, many activities being undertaken by veterinary para-professionals, livestock technicians or extension workers with limited or no veterinary supervision.

Technical independence is further weakened by the inadequate remuneration for VS staff with the resulting loss, or risk of loss, of veterinary staff to the National University of Timor-Leste. Low remuneration also risks VS staff dedicating significant time and effort to working in private veterinary practice or other businesses. It is understood that the university is able to pay a salary three times higher than the National Directorate of Veterinary Services. This imbalance in remuneration should be urgently addressed by the Public Service Commission.

Timor-Leste VS has limited ability to make decisions based on scientific evidence. Investigation of animal diseases is diagnosed mostly by veterinary para-professionals based on clinical signs with no further investigation or laboratory confirmation. National animal health programmes including passive and active surveillance should be strengthened to produce evidence-based data for policy decision, programme development and international reporting.

Resources should be allocated to the purchase of laboratory kits and reagents so that the National Veterinary Diagnostic Laboratory can undertake the required analyses and relay results to the VS. This data should support the review and improvement of VS programmes based on scientific evidence.

To reduce the risk of technical interference and to maintain the integrity of the VS it is recommended that a clearly defined procedure for documenting the decision making processes and final decisions is developed – with appropriate archiving. This will require not only the development of documented, transparent sharing of information, but also require that staff is appropriately trained to make technically justifiable and transparent decisions. A coherent, science based documentation of VS policy based on international best practises (e.g. OIE Animal Codes and Manuals, ASEAN, *Codex Alimentarius*) should be developed and used to gain political support and legitimise the technical and scientific opinion of the VS.

#### V.1.B Coordination

The coordination of VS is critical to effective delivery of livestock development, veterinary public health and animal health programmes. Currently the coordination of the VS across the key directorates within the Ministry of Agriculture and Fisheries is not clear. A well-defined organisation with clear roles and responsibilities should be developed and documented. The organisational structure should be approved by the Minister of Agriculture and Fisheries to ensure that it is applied to the decentralised delivery of field services under the technical guidance of the National Directorate of Livestock Services and with line management by the District Directors.

The National Directorate of Quarantine and Biosecurity has responsibility for the risk management of all imported goods including live animals and animal products. Closer liaison should be established between the National Directorate of Quarantine and Biosecurity and the National Directorate of Veterinary Services. Regular meetings should be held to identify risks and to coordinate risk mitigation activities. A process should also be established for *ad hoc* meetings to address threats in real time, such as a major disease outbreak in Indonesia. The National Directorate of Quarantine and Biosecurity should work with the National Director of Veterinary Services to establish formally the provision of laboratory diagnostic services by the National Veterinary Diagnostic Laboratory.

The coordination and use of data on food security, livestock production and animal health within the Minister of Agriculture and Fisheries is complex as the 'Food Security Monitoring System' is managed by the National Directorate of Policy and Planning, whereas the 'Animal Disease Response System' is managed by the National Directorate of Veterinary Services. These two databases are complimentary and should both be further developed to meet the needs of their respective directorates; development should also allow routine merging of data for further analysis and reporting.

Current veterinary supervision of field activities is inadequate and as the number of field staff increases this problem will become more severe. The new District Veterinary Officers must take the lead in providing veterinary supervision for their designated areas with the support from the central National Directorate of Veterinary Services. The National Directorate of Veterinary Services should direct national

policy and provide technical guidance. Regular meetings should be held between central and district staff to coordinate and review the design and delivery of animal health programmes.

There is currently little formal coordination with other ministries. Critical stakeholders in the VS and its programme of delivering livestock development, improved veterinary public health and animal health are the Ministry of Commerce, Industry and Environment, Ministry of Health, Ministry of Finance and Ministry of Foreign Affairs. A number of formal committees should be established to develop coordination and ensure effective programme delivery. Key committees will need to address food safety (Health and Commerce, Industry and Environment), export opportunities (Commerce, Industry and Environment and Foreign Affairs), emergency preparedness and response (Finance and whole of government).

### *V.1.C Veterinary practice organisation and policy*

There is currently no Veterinary Statutory Body in Timor-Leste for the registration of veterinarians or veterinary para-professionals, including government and university veterinarians. Currently there are two private practices in the country.

The proposed Timor-Leste Veterinary Association will provide a point of registration for veterinarians. Legislation/regulations need to be drafted and enacted to establish the Timor-Leste Veterinary Association. Initially the Timor-Leste Veterinary Association should be applied to all veterinarians in the country; it is not expected that disciplinary measures will be introduced within the next five years but this authority should be part of the legislation that is being prepared.

With the small number of veterinarians in the country it is unrealistic to have a fully autonomous Veterinary Statutory Body and so the Timor-Leste Veterinary Association will be established and supported by the National Directorate of Veterinary Services. Nevertheless the independence and integrity of the Timor-Leste Veterinary Association should be maintained by appointing veterinarians from outside the National Directorate of Veterinary Services to a governing board and the formal recording of meeting minutes and policies.

Timor-Leste already has a relatively large number of veterinary para-professionals and this will increase further in the next five years. Legislation for the Timor-Leste Veterinary Association should also include the registration of veterinary para-professionals.

## **V.2 Cross-cutting competencies of the VS**

The VS of Timor-Leste have some well qualified professional staff but their numbers are inadequate. This results in insufficient veterinary supervision of programme design, implementation, monitoring and review. The management of efficient and effective programme delivery is compromised by the inadequate number of veterinarians.

There is a critical need for the VS to strengthen their core competencies to deliver more effectively their range of programmes and operations. The strategies to develop and maintain this core, cross-cutting competencies are presented below.

### *V.2.A Qualification of VS staff*

There is no veterinary faculty in Timor-Leste. Veterinarians have been trained in veterinary schools abroad (Indonesia, Portugal, Brazil, etc.). Only three of the 11 veterinarians in Timor-Leste have completed postgraduate training (one PhD and two Masters degrees).

There are currently seven veterinarians working for the Ministry of Agriculture and Fisheries and five veterinarians employed at the National University of Timor-Leste.



The government is increasing the number of veterinarians in the country by sponsoring the education of ten veterinary students overseas (five in Portugal, two in the Philippines, two in Indonesia and one in Brazil). After completing their studies, these graduates are bonded to work for the Timor-Leste government. It is strongly recommended that these graduates are recruited by the Ministry of Agriculture and Fisheries (at both central and district levels) to improve delivery of the VS programmes and to supervise veterinary para-professional staff. The scholarship system should be continued until a sufficient number of veterinarians are working within Ministry of Agriculture and Fisheries (minimum of 8 veterinarians) – note that no cost estimate is provided as scholarships are provided under the Ministry of Education.

Currently there is no process to review the competencies of veterinarians in Timor-Leste but this will change when the Timor-Leste Veterinary Association is established as a VSB. International reference documents on minimum competencies should be considered when developing a registration process for veterinarians and veterinary para-professionals; such documents include the *OIE Recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality*<sup>4</sup> and the *OIE Guidelines on Veterinary Education Core Curriculum*<sup>5</sup>.

The VS staff principally conduct border inspection, disease surveillance and control. There is a lack of specialist knowledge in critical fields such as risk analysis, veterinary public health, animal welfare and laboratory diagnostics. The VS should conduct an assessment of gaps in competencies and staff selected for the necessary specialised training. Consideration should be given to short and medium courses that are available on-line.

The National University of Timor-Leste has an agricultural faculty which provides an undergraduate course in animal health and a diploma in agriculture and livestock. Currently, an average of 20 veterinary para-professionals graduate annually, with numbers expected to increase in line with national policies and objectives. The curricula of veterinary para-professionals is reviewed by the National University of Timor-Leste in collaboration with the VS. This process should continue and it is recommended that a standard curriculum be developed. The future Timor-Leste Veterinary Association should be extended to regulate veterinary para-professionals.

Current veterinary para-professional staff has varying levels of qualification and training. The competencies of the veterinary para-professionals should be reviewed so that the new and ongoing VS programmes can be effectively delivered. Key skills are required in communication and community engagement, training in disease surveillance and the delivery of food safety and disease control programmes. The existing livestock technicians should be encouraged to become veterinary para-professionals.

A programme to provide continuing education to all VS staff (in-house training, access to online resources, journals, etc.) should be developed and implemented; opportunities for collaboration with the National University of Timor-Leste should be explored.

### V.2.B Management of operation and resources

The VS have a strong vision and commitment for the future. There is an immediate need to improve the management of operations and resources to increase the impact and efficiency of the VS and the delivery of its programmes. It is recommended that

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<sup>4</sup>[http://www.oie.int/fileadmin/Home/eng/Support\\_to\\_OIE\\_Members/Vet\\_Edu\\_AHG/DAY\\_1/DAYONE-B-ang-C.pdf](http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/Vet_Edu_AHG/DAY_1/DAYONE-B-ang-C.pdf)

<sup>5</sup>[http://www.oie.int/Veterinary\\_Education\\_Core\\_Curriculum.pdf](http://www.oie.int/Veterinary_Education_Core_Curriculum.pdf)



the National Directorate of Veterinary Services established a review team – to be led by a veterinarian and with the support of a management consultant, to identify key programmes, their delivery, effectiveness, impact and management. To support the implementation of VS programmes, clear documented plans should always be prepared and supported by technical guidelines and SOPs with work plans to guide operations and manage resources. A system for routinely reporting, record keeping, and reviewing programme delivery and revising SOPs should be developed and implemented for every programme.

The establishment of an integrated database system will facilitate the management of information between central and district levels.

The Ministry of Agriculture and Fisheries prepares an annual report including information on VS programmes and operations. There is currently no clear document on the organisation and management of VS human and physical resources. A system to record operational activities and equipment should be developed and routinely updated – a graduate will be recruited to develop the management system.

### *V.2.C Communication*

The VS develop and distribute extension materials to inform farmers and other interested parties of their ongoing activities.

Communication with producers, industry and other stakeholders are key to ensure increased awareness and compliance with VS programmes. VS communication should be improved by establishing an official contact point for communication, a ‘communication officer’; a job description should be prepared and appropriate training should be provided.

The communication officer should identify the key messages, target audience and media to be used (community radio, posters, brochures, etc) and develop a communication strategy. The VS communication officer will be a veterinary para-profession, working under veterinary supervision. The communications officer should work with the Ministry of Agriculture and Fisheries communication office as well as with other agencies to develop common programmes and synergies.

Funding should be provided to develop and maintain a VS website and to design and print posters and other extension materials. An annual VS report should also be published and distributed to raise awareness of the VS and its programmes.

### *V.2.D Consultation with interested parties and joint programme*

The VS should develop and maintain formal consultations with key stakeholders. The VS should first identify the main stakeholders and then establish a point of contact for each stakeholder/ programme. A formal meeting schedule should be developed and meetings minutes should be recorded and archived.

A joint programme between the VS and producers within the ‘Special Economic Areas’ was mentioned during the PVS Gap Analysis mission and will require a formal consultation process, which should also involve other government agencies. (Note that two ‘Special Economic Zones’ have been declared, one in Oecusse and one in Covalima. These zones are to have special development status with government support for the development of industries including livestock production)

### *V.2.E Official representation*

The VS participates in regional trainings/meetings when paid by third parties (OIE, FAO, USAID, etc). The VS staff do not currently have the funding to participate in regional and international meetings that require self-funding.

The VS should develop an annual meeting travel schedule, including participation at the General Session of the World Assembly of OIE National Delegates, OIE Regional Conference for Asia, the Far East and Oceania as well as meetings of the ASEAN Animal Health Working Group; this would support increase international recognition of Timor-Leste.

The VS should also participate in the international standard setting process and establish linkages with other VS in the region. Budget has been provided for three weeks of international travel annually.

### *V.2.F Legislation*

The VS of Timor-Leste have made significant progress in developing legislation since the PVS Evaluation mission in 2011. Four ministerial decree laws have been enacted relating covering public health in slaughterhouses, animal identification and movement control, restrictions on animal movements in urban areas, and sanitary hygiene during transport and selling of animals and animal by-products. Notwithstanding this excellent progress further legislation is required.

The draft Animal Health legislation was prepared sometime ago and now needs to be updated, revised and finalised. This legislation should also link with the need to deliver improved veterinary public health that is not covered under the Food Safety legislation. Budget is provided for one national expert to work in coordination with the VS to finalise this legislation.

Legislation is also required to establish the Timor-Leste Veterinary Association and to provide the basis for strengthened control of veterinary medicines and biologicals, animal feed safety and the authority to develop compartmentalisation.

The existing legislation on quarantine and sanitary control of imported and exported goods should be amended and regulations developed stipulating disciplinary measures for non-compliance.

A plan with timelines for the activities and approvals necessary for the development of new legislation should be prepared by the VS to ensure that necessary tasks are completed without undue delays. In preparing draft legislation, consultation will be required with all stakeholders, and once drafted, further public reviews will be required.

A socialisation programme should be implemented to promote public awareness of VS legislation and the need for compliance. Following the awareness programme enforcement activities should be increased to ensure compliance.

## **V.3 Human resources**

This pillar includes the central VS staff, that is all the veterinary and associated animal health staff of the National Directorate of Veterinary Services. These staff are responsible for developing national animal health and veterinary service policies and for the design, management and implementation of animal health and veterinary public health programmes across the country. The human resources required to provide field animal health services, quarantine and border control, veterinary public health activities and laboratory diagnostic testing are included in the specific pillars (Trade, Veterinary Public Health, Animal Health and Laboratories).

The present number of staff is inadequate for the National Directorate of Veterinary Services – there is an imperative need to increase the number of veterinarians to develop policies, design and implement programmes. To achieve the proposed VS development and to deliver the proposed animal health and veterinary public health programmes, it is recommended that the National Directorate of Veterinary Services be strengthened with staffing as indicated

below. The cost estimate for the human resources of the Management Pillar covers 2.5 veterinarians, 11.5 veterinary para-professionals and five support staff.

**Table n°15 - Proposed staff for the National Directorate of Veterinary Services**

	Veterinarians	Veterinary para-professionals	Support staff
Management	2.5	1.5	3
Animal Health	2	7	1
Veterinary Public Health	1	3	1
<b>Total</b>	<b>5.5</b>	<b>11.5</b>	<b>5</b>

One veterinarian will be the overall manager of the VS, coordinate with other government agencies, and be the designated CVO and OIE delegate who in addition to managing the delivery of the VS in Timor-Leste will engage and lead with international agencies and partners such as OIE, FAO, ASEAN and international donors. Three of the veterinarians will be required to manage the main service delivery areas - animal health programmes and veterinary public health programmes (costed under the Veterinary Public Health and Animal Health Pillars). One veterinarian will lead the continuing education programme, and 0.5 FTE veterinarian will lead the development of community programmes, including the 'Animal Lovers Association'. The veterinarians will be supported by veterinary para-professionals as indicated in the competency cards and cost estimates.

#### **V.4 Physical resources**

The general infrastructure of the National Directorate of Veterinary Services is inadequate for efficient management and delivery of the VS programmes. Office space is limited and maintenance is overdue. The building has poor access with parking restricted by the retention of many broken down vehicles. The Ministry of Agriculture and Fisheries has received approval to develop a new Ministerial building that will house all its operations, including the VS – this building is due for completion by the end of 2016; therefore no exceptional costs are provided for any rebuilding or any major refurbishments.

With increased staffing, there is a need to increase the number of vehicles. It is proposed that an additional 4WD vehicle and two motorbikes are purchased.

Office equipment should be provided and updated regularly to allow staff to perform their duties. It is estimated that 15 staff will require 'office equipment sets' (desk, office chair, telephone, computer and standard peripherals).

#### **V.5 Financial resources**

The total financial resources for the Management pillar are presented in Table 16.

This pillar includes resources for administrative and management activities (including management of technical programmes) conducted at National Directorate of Veterinary Services. As for the Human and Physical Resources sections above, funding directly linked to the field, veterinary public health or laboratories are included in the previous pillars (Trade, Veterinary Public Health, Animal Health and Laboratories); centrally delivered activities such as communication and continuing education are included under this pillar.

Staff salaries are estimated at USD 73,000 – this includes increasing the remunerations packages for veterinarians in line with those paid by the National University of Timor-Leste.

Continuing education requirements for veterinarians and veterinary para-professional staff centrally, in the districts and in the field are estimated at 480 person-days/year at an estimated cost of USD 28,000 per year.

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The annual expenditure for staff travelling abroad on official duties is estimated at USD 10,000; this represents three person-weeks/year. Staff will also be required to travel within Timor-Leste to supervise programme delivery – it is estimated that USD 12,000 should be provided for domestic travel.

No detailed costs for a communication programme were available – the annual cost is estimated to be USD 10,000, this excludes the cost of the salary of the communication officer which is covered under salaries. The annual cost to cover consultation meetings is estimated at USD 2,400.

The cost for exceptional expenses is estimated at USD200,000, to cover capital items such as vehicles, training and national and international expertise.

The estimated exceptional costs also cover specialist training and the provision of specialist skills through consultancies. The cost estimate provides for three Master's degree courses (two in Australia/international and one in Indonesia) at an estimated cost of USD 85,000, national consultancies on developing management and review procedures and developing legislation for VS operations (240 days) at an estimated cost of USD 58,000, and one international consultant to support the drafting of further legislation (5 weeks) at an estimated cost of USD 36,000.

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
<b>Material investments</b>						
Buildings ( )		200				
Maintenance cost per (m2)		200	18	1	3 600	
Renovation cost per (m2)		-	200	15		
Building cost per (m2)		-	350	20		
Transport (Purchasing cost)						
Motorbikes		2	2 500	5	1 000	
Cars		-	45 000	10		
4x4 vehicles		1	48 000	10	4 800	24 000
Other specific vehicles for management of VS*					10 000	
Other specific vehicles for management of VS*						
Staff office equipment set		18	1 700	3	10 200	
Other specific office equipment set		-	600	3		
Other specific equipment						
Other equipment for management of VS*					3 250	
Other equipment for management of VS*					667	
<b>Sub-total Material investments</b>					<b>33 517</b>	<b>24 000</b>
<b>Non material investments</b>						
Training						
Initial training						
Specialised training (person-months/5 years)		58,0	1 450			84 100
Continuing education (person-days/year)		480,0	59		28 480	
National expertise (days/5 years)		240,0	240			57 600
International expertise (weeks/5 years)		5,0	7 250			36 250
Special funds (/ 5 years) for ...						
<b>Sub-total non material expenditure</b>					<b>28 480</b>	<b>177 950</b>
<b>Salaries</b>						
Veterinarians		2,5	12 000		30 000	
Other university degree		-	2 700			
Veterinary para-professionals		11,5	2 700		31 050	
Support staff		5,0	2 400		12 000	
<b>Sub-total Salaries</b>					<b>73 050</b>	
<b>Consumable resources</b>						
Administration			20%		14 340	
Travel allowances						
staff within the country (person-days) / year		216	40		8 640	
rivers within the country (person-days) / year		72	40		2 880	
staff abroad (person-weeks) / year		3	3 400		10 200	
Transport costs						
Km or miles Motorbikes / year		10 000	0,12		1 200	
Km or miles cars / year			0,24			
Km or miles 4x4 vehicle / year		9 000	0,36		3 240	
Other transport fees*						
Other transport fees*						
Specific costs						
Targeted specific communication		1			10 000	
Consultation (number of 1 day meetings)					2 400	
Kits / reagents / vaccines		-				
Other costs for VS management*					16 750	
Other costs for VS management*						
<b>Sub-total Consumable resources</b>					<b>69 650</b>	
<b>Delegated activities</b>						
<b>Sub-total Delegated activities</b>						
<b>Total in</b>	<b>USD</b>				<b>204 697</b>	<b>201 950</b>



## VI Resources analysis

The cost for the VS for the next five years is estimated at approximately USD 11 million. This is made up of an annual cost estimated at USD 1,800,000 and exceptional cost of USD 1,500,000.

Table n°17 - Total cost

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	% total cost for 5 years
<b>Material investments</b>									
Buildings ( )	-	4 402							
Maintenance cost per (m2)	-	1 012	18	1	18 216		91 080	1,0%	0,8%
Renovation cost per (m2)	-	390	200	15	5 200	52 000	78 000	0,3%	0,7%
Building cost per (m2)	-	3 000	350	20	52 500	787 500	1 050 000	2,8%	9,7%
Transport (Purchasing cost)									
Motorbikes	-	99	2 500	5	49 500		247 500	2,7%	2,3%
Cars	-	-	45 000	10					
4x4 vehicles	-	9	48 000	10	43 200	216 000	432 000	2,3%	4,0%
Other vehicles					24 300		121 500	1,3%	1,1%
Other vehicles					700		3 500	0,0%	0,0%
Staff office equipment set	-	108	1 700	3	61 767		308 833	3,3%	2,9%
Other specific office equipment set	-	-	600	3					
Other specific equipment									
Other equipment					20 430		102 150	1,1%	0,9%
Other equipment					6 427		32 133	0,3%	0,3%
<b>Sub-total Material investments</b>					<b>282 239</b>	<b>1 055 500</b>	<b>2 466 697</b>	<b>15,1%</b>	<b>22,9%</b>
<b>Non material investments</b>									
Training									
Initial training									
Specialised training (person-months/5 years)	-	94,0	1 450			136 300	136 300		1,3%
Continuing education (person-days/year)	-	680,0	59		40 347		201 733	2,2%	1,9%
National expertise (days/5 years)		240,0	240			57 600	57 600		0,5%
International expertise (weeks/5 years)		30,0	7 250			217 500	217 500		2,0%
Special funds									
<b>Sub-total non material expenditure</b>					<b>40 347</b>	<b>411 400</b>	<b>613 133</b>	<b>2,2%</b>	<b>5,7%</b>
<b>Salaries</b>									
Veterinarians	-	15,1	12 000		181 200		906 000	9,7%	8,4%
Other university degree	-	-	2 700						
Veterinary para-professionals	-	136,5	2 700		368 550		1 842 750	19,8%	17,1%
Support staff	-	79,0	2 400		189 600		948 000	10,2%	8,8%
<b>Sub-total Salaries</b>					<b>739 350</b>		<b>3 696 750</b>	<b>39,7%</b>	<b>34,3%</b>
<b>Consumable resources</b>									
Administration			20%		147 600		738 000	7,9%	6,8%
Travel allowances									
staff within the country (person-days) / year	-	276	40		11 040		55 200	0,6%	0,5%
staff within the country (person-days) / year	-	132	40		5 280		26 400	0,3%	0,2%
staff abroad (person-weeks) / year	-	3	3 400		10 200		51 000	0,5%	0,5%
Transport costs									
Km or miles Motorbikes / year		495 000	0,12		59 400		297 000	3,2%	2,8%
Km or miles cars / year			0,24						
Km or miles 4x4 vehicle / year		81 000	0,36		29 160		145 800	1,6%	1,4%
Other transport fees									
Other transport fees									
Specific costs									
Targeted specific communication	-				10 000		50 000	0,5%	0,5%
Consultation (number of 1 day meetings)	-				28 400		142 000	1,5%	1,3%
Kits / reagents / vaccines	-				355 000		1 775 000	19,1%	16,5%
Other costs					115 450		577 250	6,2%	5,4%
Other costs					29 500		147 500	1,6%	1,4%
<b>Sub-total Consumable resources</b>					<b>801 030</b>		<b>4 005 150</b>	<b>43,0%</b>	<b>37,1%</b>
<b>Delegated activities</b>									
Specific delegated activities									
Specific delegated activities									
<b>Sub-total Delegated activities</b>									
<b>Total in</b>	<b>USD</b>				<b>1 862 966</b>	<b>1 466 900</b>	<b>10 781 730</b>	<b>100%</b>	<b>100%</b>

Note that this cost estimate covers all activities of the VS -the animal and veterinary public health programmes and activities of the National Directorate of Veterinary Services, activities in the district/field (under the District Agriculture Directorates), quarantine activities (under the



National Directorate of Quarantine and Biosecurity) and the National Veterinary laboratory. The proposed funding covers associated staff, physical resources and activities, and operational costs.

This cost estimate provides for the expanded activities required to achieve the national priorities and to ensure increased compliance with OIE international standards. To achieve this, a significant investment is required in livestock development and trade, veterinary public health, animal health and the organisation and capability of the VS.

### VI.1 Human resources analysis

The VS of Timor-Leste have insufficient staff to deliver the desired livestock development, veterinary public health and animal health programmes.

The VS are limited in their ability to comply with OIE standards for the delivery of animal and veterinary public health programmes by the insufficient number of veterinarians, particularly the complete absence of any field veterinarians and the over reliance on veterinary para-professionals.

A priority for the Veterinary Services in the next five years is to ensure that at least five District Veterinary Officers are recruited and provide veterinary supervision and management at the district and field level. The strengthening of the field service should be further supported with the recruitment of a significant number of additional veterinary para-professionals. The National Directorate of Veterinary Services' vision is to have one veterinary para-professional in each village (442) in the country. (Note that the philosophy of the country is for the public sector to provide animal health services, and not the private sector.) The number of veterinary para-professionals graduating from the National University of Timor-Leste in the next five years will not allow this number to be recruited. It is estimated that 112 veterinary para-professionals will be employed in year 5.

**Table n°18 - Proposed VS staff numbers and their distribution (Year 5)**

	Central			District/field		
	Veterinarians	Veterinary para-professional	Support staff	Veterinarians	Veterinary para-professional	Support staff
NDV						
-Management	2.5	1.5	3			5
-Animal Health	2	7	1	5	65	66
-Veterinary Public Health	1	3	1		35	
NVDL	1	4	2	-	-	-
NDQB	3.6	7	4		20	-
<b>Total</b>	<b>8.5</b>	<b>25.5</b>	<b>9</b>	<b>5</b>	<b>112</b>	<b>55</b>

The proposed number and distribution of staff per pillar (activity area) is presented above. Note that as there is no private sector, there will be no delegation of VS activities.

Additional staff are required to strengthen the delivery of Trade (quarantine and border control) and Animal Health (disease surveillance and control, animal welfare). There have been no Veterinary Public Health activities and staff are required to develop these programmes. As staff numbers of the VS in Timor-Leste are low, staff will be required to take on multiple roles. At the district and field level staff will be required to work across all the field programmes including animal and animal product identification and traceability, registration of slaughter premises, ante and post mortem inspection, disease surveillance, disease control, emergency response, animal welfare. Staff will need to be trained and managed to deliver these programmes. Central and district management of this array of activities will be critical to their effective implementation.

To support the programme of development there is also a need for improved staff capabilities. Specialist skills should be developed by two veterinarians undertaking Master's degree courses (one in Australia and one in Indonesia is proposed); the priority specialist skills to be developed are in epidemiology/disease control/programme management and in risk analysis/epidemiology.

The capabilities of the veterinary para-professionals should also be developed so that the VS programmes can be delivered effectively and efficiently. Skills that need to be developed include community engagement and awareness, food safety inspections (premises, ante and post mortem), disease surveillance, disease control and animal welfare. A major programme in continuing education is proposed. In addition to develop the skills of incoming veterinary para-professionals, the VS should work with the National University of Timor-Leste to develop and deliver a curriculum that meets the needs of developing VS.

It is recommended that, over the next five years, the number of veterinarians is increased from the current six to fifteen. This significant increase in the number of veterinarians is required because of the need to prepare and review coherent disease surveillance and control programmes, to develop an effective veterinary public health programme and, critically, to provide veterinary supervision and management in the districts.

Veterinary salaries vary but are in the range of USD 300 to USD 500 per month when paid by the National Directorate of Veterinary Services; in comparison the National University of Timor-Leste, under the Ministry of Education, is able to pay veterinarians in the range of USD 800 to USD 1,000. This imbalance is unsustainable and is resulting in few veterinarians be willing to work for the National Directorate of Veterinary Services. A formal request must be made urgently to the Public Service Commission to resolve this issue. The PVS Gap Analysis mission has estimated the salaries of veterinarians at USD 1000 per month.

## VI.2 Physical resources analysis

Generally the current physical resources of the VS are inadequate and need upgrading. This PVS Gap Analysis recommends some important material investments and provision for maintenance. Physical resource costs represent 23% of the total cost for 5 years.

The total cost estimate for the physical resources required is USD 2,500,000 for buildings, vehicles and other equipment for the 5 year period. The majority of this amount is to build 21 new Animal Health Service Centres in the districts (USD 1,000,000) and for vehicles (11 4WD and 99 motorbikes at USD 1,300,000) with the balance required for miscellaneous equipment such as cold stores, fridges, holding yards and incinerators and building/facility refurbishment.

Total estimation of physical resources required												
	Trade		Veterinary Public Health		Animal health		Veterinary laboratories		Management of Veterinary Services		Total	
	Current	Required	Current	Required	Current	Required	Current	Required	Current	Required	Current	Required
<b>Buildings ()</b>		<b>350</b>				<b>3 702</b>		<b>150</b>		<b>200</b>		<b>4 402</b>
Maintenance cost per (m2)		350				312		150		200		1 012
Renovation cost per (m2)		-				390						390
Building cost per (m2)		-				3000						3 000
<b>Transport (Purchasing cost)</b>												
Motorbikes		16		15		65		1		2		99
Cars		-										
4x4 vehicles		1		1		5		1		1		9
Other		-										
Other		-										
<b>Staff office equipment set</b>		22	-	16	-	50	-	2		18		108
<b>Other specific office equipment set</b>		-										
<b>Other specific equipment in (ref. currency)</b>		5 060		5 080		2 800		10 000		3 917		26 857

It has to be noted that no provision has been made for office accommodation at field level as this is provided by the decentralised district budget.

## VI.3 Financial resources analysis

### VI.3.A Operational funding

The figure below shows an ‘analysis of the annual operational cost’ by pillar, a derivative of the strategies and activities required to achieve the desired objectives and the estimated cost.

In year 5, the annual cost for operational funding is estimated to be USD 800,000 for staff salaries and USD 800,000 for ‘consumables’. Consumables (vaccines, diagnostic tests, fuel, etc.) represent 50% of the total annual operating cost, which is considered appropriate. The proposed increase in the operating budget is the most significant proposed change - and is in line with the findings of the 2011 OIE PVS Evaluation. Critically the proposed annual operating budget provides for a significant increase in the number of veterinarians and veterinary para-professionals and a consequent increase in salary.

The highest operational budget is provided to deliver the animal health programmes (USD 860,000). This high budget is derived from the extensive use of vaccination for disease control and the staff to manage and administer the control programmes. The number of staff to implement this programme should reduce as communities increasingly manage their own programmes; this will allow these staff to work in other priority areas. Staff costs for Veterinary Public Health will also be significant (USD 170,000) as this programme is introduced. Note that district and field staff will work across all the activity areas (Trade, Veterinary Public Health and Animal Health) and so the division of costs between the pillars reflects the expected level of input.

Analysis of the annual operational cost (CC I-8)							
	Trade	Veterinary Public Health	Animal Health	Veterinary laboratories	Management of Veterinary Services	Total operational cost	%
Salaries							
<i>Veterinarians</i>	43 200	12 000	84 000	12 000	30 000	181 200	11,46
<i>Other university degree</i>							
<i>Veterinary para-professionals</i>	56 700	94 500	175 500	10 800	31 050	368 550	23,32
<i>Support staff</i>	9 600	4 800	158 400	4 800	12 000	189 600	11,99
Continuing education		10 383		1 483	28 480	40 347	2,55
<b>Sub-total human resources</b>	<b>109 500</b>	<b>121 683</b>	<b>417 900</b>	<b>29 083</b>	<b>101 530</b>	<b>779 697</b>	<b>49,33</b>
Administration	21 900	22 260	83 580	5 520	14 340	147 600	9,34
Travel allowances		4 800			21 720	26 520	1,68
Transport costs	12 840	12 240	55 200	3 840	4 440	88 560	5,60
Specific costs							
<i>Communication</i>					10 000	10 000	0,63
<i>Consultation</i>	26 000				2 400	28 400	1,80
<i>Specific kits /reagents / vaccines</i>			295 000	60 000		355 000	22,46
<i>Other</i>	77 000	6 500	5 200	10 000	16 750	115 450	7,30
<i>Other</i>	19 500			10 000		29 500	1,87
<b>Sub-total consumable resources</b>	<b>157 240</b>	<b>45 800</b>	<b>438 980</b>	<b>89 360</b>	<b>69 650</b>	<b>801 030</b>	<b>50,67</b>
<b>Sub-total delegated activities</b>							
<b>TOTAL OPERATIONAL COST</b>	<b>266 740</b>	<b>167 483</b>	<b>856 880</b>	<b>118 443</b>	<b>171 180</b>	<b>1 580 727</b>	<b>100,00</b>

### VI.3.B Emergency funding

No specific animal health contingency fund exists. The main activity in the next five years will be to work with the Ministry of Agriculture and Fisheries staff to document clearly the process of releasing contingency funds – with the development of templates – and contingency plans for disease response.

### VI.3.C Capital investment

The figure below provides a summary of the proposed capital investment programme for the next five years by pillar. This item refers to required facilities and equipment (buildings, transport, office and other miscellaneous equipment) and exceptional non-material investments to support the operational infrastructure (specialised training, national and international expertise and special funds).

The total capital investment for the 5 year programme is estimated at USD 1,470,000, with USD 285,000 per year.

As can be seen under section VI.2, significant capital investment is required to provide new or upgraded buildings (USD 920,000 for building mainly for the 21 Animal Health Service Centres). In addition a budget of USD 335,000 is recommended for vehicles (4WD and motorbikes). Other equipment such as 'office equipment sets' (desks, chairs, computers, printers, etc.) and miscellaneous equipment (cold store, fridges, incinerators, quarantine holding yards) should be provided – estimated cost of USD 100,000.

Specialised training is considered to be a capital investment. A cost estimate is provided for three Master's degree courses, two in Australia/international and one in Indonesia (around USD 140,000). Funding is also recommended for a national consultant to develop management (USD 57,000) and international consultants for animal identification and legislation (USD 220,000).

The distribution of capital investment costs per pillar mirrors that of the annual operating budget with the largest amount being provided to Animal Health for the 21 new Animal Health Service Centres and transport. Veterinary Public Health is much lower with most investment for transport. Note, as above, that district and field staff will work across all the activity areas (Trade, Veterinary Public Health and Animal Health), the division of costs between the pillars reflects the expected level of input.

Analysis of capital investment required (CC I-10)													
	Trade		Veterinary Public Health		Animal Health		Veterinary laboratories		Management of Veterinary Services		Total capital investment		% over 5 years
	Annual	Exceptional	Annual	Exceptional	Annual	Exceptional	Annual	Exceptional	Annual	Exceptional	Annual	Exceptional	
Buildings	6 300				63 316	839 500	2 700		3 600		75 916	839 500	42,36
Transport	12 800	24 000	12 300	24 000	71 500	120 000	5 300	24 000	15 800	24 000	117 700	216 000	27,95
Staff office equipment set	12 467		9 633		28 333		1 133		10 200		61 767		10,73
Other office equipment set													
Other specific equipment	5 060		5 080		2 800		10 000		3 917		26 857		4,67
<b>Sub-total Material investment</b>	<b>36 627</b>	<b>24 000</b>	<b>27 013</b>	<b>24 000</b>	<b>165 949</b>	<b>959 500</b>	<b>19 133</b>	<b>24 000</b>	<b>33 517</b>	<b>24 000</b>	<b>282 239</b>	<b>1 055 500</b>	<b>85,71</b>
Initial training													
Specialised training		34 800		17 400					84 100			136 300	4,74
National expertise									57 600			57 600	2,00
International expertise		108 750				72 500			36 250			217 500	7,56
Special funds													
<b>Sub-total Non-Material expenditure</b>		<b>143 550</b>		<b>17 400</b>		<b>72 500</b>			<b>177 950</b>			<b>411 400</b>	<b>14,29</b>
<b>TOTAL CAPITAL INVESTMENT</b>	<b>36 627</b>	<b>167 550</b>	<b>27 013</b>	<b>41 400</b>	<b>165 949</b>	<b>1 032 000</b>	<b>19 133</b>	<b>24 000</b>	<b>33 517</b>	<b>201 950</b>	<b>282 239</b>	<b>1 466 900</b>	<b>100,00</b>

## VI.4 Sustainability

To achieve the national priorities, the Timor-Leste VS require considerable strengthening. Investment is required to achieve the target of developing livestock production and re-establishing an export trade, to promote public health and to improve animal health, and to increase compliance with international standards. The investment is significant given the country's but as a potential driver of food security, food safety and economic development should be considered as a sound investment.

The indicative funding is necessary to achieve the determined national priorities.

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

In 2013, the national Timor-Leste GDP was USD 1.6 billion with the agricultural economy estimated to be USD 201 million; livestock GDP is not known.

The national budget for 2013 was USD 1.3 billion and the Ministry of Agriculture and Fisheries budget was USD 21.5 million. The national 2014 budget is USD 1.5 billion and the Ministry of Agriculture and Fisheries budget is USD 27.9 million. There is no figure available for the VS budget as it is made up from a number of directorates – Secretary of State for Livestock, the combined National Directorate of Veterinary and Livestock Services and the National Directorate of Quarantine and Biosecurity.

Reviewing the proposed funding for the VS of USD 1.9 million annually and of USD 1.5 million for exceptional costs over five years, it can be calculated that the annual cost of the VS is less than 2% of agricultural GDP. This is considered a very cost effective investment that should be made by the national government as it will become a major economic driver for rural development in the country, and provide food security.

#### VI.4.B Analysis of distribution per pillar

The total annual budget figure of USD 1,863,000 is distributed as trade (16%), veterinary public health (10%), animal health (55%), laboratories (7%) and general management (11%). The high proportion costed for animal health is because of the need and the potential to deliver improved animal health and productivity, and also because the majority of field services staff and overheads have been placed against this pillar as directed by the National Directorate of Veterinary Services.

This approach was taken as the district and field services will be required to undertake multiple tasks, but the build of these tasks are to deliver animal health programmes; a significant number of staff with overhead costs were assigned to veterinary public health, a major area of programme development and implementation.

Timor-Leste has an extensive livestock sector with a number of key, production limiting diseases and it can be expected to develop its livestock production sector with improved disease control.

ANNUAL COST PER PILLAR						
Resource and cost lines	Trade	Veterinary Public Health	Animal health	Veterinary laboratories	Management of Veterinary Services	Total
<b>Material investments</b>						
Sub-total Material investments	36 627	27 013	165 949	19 133	33 517	282 239
%	13,0%	9,6%	58,8%	6,8%	11,9%	100%
<b>Non material investments</b>						
Sub-total non material expenditure	-	10 383	-	1 483	28 480	40 347
%		25,7%		3,7%	70,6%	100%
<b>Salaries</b>						
Sub-total Salaries	109 500	111 300	417 900	27 600	73 050	739 350
%	14,8%	15,1%	56,5%	3,7%	9,9%	100%
<b>Consumable resources</b>						
Sub-total Consumable resources	157 240	45 800	438 980	89360	69 650	801 030
%	19,6%	5,7%	54,8%	11,2%	8,7%	100%
<b>Delegated activities</b>						
Sub-total Delegated activities	-	-	-	-	-	-
%						
<b>Total in USD</b>	<b>303 367</b>	<b>194 497</b>	<b>1 022 829</b>	<b>137 577</b>	<b>204 697</b>	<b>1 862 966</b>
%	16,3%	10,4%	54,9%	7,4%	11,0%	100%

Similarly the total five year estimated cost of USD 10,800,000 is similarly distributed across the pillars of trade (16%), veterinary public health (9%), animal health (57%), laboratories (7%) and general management (11%).

TOTAL COST (5 annual cost + exceptional cost) PER PILLAR						
	Trade	Veterinary Public Health	Animal health	Veterinary laboratories	Management of Veterinary Services	Total
<b>Material investments</b>						
<b>Sub-total Material investments</b>	207 133	159 067	1 789 247	119 667	191 583	2 466 697
%	8,4%	6,4%	72,5%	4,9%	7,8%	100%
<b>Non material investments</b>						
<b>Sub-total non material expenditure</b>	143 550	69 317	72 500	7 417	320 350	613 133
%	23,4%	11,3%	11,8%	1,2%	52,2%	100%
<b>Salaries</b>						
<b>Sub-total salaries</b>	547 500	556 500	2 089 500	138 000	365 250	3 696 750
%	14,8%	15,1%	56,5%	3,7%	9,9%	100%
<b>Consumable resources</b>						
<b>Sub-total Consumable resources</b>	786 200	229 000	2 194 900	446 800	348 250	4 005 150
%	19,6%	5,7%	54,8%	11,2%	8,7%	100%
<b>Delegated activities</b>						
<b>Sub-total Delegated activities</b>	-	-	-	-	-	-
%						
<b>Total in USD</b>	<b>1 684 383</b>	<b>1 013 883</b>	<b>6 146 147</b>	<b>711 883</b>	<b>1 225 433</b>	<b>10 781 730</b>
%	16%	9%	57%	7%	11%	100%





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## CONCLUSION

The PVS Gap Analysis mission was well supported by the VS with most of the senior veterinary staff attending most days; further support was provided by other members of the Ministry of Agriculture and Fisheries. The mission also had the opportunity to hold discussions with the Minister of Agriculture and Fisheries and the Secretary of State for Livestock.

Overall, the PVS Gap Analysis mission has developed a programme that can be achieved with good advocacy from the National Directorate of Veterinary Services and the National Directorate of Quarantine and Biosecurity and with strong support from the Minister of Agriculture and Fisheries and his senior managers; close collaboration will be required with other key government agencies – including the Ministry of Finance, Ministry of Health, Ministry of Commerce, Industry and Environment and Ministry of Foreign Affairs.

Strengthening the VS will deliver improved veterinary public health, and food security and allow the re-establishment of export markets. This programme of strengthening will increase the compliance of the VS with international standards as established by OIE.

Critical to achieving the high standards set out in this PVS Gap Analysis, for the next five years, is the need to address the absence of veterinarians in the districts and the limited training and capabilities of veterinary para-professionals.

Programmes need to be rigorously designed and documented, with clear operational plans including management, activities to be undertaken with programme evaluation, review/revision and reporting. This approach needs to be implemented with strong commitment from the senior staff of the Ministry of Agriculture and Fisheries, supported by the Minister and Vice-Minister.

The PVS Gap Analysis presents a significant challenge to the Government of Timor-Leste and its Ministry of Agriculture and Fisheries and their ability to support the development programme. The investment in livestock development, veterinary public health and animal health will deliver major rewards for the country – improved food security and safety and better public health with reduced food borne infections and increased economic growth and development of rural livelihoods.

The determination of national priorities, the agreement to upgrade many critical competencies, the strategies and the activities determined for each competency, and the costing of the implementation of these activities are an important step in gaining the commitment of senior Ministry of Agriculture and Fisheries staff and the central government to provide increased resources to the VS.

The VS of Timor-Leste have made significant progress but face some major challenges. For such a new country there are a number of important animal health programmes in place and these need to be better supported to deliver efficient, effective and sustainable disease control.

The strengthening plan developed identifies the key objectives and therefore the priorities necessary for the VS to achieve its five year goals. The recommended increase in funding is reasonable with the major animal and veterinary public health programmes that are to be implemented.

The strengthening compliance of the Veterinary Services with OIE standards depends on strong political leadership with the support of senior management and the commitment of resources.

The main activities/changes required are:

### *Staffing*

Veterinarians should be placed in the districts to lead and supervise field activities. Job descriptions should be developed for the roles to be undertaken by the veterinary para-professionals; a training programme should be implemented to develop staff capabilities.

### *Legislation*

Legislation is required to establish professional standards through a Veterinary Statutory Body, the Timor-Leste Veterinary Association. The draft Animal Health Law needs to be revised, updated and enacted.

### *Trade*

Quarantine and border controls need to be strengthened to reduce the risk to Timor-Leste animal and public health. Critically a formal protocol should be prepared for all imported animals and animal products that requires prior notification and certification – updated legislation will be required. Pre-border risk assessments should be undertaken.

### *Animal health activities*

The current animal disease control programmes lack clear documentation and there is no formal monitoring and review process. Existing vaccination and other control programme activities should be reviewed and the work plans revised to increase impact, effectiveness and sustainability.

Contingency plans have been developed for HPAI and should be extended to other high risk diseases particularly rabies and FMD. Emergency preparedness and response should be developed for emergency and emerging animal diseases. Staff at all levels need to be trained in emergency response; simulation exercises should be conducted to assess the response plans.

### *Veterinary Public Health*

To promote food safety, strong coordination should be developed between the VS and Ministry of Health. All places of animal slaughter should be inspected, licensed and supervised; a programme of improving slaughter facilities should be developed to support improved food safety.

Greater control over the import, distribution and prudent use of veterinary medicines and biologicals is mandatory and should be supported by a greater focus on preventing their informal importation. A programme of monitoring antimicrobial and other residues needs to be developed.

### *Budget*

To implement such a programme, the PVS Gap Analysis estimated that the total budget to be made available should be USD 11,000,000 over a period of 5 years. The proposed funding is a significant increase but is appropriate when the limitations of the current veterinary public health control programmes are considered, and when the opportunity to increase livestock production promoting food security and economic development is considered.

The cost estimate for the next five years is made up of USD 1,860,000 annual costs and USD 1,470,000 for capital investment. It should be recognised that though the annual cost estimate is provided as the same amount for each year of the five years that this will not be the reality – the programmes, staff recruitment and investment will take time to develop. Realistically the annual cost estimate is expected to reach 100% in year 5. It is recommended that the VS of Timor-Leste carefully review the report, and prepare a work plan with a realistic budget for years 1, 2, 3, 4 and 5.

Timor-Leste VS should continue to work with OIE, to follow-up development and implementation of the strengthening plan, and particularly to provide support in developing legislation to ensure its compliance with OIE standards.



## **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 activities<sup>6</sup> 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)

To strengthen animal quarantine by increasing border control, undertaking risk assessment and risk mitigation

### 4. Activities to implement (chronological)

Specific activities	<ul style="list-style-type: none"> <li>Construct and/or maintain infrastructure: 3 live animal and animal product quarantine facilities (one in Dili and one in two districts)</li> <li>Recruit and train additional veterinary para-professionals to work at the Border Inspection Posts (BIPs)</li> <li>Develop SOPs and regulations for importing goods including the prior notification of incoming shipment of goods</li> <li>Enforce legislation on acceptance of imported goods</li> <li>Prohibit informal entry of goods and require their return or destruction</li> <li>Purchase required equipment (incinerators, cold storage, fridges, computers, basic protective clothing, transport, mobile telephones, and relevant rapid tests)</li> <li>Organise, prepare materials and conduct an awareness raising campaign</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Engage in discussion with Indonesia Promote an approach to facilitate accession to ASEAN
	IV.1, 2, 3. Legislation	Develop and enforce regulations for quarantine of imported goods
	I.3. Continuing Education	Undertake in-country training in risk assessment Support a staff member for specialised education in Risk Assessment
	III.1 Communication	Promote understanding and compliance with quarantine regulations
	I.11. Management of resources and operations	Recruit required veterinary para-professionals to ensure quarantine and border security Purchase required equipment and consumables
	III.3. Official representation	

### 5. Objectively verifiable indicators

- Quarantine and biosecurity SOPs
- ToRs and contracts of recruited staff
- Records of shipments and numbers of goods rejected/confiscated/destroyed
- Purchase and delivery orders of new equipment
- Agenda and list of participants for training activities

<sup>6</sup>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.

<b>TRADE - 1</b>					
<b>CC: II-4. Quarantine and border security</b>					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
<b>Material investments</b>					
Buildings ( )	350				
<i>Maintenance cost per (m2)</i>	350	18	1	6 300	
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>	16	2 500	5	8 000	
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>	1	48 000	10	4 800	24 000
Staff office equipment set	22	1 700	3	12 467	
Other specific office equipment set		600	3		
Other specific equipment					
<i>Cold Store, fridges, holding pens</i>	1	14 500	5	2 900	
<i>Incinerators, manual incinerators</i>	1	10 800	5	2 160	
<b>Sub-total Material investments</b>				<b>36 627</b>	<b>24 000</b>
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>	24,0	1 450			34 800
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for study tour					
<b>Sub-total non material expenditure</b>					<b>34 800</b>
<b>Salaries</b>					
Veterinarians	3,0	12 000		36 000	
Other university degree		2 700			
Veterinary para-professionals	19,0	2 700		51 300	
Support staff	4,0	2 400		9 600	
<b>Sub-total Salaries</b>				<b>96 900</b>	
<b>Consumable resources</b>					
Administration		20%		19 380	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>drivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>	80 000	0,12		9 600	
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>	9 000	0,36		3 240	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>32 220</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>165 747</b>	<b>58 800</b>



## Trade 2 – II-12. Identification and traceability

### A. Animal identification and movement control

1. Definition of this PVS Critical Competency		
<p><i>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.</i></p>		
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)		
To implement the national decree law for the identification and movement control of animals		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Develop a work plan and SOPs for the implementation of livestock identification – to be delivered by communities through the 'Animal Lovers Association</li> <li>Delegate identification activities to local communities, and provide training and SOPs</li> <li>Two veterinary para-professionals will lead the development of animal identification/a movement control programme and be based at the National Directorate of Veterinary Services</li> <li>Establish animal movement control posts –to be staffed part-time/as required by existing district staff: three on the main routes into Dili and one in Covalina</li> <li>Develop an animal identification database/software</li> <li>Transfer the current paper based animal registration system into a central database</li> <li>Establish a system for the management and maintenance of the database (see under Management of Resources I.11)</li> <li>Purchase computers for data entry at district level</li> <li>Undertake public consultation and awareness campaigns – estimated at two per district per year with three community based meetings per district annually</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Conduct consultation with interested parties (other government services/producers, farmers, industry)
	IV.1, 2, 3. Legislation	Ensure enforcement of the decree
	I.3. Continuing Education	Train district and central VS staff (tagging activities, reporting)
	III.1 Communication	Undertake an awareness raising campaign on the system and its benefits Advocate disease reporting and notification
	I.11. Management of resources and operations	Gain funding for the purchase eartags Purchase servers for system storage and backup and computers at district level
	III.3. Official representation	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Recruited and trained staff</li> <li>ToR and contract for expert to develop the database software</li> <li>Purchase and delivery records of equipment</li> <li>Communication materials</li> <li>Reports of livestock ownership and movements</li> </ul>		

<b>TRADE - 2</b>					
<b>CC: II-12. Identification and traceability</b>					
<b>A. Animal identification and movement control</b>					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)	10,0	7 250			72 500
Special funds (/ 5 years) for					
<b>Sub-total non material expenditure</b>					<b>72 500</b>
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals	2,0	2 700		5 400	
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>5 400</b>	
<b>Consumable resources</b>					
Administration		20%		1 080	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>	26	1 000,00		26 000	
<i>Kits / reagents / vaccines</i>					
<i>Eartags</i>	75 000	1,00		75 000	
<i>Community meetings</i>	39	500,00		19 500	
<b>Sub-total Consumable resources</b>				<b>121 580</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>126 980</b>	<b>72 500</b>

## Trade 3 – II-12. Identification and traceability

### B. Identification and traceability of products of animal origin

1. Definition of this PVS Critical Competency		
<i>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.</i>		
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)		
To develop a national programme to identify and trace products of animal origin (meat)		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>• Work with the Ministry of Health and Ministry of Commerce, Industry and Environment and other public and private stakeholders to transfer this role and responsibility</li> <li>• Establish a technical commission within the Ministry of Agriculture to guide the development of animal product identification and traceability and to consult with stakeholders</li> <li>• Assign a central veterinarian (0.2 FTE) to lead the development of product identification, under the guidance of the Director, NDV</li> <li>• Support development of a coherent national programme for animal product identification and traceability</li> <li>• Review and revise legislation to include and cover the identification and registration of animal by-products</li> <li>• Conduct awareness raising campaign</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Undertake consultation with public and private stakeholders
	<i>IV.1, 2, 3. Legislation</i>	Revise and expand existing legislation to include meat and animal by-products
	<i>I.3. Continuing Education</i>	Train district and central VS staff on operating procedures of the identification and traceability system
	<i>III.1 Communication</i>	Communication with producers to understand the benefits and needs of the system for tracing meat and animal by-products Advocate disease reporting and notification
	<i>I.11. Management of resources and operations</i>	
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>• New legislation enacted and operating</li> <li>• National programme and corresponding SOPs</li> <li>• Meetings minutes and reports of the technical commission</li> <li>• Minutes and reports of the inter-ministerial meetings</li> <li>• Recruited and trained staff</li> <li>• Communication material</li> </ul>		

<b>TRADE - 3</b>					
<b>CC: II-12. Identification and traceability</b>					
<b>B. Identification and traceability of products of animal origin</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
<i>National expertise (days/5 years)</i>		240			
<i>International expertise (weeks/5 years)</i>		7 250			
<i>Special funds (/ 5 years) for ...</i>					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians	0,2	12 000		2 400	
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>2 400</b>	
<b>Consumable resources</b>					
Administration		20%		480	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>Technical Commission</i>	4	500,00		2 000	
<b>Sub-total Consumable resources</b>				<b>2 480</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>		<b>USD</b>		<b>4 880</b>	

## Trade 4 – IV-4. International certification<sup>7</sup>

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.		
<b>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.</b>		
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)		
To develop an international certification process		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Define protocol/procedures for issuing veterinary certificates for international trade (including quarantine for export) – the Veterinary Authority will be the Director, NDV; certifications will be signed by the Director or authorised delegate</li> <li>Train veterinarians to better understand international requirements under the OIE and the protocol for certification</li> <li>Document and review the certification process to ensure compliance</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Undertake meetings with the Ministry of Health
	<i>IV.1, 2, 3. Legislation</i>	Revise existing legislation
	<i>I.3. Continuing Education</i>	Training of staff on certification protocols and international requirements
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Train staff on the protocols/procedures and conduct periodic reviews
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Minutes and reports of the inter-ministerial meetings</li> <li>New legislation enacted and operating</li> <li>Protocols/procedures developed</li> <li>Agenda and list of participants of training programmes</li> <li>Recruited and trained staff</li> </ul>		

<sup>7</sup> Certification procedures should be based on relevant OIE and Codex Alimentarius standards.

<b>TRADE - 4</b>					
<b>CC: IV-4. International certification</b>					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians	0,1	12 000		1 200	
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>1 200</b>	
<b>Consumable resources</b>					
Administration		20%		240	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>240</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>1 440</b>	

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

<b>1. Definition of this PVS Critical Competency</b>		
<i>The authority and capability of the VS to negotiate, implement and maintain equivalence and other types of sanitary agreements with trading partners.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>3. The VS have implemented equivalence and other types of sanitary agreements with trading partners on selected animals, animal products and processes.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To re-establish trade with Indonesia and other countries		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<p><i>Note: Authority exists through the Ministry of Foreign Affairs</i></p> <ul style="list-style-type: none"> <li>• Work with ministerial colleagues to develop equivalency agreements</li> <li>• Engage in international discussions with the development of sanitary agreements, where appropriate, with both countries exporting to Timor Leste and proposed export markets</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consultation with trading partners
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Draft protocols for the development of equivalency agreements
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Number of sanitary agreements</li> </ul>		



<b>TRADE - 5</b>					
<b>CC: IV-5. Equivalence and other types of sanitary agreements</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ()					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians	0,1	12 000		1 200	
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>1 200</b>	
<b>Consumable resources</b>					
Administration		20%		240	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>240</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>		<b>USD</b>		<b>1 440</b>	

## Trade 6 – IV-6. Transparency

<b>1. Definition of this PVS Critical Competency</b>		
<i>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.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. The VS do not notify.		
2. The VS occasionally notify.		
<b>3. The VS notify in compliance with the procedures established by these organisations.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To notify relevant information to appropriate international organisations		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Interpret data from the national disease information system and report to the OIE and other international and regional organisations (OIE, ASEAN)</li> <li>Inform the ministries in Timor Leste of the obligation to report to the OIE</li> </ul>	
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>	Maintain National Focal Point to the OIE for animal disease notification
	<i>III.3. Official representation</i>	Participate in relevant OIE National Focal Point training events and at AESAN meetings
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Six-monthly and annual reports to the OIE</li> <li>Records of real time exceptional notifications to the OIE</li> <li>Agenda and training material</li> </ul>		

NOTE: no costs have been assigned to this CC

## Trade 7 – IV-7. Zoning

1. Definition of this PVS Critical Competency		
<i>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).</i>		
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)		
Zoning is not a priority for Timor Leste		
4. Activities to implement (chronological)		
Specific activities	No activities foreseen	
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		

NOTE: no costs have been assigned to this CC

## 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)

To establish disease free compartments within the special economic areas (Oecuse and Suai, Covalima) in order to achieve international trade and sanitary agreements

### 4. Activities to implement (chronological)

Specific activities	<ul style="list-style-type: none"> <li>• Hire an international expert to support the veterinarian based at central level to work with private sector to:             <ul style="list-style-type: none"> <li>○ develop compartmentalisation in special economic areas, including: definition of the extent and limit of the compartment, the species and production system and its geographic limitations, the biosecurity barriers required and the isolation of the compartment from other production systems</li> <li>○ draft a biosecurity plan describing routine operating procedures relating to surveillance, identification and traceability, the management practises (herd/flock production records, feed sources, surveillance results, etc)</li> </ul> </li> <li>• Negotiate with potential importing countries</li> <li>• Establish, maintain and report the distinct animal health status</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Liaise with trading countries
	IV.1, 2, 3. Legislation	Draft legislation on compartmentalisation
	I.3. Continuing Education	Training on audit systems and biosecurity
	III.1 Communication	
	I.11. Management of resources and operations	Staff to develop biosecurity plan and to certify the compartment animal health status
	III.3. Official representation	

### 5. Objectively verifiable indicators

- List of compartments of specified health status
- Biosecurity plan
- Surveillance and monitoring plan
- Documented procedures for compartmentalisation
- Legislation
- Reports of meetings with the private sector

<b>TRADE - 8</b>					
<b>CC: IV-8. Compartmentalisation</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)	5,0	7 250			36 250
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					<b>36 250</b>
<b>Salaries</b>					
Veterinarians	0,2	12 000		2 400	
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>2 400</b>	
<b>Consumable resources</b>					
Administration		20%		480	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>480</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>2 880</b>	<b>36 250</b>



## **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

<b>1. Definition of this PVS Critical Competency</b>		
<i>The authority and capability of the VS to establish and enforce sanitary standards for establishments that produce, process and distribute food of animal origin.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
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).		
<b>3. Regulation, authorisation and inspection of relevant establishments are undertaken in conformity with international standards in all premises supplying throughout the national market.</b>		
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).		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To establish a programme for the authorisation, inspection and registration of all slaughter premises (slaughter house and slaughter sites)		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Develop a programme to implement registration of slaughter premises; this will include definition of standards for facilities and operations, staff training, identification of slaughter premises, assessment and registration</li> <li>Establish an inter-ministerial working group with the Ministry of Health and Ministry of Commerce, Industry and Environment to coordinate roles and responsibilities in relation to food safety</li> <li>Identify other premises undertaking animal product processing and distribution; develop standards and inspect and register the operations</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Engage and coordinate with other relevant government agencies and industry Undertake stakeholder consultation to identify slaughter premises and the standards required
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Conduct staff training on inspection of facilities and operating arrangements including the management of live animals and animal products
	III.1 Communication	Implement a public awareness campaign to promote the use of registered slaughter premises
	I.11 .Management of resources and operations	Staff to inspect and assess animal slaughter premises Allocate funding for meetings of the inter-ministerial working group
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Food safety programme documented</li> <li>Minutes and reports of the inter-ministerial meetings and of the food safety coordination committee</li> <li>National programme documented</li> <li>Records of registered slaughter premises and inspection reports</li> <li>Agenda and list of participants of training programmes</li> <li>Recruited and trained staff</li> </ul>		

CC not assessed in 2011 PVS Evaluation

NOTE: no costs have been assigned under this CC – see II-8B

## 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)

<b>1. Definition of this PVS Critical Competency</b>		
<i>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.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>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.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To implement the national decree law relating to meat inspection for the national market suppliers and increasingly for the local market suppliers		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Assign one veterinarian (1.0 FTE across food inspection and veterinary medicines control) to supervise and implement the food safety programme nationally</li> <li>Prepare and document a programme for food safety including ante and post mortem inspection and general disease surveillance at slaughter premises</li> <li>Assess capacities of district veterinarians and the veterinary para-professionals; develop and undertake a training programme on ante and post mortem inspection</li> <li>Develop SOPs for ante and post mortem inspection and the capture and reporting of food safety and animal health information</li> <li>Veterinary para-professionals conduct ante and post mortem inspection at registered slaughter premises initially for national market suppliers and then increasingly to local market suppliers</li> <li>Purchase and provide necessary equipment for the veterinary para-professionals to be able to carry out their duties</li> <li>Review and revise the programme as necessary</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with stakeholders on the objectives and requirements of ante and post mortem inspections
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Develop and undertake a training programme on ante and post mortem inspection for veterinary para-professionals
	III.1 Communication	
	I.11 .Management of resources and operations	Recruitment of veterinary para-professionals to implement ante and post mortem inspection Purchase required equipment including a motorbike, mobile phone, protective clothing, autopsy equipment, sample collection bottles and swabs, detergents and disinfectants
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Food safety programme documented</li> <li>Sample collection protocols drafted</li> <li>List of equipment purchased and in use</li> <li>Agenda and list of participants of training programmes</li> <li>Recruited and trained staff</li> </ul>		

<b>VETERINARY PUBLIC HEALTH - 2</b>					
<b>CC: II-8. Food safety</b>					
<b>B. Ante and post mortem inspection at abattoirs and associated premises</b>					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>	15	2 500	5	7 500	
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>	1	48 000	10	4 800	24 000
Staff office equipment set	16	1 700	3	9 067	
Other specific office equipment set		600	3		
Other specific equipment					
<i>Mobile phones</i>	37	200	5	1 480	
<i>General equipment and clothing</i>	36	100	1	3 600	
<b>Sub-total Material investments</b>				<b>26 447</b>	<b>24 000</b>
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>	12,0	1 450			17 400
<i>Continuing education (person-days/year)</i>	175,0	59		10 383	
<i>National expertise (days/5 years)</i>		240			
<i>International expertise (weeks/5 years)</i>		7 250			
<i>Special funds (/ 5 years) for ...</i>					
<b>Sub-total non material expenditure</b>				<b>10 383</b>	<b>17 400</b>
<b>Salaries</b>					
Veterinarians	0,5	12 000		6 000	
Other university degree		2 700			
Veterinary para-professionals	35,0	2 700		94 500	
Support staff	2,0	2 400		4 800	
<b>Sub-total Salaries</b>				<b>105 300</b>	
<b>Consumable resources</b>					
Administration		20%		21 060	
Travel allowances					
<i>staff within the country (person-days) / year</i>	60	40		2 400	
<i>rivers within the country (person-days) / year</i>	60	40		2 400	
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>	75 000	0,12		9 000	
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>	9 000	0,36		3 240	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>38 100</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>180 230</b>	<b>41 400</b>

## VPH 3 – II-8. Food safety

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

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>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.</b>		
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)		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop a national programme to inspect the collection, processing and distribution of products of animal origin		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• Prepare and document a programme for food safety including the inspection of the collection, processing and distribution of products of animal origin for the national market</li> <li>• Establish an inter-ministerial working group with the Ministry of Health, Ministry of Commerce, Industry and Environment, and the National Directorate of Quarantine and Biosecurity to determine roles and responsibilities for food safety</li> <li>• Establish an ongoing cross-sectoral food safety committee to ensure the coordination of all involved partners and to identify and manage any arising food safety issues</li> <li>• Develop inspection guidelines and SOPs</li> <li>• Train district and central veterinary para-professionals</li> <li>• Undertake desk top simulation exercises with the Ministry of Health for food safety events</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Engage and coordinate with other interested government agencies Undertake stakeholder consultation to identify processing and distribution premises
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Train staff on inspection the collection, processing and distribution of products of animal origin
	III.1 Communication	
	I.11. Management of resources and operations	Staff to inspect the collection, processing and distribution of products of animal origin
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Food safety programme documented</li> <li>• Minutes and reports of the inter-ministerial meetings and of the food safety coordination committee</li> <li>• National programme</li> <li>• Agenda and list of participants of training programmes</li> <li>• Recruited and trained staff</li> </ul>		

NOTE: no costs have been assigned under this CC – see II-8B

## VPH 4 – II-9. Veterinary medicines and biologicals

<b>1. Definition of this PVS Critical Competency</b>		
<i>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.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. The VS cannot regulate veterinary medicines and veterinary biologicals.		
<b>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.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop a plan for the registration, import, distribution and use of veterinary medicines and biologicals		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• The NDV is the Veterinary Authority and will take the role of veterinary medicines and biologicals management – including registration, import, distribution and use</li> <li>• Assign a veterinarian to undertake development of veterinary medicines regulations – estimated at 0.4 FTE</li> <li>• Develop national legislation for the control of veterinary medicines and biologicals - in consultation with the Ministry of Health and the Ministry of Commerce, Industry and Environment; the legislation should include a hierarchy of veterinary products, their registration, importation, distribution/prescription and prudent use</li> <li>• A quality assurance system should be developed and included into the national plan determining minimum product standards for importation into Timor Leste and compliance with international standards (e.g. VICH)</li> <li>• Develop a national plan for implementing the legislation including the registration, import, distribution and use of veterinary medicines and biologicals in collaboration with the Ministry of Health, Ministry of Commerce and Industry, the National Directorate for Quarantine and Biosecurity and Livestock Associations</li> <li>• Define the protocols/procedures for the registration of veterinary medicines and biologicals</li> <li>• Carry out an awareness campaign to promote the effective and prudent use of veterinary medicines and biologicals in collaboration with the Ministry of Health, Ministry of Commerce and Industry, the National Directorate for Quarantine and Biosecurity and Livestock Associations</li> <li>• Review and revise the programme as necessary</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with cross government agencies and industry stakeholders to define the approach
	<i>IV.1, 2, 3. Legislation</i>	Draft and enact national legislation
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	Conduct awareness campaign on the new registration, import, distribution and use of veterinary medicines and biologicals procedures
	<i>I.11. Management of resources and operations</i>	Continue to participate in OIE training National Focal Points for Veterinary Products Develop, produce and disseminate communication material
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• National plan</li> <li>• National legislation</li> <li>• Import quality assurance guidelines</li> <li>• Registry for veterinary medicines and biologicals</li> <li>• Communication material</li> </ul>		

<b>VETERINARY PUBLIC HEALTH - 4</b>					
<b>CC: II-9. Veterinary medicines and biologicals</b>					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set	1	1 700	3	567	
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>				<b>567</b>	
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians	0,4	12 000		4 800	
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>4 800</b>	
<b>Consumable resources</b>					
Administration		20%		960	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>drivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>Public awareness meetings</i>	13	500,00		6 500	
<b>Sub-total Consumable resources</b>				<b>7 460</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>12 827</b>	

## 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)

To develop a plan for outsourcing residue testing

### 4. Activities to implement (chronological)

		<ul style="list-style-type: none"> <li>One veterinarian should be assigned to develop the residue testing programme at 0.1 FTE (one half day per week)</li> <li>Develop a plan for outsourcing residue testing with the Ministry of Commerce, Industry and Environment (The cost of residue testing was not available and has not been included)</li> <li>Develop a sampling programme initially focused on export animals and products but in time to cover animal products for the domestic market</li> <li>Negotiate with private sector exporters to cover the costs of residue testing at a foreign reference laboratory for live cattle destined for export</li> </ul>
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with the Ministry of Commerce, Industry and Environment and Ministry of Health
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Train staff on designing sampling plans and the collection and handling of samples
	III.1 Communication	
	I.11. Management of resources and operations	
	III.3. Official representation	

### 5. Objectively verifiable indicators

- Reports of meetings and Memorandum of Understanding with Ministry of Commerce, Industry and Environment
- Sampling plan
- Results of residue tests
- Minutes of consultation meetings with exporters



<b>VETERINARY PUBLIC HEALTH - 5</b>					
<b>CC: II-10. Residue testing</b>					
Resource and cost lines	Required Number	Unit Cost	Years of amortisation	Annual cost	Exceptional cost
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
<i>National expertise (days/5 years)</i>		240			
<i>International expertise (weeks/5 years)</i>		7 250			
<i>Special funds (/ 5 years) for ...</i>					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians	0,1	12 000		1 200	
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>1 200</b>	
<b>Consumable resources</b>					
Administration		20%		240	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>240</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>1 440</b>	

## VPH 6 – II-11. Animal feed safety

<b>1. Definition of this PVS Critical Competency</b>		
<i>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.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. The VS cannot regulate animal feed safety.		
<b>2. The VS have some capability to exercise regulatory and administrative control over animal feed safety.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop a basic initial national plan on animal feed safety		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Develop a national plan for animal feed safety_ this programme will initially (in the next five years) be very small and so no specific resource is assigned; the Director of the National Directorate of Veterinary Services will take the lead role, supported by veterinary para-professionals</li> <li>Draft and enact veterinary legislation to include the regulation and administrative control of animal feed safety to be under the responsibility of the National Directorate of Veterinary Services</li> <li>Work with National Directorate for Quarantine and Biosecurity to develop and undertake pre-border risk assessment of imported animal feeds</li> <li>Work with Ministry of Health and the Ministry of Commerce, Industry and Environment</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Undertake consultation with the Ministry of Health and the Ministry of Commerce, Industry and Environment
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff on risk assessment and sample collection
	<i>III.1 Communication</i>	Communicate with importers on their obligations
	<i>I.11. Management of resources and operations</i>	Programme needs coordination between the National Directorate for Quarantine and Biosecurity and National Directorate of Veterinary Services and with other stakeholders
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>National plan on animal feed safety</li> <li>Pre-border risk assessment documents</li> </ul>		

CC not assessed in 2011 PVS Evaluation

NOTE: no costs have been assigned to this CC

### **C. Critical Competencies for Animal Health**

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

### A. Passive surveillance

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. The VS have no passive surveillance programme.		
<b>2. The VS conduct passive surveillance for some relevant diseases and have the capacity to produce national reports on some diseases.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To strengthen the national disease reporting system by promoting awareness and increasing district staff and field investigations		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Review and update the national list of 'notifiable' diseases</li> <li>Liaise and communicate with the District Agriculture Directorates to capture, collate and report national animal health information on all relevant disease data (field to central level)</li> <li>Define and document a clear chain of reporting/command from village/sub-district/district/central</li> <li>Recruit veterinarians as District Veterinary Officers</li> <li>Recruit and train additional veterinary para-professionals</li> <li>Define protocols/procedures for disease investigation</li> <li>Train field staff on syndromic surveillance, field investigation, data capture and reporting</li> <li>Implement campaigns to raise awareness at community level on priority diseases – consider the use of radio/TV, print media/pamphlets and participate at public meetings</li> </ul> <p><i>Note: The National Disease Reporting System is not under the responsibility of the National Directorate for Policy and Planning of the Ministry of Agriculture and so clear lines of communication must be established</i></p>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Liaise and work with the District Agriculture Directorates, the National Directorate for Quarantine and Biosecurity and National Directorate for Veterinary Services
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Provide training to field staff on disease investigation (passive surveillance)
	<i>III.1 Communication</i>	Implement public awareness campaigns
	<i>I.11. Management of resources and operations</i>	Recruit veterinarians and veterinary para-professionals for work at district level Purchase vehicles, motorbikes, refrigerators for sample storage, sample collection equipment/materials Develop, produce and disseminate pamphlets and other guidelines and SOPs
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Minutes and reports of consultation meetings with other government agencies</li> <li>National programme documented</li> <li>Recruited and trained staff</li> <li>Purchase and delivery orders for equipment and materials</li> <li>Communication materials</li> </ul>		

NOTE: no costs have been assigned to this CC – all animal health field cost are assigned to II.7

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

### B. Active surveillance

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>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.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To conduct regular surveys to assess the prevalence of diseases and the impact of disease control activities		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• A senior veterinarian at NDV will develop and implement active surveillance programmes including some as part of the national programmes for disease control</li> <li>• Identify the information required, that needs to be provided by livestock surveys – note that the priority will be monitoring the current disease control programmes</li> <li>• Define the survey methodology (random or convenience), target populations, disease/pathogen/immune response, sample size, diagnostic tests and design sensitivity</li> <li>• Document all surveillance activities including the design, the implementation and reporting required</li> <li>• Collect and send the samples to National Directorate for Veterinary Services for testing</li> <li>• Evaluate efficacy of disease control and the vaccination programmes by conducting pre and post vaccination assessment and monitoring disease prevalence</li> <li>• Analyse and report survey results to inform review active disease control activities</li> <li>• Undertake risk based surveillance - work with the National Directorate for Quarantine and Biosecurity to identify high risk populations</li> <li>• Conduct public awareness campaigns using radio/TV, print media, participation at public meetings</li> <li>• Conduct further cross-sectoral surveys of brucellosis to assess prevalence and impact on the production of cattle and buffalo</li> <li>• Strengthen the ongoing collaboration with the Australian Department of Agriculture</li> <li>• Strengthen and explore future opportunities for collaboration with a laboratory in Australia (OIE twinning laboratory project)</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with stakeholders
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff
	<i>III.1 Communication</i>	Implement public awareness campaigns
	<i>I.11. Management of resources and operations</i>	
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Documented active surveillance programmes with reports for HS, CSF, ND, brucellosis</li> <li>• Training agenda and list of participants</li> <li>• Communication material</li> </ul>		

NOTE: no costs have been assigned to this CC – all animal health field cost are assigned to II-7

## AH 3 – II-6. Emergency response

1. Definition of this PVS Critical Competency		
<i>The authority and capability of the VS to respond rapidly to a sanitary emergency (such as a significant disease outbreak or food safety emergency).</i>		
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)		
To strengthen emergency preparedness and response		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Emergency preparedness activities will be led by the CVO</li> <li>Extend the mandate of the National Commission for HPAI to include all emergency diseases</li> <li>Develop contingency plans for diseases identified as high risk – particularly those in the region such as FMD, HPAI and rabies</li> <li>Establish an ‘Emergency Management System’ to guide and direct emergency response, including: define the policies to develop, guide and direct emergency preparedness and response, identify cross government roles and responsibilities, establish lines of responsibility and reporting</li> <li>Institute a working group composed of representatives from the Ministry of Health and the Ministry of Agriculture working towards a One Health approach for zoonoses</li> <li>The Ministry of Agriculture should develop a response management framework (e.g. Incident Command System), including: define emergency response arrangements, job cards for staff roles, technical guidelines and activity SOPs, pre-signed forms and templates are required to expedite reporting and dissemination of information</li> <li>Develop SOPs for the release of emergency funds in consultation with the Ministry of Finance</li> <li>Determine staff roles and develop/train for the necessary capabilities</li> <li>Undertake animal disease emergency response simulation exercises and joint simulation exercises for priority zoonoses with the Ministry of Health</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Work with Ministry of Health and Ministry of Finance
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff in emergency preparedness and response
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Identify emergency funding sources and process of accessing funds for emergency operations, the supply of emergency equipment and materials
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Contingency plans, Emergency Management System, response management framework</li> <li>Minutes and reports of the National Commission for ‘emergency diseases’</li> <li>SOPs and staff job cards</li> <li>Reports of emergency response simulation exercises and joint exercises</li> </ul>		

<b>ANIMAL HEALTH - 3</b>					
<b>CC: II-6. Emergency response</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ()					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
<i>National expertise (days/5 years)</i>		240			
<i>International expertise (weeks/5 years)</i>		7 250			
<i>Special funds (/ 5 years) for ...</i>					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>					
<b>Consumable resources</b>					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>Simulation exercise</i>	1	1 000,00		1 000	
<b>Sub-total Consumable resources</b>				<b>1 000</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>1 000</b>	



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

<b>1. Definition of this PVS Critical Competency</b>													
<i>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.</i>													
<b>2. Desired Level of Advancement (DLA)</b>													
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.													
<b>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.</b>													
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.													
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>													
To continue to implement the priority national disease control programmes with monitoring to assess their efficiency and sustainability													
<b>4. Activities to implement (chronological)</b>													
Specific activities	<ul style="list-style-type: none"> <li>• One central veterinarian will oversee the disease surveillance and control programmes</li> <li>• An international consultant will be recruited to support programme review and revision and to undertake scientific evaluation of the programmes</li> <li>• Review the current disease control programmes (HS, CSF, ND), including assessing the impact of each disease, the cost-effectiveness of the control programme, the ability to deliver an effective programme and the specific goals of each control programme; consult with stakeholders to determine whether to continue the disease control programmes</li> <li>• For the continuing disease control programmes, identify specific control objectives</li> <li>• Document in detail the control programme activities (risk mitigation, vaccination, movement control) and the monitoring and evaluation to be undertaken</li> <li>• Work with owners to ensure effective and efficient programmes are delivered; implement a public awareness campaign to ensure community and owner support</li> <li>• Train staff at the district level to deliver the programme, under veterinary supervision (initially this will be centrally and then by the district veterinary officers)</li> <li>• Assess programme impact by assessing incidence and undertaking annual prevalence surveys</li> <li>• Develop a brucellosis programme – consult with stakeholders, review prevalence data and undertake further surveys. Design and cost a control programme</li> <li>• Review and revise disease control programmes annually</li> </ul>												
Activities linked to cross-cutting competencies	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"><i>III.2 Consultation</i></td> <td>Consult with stakeholder on the design, implementation and review of disease control programmes Consult with the Ministry of Health on their priority zoonoses to be controlled</td> </tr> <tr> <td><i>IV.1, 2, 3. Legislation</i></td> <td></td> </tr> <tr> <td><i>I.3. Continuing Education</i></td> <td>Train staff at district and village level to implement disease control effectively</td> </tr> <tr> <td><i>III.1 Communication</i></td> <td>Public awareness campaign required to ensure understanding and support</td> </tr> <tr> <td><i>I.11. Management of resources and operations</i></td> <td>Management of the control programmes including activities, staffing and resources is required Identify and manage risks with National Directorate for Quarantine and Biosecurity</td> </tr> <tr> <td><i>III.3. Official representation</i></td> <td></td> </tr> </table>	<i>III.2 Consultation</i>	Consult with stakeholder on the design, implementation and review of disease control programmes Consult with the Ministry of Health on their priority zoonoses to be controlled	<i>IV.1, 2, 3. Legislation</i>		<i>I.3. Continuing Education</i>	Train staff at district and village level to implement disease control effectively	<i>III.1 Communication</i>	Public awareness campaign required to ensure understanding and support	<i>I.11. Management of resources and operations</i>	Management of the control programmes including activities, staffing and resources is required Identify and manage risks with National Directorate for Quarantine and Biosecurity	<i>III.3. Official representation</i>	
<i>III.2 Consultation</i>	Consult with stakeholder on the design, implementation and review of disease control programmes Consult with the Ministry of Health on their priority zoonoses to be controlled												
<i>IV.1, 2, 3. Legislation</i>													
<i>I.3. Continuing Education</i>	Train staff at district and village level to implement disease control effectively												
<i>III.1 Communication</i>	Public awareness campaign required to ensure understanding and support												
<i>I.11. Management of resources and operations</i>	Management of the control programmes including activities, staffing and resources is required Identify and manage risks with National Directorate for Quarantine and Biosecurity												
<i>III.3. Official representation</i>													
<b>5. Objectively verifiable indicators</b>													
<ul style="list-style-type: none"> <li>• Documented control programmes including policies, objectives, activities and monitoring and periodic reviews</li> <li>• Organisational charts of staff implementing the programme</li> <li>• Public awareness campaign materials</li> </ul>													

<b>ANIMAL HEALTH - 4</b>					
<b>CC: II-7. Disease prevention, control and eradication</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )	3 702				
<i>Maintenance cost per (m2)</i>	312	18	1	5 616	
<i>Renovation cost per (m2)</i>	390	200	15	5 200	52 000
<i>Building cost per (m2)</i>	3 000	350	20	52 500	787 500
Transport (Purchasing cost)					
<i>Motorbikes</i>	65	2 500	5	32 500	
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>	5	48 000	10	24 000	120 000
<i>Fridges, cold store, coldboxes, datalog</i>	65	1 100	5	14 300	
<i>Cold storage for vaccines</i>	1	3 500	5	700	
Staff office equipment set	50	1 700	3	28 333	
Other specific office equipment set		600	3		
Other specific equipment					
<i>Mobile phones with camera</i>	70	200	5	2 800	
<b>Sub-total Material investments</b>				<b>165 949</b>	<b>959 500</b>
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)	10,0	7 250			72 500
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					<b>72 500</b>
<b>Salaries</b>					
Veterinarians	7,0	12 000		84 000	
Other university degree		2 700			
Veterinary para-professionals	65,0	2 700		175 500	
Support staff	66,0	2 400		158 400	
<b>Sub-total Salaries</b>				<b>417 900</b>	
<b>Consumable resources</b>					
Administration		20%		83 580	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>drivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>	325 000	0,12		39 000	
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>	45 000	0,36		16 200	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>	295 000	1,00		295 000	
<i>Vaccination gun, PPE, autopsy kit</i>	20	210,00		4 200	
<b>Sub-total Consumable resources</b>				<b>437 980</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>1 021 829</b>	<b>1 032 000</b>

## AH 5 – II-13. Animal welfare

<b>1. Definition of this PVS Critical Competency</b>		
<i>The authority and capability of the VS to implement the animal welfare standards of the OIE as published in the Terrestrial Code.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. There is no national legislation on animal welfare.		
2. There is national animal welfare legislation for some sectors.		
<b>3. In conformity with OIE standards, animal welfare is implemented for some sectors (e.g. for the export sector).</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To implement the national decree law on animal welfare		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• This activity will be led by the CVO</li> <li>• Consult with industry/stakeholders on the national decree law on animal welfare</li> <li>• Conduct a public awareness campaign to promote animal welfare and compliance with the national decree law</li> <li>• Continue the development of the Animal Lovers Association</li> <li>• Develop a programme of enforcement through the development of regulations with expiations (disciplinary measures)</li> <li>• Train staff on the national decree law</li> <li>• Review and revise the programme annually</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with industry/stakeholders and the community
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff on the national decree law
	<i>III.1 Communication</i>	Conduct a public awareness campaign
	<i>I.11. Management of resources and operations</i>	Identify a national animal welfare focal point to lead programme activities
	<i>III.3. Official representation</i>	Participate in OIE seminars for National Focal Points in animal welfare
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Regulations outlining enforcement procedures</li> <li>• Training agenda and list participants</li> <li>• Minutes of consultation meetings</li> <li>• Communication materials</li> <li>• Records of animal welfare enforcement activities and expiations</li> </ul>		

NOTE: no costs have been assigned to this CC

## **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		
<p><i>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.</i></p>		
2. Desired Level of Advancement (DLA)		
<p>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.</p>		
<p><b>2. For major zoonoses and diseases of national economic importance, the VS have access to and use a laboratory to obtain a correct diagnosis.</b></p>		
<p>3. For other zoonoses and diseases present in the country, the VS have access to and use a laboratory to obtain a correct diagnosis.</p>		
<p>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.</p>		
<p>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.</p>		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
<p>To use the national veterinary laboratory to support national animal health, livestock development and community agriculture development programmes</p>		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>• Review the role and operational requirements of the national veterinary laboratory (as directed by the National Directorate of Veterinary Services)</li> <li>• Establish procedures/protocol for routine collection, shipping and delivery of samples (cold chain)</li> <li>• Conduct deferential laboratory diagnosis: serological, microbiology, parasitology, gross pathology, Fluorescent Antibody Test (rabies)</li> <li>• Undertake an analysis of the laboratory staff training needs</li> <li>• Send samples to regional reference laboratories for confirmatory or second level diagnostic testing</li> <li>• Strengthen linkages with the human health laboratory</li> <li>• Explore opportunities to twin with Australia and other regional laboratories</li> <li>• Undertake a cost benefit study to explore expansion of types of laboratory diagnosis (molecular biology, virology)</li> </ul>	
Activities linked to cross-cutting competencies	<p><i>III.2 Consultation</i></p>	
	<p><i>IV.1, 2, 3. Legislation</i></p>	
	<p><i>I.3. Continuing Education</i></p>	Provide access to continuing and specialist education
	<p><i>III.1 Communication</i></p>	
	<p><i>I.11. Management of resources and operations</i></p>	Increase funding to carry out the tests required
	<p><i>III.3. Official representation</i></p>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>• Tests conducted</li> <li>• Training agenda and materials</li> <li>• Proficiency testing reports</li> <li>• Twinning agreements</li> <li>• Cost benefit analysis</li> </ul>		

<b>VETERINARY LABORATORIES - 1</b>					
<b>CC: II-1.A Access to veterinary laboratory diagnosis</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )	150				
<i>Maintenance cost per (m2)</i>	150	18	1	2 700	
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>	1	2 500	5	500	
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>	1	48 000	10	4 800	24 000
Staff office equipment set	2	1 700	3	1 133	
Other specific office equipment set		600	3		
Other specific equipment					
laboratory equipment maintenance and calibration					
<i>Equipment replacement/upgrade</i>	1	10 000	1	10 000	
<b>Sub-total Material investments</b>				<b>19 133</b>	<b>24 000</b>
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>	25,0	59		1 483	
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>				<b>1 483</b>	
<b>Salaries</b>					
Veterinarians	1,0	12 000		12 000	
Other university degree		2 700			
Veterinary para-professionals	4,0	2 700		10 800	
Support staff	2,0	2 400		4 800	
<b>Sub-total Salaries</b>				<b>27 600</b>	
<b>Consumable resources</b>					
Administration		20%		5 520	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>drivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>	5 000	0,12		600	
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>	9 000	0,36		3 240	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>	60 000	1,00		60 000	
<i>Maintenance of equipment</i>	10 000	1,00		10 000	
<i>Calibration of equipment</i>	10 000	1,00		10 000	
<b>Sub-total Consumable resources</b>				<b>89 360</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>137 577</b>	<b>24 000</b>

## LAB 2 – II-1. Veterinary laboratory diagnosis\*

### B. Suitability of national laboratory infrastructures

1. Definition of this PVS Critical Competency		
<i>The sustainability, effectiveness and efficiency of the national (public and private) laboratory infrastructures to service the needs of the VS.</i>		
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)		
To maintain the infrastructure of the national veterinary laboratory		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>• Development a maintenance schedule with estimated costing</li> <li>• Develop a programme of replacement and calibration of equipment</li> <li>• Build a cold store for vaccines</li> </ul>	
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		
<ul style="list-style-type: none"> <li>• Maintenance schedule</li> <li>• Reports of equipment calibration</li> </ul>		

\* CC not assessed in 2011 PVS Evaluation

NOTE: no costs have been assigned to this CC



## LAB 3 – II-2. Laboratory quality assurance

1. Definition of this PVS Critical Competency		
<i>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.</i>		
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)		
To strengthen the quality assurance system of the national veterinary laboratory		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Assign one of the laboratory technicians to be the quality manager, under the supervision of the laboratory veterinarian</li> <li>Develop SOPs and quality manuals</li> <li>Train staff on quality assurance</li> <li>Develop a formal programme of routine calibration</li> <li>Conduct proficiency tests</li> <li>Implement validation tests with positive/ negative samples</li> <li>Encourage continued support from the Australian Department of Agriculture</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with the Australian Department of Agriculture
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff on quality assurance
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Allocate funds for proficiency testing and validation
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Quality manual</li> <li>SOPs</li> <li>Calibration records</li> </ul>		

NOTE: no costs have been assigned to this CC



**E. Critical Competencies for Management of Veterinary Services**  
**General Competencies**

## MVS– I-4. Technical independence

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>3. The technical decisions are based on scientific evidence but are subject to review and possible modification based on non-scientific considerations.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop a technically independent Veterinary Services that makes decisions based on scientific evidence		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• Utilise animal health data for evidence-based decision-making</li> <li>• Make coherent documented decisions based on scientific evidence</li> <li>• Use international best practices and technical guidelines (ASEAN, OIE, Codex)</li> <li>• Document the development of policies and submit for review</li> <li>• Recruit required staff and provide adequate remuneration</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with the private sector and other government agencies
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff on the need of formal documentation of decisions
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Recruit required staff and provide adequate remuneration
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Documented decisions</li> <li>• Reports of consultation meetings</li> <li>• Training agenda and list of participants</li> <li>• Staff recruitment and revised remuneration</li> </ul>		

NOTE: no costs have been assigned to this CC

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

<b>1. Definition of this PVS Critical Competency</b>		
<i>The capability of the VS structure and/or leadership to implement and sustain policies over time.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>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.</b>		
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. <sup>1</sup>		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To advocate for the Veterinary Services' role, policies and programmes with government and other stakeholders		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Engage with senior government staff to promote the role of Veterinary Services</li> <li>Inform international partners/organisations (OIE, FAO, ASEAN, CPLP) and neighbouring countries of Veterinary Services policies and programmes</li> <li>Publicise the activities and results of the Veterinary Services (annual report, strategic plans, press releases)</li> <li>Engage with the community and industry</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with stakeholders
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	Develop communication material and awareness raising campaigns
	I.11. Management of resources and operations	Implement an extension programme for relevant parties
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Communication material</li> <li>Reports of meetings</li> </ul>		

NOTE: no costs have been assigned to this CC

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

### A. Internal coordination (chain of command)

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>4. There are internal coordination mechanisms and a clear and effective chain of command at the national level for most activities.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To have a well-defined organisation with clear roles, responsibilities and lines of reporting		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Define the organisation of the Veterinary Services outlining the role and responsibility of all involved actors (chain of command); the role of the District Directors is recognised but the technical management and delivery of the VS must be directed by the NDV</li> <li>Obtain ministerial approval on the organogram of the 'chain of command'; the Director of the National Directorate of Veterinary Services will lead and manage the delivery (and coordination) of the VS</li> <li>Develop a Veterinary Services strategic plan</li> <li>Delegate activities with routine exchange of information</li> <li>Develop SOPs, guidelines, terms of reference</li> <li>Undertake periodic reviews of the system</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with the Ministry of Agriculture
	<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>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Strategic Plan</li> <li>Revised organogram</li> <li>Meeting reports</li> <li>SOPs, guidelines, terms of reference</li> <li>Documented reviews of the system</li> </ul>		

NOTE: no costs have been assigned to this CC

## 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)		
To develop formal external coordination mechanisms with national partners		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Identify stakeholders (Ministry of Health, Ministry of Finance, Ministry of Commerce, Industry and Environment)</li> <li>Define process of coordination, roles and responsibilities</li> <li>Develop SOPs, guidelines and terms of reference</li> <li>Draft and sign Memoranda of Understanding, when relevant</li> <li>Establish commissions, working groups and conduct regular meetings</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with relevant parties and conduct routine meetings
	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		
<ul style="list-style-type: none"> <li>SOPS, guidelines, terms of reference</li> <li>Memoranda of Understanding</li> <li>Meeting reports</li> </ul>		

NOTE: no costs have been assigned to this CC



## 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.		
<b>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.</b>		
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)		
To develop the capability to conduct risk assessment and develop mitigation measures		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Conduct training on the principles of risk assessment and analysis for the National Directorate of Veterinary Services and National Directorate of Quarantine and Biosecurity</li> <li>Secure funding to outsource risk analysis and assessment of imported products to the National University of Timor Leste (frequency 1-2 risk analyses per annum for a total contracted time of 3 months). This would include: defining hazards, potential impact, mitigation measures</li> <li>Develop a technical assistance contract for outsourcing this work with the National University of Timor Leste and provide necessary animal health data</li> <li>Conduct risk assessment of informal trade</li> <li>Document process and conduct routine reviews</li> </ul> <p>Note that the level of advancement expected is between level 2 and level 3 – the staff capability will have been developed but only some risk management measures will be based on risk assessment, over the next five years</p>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with National Directorate of Quarantine and Biosecurity, National University of Timor Leste and importer
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Allocate funding for the provision of technical assistance in risk analysis by the National University of Timor Leste
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Training agenda, list of participants and material</li> <li>Technical assistance contract with the National University of Timor Leste</li> <li>Risk analysis reports</li> <li>Reports of review process</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - General competencies</b>					
<b>CC: II-3. Risk analysis</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>	2,0	1 450			2 900
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					<b>2 900</b>
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>					
<b>Consumable resources</b>					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>drivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>Outsource to UNTL</i>	3	1 250,00		3 750	
<b>Sub-total Consumable resources</b>				<b>3 750</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>3 750</b>	<b>2 900</b>

## MVS – III-4. Accreditation / authorisation / delegation

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>3. The public sector of the VS develops accreditation / authorisation / delegation programmes for certain tasks, but these are not routinely reviewed.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To establish the Animal Lover Association		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• Provide training to livestock technicians (Note that these are civil servants, who already carry out vaccinations; they have a statutory association)</li> <li>• Establish the Animal Lovers Association (creating community vaccinators): engage community in veterinary decision making, define roles, responsibilities and reporting mechanisms (at village level and involved in disease surveillance)</li> <li>• Priority tasks for the Animal Lovers Association will be the promotion of passive surveillance with case reporting, implementing animal identification and delivering disease control programmes (primarily based on vaccination)</li> <li>• Provide training to Animal Lovers Association workers</li> </ul>	
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	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Animal Lovers Associations established</li> <li>• Training records</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - General competencies</b>					
<b>CC: III-4. Accreditation / Authorisation / Delegation</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set	1	1 700	3	567	
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>				<b>567</b>	
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians	0,5	12 000		6 000	
Other university degree		2 700			
Veterinary para-professionals	1,0	2 700		2 700	
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>8 700</b>	
<b>Consumable resources</b>					
Administration		20%		1 740	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>drivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<i>Training for Animal Lovers Associations</i>	26	500,00		13 000	
<b>Sub-total Consumable resources</b>				<b>14 740</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>24 007</b>	

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

### A. VSB authority

<b>1. Definition of this PVS Critical Competency</b>		
<i>The VSB is an autonomous regulatory body for veterinarians and veterinary para-professionals. Its role is defined in the Terrestrial Code.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. There is no legislation establishing a VSB.		
<b>2. The VSB regulates veterinarians only within certain sectors of the veterinary profession and/or does not systematically apply disciplinary measures.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To establish a Veterinary Statutory Body that regulates the profession		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Finalise and enact legislation for the Timor Leste Veterinary Association (include veterinary para-professionals) – to cover the public and private sectors</li> <li>Establish a VSB, based on the enacted legislation with the mandate to register all veterinarians</li> <li>Extend the VSB to veterinary para-professionals</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with veterinarians and veterinary para-professionals
	<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>	VS will need to support the VSB
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Developed legislation</li> <li>List if registered veterinarians</li> </ul>		

NOTE: no costs have been assigned to this CC

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

### B. VSB capacity

<b>1. Definition of this PVS Critical Competency</b>		
<i>The capacity of the VSB to implement its functions and objectives in conformity with OIE standards.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. The VSB has no capacity to implement its functions and objectives.		
2. <b>The VSB has the functional capacity to implement its main objectives.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop a national VSB, led by the NDV		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>The small scale of the veterinary profession in Timor-Leste means that the VSB function will be best carried out within the government VS</li> </ul>	
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>	The VS will need to support the VSB
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Documented activities of VSB</li> </ul>		

NOTE: no costs have been assigned to this CC

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

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>3. Producers and other interested parties are trained to participate in programmes and advise of needed improvements, and participate in early detection of diseases.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop joint programmes by working with developing industry groups and the private sector		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• Establish the Animal Lovers Association to empower local communities</li> <li>• Conduct industry level consultation</li> <li>• Conduct inter-ministerial consultation (Ministry of Health, Ministry of Commerce, Industry and Environment)</li> <li>• Work with DNQB to best manage imports</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consultation with the private sector and other stakeholders
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	Communicate the need of joint programmes with stakeholders
	I.11. Management of resources and operations	Requires management and coordination
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Records of consultations</li> <li>• Programmes developed</li> </ul>		

NOTE: no costs have been assigned to this CC



**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

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>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.).</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To strengthen the technical capabilities of the VS by developing the priority specialist skills required		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Conduct an analysis of training needs – to be led by the Director of the Directorate of National Veterinary Services with support from the National University of Timor-Leste.</li> <li>Training in epidemiology, risk assessment and analysis, HACCP, public health, development of cross-sectoral surveys, diagnostic capacities, development of technical guidelines and communication materials; the cost estimate provides for one overseas Masters course is provided</li> <li>On the job training for veterinarians</li> <li>Compliance with ASEAN – requirement for registration in Timor-Leste Veterinary Association</li> </ul> <p>Note that no cost estimate is provided for scholarships/training of veterinarians overseas as this is managed by the Ministry of Education</p>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with veterinarians on training needs
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Continuing Education will become mandatory
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	The training programme will need coordination and management
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Records of training assessments</li> <li>Records of training delivered</li> <li>Compliance with ASEAN requirements</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues</b>					
<b>CC: I-2.A. Professional competencies of veterinarians</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Initial training (nb of students / year)</i>		50 400			
<i>Specialised training (person-months/5 years)</i>	20,0	1 450			29 000
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					<b>29 000</b>
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>					
<b>Consumable resources</b>					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>					
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>				<b>29 000</b>

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

### B. Competencies of veterinary para-professionals

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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. <b>The training of veterinary para-professionals is of a uniform standard that allows the development of some advanced competencies (e.g. meat inspection).</b>		
5. The training of veterinary para-professionals is of a uniform standard and is subject to regular evaluation and/or updating.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop the technical capabilities of the veterinary para-professionals to undertake the specialist skills required		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Assess veterinary para-professionals training needs: including food safety, meat inspection, disease surveillance and disease control programme delivery and animal welfare</li> <li>Develop training</li> <li>Liaise with UNTL and advocate to change curricula at UNTL based on needs</li> <li>Train the veterinary para-professionals</li> <li>Review competencies acquired</li> <li>Develop ToRs, SOP, guidelines</li> <li>Conduct inter-ministerial consultations (food safety)</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with veterinary para-professionals and UNTL on training needs
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Continuing Education is mandatory
	III.1 Communication	
	I.11. Management of resources and operations	Training will require resources and management
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Records of training assessments</li> <li>Records of training delivered</li> </ul>		

NOTE: no costs have been assigned to this CC – costs are assigned under I.3 Continuing Education

## 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)		
To develop skills and capabilities of veterinarians and veterinary para-professionals through an ongoing programme of continuing education		
4. Tasks to implement (chronological)		
Specific tasks	<ul style="list-style-type: none"> <li>• One veterinarian will be assigned to lead the programme for continuing education (1.0 FTE), supported by 1.0 FTE veterinary para-professional</li> <li>• Assess training needs and priorities</li> <li>• On line journals, on line courses, internal training, focal point trainings, ToT</li> <li>• Participate in conferences</li> <li>• Introduce a continuing education requirement to practice veterinary medicine and work as veterinary para-professional (Timor Leste Veterinary Association)</li> <li>• Review training programme provided</li> <li>• Establish a formal annual training programme: risk assessment, laboratory diagnosis, surveillance, control programmes, veterinary medicines</li> </ul>	
Tasks linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with veterinarians, veterinary para-professionals and stakeholders on training needs/skills required
	<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>	The programme for Continuing Education requires resources and management
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>• Records of consultations</li> <li>• Training records</li> <li>• Monitoring records of training provided</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues</b>					
<b>CC: I-3. Continuing education</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set	1	1 700	3	567	
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>				<b>567</b>	
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>	480,0	59		28 480	
<i>National expertise (days/5 years)</i>		240			
<i>International expertise (weeks/5 years)</i>		7 250			
<i>Special funds (/ 5 years) for ...</i>					
<b>Sub-total non material expenditure</b>				<b>28 480</b>	
<b>Salaries</b>					
Veterinarians	1,0	12 000		12 000	
Other university degree		2 700			
Veterinary para-professionals	1,0	2 700		2 700	
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>14 700</b>	
<b>Consumable resources</b>					
Administration		20%		2 940	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>2 940</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>46 687</b>	

## MVS – I-11. Management of resources and operations

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>3. The VS have adequate records, documentation, and management systems and use these to a limited extent for the control of efficiency and effectiveness.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To document and regularly review procedures, and to develop an integrated database management system		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Assign a veterinarian to lead the management and delivery of VS operations</li> <li>Identify key programmes and programme managers</li> <li>Document programmes and develop SOPs for their management and the use of staff and resources</li> <li>Provide training to support staff implementing tasks with the reporting required</li> <li>Undertake regular analysis of programme delivery</li> <li>Document a monitoring and evaluation process with a formal process of review and revision</li> <li>Modify and adjust procedures based on lessons learned</li> <li>Develop an integrated database (software and hardware) for managing and monitoring activities, resources and costs – internet access will be required</li> </ul> <p>Note: The cost estimation card covers all the central staff of the Directorate of Veterinary Services – four veterinarians one director with three supporting veterinarians to manage programmes in animal health, veterinary public health and supporting activities including consultation and the development of legislation. Veterinary para-professionals will support these veterinarians and programme delivery. The programmes run nationally and drivers and vehicles will be required to enable supporting visits to field sites and to hold stakeholder consultations and communications meetings</p>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with VS stakeholders and staff on needs
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train staff to manage, implement and report on activities undertaken
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>Job description of managing veterinarian</li> <li>Key programmes listed and documented</li> <li>Monitoring, evaluation and review records</li> <li>Database developed and in use</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues</b>					
<b>CC: I-11. Management of resources and operations</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )	200				
<i>Maintenance cost per (m2)</i>	200	18	1	3 600	
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>	2	2 500	5	1 000	
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>	1	48 000	10	4 800	24 000
<i>Database design</i>	1	50 000	5	10 000	
Staff office equipment set	15	1 700	3	8 500	
Other specific office equipment set		600	3		
Other specific equipment					
<i>13 district computers</i>	13	750	3	3 250	
<i>1 central server</i>	1	2 000	3	667	
<b>Sub-total Material investments</b>				<b>31 817</b>	<b>24 000</b>
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>	36,0	1 450			52 200
<i>Continuing education (person-days/year)</i>		59			
<i>National expertise (days/5 years)</i>	40,0	240			9 600
<i>International expertise (weeks/5 years)</i>		7 250			
<i>Special funds (/ 5 years) for ...</i>					
<b>Sub-total non material expenditure</b>					<b>61 800</b>
<b>Salaries</b>					
Veterinarians	1,0	12 000		12 000	
Other university degree		2 700			
Veterinary para-professionals	8,0	2 700		21 600	
Support staff	5,0	2 400		12 000	
<b>Sub-total Salaries</b>				<b>45 600</b>	
<b>Consumable resources</b>					
Administration		20%		9 120	
Travel allowances					
<i>staff within the country (person-days) / year</i>	216	40		8 640	
<i>rivers within the country (person-days) / year</i>	72	40		2 880	
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>	10 000	0,12		1 200	
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>	9 000	0,36		3 240	
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>25 080</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>102 497</b>	<b>85 800</b>



## MVS – III-1. Communication

<b>1. Definition of this PVS Critical Competency</b>		
<p><i>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.</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>		
<b>2. Desired Level of Advancement (DLA)</b>		
1. The VS have no mechanism in place to inform interested parties of VS activities and programmes.		
2. The VS have informal communication mechanisms.		
<b>3. The VS maintain an official contact point for communication but it is not always up-to-date in providing information.</b>		
4. The VS contact point for communication 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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop and implement a communication strategy for the Veterinary Services		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• Assign a veterinary para-professional to coordinate the communication programme</li> <li>• Develop a communication strategy for the VS with an annual plan for implementation</li> <li>• Identify key messages and target audience</li> <li>• Identify media to be used – community radio, posters, brochures</li> <li>• Run communication campaigns</li> <li>• Hold regular meetings with Ministry of Agriculture and Fisheries Communication Office</li> <li>• Enlist support of the Animal Lovers Association</li> <li>• Translate key documents and materials – adapt to audience</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with stakeholders on the needs of the communication plan
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Train staff as necessary to prepare communication materials
	III.1 Communication	
	I.11. Management of resources and operations	The communication plan needs management and resources
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Veterinary para-professional with communication included in job description</li> <li>• Documented communication strategy and annual plan</li> <li>• Communication materials available</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues</b>					
<b>CC: III-1. Communication</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set	1	1 700	3	567	
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>				<b>567</b>	
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
<i>National expertise (days/5 years)</i>		240			
<i>International expertise (weeks/5 years)</i>		7 250			
<i>Special funds (/ 5 years) for ...</i>					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals	1,0	2 700		2 700	
Support staff		2 400			
<b>Sub-total Salaries</b>				<b>2 700</b>	
<b>Consumable resources</b>					
Administration		20%		540	
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>General communication</i>	1	10 000,00		10 000	
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>10 540</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>13 807</b>	

## MVS – III-2. Consultation with interested parties

1. Definition of this PVS Critical Competency		
<p><i>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.</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. 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)		
To identify and hold regular formal consultations with priority stakeholders		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Assign a veterinarian to coordinate the consultations programme</li> <li>Identify priority stakeholders (Chamber of Commerce, farmer cooperatives, WHO, FAO, donors, national and international NGOs/agencies, Animal Lovers Association, Timor Leste Veterinary Association, Veterinary clinics, UNTL, ASEAN)</li> <li>Identify points of contact</li> <li>Establish a consultation process – ToRs, context, reporting, frequency</li> <li>Develop MoU as necessary</li> </ul>	
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	Resources will be required to hold meetings and workshops
	III.3. Official representation	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Veterinarian appointed with a job description including consultations</li> <li>Records of consultations held and the outcomes</li> <li>MoUs developed</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues</b>					
<b>CC: III-2. Consultation with interested parties</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds ( / 5 years) for ...					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>					
<b>Consumable resources</b>					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>	6	400,00		2 400	
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				<b>2 400</b>	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>2 400</b>	

## MVS – III-3. Official representation

<b>1. Definition of this PVS Critical Competency</b>		
<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>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>3. The VS actively participate<sup>8</sup> in the majority of relevant meetings.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To advocate attendance and obtain support to participate in international meetings to increase international recognition of Timor-Leste to support national livestock exports		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>Develop a schedule of appropriate annual international meetings</li> <li>Advocate for funding and invite senior government officials to participate at OIE General Session</li> <li>Participate in the annual OIE General Session, trade fairs, ASEAN Animal Health Working Group</li> <li>Report back on meetings attended</li> <li>Coordinate between the Ministry of Agriculture and Ministry of Foreign Affairs</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with the Ministry of Foreign Affairs and other stakeholders
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Resources will be required to attend international meetings
	III.3. Official representation	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>List of relevant international meetings, meetings attended and reports delivered</li> <li>Attendance at OIE General Assembly</li> </ul>		

<sup>8</sup> 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.

<b>MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues</b>					
<b>CC: III-3. Official representation</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)		240			
International expertise (weeks/5 years)		7 250			
Special funds ( / 5 years) for ...					
<b>Sub-total non material expenditure</b>					
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>					
<b>Consumable resources</b>					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>	3	3 400		10 200	
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>				10 200	
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>			<b>10 200</b>	

## MVS – IV-1. Preparation of legislation and regulations

1. Definition of this PVS Critical Competency		
<p><i>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).</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. 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 out dated 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)		
To draft and enact an Animal Health Legislation		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>• The CVO should take the lead in developing the required legislation</li> <li>• Update, revise and advocate enacting the draft animal health legislation</li> <li>• Hire a national consultant/lawyer to revise the draft animal health legislation (200 days over 5 years)</li> <li>• Recruit an international consultant to support the development of veterinary legislation (5 weeks over 5 years)</li> <li>• Review and advocate the enacting Timor-Leste Veterinary Association legislation</li> <li>• DNQB needs to review legislation, consultation with stakeholders and advocate for its passing</li> <li>• Development corresponding regulations (enforcement measures)</li> <li>• Review the list of notifiable disease and submit to Minister</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with other Ministries and stakeholders on required legislation
	<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>	A veterinarian will need to lead the technical development of the required legislation
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>• New legislation prepared and enacted</li> </ul>		

<b>MANAGEMENT OF VETERINARY SERVICES - Cross-cutting issues</b>					
<b>CC: IV-1. Preparation of legislation and regulations</b>					
<b>Resource and cost lines</b>	<b>Required Number</b>	<b>Unit Cost</b>	<b>Years of amortisation</b>	<b>Annual cost</b>	<b>Exceptional cost</b>
<b>Material investments</b>					
Buildings ( )					
<i>Maintenance cost per (m2)</i>		18	1		
<i>Renovation cost per (m2)</i>		200	15		
<i>Building cost per (m2)</i>		350	20		
Transport (Purchasing cost)					
<i>Motorbikes</i>		2 500	5		
<i>Cars</i>		45 000	10		
<i>4x4 vehicles</i>		48 000	10		
Staff office equipment set		1 700	3		
Other specific office equipment set		600	3		
Other specific equipment					
<b>Sub-total Material investments</b>					
<b>Non material investments</b>					
Training					
<i>Specialised training (person-months/5 years)</i>		1 450			
<i>Continuing education (person-days/year)</i>		59			
National expertise (days/5 years)	200,0	240			48 000
International expertise (weeks/5 years)	5,0	7 250			36 250
Special funds (/ 5 years) for ...					
<b>Sub-total non material expenditure</b>					<b>84 250</b>
<b>Salaries</b>					
Veterinarians		12 000			
Other university degree		2 700			
Veterinary para-professionals		2 700			
Support staff		2 400			
<b>Sub-total Salaries</b>					
<b>Consumable resources</b>					
Administration		20%			
Travel allowances					
<i>staff within the country (person-days) / year</i>		40			
<i>rivers within the country (person-days) / year</i>		40			
<i>staff abroad (person-weeks) / year</i>		3 400			
Transport costs					
<i>Km or miles Motorbikes / year</i>		0,12			
<i>Km or miles cars / year</i>		0,24			
<i>Km or miles 4x4 vehicle / year</i>		0,36			
Specific costs					
<i>Targeted specific communication</i>					
<i>Consultation (number of 1 day meetings)</i>					
<i>Kits / reagents / vaccines</i>					
<b>Sub-total Consumable resources</b>					
<b>Delegated activities</b>					
<b>Sub-total Delegated activities</b>					
<b>Total in</b>	<b>USD</b>				<b>84 250</b>



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

<b>1. Definition of this PVS Critical Competency</b>		
<i>The authority and capability of the VS to ensure compliance with legislation and regulations under the VS mandate.</i>		
<b>2. Desired Level of Advancement (DLA)</b>		
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.		
<b>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.</b>		
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.		
<b>3. Strategy to reach the Desired Level of Advancement (if relevant)</b>		
To develop a programme of compliance with ongoing enforcement activities		
<b>4. Activities to implement (chronological)</b>		
Specific activities	<ul style="list-style-type: none"> <li>• Develop a programme to increase compliance with the legislation – including defining and targeting high risk activities, developing communications to target non-compliant activities and an operational plan to assess/audit/enforce compliance</li> <li>• Implement a communication programme to promote awareness (radio, letters, community meetings) and of the intent to enforce this legislation</li> <li>• Train veterinarians and veterinary para-professional staff on legislation and regulations</li> <li>• Conduct inspections</li> <li>• Impose penalties (fines, confiscate goods)</li> <li>• Review procedure, enforcement taken place</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with stakeholders
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	
	<i>III.1 Communication</i>	Conduct a public awareness campaign to promote awareness
	<i>I.11. Management of resources and operations</i>	Enforcing legislation requires commitment and resources
	<i>III.3. Official representation</i>	
<b>5. Objectively verifiable indicators</b>		
<ul style="list-style-type: none"> <li>• Records of enforcement activities</li> <li>• Public awareness campaign materials</li> <li>• Reviews of procedures</li> </ul>		

NOTE: no costs have been assigned to this CC

## 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 <sup>9</sup> , and use the standards to harmonise national legislation, regulations and sanitary measures.		
3. Strategy to reach the Desired Level of Advancement (if relevant)		
To review and update national legislation, regulations and sanitary measures to comply with international standards		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>• Monitor new and revised international standards and relevant legislation</li> <li>• Periodically review Timor-Leste legislation and revise as required</li> <li>• Participate in key international meetings (OIE and ASEAN)</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with stakeholders on any changes of legislation required
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Monitoring of international standards requires one or more veterinarians to be assigned to this task
	III.3. Official representation	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>• Reviews of changes in international legislation, regulations and sanitary measures</li> <li>• Legislation revised and updated as necessary</li> </ul>		

NOTE: no costs have been assigned to this CC

<sup>9</sup> 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)		
To recruit additional veterinarians so that five districts have a veterinary officer (DVO) To develop necessary specialist skills in epidemiology/risk assessment and veterinary public health		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Recruit district veterinary officers to provide district and field level supervision</li> <li>Equip and train the district veterinary officers</li> <li>Develop specialist skills in epidemiology and risk assessment and the capability to deliver a veterinary public health programme</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with stakeholders on the technical needs and the training required
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Management will need to provide the lead in developing and maintain the necessary skills
	III.3. Official representation	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Advocacy documents available</li> <li>Reports of additional veterinarians recruited and training provided</li> </ul>		

## 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.		
<b>3. The majority of technical positions at local (field) level are occupied by personnel holding appropriate qualifications.</b>		
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)		
To define the categories and roles of veterinary para-professionals and other technical staff To provide veterinary supervision of veterinary para-professionals and other technical staff		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Identify roles and responsibilities for veterinary para-professionals and other technical staff – review and revise job descriptions and define qualifications/training for each role, eg meat inspection, animal welfare, surveillance/investigation, movement control, vaccination, etc</li> <li>Develop a training programme to provide the skills and qualifications required and to reassign staff as necessary</li> <li>Review VS organisation to assign veterinary staff for the supervision for all veterinary para-professionals and other technical staff</li> <li>Develop formal reporting procedure of veterinary para-professional and other technical staff activities to the supervising veterinarians</li> <li>Review the activities of veterinary para-professionals and other technical staff and revise/update as necessary</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consultation with veterinary para-professionals and other technical staff on roles
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Train DVOs to supervise veterinary para-professional and other technical staff
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Veterinary management time will be required to set up, manage and review the roles and activities of veterinary para-professionals and other technical staff
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Documented review of VS showing veterinary supervision</li> <li>Reports by veterinary para-professional and other technical staff</li> </ul>		

## 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)		
To review the available physical resources and to develop a maintenance schedule		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>The management of physical resources is included under CC I.11</li> <li>Develop a resources register and include schedules for maintenance and replacement</li> <li>Review physical resources and develop a plan with priorities for maintain/upgrading/replacing as required</li> <li>Identify annual budget for replacement, repairs and maintenance</li> <li>Carry out upgrading plan recognising the funding available</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	
	IV.1, 2, 3. Legislation	
	I.3. Continuing Education	Staff training on resources/inventory management including maintenance
	III.1 Communication	
	I.11. Management of resources and operations	Management of the purchase, maintenance and replacement of resources is required
	III.3. Official representation	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>List of physical resources</li> <li>Schedules for maintenance and replacement with priorities</li> </ul>		

## 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)		
<b>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.</b>		
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)		
To improve high level advocacy to promote funding for key operations		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>• Develop staff skills in risk analysis and cost-benefit analysis</li> <li>• Develop rigorous operational plans for all VS programmes and activities with costs and benefits</li> <li>• Review the availability of operational funds and revise the VS programme targeting high impact areas, as required</li> <li>• Develop multi-year programme budgets</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Consult with stakeholders on priorities
	<i>IV.1, 2, 3. Legislation</i>	
	<i>I.3. Continuing Education</i>	Skills in risk analysis and cost-benefit analysis required to support budget development
	<i>III.1 Communication</i>	
	<i>I.11. Management of resources and operations</i>	Develop a multi-year programme of VS activities with an indicative budget
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>• Accounting provide detailed records of operating costs against budget</li> <li>• Reports of cost-benefit analyses conducted</li> </ul>		

## I-9. Emergency funding

1. Definition of this PVS Critical Competency		
<p><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></p>		
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).		
<p><b>3. Funding arrangements with limited resources have been established; additional resources for emergencies may be approved but approval is through a political process.</b></p>		
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)		
To develop a defined, documented process for accessing emergency funding		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>Review arrangements for the early release of funds to manage an emergency event and how this will impact on ongoing programmes; establish top-up procedures if necessary</li> <li>Develop clear understanding of the criteria required to release emergency funds</li> <li>Develop clear documentation of the procedure for the release of emergency funds and the process to access additional funds. This documentation should specify the information required to release funding at each stage and the likely timing of funds being released.</li> <li>Develop pre-prepared templates for accessing emergency funding</li> <li>Run a desk top simulation exercise to understand better the process and timing of funds release</li> </ul>	
Activities linked to cross-cutting competencies	III.2 Consultation	Consult with other government departments to develop contingency funding mechanisms
	IV.1, 2, 3. Legislation	Review legislation and advocate for changes if necessary
	I.3. Continuing Education	
	III.1 Communication	
	I.11. Management of resources and operations	Management need to develop clear protocols for the release of emergency funding and to test the process of funds release
	III.3. Official representation	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>Documented process of funds release with information required and an indicative timeline</li> <li>Documentation of desk top simulation exercise</li> </ul>		



## 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.		
<b>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.</b>		
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)		
To develop a capital investment plan to upgrade capital items necessary for service delivery, and to gain access to these funds		
4. Activities to implement (chronological)		
Specific activities	<ul style="list-style-type: none"> <li>• Develop a five year investment plan</li> <li>• As part of the management of physical resources (CC 1.7) develop a replacement programme for equipment and major renovations of facilities</li> <li>• Develop a purchase plan with priorities</li> <li>• Assess likely availability of funds and assign priorities</li> <li>• Advocate for funding capital investment for VS through Ministry of Agriculture</li> <li>• Explore options to obtain capital funding from international donors</li> <li>• Review and revise the capital investment plan annually</li> </ul>	
Activities linked to cross-cutting competencies	<i>III.2 Consultation</i>	Work across Ministry of Agriculture to identify synergies in major capital investments with the plant and cropping sector
	<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>	A capital investment programme requires good scoping and vision for the VS
	<i>III.3. Official representation</i>	
5. Objectively verifiable indicators		
<ul style="list-style-type: none"> <li>• A documented capital investment programme</li> <li>• Records of discussions across Ministry of Agriculture</li> </ul>		



## 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

### **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,

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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 equides 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: Documents used in the PVS Gap Analysis mission

Type	DOCUMENTS
H	<i>Republica democratica de Timor-Leste Ministerio da Agricultura e Pescas Direccao Nacional da Pecuaria e Veterinaria : Annualreport 2013</i>
E	<i>Journal da Republica, Fevereiro 2014 : Declaracao de Rectifacao 2/2014</i>
P	<i>Agriculture, Forestry and Fisheries – Priorities and prospects for investment, April 2006</i>

E = Electronic version, H = Hard copy version, P= Digital picture





## Appendix 4: Timetable of the mission (1- 11 September)

Day (D)	Purpose of the meeting	Participants
Day 1	<ul style="list-style-type: none"> <li>Opening meeting</li> </ul>	Secretary of State for Livestock, Director of National Directorate of Livestock and Veterinary Services, OIE Delegate, senior staff of VS and Quarantine services
Days 1 - 5	<ul style="list-style-type: none"> <li>Definition of the national priorities and the levels of advancement for Trade, Veterinary Public Health, Animal Health, Laboratory and Management Pillar</li> </ul>	OIE Delegate and senior staff
D6 and D7	<ul style="list-style-type: none"> <li>Synthesis of findings by the team of experts</li> </ul>	The experts
D8	<ul style="list-style-type: none"> <li>Meeting with Secretary of State for Livestock</li> <li>Preliminary presentation of the PVS Gap Analysis national priorities, objectives, strategies, activities and cost estimation</li> </ul>	OIE Delegate and senior staff
D9 /10	<ul style="list-style-type: none"> <li>Meeting with Minister of Agriculture and Fisheries</li> <li>Collection of additional information &amp; finalisation of the PVS Gap Analysis.</li> </ul>	OIE Delegate and senior staff
D11	<ul style="list-style-type: none"> <li>Final meeting</li> </ul>	OIE Delegate and senior staff