

# OIE PVS Evaluation mission

Belize

Human, Physical  
and Financial  
Resources

Technical Authority  
and Capability

Interaction with  
Interested Parties

Access to Markets



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2014

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**OIE PVS EVALUATION**

**REPORT OF THE**

**VETERINARY SERVICES OF**

**BELIZE**

**13 – 26 July 2014**

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## LIST OF ACRONYMS AND ABBREVIATIONS

AAHO	Aquatic Animal Health Officer
AAHS	Aquatic Animal Health Services
AAHL	Aquatic Animal Health Laboratory (of BAHA)
AH	Animal Health
AI	Avian influenza
BAHA	Belize Agricultural Health Authority
BLPA	Belize Livestock Producers Association
BPA	Belize Poultry Association
BSE	Bovine Spongiform Encephalopathy ('mad cow' disease)
CAC	Codex Alimentarius Commission
CBPP	Contagious bovine pleuropneumonia
CE	Continuing Education
CIL	Central Investigation Laboratory (of BAHA)
CSF	Classical swine fever
CVL	Central Veterinary Laboratory (of BAHA)
CVO	Chef Veterinary Office
DVS	Director of Veterinary Services (Chief Veterinary Officer)
FAO	Food and Agriculture Organization of the United Nations
FMD	Foot and mouth disease
FTE	Full Time Equivalent
GDP	Gross Domestic Product
GIS	Geographic Information Systems
GOB	Government of Belize
HPAI	Highly pathogenic avian influenza
HR	Human Resources
IAEA	International Atomic Energy Agency
ID	Identification
IDB	Inter-American Development Bank
IPPC	International Plant Protection Convention
ISO	International Standardization Organisation
MOA	Ministry of Natural Resources and Agriculture
MOF	Ministry of Fisheries
MOH	Ministry of Health
ND	Newcastle disease
NEMO	National Emergency Management Organization
NGOs	Non Governmental Organisations
OECD	Organization for Economic Cooperation and Development
OIE	World Organisation for Animal Health
OIRSA	Organismo Internacional Regional de Sanidad Agropecuaria
PVS Tool	OIE Tool for Evaluation of <i>Performance of Veterinary Services</i>
QA	Quality Assurance
QC	Quality Control
RA	Risk Analysis
RL	Reference laboratory of the OIE
SENASICA	Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria Mexico
SGD	Solicitor-General's Department
S.I.	Statutory Instrument
SOPs	Standard Operating Procedures
SPS	Sanitary and Phytosanitary (WTO Agreement)
SWEEP	National Cattle Sanitary Plan Project
TADs	Transboundary Animal Diseases

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TB	Tuberculosis (bovine)
TBT	Technical Barriers to Trade (WTO Agreement)
VPH	Veterinary Public Health
VPP	Veterinary Para-professional
VS	Veterinary Services
VS	Veterinary Statutory Body (in Belize, the Veterinary Surgeon's Board)
WTO	World Trade Organization

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# PART I: EXECUTIVE SUMMARY

## I.1 Introduction

Following a request to the OIE from the Government of Belize, a Follow-up evaluation of the Veterinary Services based on the *OIE PVS (Performance of Veterinary Services)* methodology was conducted in July 2014 by a team of two independent OIE certified PVS evaluators.

The evaluation began with meetings with the Managing Director of the Belize Agricultural Health Authority (BAHA), the Chief Veterinary Officer / OIE Delegate and senior staff at the Central Farm, Cayo, followed by meetings with officials of the Ministries of Health, Environment and Fisheries and the Customs and Excise Department.

The OIE PVS Team visited sites and institutions, both public and private sector, in the capital and rural areas of Belize and discussed relevant matters with government officials, public and private sector veterinarians, livestock producers, traders, and other interested parties.

The mission concluded at the Central Farm, Cayo District, with a closing meeting at which the preliminary findings of the PVS Team were discussed. BAHA Managing Director, Mr Emil Cruz, Dr DePaz, managers and staff of BAHA attended the meeting, together with representatives of regulated industries and other interested parties.

The VS of Belize has at its core BAHA, a relatively small organisation staffed by competent people, with a modern legislative base and management system. The relationship between BAHA and interested parties is positive and there is generally good collaboration.

The main shortcoming, which underlies most of the findings in this report, relates to BAHA's financial position. Approximately one third of the core budget is provided by the Government of Belize and two thirds is from 'fee for service' or revenue provided by the private sector. BAHA depends on externally funded projects and loans for the implementation of some key programmes and for the maintenance or upgrading of infrastructure. Obvious problems with this financial model are the lack of capacity to sustain long term programmes and difficulty in making a commitment to activities that do not directly reflect industry priorities. Programmes for disease surveillance, prevention and control are in the former category and various 'public good' functions, such as basic public health inspection are in the latter.

With an increased number of national regulatory programmes BAHA is challenged to develop and implement a number of essential policies and functions such as compliance and enforcement, decisions on the management of infected herds (including compensation) and the acknowledged "informal" movement of cattle from Belize to Guatemala. BAHA requires additional full time personnel to tackle these challenges – they are not problems that can be addressed through time limited projects.

Monitoring and evaluation of BAHA programmes is mainly conducted by external organisations in relation to specific projects or loans. BAHA does not implement self-audit of the effectiveness or efficiency of its core programmes.

The approach to veterinary public health should be reassessed. The current focus is on inspection to satisfy export markets and little attention is paid to the quality of food consumed domestically. The PVS Team recommends that BAHA take responsibility for establishing a dialogue within the Government of Belize to propose a national programme for domestic food safety and quality.

The PVS Team commended the initiative to establish a strategic plan and recommended that this be finalised without delay. BAHA management may wish to consider requesting a further PVS Pathway mission to provide advice on the development of the laboratories and the

application of QA systems.

## **I.2 Key findings of the evaluation**

For the assessment of many critical competencies, the PVS Team considered the findings and recommendations in the report of the initial PVS evaluation (2009) and the PVS Gap Analysis (2010) were still relevant. Notably, there is a need to strengthen staff numbers, operational funding, physical resources and capital investment.

### ***I.2.A Human, physical and financial resources***

#### Human Resources

BAHA's greatest asset is its people. Belize has no veterinary school but the veterinarians and other professionals hold appropriate qualifications obtained outside Belize. Veterinary para-professionals and other technicians normally hold a formal qualification in a relevant discipline. Professional and technical staff have many opportunities for continuing education.

The core number of veterinary and other professional staff employed by BAHA has decreased since the PVS report of 2009 and new activities that have been introduced have largely been delivered by contract staff. The small number of permanent professional staff makes it difficult for BAHA to develop specialised skills in areas such as epidemiology and risk assessment and to deliver compliance and enforcement activities that are required to support new animal health and identification programmes and the growing export of cattle. In addition, there is a risk that long term overloading of highly motivated professional staff will lead to 'burn out'. The shortage of veterinarians in BAHA also means that the Directors of Animal Health and Food Safety cannot always make themselves available to staff in a timely manner, which could threaten the efficiency and effectiveness of the veterinary chain of command.

BAHA now has the capacity to accredit private veterinarians and contractors have been duly accredited. New funding has been provided by the GOB for the recruitment of a veterinarian and some paraprofessional staff for the animal health, food safety and quarantine programmes at the conclusion of a major IDB project. These are helpful measures but the underlying inadequacy of the core BAHA budget remains.

Official information is lacking but it seems that there are few young Belizeans studying veterinary medicine. This presents a challenge to BAHA recruitment in the longer term

The Aquatic Animal Health Unit comprises a single Aquatic Animal Health Professional and one technician. This Unit urgently needs additional staff to assure continuity and excellence in the provision of services to a growing industry whose exports are valued at approx. US\$35-45M per annum.

The Food Safety and Animal Health Departments have too few veterinary para-professional staff (inspectors, assistants, technicians) for their current work. In Animal Health, new disease surveillance, control and eradication programmes are handled with the help of technical staff employed on short-term contracts using external funding.

As reported in 2009, the personnel management system is fundamentally sound. Staff has duty statements, performance appraisal is done systematically and results are linked to salary increments. As part of the development of the first BAHA Strategic Plan, Core Values are being drafted in a series of staff workshops. The draft Core Values highlights the importance of professional and technical capacity, performance and development.

Thanks to the support of external organisations, including the OIE, FAO, OIRSA and donors, BAHA staff has access to a comprehensive series of technical training opportunities. BAHA technical managers are skilled in preparing project proposals and managing projects. Technical managers should also receive regular training in management related competencies so that they can be effective in monitoring and seeking improvements in operational efficiency and effectiveness. All staff working in regulatory programmes should systematically receive training in the enforcement of compliance with regulatory requirements.

#### Governance

BAHA is a stable organisation, founded on modern legislation. Ministerial transitions have not altered the overall structure or directions of BAHA. Many of the recommendations in previous PVS Reports and in reports of FAO and IDB have been implemented or are in progress. BAHA is currently developing a Strategic Plan.

The BAHA Terms and Conditions of Employment set requirements for the conduct and integrity of BAHA staff. Directors of the technical departments maintain vigilance and have dismissed personnel following improper conduct.

BAHA does not have a systematic self-audit process.

BAHA should improve collaboration with the Ministry of Health, the Ministry of Natural Resources and Environment, and the Customs and Excise Department, as described under the critical competency I-6B, II-4, II-7 and II-8.

#### Financial Resources

As recommended in the report of the PVS evaluation (2009) and the PVS Gap Analysis (2010) BAHA needs access to sustainable core funding.

Good progress has been achieved, notably in the maintenance of quarantine and border security and the implementation of cattle identification and disease surveillance programmes. However, the core budget has not increased since 2010. The annual operating budget is approx. BZ\$ 3.2 M. of which 37% (BZ\$1.2M) is provided by the GOB and 63% (BZ\$2.0M) comes from fees for services.

Charges for BAHA services established in legislation have not increased since 2008. BAHA should have the capacity to make annual adjustments to the fees, based on the real costs of providing services.

The GOB approved supplemental funding of BZ\$1.5M for the fiscal year 2014-15 for the recruitment of personnel that, for the VS, will include one veterinary officer and 11 technicians but the status of this supplement in years to come is unclear.

The OIE PVS Gap Analysis (2010) recommendation to establish a policy on the payment of compensation has not been addressed. The matter has become urgent since the implementation of active surveillance for TB and brucellosis and the finding of infection in a dairy farm that is currently in quarantine.

#### Physical Resources

Previous PVS findings and recommendations are still relevant. Improvements in physical resources are due in large part to projects and donations; there is no on-going provision for maintenance or replacement of assets. IDB funds are being used to renovate existing and build new facilities including a new PCR laboratory and two new Quarantine Offices. The Animal Health Department, in particular, is in short supply of vehicles.

## ***1.2.B Technical authority and capability***

### Laboratories

BAHA has access to laboratory diagnosis through the CIL, the CVL and a small Aquatic Animal Health Laboratory (AAHL). The CIL, in the Food Safety Department, was being refurbished at the time of the mission. CIL tests for residues of pesticides and veterinary drugs in foods and does microbiological testing.

In addition to the refurbishment of CIL, IDB will fund the construction of a new PCR laboratory at Central Farm. It is planned to move the aquatic disease testing facility to CVL but the future arrangements for management and maintenance of the CVL/PCR facility are unclear.

The arrangements for supervision of the three laboratories are variable. The laboratories depend on external funding for most equipment and consumables and laboratory managers spend considerable time on the development and management of projects. Fees, established in legislation, have not been increased since 2008.

Senior laboratory personnel are keen to develop formal QA systems and all have made some progress despite shortages of staff and equipment.

### Quarantine

The Quarantine department has received significant investments in staff, training, buildings, equipment and vehicles from projects, with evident results. The department has increased its productivity and generates increasing revenue to BAHA based on 'fee for service'. OIRSA facilitates coordination with counterpart agencies in the region and provides capacity building.

Inspectors are rotated to mitigate the risk of inappropriate work practices.

There is good coordination between BAHA and the Customs and Excise Department. However, BAHA is not participating in the recently implemented ASYCUDA World system<sup>1</sup>.

The informal movement of cattle across the border to Guatemala presents a quarantine risk in relation to which BAHA staff maintains a high level of vigilance at the border.

### Disease Surveillance, prevention and control

Passive surveillance is conducted by the Animal Health Department and for some diseases is complemented by active surveillance. Dossiers are being prepared for the OIE (continued FMD free status; recognition of BSE negligible risk status and CSF free status). BAHA officials have a good knowledge of the local industries. Issues that weaken the passive surveillance system include the slaughter of some livestock without BAHA supervision and the lack of official veterinarians, which threatens the timely conduct of investigations and sample collection (e.g. BSE). Notwithstanding these points, Belize has a good record of reporting to the OIE.

Active surveillance has improved due to the SWEEP project to demonstrate national freedom from TB and brucellosis. There is active surveillance for CSF in smallholdings and backyard farms that are close to the border with Guatemala. At the conclusion of SWEEP (2015) new funding will be needed for active surveillance in 2016-17 and abattoir monitoring thereafter.

Policies on herd depopulation and compensation (recommended in the Gap Analysis report) have not been established. This may reduce willingness to report suspected cases of disease.

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<sup>1</sup> <http://www.asycuda.org/asyversions.asp>

Disease prevention, control and eradication programmes are implemented for several important diseases. Scientific evaluations are mainly undertaken by external agencies. BAHA does not undertake self-audit of technical programmes.

The underlying problem of insufficient core funding and reliance on externally funded projects threatens the sustainability of these and other technical programmes.

#### Food Safety

Under the legislation and according to the terms of an MOU, the Ministry of Health and BAHA share responsibility for inspection of slaughterhouses and other food processing premises. Other than for fish, the legislation for food products falls under the MOH and there is a lack of legislative support (and official protocols and manuals) for BAHA inspection.

BAHA inspects larger abattoirs (none are export listed) and food processing establishments that use HACCP, which includes exporters of farmed shrimp and processed foods. Operators who are not interested in export generally prefer MOH inspection, due to the cost and standards-related issues. The slaughter of pigs and cattle without BAHA inspection has implications for food safety and for animal disease surveillance.

#### Veterinary drugs and residues

As reported in 2009, there is legal authority for the registration and control of veterinary drugs and vaccines but there is little control exercised over their use and no testing for residues in foods consumed domestically. Addressing this problem would require significant resources and a campaign to raise public awareness. This is a 'public good' issue, for which no funding is currently available.

As terrestrial animal products are not tested, the state of play with veterinary drug residues in the domestic food supply is largely unknown.

#### Identification and Traceability

The promulgation of Animal Identification Regulations and establishment of the Belize Livestock Registry under BAHA legal authority and management of the Belize Livestock Producers' Association (BLPA) are positive developments. There are growing concerns about farmers who do not comply with the rules and on the need for enforcement action.

#### Animal Welfare

BAHA staff is aware of animal welfare issues but there are as yet no specific programmes to promote compliance with OIE standards.

### ***1.2.C Interaction with interested parties***

#### Communications and Consultations

There is a corporate culture of openness and willingness to collaborate with stakeholders. Meetings are held with representatives of the terrestrial and aquatic animal industries to discuss current disease issues and results of animal health surveillance. BAHA officials participate regularly in relevant meetings of standard setting organisations at the international and regional level. BAHA has lost some capacity to make interventions at these meetings due to the loss of experienced officials and the reduction in the number of veterinarians overall.

#### Veterinary Statutory Body (VSB)

The VSB has the authority to register veterinarians, veterinary specialists and animal health assistants. It is small but active on a number of initiatives (see CC III-5.B).

The VSB lacks capacity to address the problem of 'informal' veterinary practice. This is a difficult issue to resolve, in part due to the lack of veterinarians in some districts.

Although there is legal authority, no animal health assistants are currently registered.

#### Participation of Producers in Joint Programmes

Important progress has been achieved since 2009, including the Belize Livestock Register (BLR), the Belize Poultry Improvement Plan (BPIP) and systematic surveillance for crustacean diseases and chemical residues as a basis for export of shrimp to the EU.

### ***1.2.D Access to markets***

#### Legislation and Regulations

S.I.'s have been established for surveillance and control of BSE; TB and brucellosis; accreditation of veterinarians and cattle identification. The procedures for developing new legislation are consistent with OIE recommendations. However, the finalisation of some important S.I.'s has been delayed, in part due to the limited professional capacity discussed previously.

The capacity of BAHA to enforce legislation in some specific areas needs to be strengthened. Relevant recommendations of the Gap Analysis (2010) have not been addressed.

#### Harmonization, Certification, Equivalence and Transparency

BAHA has a good reputation for integrity and transparency, but its capacity to review and comment on international standards has declined with the departure of senior officials. Each of the four veterinarians in BAHA has multiple responsibilities, which can lead to difficulties in maintaining engagement with the standard setting organisations.

The aquaculture sector continues to grow and almost all products are exported. The shortage of human resources in the Aquatic Animal Health Unit may limit capacity for export certification if BAHA does not recruit additional staff.

#### Zoning and Compartmentalization

The new S.I.'s on TB and brucellosis make provision for zoning. There is industry support and regulatory authority for the establishment of a TB-free zone and this should be feasible on the basis of public/private cooperation.

**Table 1: Summary of OIE PVS evaluation results**

Note: an asterisk (\*) denotes a change in the critical competency between 2009 and 2014.

<b>PVS summary results</b>	<b>Result 2014</b>	<b>Result 2009</b>
<b>I. HUMAN, PHYSICAL AND FINANCIAL RESOURCES</b>		
I.1.A. Staffing: Veterinarians and other professionals	2	4
I.1.B. Staffing: Veterinary paraprofessionals and other	3	4
I.2.A. Professional competencies of veterinarians	3	3
I.2.B. Competencies of veterinary paraprofessionals	4	4
I-3. Continuing education	4	2
I-4. Technical independence	3	3
I-5. Stability of structures and sustainability of policies	4	4
I-6.A. Internal coordination (chain of command)	4	3*
I-6.B. External coordination	3	3*
I-7. Physical resources	3	3
I-8. Operational funding	2	3*
I-9. Emergency funding	2	2*
I-10. Capital investment	3	3*
I-11. Management of resources and operations	3	-
<b>II. TECHNICAL AUTHORITY AND CAPABILITY</b>		
II-1.A. Access to veterinary laboratory diagnosis	4	4*
II-1.B. Suitability of national laboratory infrastructures	3	4*
II-2. Laboratory quality assurance	2	2
II-3. Risk analysis	3	3
II-4. Quarantine and border security	3	3
II-5.A. Passive epidemiological surveillance	3	3
II-5.B. Active epidemiological surveillance	4	2
II-6. Emergency response	4	4
II-7. Disease prevention, control and eradication	3	2
II-8.A. Regulation, authorisation and inspection of establishments	2	3*
II-8.B. Ante and post mortem inspection	3	3*
II-8.C. Inspection of collection, processing and distribution	3	3*
II-9. Veterinary medicines and biological	2	2
II-10. Residue testing	2	2
II-11. Animal feed safety	2	-
II-12.A. Animal identification and movement control	3	2*
II-12.B. Identification and traceability of animal products	2	2*
II-13. Animal welfare	2	-
<b>III. INTERACTION WITH INTERESTED PARTIES</b>		
III-1. Communications	3	2
III-2. Consultation with interested parties	4	4
III-3. Official representation	3	3
III-4. Accreditation/authorisation/delegation	3	1
III-5.A. Veterinary Statutory Body Authority	4	3*
III-5.B. Veterinary Statutory Body Capacity	2	3*
III-6. Participation of producers and other interested parties in joint programmes	4	4
<b>IV. ACCESS TO MARKETS</b>		
IV-1. Preparation of legislation and regulations	3	3
IV-2. Implementation of legislation and regulations and compliance thereof	2	2
IV-3. International harmonisation	3	4
IV-4. International certification	3	3
IV-5. Equivalence and other types of sanitary agreements	3	3
IV-6. Transparency	4	4

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IV-7. Zoning	2	2
IV-8. Compartmentalisation	1	2

### ***1.3 Key recommendations***

#### ***1.3.A Human, physical and financial resources***

- Increase BAHA's core budget (the GOB subvention) to assure core programmes, notably disease surveillance, preparedness and response and laboratories and support for 'public good' activities.
- Update the current scale of fees and facilitate regular updating of the fees based on the real costs of providing services.
- Establish a compensation policy for herds in which reportable diseases occur and implement this policy in the context of the TB/brucellosis eradication campaign.
- As part of the modernisation of the BAHA accounting system, make provision for the maintenance and depreciation of physical resources as appropriate.
- Consider the implementation of systematic self-auditing of policies and programmes.
- Establish a small, specialised Compliance and Enforcement Unit in BAHA headquarters to support and train staff in regulatory policy and programmes.
- Recruit additional veterinarians. In the short term, it is recommended to recruit one in headquarters and one in the field and in the medium term it is recommended to conduct a workload assessment to ascertain the need for any additional recruitment.
- Increase staffing of the Aquatic Animal Health Unit.
- Recruit additional food inspectors. This will be particularly necessary if BAHA, in consultation with MOH, decides to provide inspection to all establishments slaughtering livestock.
- Prioritise succession planning for veterinary and professional staff and make provision for this in BAHA's HR strategy, including, in liaison with the Ministry of Education, consideration of strategies to increase the supply of Belizean graduates in veterinary medicine.
- Identify ways to encourage and enforce the registration of qualified veterinary paraprofessionals with the VSB.

#### ***1.3.B Technical authority and capability***

- Strengthen the management of laboratories by recruiting a Director at the CVL and forming a network of all BAHA labs led by a qualified professional with mandates and management support for QA implementation during a defined period (e.g. 2 years).
- Modernise BAHA informatics systems for import/export and establish an electronic interface with the Customs and Excise Department.
- Expedite the establishment of health conditions for the export of cattle to Guatemala.
- Establish a policy on compensation in the context of disease control programmes.
- Facilitate the submission of dossiers on BSE and CSF to the OIE, including the recruitment of an official veterinarian.
- Initiate a dialogue between BAHA and MOH on food safety inspection and zoonoses.
- Engage MOA and MOH to design and implement controls over the sale and use of selected veterinary medicines, especially antimicrobials, in accordance with international standards.

- 
- Consider any needed modifications to the BLR to facilitate its use in the control of emergencies relating to animal diseases and foodborne illness.
  - Consider the establishment of a surveillance plan for residues in food of animal origin.
  - Develop a programme for the control of veterinary medicines and animal feed (depending on the provision of additional financial and staff resources).

### ***1.3.C Interaction with interested parties***

- Improve the currency and relevance of information on the BAHA internet site.
- Initiate a dialogue with the Ministry of Forestry, Fisheries and Sustainable Development regarding cooperation on diseases in wildlife.
- Encourage Animal Health Assistants to register with the VSB.
- In collaboration with industry, develop public awareness campaigns to encourage producers to comply with the requirements of regulatory programmes.

### ***1.3.D Access to markets***

- Finalise outstanding items of veterinary legislation (notably, on reportable diseases of terrestrial and aquatic animals) without delay.
- Review and strengthen the legal framework for enforcement of the BLR and SWEEP to make sure that there is a sound basis for enforcement, including prosecution.
- Establish a BAHA compliance and enforcement unit to support VS programmes with appropriate policies, procedures and training.
- Create and staff a Deputy Director for Animal Health in BAHA headquarters.
- Develop a legal base for the implementation of compartmentalisation.

## PART II: CONDUCT OF THE EVALUATION

At the request of the Government of Belize, the Director General of the OIE appointed an independent OIE PVS team consisting of Dr. Sarah Kahn (Team Leader) and Dr. Barry Stemshorn (Technical expert) to undertake a follow up evaluation of the veterinary services of Belize. The evaluation was carried out on July 13-25, 2014.

The evaluation was carried out with close reference to the OIE standards contained in Chapters 3.1, 3.2, 3.3 and 3.4 of the OIE *Terrestrial Animal Health Code* (the Terrestrial Code), using the OIE *PVS Tool* (6<sup>th</sup> edition, 2013) to guide the procedures. Relevant Terrestrial Code references are quoted for each critical competency in appendix 1.

This report identifies the strengths and weaknesses of the veterinary services of Belize as compared to the OIE standards. The report also makes some general recommendations for actions to improve performance.

### II.1 OIE PVS Tool: method, objectives and scope of the evaluation

To assist countries to establish their current level of performance, form a shared vision, establish priorities and carry out strategic initiatives, the OIE has developed an evaluation tool called the OIE Tool for the Evaluation of Performance of Veterinary Services (OIE PVS Tool<sup>2</sup>) which comprises four fundamental components:

- Human, physical and financial resources
- Technical authority and capability
- Interaction with interested parties
- Access to markets.

These four fundamental components encompass 47 critical competencies, for each of which five qualitative levels of advancement are described. For each critical competency, a list of suggested indicators was used by the OIE PVS Team to help determine the level of advancement.

A glossary of terms is provided in Appendix 2.

The report follows the structure of the *OIE PVS Tool*, which the reader should consult to obtain a good understanding of the context in which the evaluation was conducted.

The objective and scope of the OIE PVS Evaluation includes all aspects relevant to the OIE *Terrestrial Animal Health Code* and the quality of Veterinary Services.

### II.2 Country information (geography, administration, agriculture and livestock)

Belize is located in Central America bordering the Caribbean Sea between Guatemala to the West and South and Mexico to the North. There are 516 km of land border (Guatemala 266 km and Mexico 250 km) and 386 km of coastline that features many cays and the world's 2<sup>nd</sup> largest barrier reef. It is the only country in Central America without a coastline on the Pacific Ocean. With a total area of 22,966 sq. km it is slightly smaller than Massachusetts.

The population density of Belize is low with about 340,844 people (July 2014). Belize's declining birth rate and its increased life expectancy are creating an aging population<sup>3</sup>.

<sup>2</sup> Available at [http://www.oie.int/eng/oie/organisation/en\\_vet\\_eval\\_tool.htm?e1d2](http://www.oie.int/eng/oie/organisation/en_vet_eval_tool.htm?e1d2)

<sup>3</sup> Excerpts from "The World Factbook - Belize" accessed 20/07/2014 at [https://www.cia.gov/library/publications/the-world-factbook/geos/print/country/countrypdf\\_bh.pdf](https://www.cia.gov/library/publications/the-world-factbook/geos/print/country/countrypdf_bh.pdf)

Belize is a parliamentary democracy and a member of the Commonwealth. The official language is English, but Spanish is the most commonly spoken.

A long-standing territorial dispute with its neighbour Guatemala has not yet been resolved. In December 2008, both countries agreed to refer the dispute to the International Court of Justice (ICJ), requiring referenda in both Belize and Guatemala which to date have not been carried out.<sup>4</sup>

The country's global comparative advantage is derived from its natural resource base, which supports the tourism and agriculture sectors, and its advantageous geographical proximity to major markets<sup>3</sup>. Tourism is the number one foreign exchange earner, followed by exports of marine products, citrus, cane sugar, bananas, and garments. Agriculture accounts for 13% of GDP<sup>2</sup>.

With weak economic growth and a large public debt burden, fiscal spending is likely to be tight. A key government objective remains the reduction of poverty and inequality with the help of international donors. Although Belize has the second highest per capita income in Central America, the average income figure masks a huge income disparity between rich and poor. The sizable trade deficit and heavy foreign debt burden continue to be major concerns.<sup>2</sup>

The 2008 Belize National Export Strategy as well as a 2008 IDB Trade Sector Note recognize that agriculture holds the potential to remain an economic mainstay, but that will require increased diversification of markets, products, and increased value-added rather than the predominantly commodity-driven approach of the past decades. This view is consistent with the continued expansion of non-traditional markets, notably tilapia, shrimp, papayas and more processed products such as hot pepper sauce, as well as the substantial demand for livestock, beans and grain across land borders to Guatemala and Mexico and to CARICOM markets and beyond. Furthermore, the sustained expansion of tourism in Belize is creating new demand for higher value export-quality foods<sup>5</sup>.

The Annual Report by the Central Bank of Belize (CBB) for the 2012 year (E66)<sup>6</sup> includes a 2 page vignette on the re-emergence of the shrimp industry following a decline with farm closures in the years 2006-2010 caused by an outbreak of Taura disease – see figure, labelled Chart B, below. The CBB report emphasizes the importance of preventing disease incursions, notably the OIE listed White Spot Disease, as the industry makes efforts to grow in a competitive international export environment.

A Country Environmental Analysis by the IDB<sup>7</sup> (E66) underlines the critical importance of BAHA's export certification activities to the competitiveness of the shrimp industry and calls for continuous upgrading of BAHA's skills and laboratories.

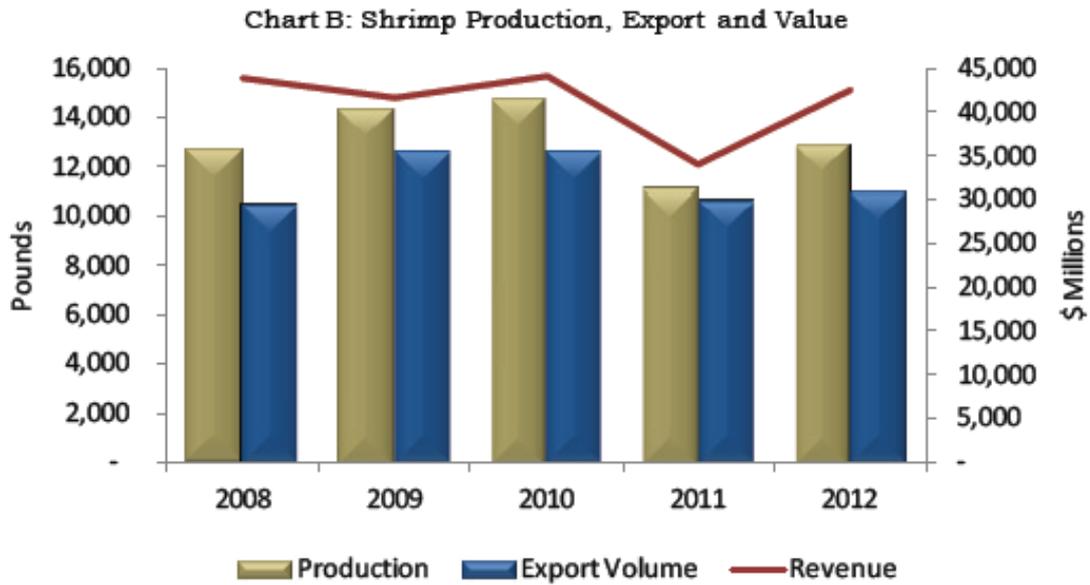
<sup>4</sup> World Bank Overview of Belize available at <http://www.worldbank.org/en/country/belize> accessed July 20, 2014

<sup>5</sup> Belize Agricultural Services Program Loan Proposal, Inter-American Development Bank circa 2010 (E4)

<sup>6</sup> Central Bank of Belize Thirty-First Annual Report and Statement Of Accounts for the year ending December 31, 2012. Central Bank of Belize. Belize City, Belize, 2012. Pages 1, 20, 24-25

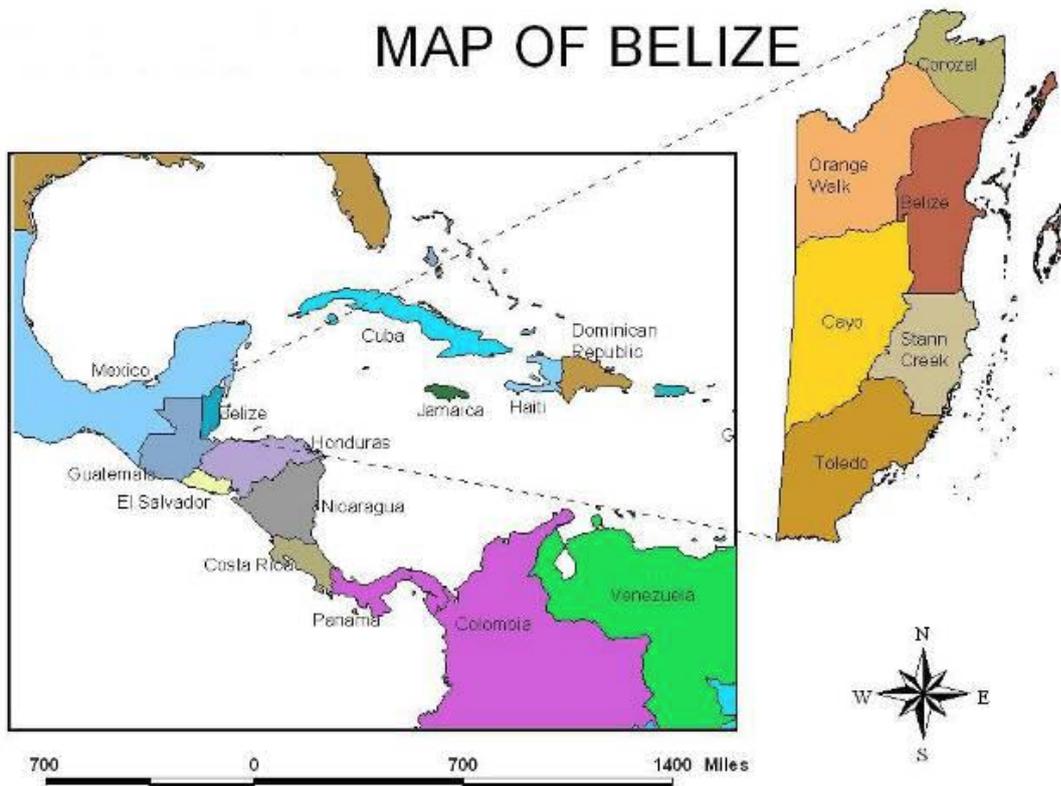
<sup>7</sup> <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=35005771> pages 41-42

Figure 1A showing the value of the shrimp farming sector in Belize<sup>8</sup>



Source: SIB

Figure 1B: Belize in Geographic Context



<sup>8</sup> Source: Central Bank of Belize: (see Appendix 6 E66)

Figure 2: Map of Belize



Table 2: Data summary for geography, agriculture and livestock

**Geographic features**

Climatic and/or agro-ecological zones	Topography <sup>9</sup>	Km2	%
Flat, swampy coastal plain; low mountains in south	Total area	2297	100
limestone hills, moderate rainfall; deep acidic soil, high rainfall	Total land area	2281	99

**Demographic data<sup>10</sup>**

Human population <sup>12</sup>	
Total number	340,844
Average density / km2	148

**Current livestock census data<sup>11</sup>**

Animals species	Total Number
Beef	80,725
Dairy	4,724
Swine	21,887
Sheep	7,920
Goat	1,136
Poultry	11,088,195

**Economic data**

National GDP	US\$3.083 billion 2013 (Purchasing Power Parity) US\$1.637 billion USD 2013 (Official Exchange) <sup>12</sup>
National budget	revenues: US \$410.1 M expenditures: US\$352.4 M (2013 estimated) <sup>12</sup>
Agriculture GDP	13% <sup>12</sup>
Annual budget of the Veterinary Services	US\$ 1.3 million <sup>13</sup>

<sup>9</sup> FAOSTAT. Official data, 2011. Accessed 13/08/2014 <http://www.fao.org/countryprofiles/index/en/?iso3=blz>

<sup>10</sup> For 2013 year (Appendix 6 E3)

<sup>11</sup> For 2013 year (Appendix 6 E3)

<sup>12</sup> The World Factbook - Belize accessed 13/08/2014 at <https://www.cia.gov/library/publications/the-world-factbook/geos/bh.html>

<sup>13</sup> Estimated share of BAHA budget for VS in 2013-14 (not including donor project funding) based on documents E19 (Appendix 6) including Animal Health 100%, Food Safety 100%, Quarantine 50% and Administration 33%

## II.3 Context of the evaluation

### II.3.A Availability of data relevant to the evaluation

A list of documents received by the OIE PVS Team before and during the PVS Evaluation mission is provided in appendix 6. All documents and pictures listed in appendix 6 are referenced to relevant critical competencies to demonstrate the levels of advancement and related findings.

The following table provides an overview of the availability of the main categories of documents or data needed for the evaluation, taking into account the information requirements set out in the OIE Terrestrial Code.

Table 3: Summary of data available for evaluation

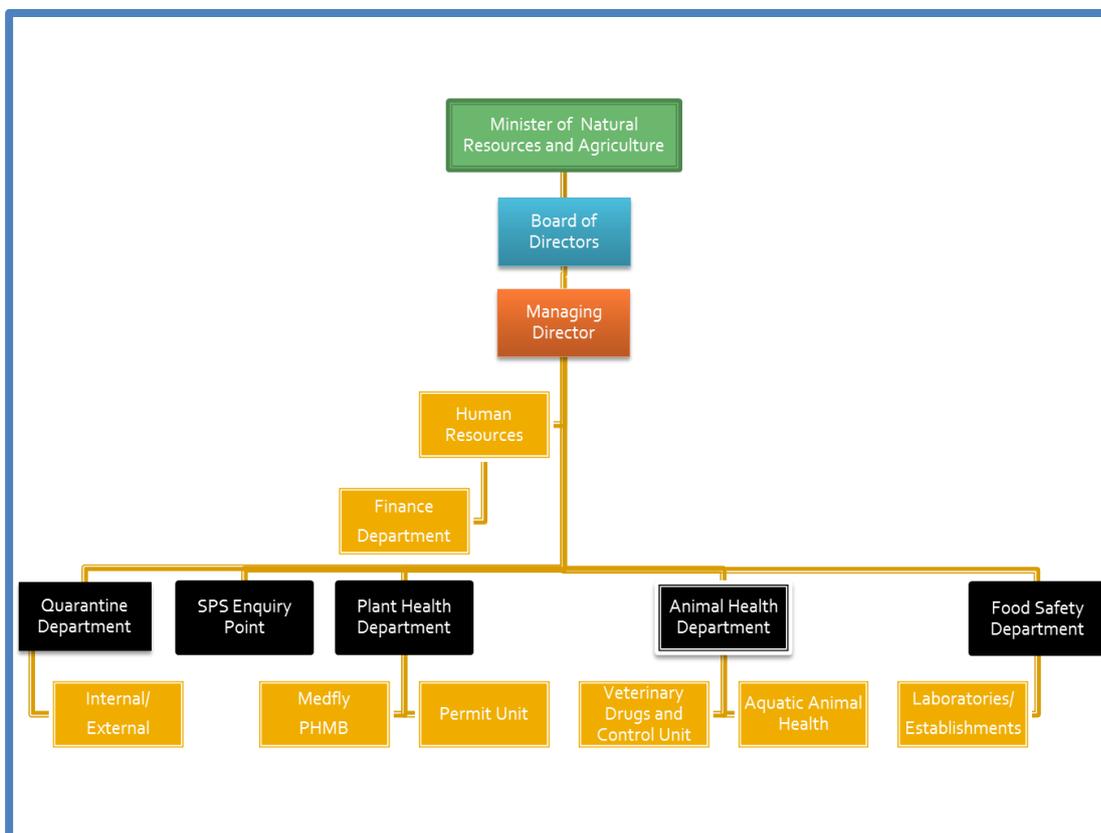
Main document categories	Data available in the public domain	Data accessible only on site or on request	Data not available
→ <b>Animal census:</b>			
○ at 1st administrative level		X	
○ at 2 <sup>nd</sup> administrative level		X	
○ at 3rd administrative level	NA		
○ per animal species		X	
○ per production systems		X	
→ <b>Organisation charts</b>			
○ Central level of the VS	X		
○ 2 <sup>nd</sup> level of the VS	X		
○ 3 <sup>rd</sup> level of the VS	NA		
→ <b>Job descriptions in the VS</b>			
○ Central levels of the VS		X	
○ 2 <sup>nd</sup> level of the VS		X	
○ 3 <sup>rd</sup> level of the VS	NA		
→ <b>Legislations, regulations, decrees ...</b>			
○ Animal health and public health	X		
○ Veterinary practice	X		
○ Veterinary statutory body	X		
○ Veterinary medicines and biologicals	X		
○ Official delegation	X		
→ <b>Veterinary census</b>			
○ Global (public, private, veterinary, para-professional)		X	
○ Per level	NA		
○ Per function		X	
→ <b>Census of logistics and infrastructures</b>		X	
→ <b>Activity reports</b>	X		
→ <b>Financial reports</b>		X	
→ <b>Animal health status reports</b>	X		
→ <b>Evaluation reports</b>	X		
→ <b>Procedures, registers, records, letters ...</b>		X	

### II.3.B General organisation of the Veterinary Services

The Belize Animal Health Authority (BAHA) is a Corporate Body established in 1999 by the Belize Agricultural Health Authority Act No. 47 of 1999, now known as the BAHA Act Chapter 211 of the Substantive Laws of Belize (Revised Edition 2000-2003). BAHA has about 110 staff. It employs all the official veterinarians in Belize (4 in total) plus a consultant to the animal health department. The mandate of BAHA includes animal health, food safety, quarantine / border security and plant health, each of which is the responsibility of a technical department, as shown in the following organogram. BAHA is directed by a Board comprising representatives of relevant Ministries and interested parties. The senior responsible official is the Managing Director, who reports to the Minister of Natural Resources and Agriculture.

Organization Charts for BAHA are shown in Figures 3a and 3b.

**Figure 3a**



The number of veterinarians and veterinary paraprofessionals in the Veterinary Services of Belize is shown in Table 1.

**Table 1 number of veterinarians and veterinary paraprofessionals in BAHA**

District	Private veterinarians	Government Veterinarians	Total vets	Animal health inspectors	Food safety inspectors	Quarantine inspectors	Total Inspectors
Corozal	2	0	2	0			0
Orange Walk	1	1	2	1	3		4
Belize	6	1	7	2	2		16
Cayo	5	2	7	2	3		4
Stann Creek	2	0	2	1			2
Toledo	2	0	2	0			1
<b>Total</b>	<b>18</b>	<b>4 *</b>	<b>22</b>	<b>6</b>	<b>8</b>	<b>36</b>	<b>27</b>

\* plus 1 senior veterinarian employed as a consultant under the IDB Project.

**Figure 3b**

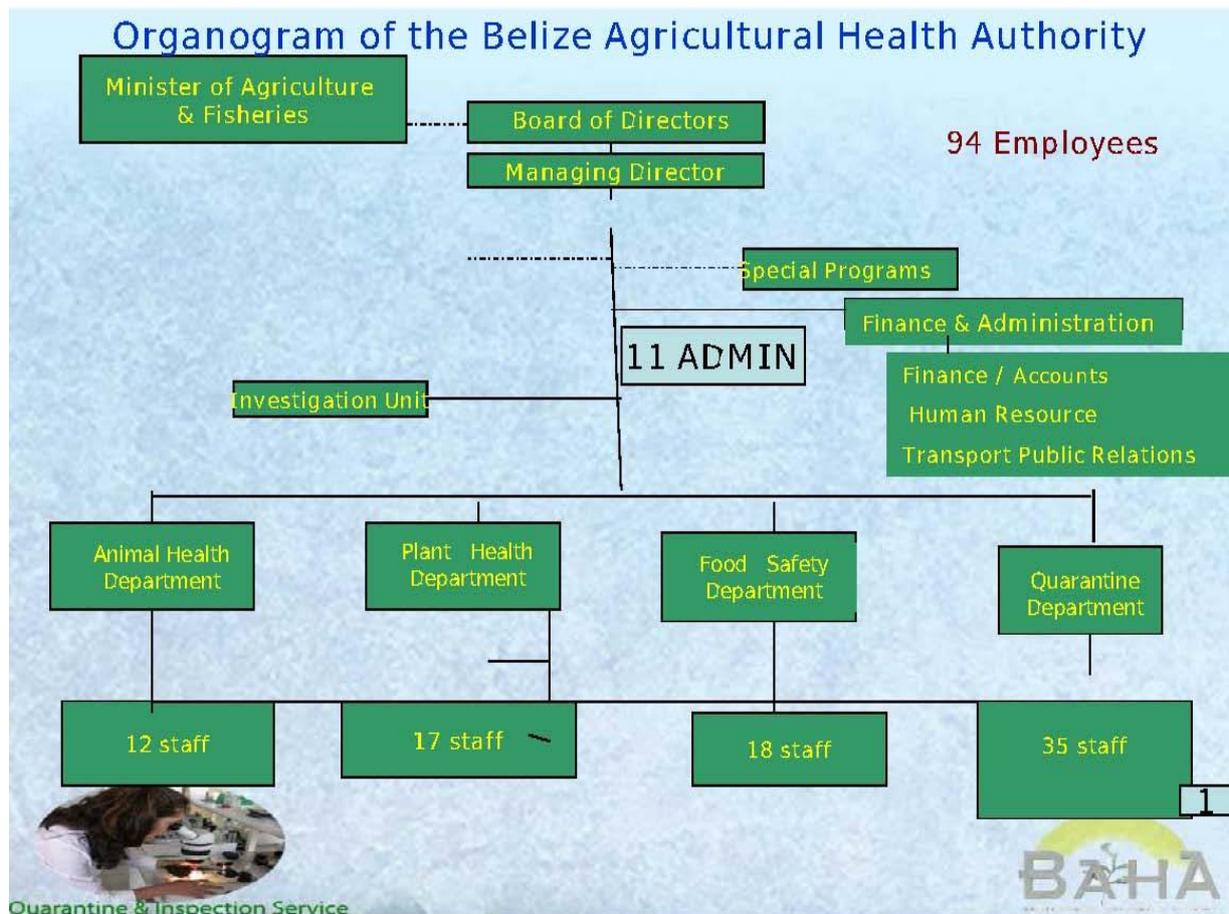
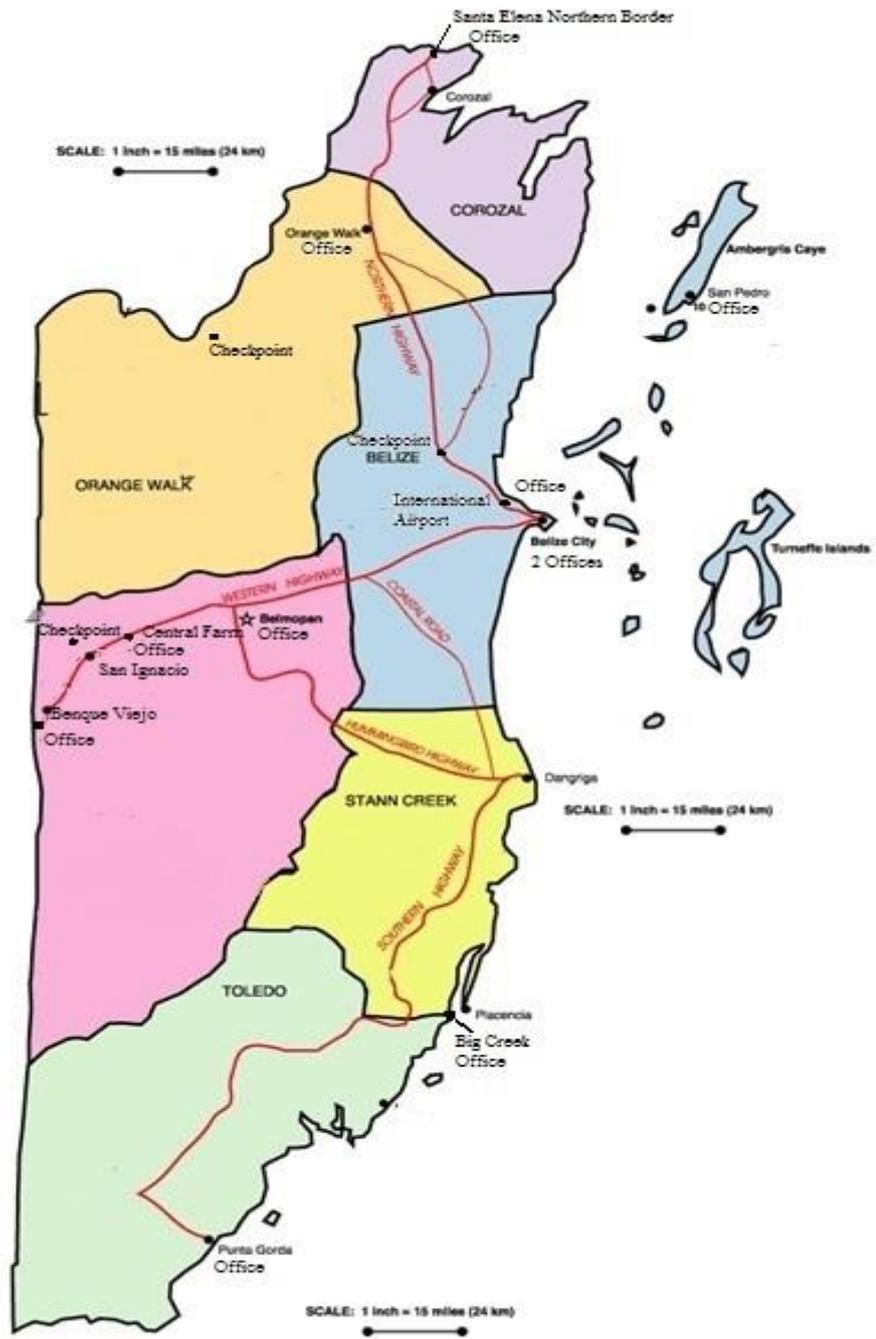
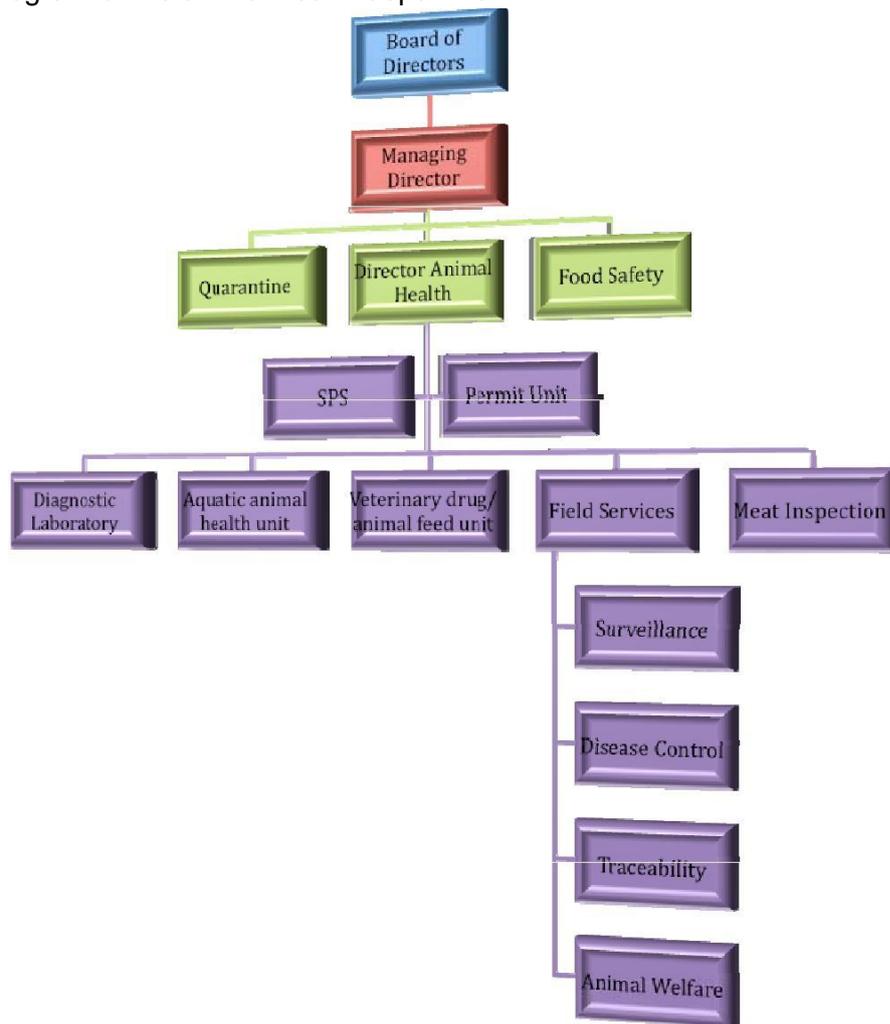
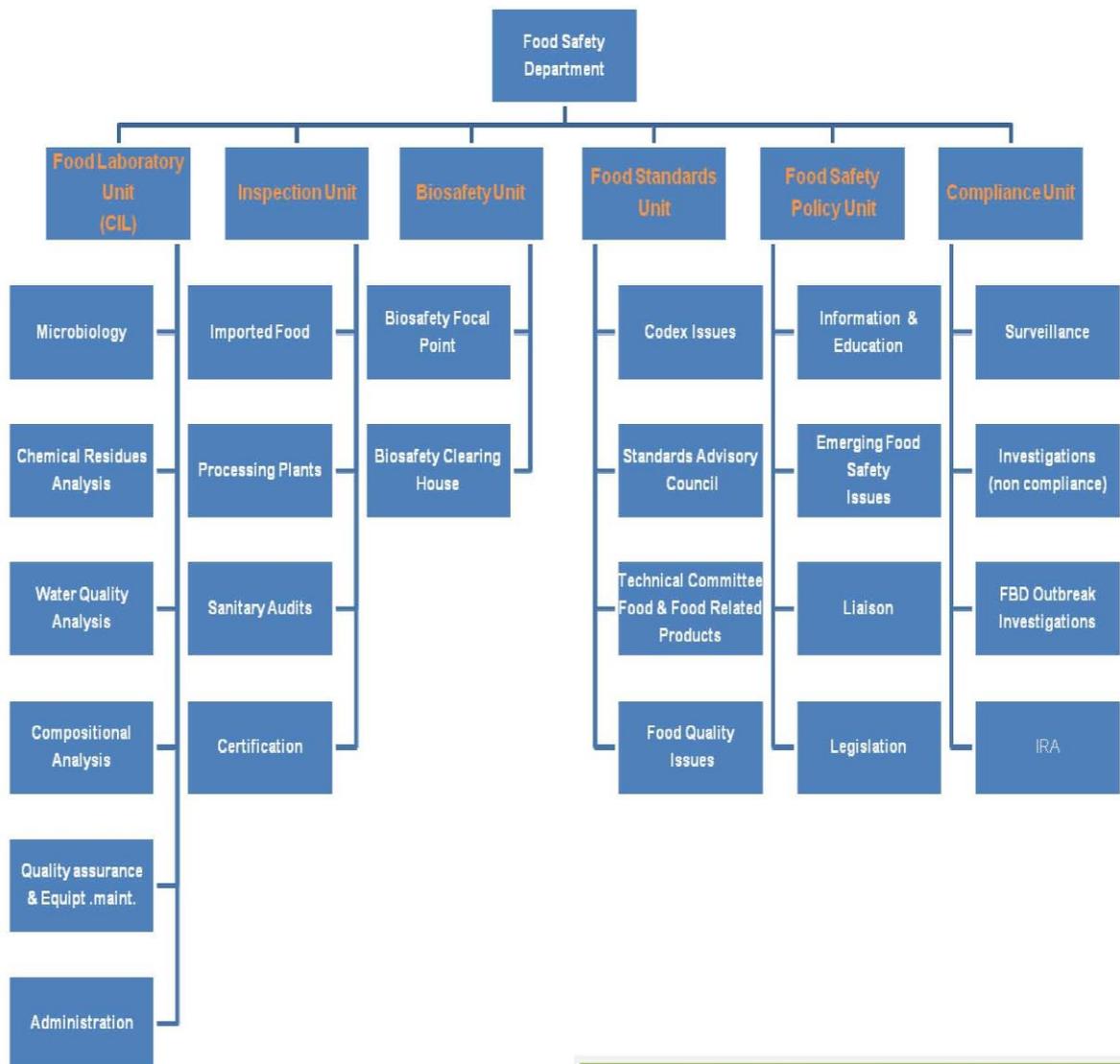


Figure 4: Map showing BAHA offices and highways, checkpoints, towns and districts of Belize



**Figure 5:** Organogram of the animal health department

**Figure 6:** Organogram of the Food Safety Department



**Food Safety Department Staff (May 2009)**

- Food Safety Director (1)
- Deputy Director (Vacant)
- Laboratory Administrator (Vacant)
- Food Safety Inspectors (6)
- Analytical Chemist (1)
- Laboratory Technicians (2)
- Support Staff (6)

Figure 7:

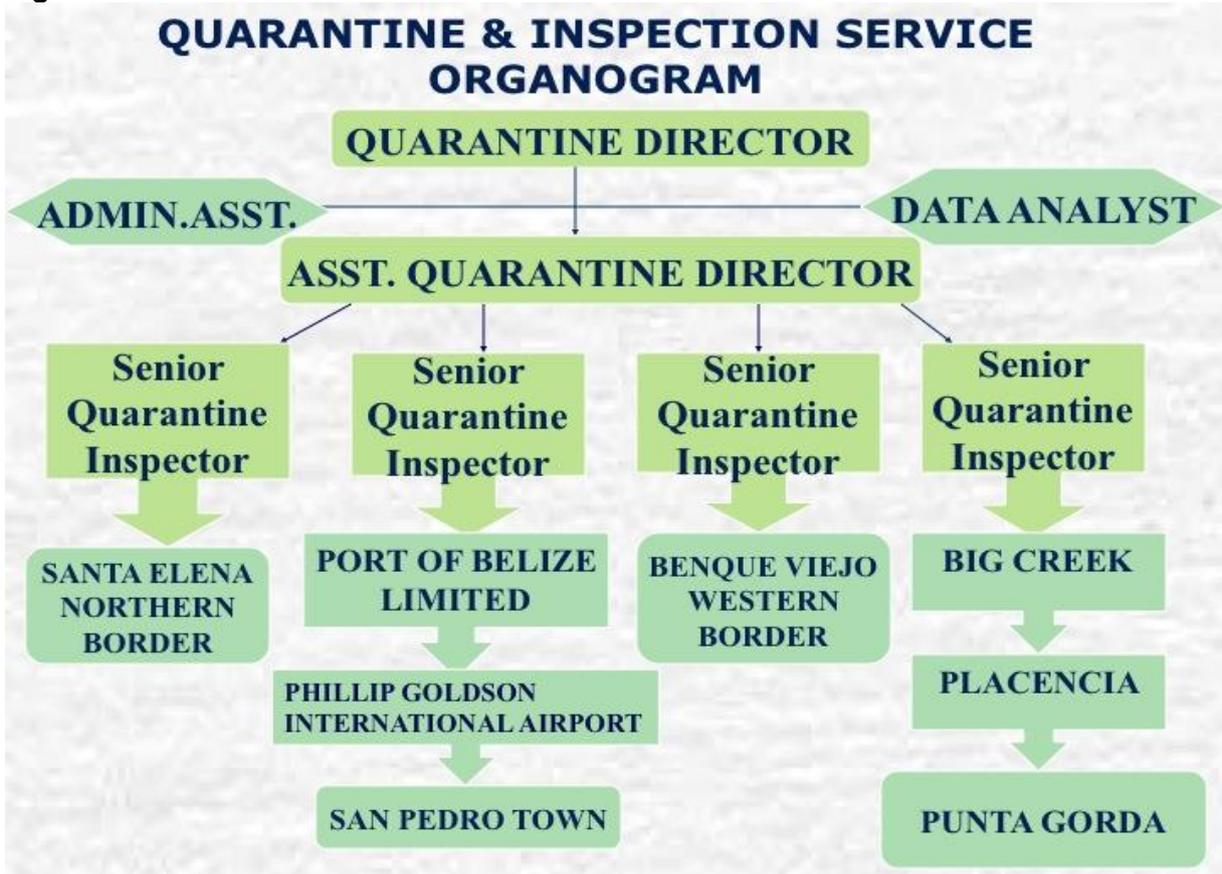
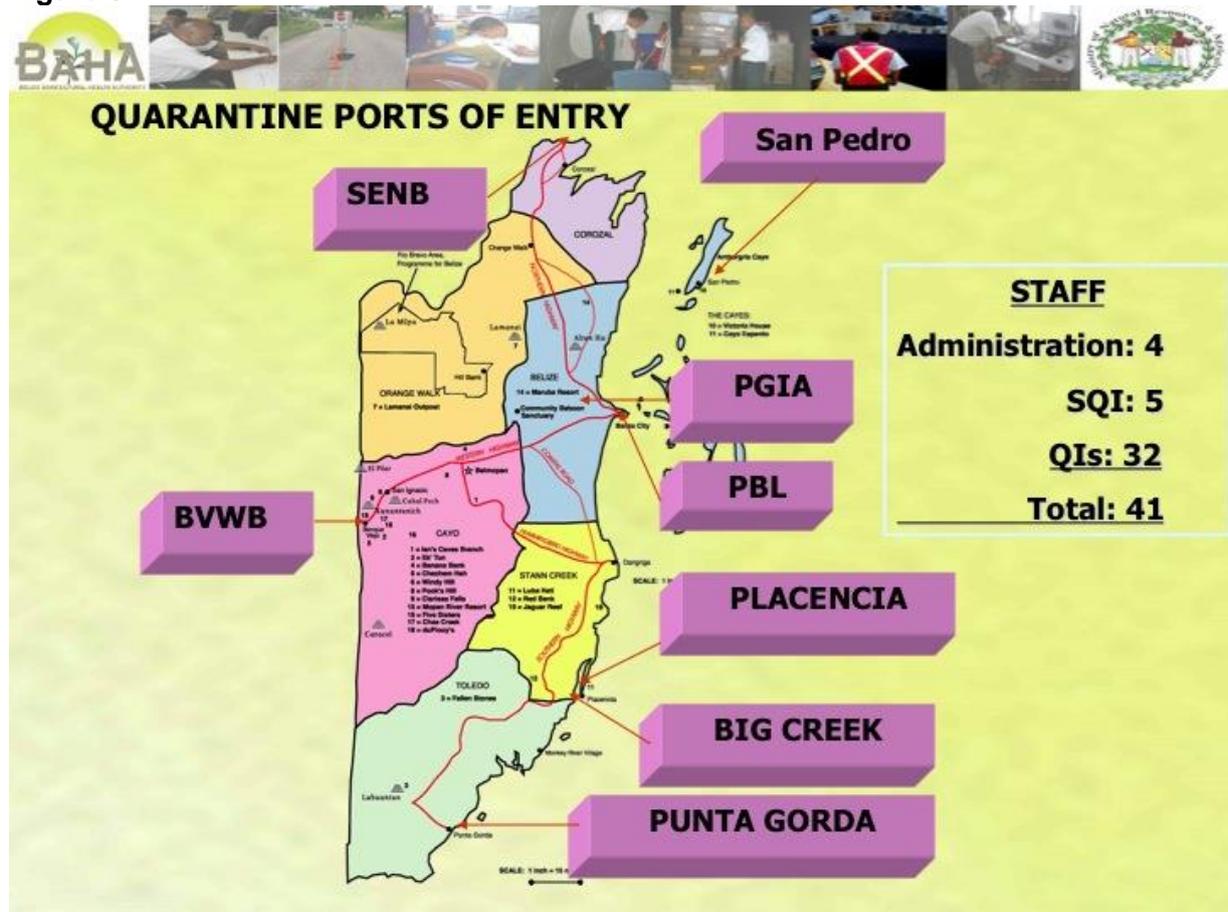


Figure 8:



### II.3.C Animal disease occurrence

Information on animal disease occurrence from the OIE website (see table 4)

**Table 4: Disease status of Belize**

Disease	Notifiable	Status	Notifiable	Status
Avian mycoplasmosis (M.synoviae)		Confirmed infection (no clinical disease)		Not reported for this Period (since Unknown)
Bovine babesiosis		Clinical Disease		Not reported for this Period (since Unknown)
Infectious hypodermal and haematopoietic necrosis		Confirmed infection (no clinical disease)		Not reported for this Period (since Unknown)
Varroosis of honey bees		Confirmed infection (no clinical disease)		
Venezuelan equ.encephalomyelitis		Clinical Disease		Not reported for this Period (since 11/2007)
Vesicular stomatitis		Clinical Disease		Not reported for this Period (since Unknown)

#### Diseases never reported

Disease	Notifiable	Type of surveillance
Acarapisosis of honey bees		
African horse sickness		
African swine fever		Targeted Surveillance
Anthrax		
Aujeszky's disease		
Avian chlamydiosis		
Avian infect. laryngotracheitis		General Surveillance
Bovine spongiform encephalopathy		General Surveillance
Brucellosis (Brucella abortus)		General Surveillance
Brucellosis (Brucella suis)		General Surveillance
Camelpox		
Caprine arthritis/encephalitis		General Surveillance
Contagious bov. pleuropneumonia		
Contagious cap. pleuropneumonia		
Contagious equine metritis		
Crayfish plague (Aphanomyces astaci)		

Crimean Congo haemorrhagic fever		
Dourine		
Duck virus hepatitis		
Echinococcosis/hydatidosis		
Epizoot. haematopoietic necrosis		General Surveillance
Epizootic haemorrhagic disease		
Epizootic ulcerative syndrome		
Equine rhinopneumonitis		
Equine viral arteritis		
Foot and mouth disease		General Surveillance
Glanders		
Haemorrhagic septicaemia		
Heartwater		
Highly path. avian influenza		General and targeted surveillance
Infect. haematopoietic necrosis		General Surveillance
Infection with abalone herpes-like virus		
Infection with Batrachochytrium dendrobatidis		
Infection with Bonamia exitiosa		General Surveillance
Infection with Bonamia ostreae		General Surveillance
Infection with Gyrodactylus salaris		
Infection with Marteilia refringens		
Infection with Perkinsus marinus		General Surveillance
Infection with Perkinsus olseni		General Surveillance
Infection with ranavirus		
Infection with Xenohaliotis californiensis		
Infectious myonecrosis		General Surveillance
Infectious salmon anaemia		
Japanese encephalitis		
Koi herpesvirus disease		
Low pathogenic avian influenza (poultry)		General and targeted surveillance
Lumpy skin disease		
Maedi-visna		General Surveillance

Myxomatosis	X	
Nairobi sheep disease	X	
Necrotising hepatopancreatitis	X	
Nipah virus encephalitis	X	
O. w. screwworm (C. bezziana)	X	
Ovine epididymitis (B. ovis)	✓	General Surveillance
Peste des petits ruminants	X	
Porcine reproductive/respiratory syndr.	X	General Surveillance
Pullorum disease	X	General Surveillance
Q fever	X	
Rabbit haemorrhagic disease	X	
Red sea bream iridoviral disease	X	
Rift Valley fever	X	
Rinderpest	✓	General Surveillance
Salmonellosis (S. abortusovis)	X	
Scrapie	✓	General Surveillance
Sheep pox and goat pox	X	
Small hive beetle infestation	✓	General and targeted surveillance
Spring viraemia of carp	✓	General Surveillance
Surra (Trypanosoma evansi)	X	
Swine vesicular disease	X	
Theileriosis	X	
Transmissible gastroenteritis	X	General Surveillance
Tropilaelaps infestation of honey bees	X	
Trypanosomosis	X	
Tularemia	X	
Turkey rhinotracheitis	X	
Viral haemorrhagic septicaemia	✓	General Surveillance
White spot disease	✓	General and targeted surveillance
White tail disease	X	General Surveillance
Yellow head disease	✓	General and targeted surveillance

## Diseases not reported in 2013

Disease	Domestic			Wild		
	Notifiable	Last occurrence	Surveillance	Notifiable	Last occurrence	Surveillance
American foulbrood of honey bees		Unknown	General Surveillance			
Avian infectious bronchitis		06/2007	General Surveillance		Unknown	General Surveillance
Bluetongue		Unknown			Unknown	
Bov. genital campylobacteriosis		Unknown			Unknown	
Bovine anaplasmosis		01/2012	General Surveillance		Unknown	General Surveillance
Bovine tuberculosis		1991			Unknown	
Bovine viral diarrhoea		07/2002			Unknown	
Brucellosis (Brucella melitensis)		Unknown	General Surveillance		Unknown	General Surveillance
Classical swine fever		03/1988	Targeted Surveillance		Unknown	Targeted Surveillance
Contagious agalactia		Unknown			Unknown	
Encephalomyelitis (West.)		Unknown	General Surveillance		Unknown	General Surveillance
Enzootic abortion (chlamydiosis)		Unknown			Unknown	
Enzootic bovine leukosis		Unknown	General Surveillance		Unknown	General Surveillance
Equine encephalomyelitis (Eastern)		31/08/2009	General Surveillance		Unknown	General Surveillance
Equine infectious anaemia		05/2012	General Surveillance		Unknown	General Surveillance
Equine influenza		Unknown			Unknown	
Equine piroplasmiasis		11/2009	General Surveillance		Unknown	General Surveillance
European foulbrood of honey bees		Unknown	General Surveillance			
Fowl typhoid		10/11/2011	General Surveillance		1986	General Surveillance

Inf. bov. rhinotracheit. (IBR/IPV)		03/2009	General Surveillance		Unknown	General Surveillance
Inf. bursal disease (Gumboro)		02/2012	General Surveillance		Unknown	General Surveillance
Leishmaniosis		12/2010			Unknown	
Mycoplasmosis (M. gallisepticum)		Unknown	General Surveillance		Unknown	General Surveillance
N. w. screwworm (C. hominivorax)		1994	General Surveillance		1994	General Surveillance
Newcastle disease		07/2011	General Surveillance		2009	General Surveillance
Paratuberculosis		1998	General Surveillance		Unknown	General Surveillance
Porcine cysticercosis		Unknown	General Surveillance		Unknown	General Surveillance
Rabies		12/2012	General Surveillance		02/2007	General Surveillance
Taura syndrome		2006	General and targeted surveillance		Unknown	General and targeted surveillance
Trichomonosis		Unknown			Unknown	
West Nile Fever		30/09/2010	General Surveillance		Unknown	General Surveillance

**Diseases for which no Information has been provided.**

Disease
Trichinellosis - (Domestic)
Trichinellosis - (Wild)

## **II.4 Organisation of the evaluation**

### ***II.4.A Timetable of the mission***

Appendix 3 provides a list of persons met; Appendix 4 provides a detailed list of sites visited and meetings conducted and Appendix 5 provides the international air travel itinerary of team members.

### ***II.4.B Categories of sites and sampling for the evaluation***

Table 5 lists the categories of site relevant to the evaluation and the number of each category of site in the country. It indicates how many of the sites were visited, in comparison with the suggested sampling framework (“ideal” sampling) recommended in OIE PVS Manual.

Table 5: Site sampling	Terminology or names used in the country	Number of sites	"Ideal" sampling	Actual sampling
<b>GEOGRAPHICAL ZONES OF THE COUNTRY</b>				
Climatic zone	<i>Tropical</i>	1	all	1
Topographical zone	<i>Flat, swampy coastal plain; low mountains in south</i>	2	all	2
Agro-ecological zone	<i>limestone hills, mod. rainfall; deep acidic soil, high rainfall</i>	2	all	2
<b>ADMINISTRATIVE ORGANISATION OF THE COUNTRY</b>				
1st administrative level	<i>national</i>	1	all	1
2nd administrative level	<i>district</i>	6	all	5
3rd and 4 <sup>th</sup> administrative level	<i>Not applicable</i>	0	0	0
Urban entities	<i>City/town</i>	3	all	3
<b>VETERINARY SERVICES ORGANISATION AND STRUCTURE</b>				
Central (Federal/National) VS	<i>Headquarters Belmopan</i>	1	all	1
Internal division of the central VS	<i>3 technical departments</i>	3	all	3
1 <sup>st</sup> level of the VS	<i>BAHA Headquarters</i>	1	all	1
2 <sup>nd</sup> level of the VS	<i>BAHA District office</i>	3	all	2
3 <sup>rd</sup> level of the VS	<i>Border inspection posts</i>			
Veterinary organisations (VSB, unions...)	<i>Vet. Surgeon's Board</i>	1	all	1
<b>FIELD ANIMAL HEALTH NETWORK</b>				
Field level of the VS (animal health)	<i>District offices</i>	3	all	2
Private veterinary sector	<i>Veterinary practices</i>	18	10	0
Other sites (dip tanks, crush pens....)	<i>Mobile TB / brucella test sites</i>	8	all	1
<b>VETERINARY MEDICINES &amp; BIOLOGICALS</b>				
Production sector	<i>No production sector</i>	0	0	0
Import and wholesale sector	<i>Various businesses</i>	2-3	all	2
Retail sector	<i>2-3 companies/ feed stores</i>	2-3	all	2
Other partners involved	<i>Not applicable</i>			
<b>VETERINARY LABORATORIES</b>				
National labs	<i>CIL Belize City, CVL Cayo</i>	2	all	2
Regional and local labs	<i>Orange Walk (for SWEEP)</i>	1	all	1
Associated, accredited and other labs	<i>Not applicable</i>			
<b>ANIMAL AND ANIMAL PRODUCTS MOVEMENT CONTROL</b>				
Bordering countries	<i>Mexico, Guatemala</i>	2	all	1
Airports and ports border posts	<i>2 airports, 2 seaports</i>	4	all	2
Main terrestrial border posts	<i>Benque Viejo</i>			
Minor terrestrial border posts	<i>Not applicable</i>			
Import quarantine and live animal market	<i>none</i>	0	0	0
Internal check points	<i>3</i>	3	all	1
Zones, compartments, export quarantines	<i>1 export corral</i>	1	all	1
<b>PUBLIC HEALTH INSPECTION OF ANIMALS AND ANIMAL PRODUCTS</b>				
Export slaughterhouse	<i>none</i>	0	0	0
National market slaughterhouses	<i>11 BAHA inspected abattoirs</i>	11	10	2
Local market slaughterhouse	<i>Not applicable</i>			
Slaughter areas/slabs/points	<i>Number unknown</i>			0
On farm or butcher's slaughtering sites	<i>Number unknown</i>			0
Processing sites (milk, meat, eggs)	<i>1 dairy, various meat, eggs</i>			1 (dairy)
Aquaculture sites, fish processing plants	<i>12 farms, 9 processors</i>	21	10	1
Retail outlets (butchers, shops, restaurants)	<i>Unknown number</i>			1
<b>TRAINING AND RESEARCH ORGANISATIONS</b>				
Veterinary university/research organisation	<i>none</i>	0	0	0
Veterinary paraprofessional schools	<i>University of Belize</i>	1	all	0
<b>STAKEHOLDERS' ORGANISATIONS</b>				
Agricultural Chamber / organisation	<i>Chamber of commerce</i>	1	all	1
National livestock farmers organisations	<i>Cattle, pig, chicken, shrimp</i>	4	all	3
Local livestock farmers organisations	<i>Community bodies</i>	several	all	1
Other stakeholder organisations	<i>Not applicable</i>			
Consumer organisations	<i>none</i>	0	0	0

## PART III: RESULTS OF THE EVALUATION & GENERAL RECOMMENDATIONS

This evaluation identifies the strengths and weaknesses of the veterinary services, and makes general recommendations.

### FUNDAMENTAL COMPONENTS

1. HUMAN PHYSICAL AND FINANCIAL RESOURCES
2. TECHNICAL AUTHORITY AND CAPABILITY
3. INTERACTION WITH INTERESTED PARTIES
4. ACCESS TO MARKETS

The activities of the Veterinary services are recognised by the international community and by OIE Members as a '**global public good**'. Accordingly, it is essential that each country acknowledges the importance of the role and responsibilities of its Veterinary Services and gives them the human and financial resources needed to fulfil their responsibilities.

This OIE PVS Evaluation examined each critical competency under the 4 fundamental components, listed strengths and weaknesses where applicable, and established a current level of advancement for each critical competency. Evidences supporting this level are listed in appendix 6. General recommendations were provided where relevant.

The current level of advancement for each critical competency is shown in cells **shadowed in grey (15%)** in the table. A 2<sup>nd</sup> table reflects levels of advancement identified by previous PVS missions with the level attained in the 2008-9 PVS Evaluation highlighted in yellow and the desired level identified during the 2010 PVS Gap Analysis is shown in red if it differs from the level attained in 2008-9.



### III.1. Fundamental component I: human, physical and financial resources

This component of the evaluation concerns the institutional and financial sustainability of the VS as evidenced by the level of professional/technical and financial resources available and the capacity to mobilize these resources. It comprises fourteen critical competencies:

#### Critical competencies:

<b>Section I-1</b>	<b>Professional and technical staffing of the Veterinary Services</b>
	<b>A. Veterinary and other professionals (university qualification)</b>
	<b>B. Veterinary para-professionals and other technical personnel</b>
<b>Section I-2</b>	<b>Competencies of veterinarians and veterinary para-professionals</b>
	<b>A. Professional competencies of veterinarians</b>
	<b>B. Competencies of veterinary para-professionals</b>
<b>Section I-3</b>	<b>Continuing education</b>
<b>Section I-4</b>	<b>Technical independence</b>
<b>Section I-5</b>	<b>Stability of structures and sustainability of policies</b>
<b>Section I-6</b>	<b>Coordination capability of the VS</b>
	<b>A. Internal coordination (chain of command)</b>
	<b>B. External coordination</b>
<b>Section I-7</b>	<b>Physical resources</b>
<b>Section I-8</b>	<b>Operational funding</b>
<b>Section I-9</b>	<b>Emergency funding</b>
<b>Section I-10</b>	<b>Capital investment</b>
<b>Section I-11</b>	<b>Management of resources and operations</b>

-----  
**Terrestrial Code References:**

Points 1-7, 9 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / Independence / Impartiality / Integrity / Objectivity / Veterinary legislation / General organisation / Procedures and standards / Human and financial resources.

Point 4 of Article 3.2.1. on General considerations.

Point 1 of Article 3.2.2. on Scope.

Points 1 and 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services.

Point 2 of Article 3.2.4. on Evaluation criteria for quality system: "Where the Veterinary Services undergoing evaluation... than on the resource and infrastructural components of the services".

Article 3.2.5. on Evaluation criteria for human resources.

Points 1-3 of Article 3.2.6. on Evaluation criteria for material resources: Financial / Administrative / Technical.

Points 3 and Sub-point d) of Point 4 of Article 3.2.10. on Performance assessment and audit programmes: Compliance / In-Service training and development programme for staff.

Article 3.2.12. on Evaluation of the veterinary statutory body.

Points 1-5 and 9 of Article 3.2.14. on Organisation and structure of Veterinary Services / National information on human resources / Financial management information / Administration details / Laboratory services / Performance assessment and audit programmes.

<b>I-1 Professional and technical staffing of the Veterinary Services</b> <i>The appropriate staffing of the VS to allow for veterinary and technical functions to be undertaken efficiently and effectively.</i>  <b>A. Veterinary and other professionals (university qualification)</b>	<b>Levels of advancement</b>
	1. The majority of veterinary and other professional positions are not occupied by appropriately qualified personnel.
	<b>2. The majority of veterinary and other professional positions are occupied by appropriately qualified personnel at central and state / provincial levels.</b>
	3. The majority of veterinary and other professional positions are occupied by appropriately qualified personnel at local (field) levels.
	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.

<b>1. Specific objective</b>
<i>The staffing of the VS is appropriate to allow veterinary functions to be undertaken efficiently and effectively.</i>
<b>2. Result / Expected level of advancement:</b>
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.

Terrestrial Code reference(s): Appendix 1

**Evidence** (listed in Appendix 6): E3/15, E9, E10, E20, E43 (Aquatic), E44-45, E47, E48, E49, H10, H32 to H34 inclusive.

### **Findings:**

The situation with permanent staffing of veterinarians and other professional staff has deteriorated slightly in absolute terms, adding to a significant shortage of professionals to address the increased workload reflecting new activities that the Animal Health Department has started since the PVS reports of 2008-9 and 2010. The number of permanent veterinarians is down from 5 to 4. This decline is offset in the short term by nine veterinarians employed under the TB and brucellosis project (SWEEP) and the former CVO being temporarily employed as a consultant, carrying out specific tasks defined in externally funded projects (e.g. TB manual; animal welfare review). These temporary hires are employed under projects funded by donors and the IDB. The situation has improved in that BAHA now has the capacity to accredit private veterinarians (see CC III-4) such as the veterinarians working on the SWEEP. In addition, during the evaluation, the PVS Team was informed that funding had been provided by the GOB for the permanent recruitment of a veterinarian and some paraprofessional staff for the animal health, food safety and quarantine programmes at the conclusion of the IDB project.

In the meeting with the VSB (see critical competency III-5) the PVS Team discussed the general issue of veterinary training. Official information is lacking but it seems that there are few young Belizeans studying veterinary medicine and this presents a challenge to BAHA recruitment. In the event of an outbreak of serious animal disease such as FMD, BAHA would have to rely on support from other countries to increase its veterinary staffing. Belizean high school students have access to scholarships to study at university level in Mexico and it was generally agreed that more should be done to encourage the study of veterinary medicine.

The PVS Team noted that the workload of veterinary and professional staff has increased as a result of the various new projects. Each official veterinarian has multiple responsibilities (e.g. the DVO in the north is also the BAHA poultry specialist, the veterinary drug registrar, and the OIE Focal Point for both disease information and veterinary products). As noted in

2009, the strategy of multi-tasking limits specialization; there is currently no veterinary epidemiologist in BAHA, which is unfortunate in light of control and eradication programmes for TB, brucellosis and classical swine fever, in addition to the annual reconfirmation of FMD free status and the preparation of a dossier for the OIE on Belize's BSE status. There are two veterinarians responsible for animal health in the field and the CVO is frequently in the field as well. This staffing level is inadequate; hence the reduced level of advancement: level 2 as compared to level 4 in 2009.

The aquatic animal health situation warrants specific mention. The Aquatic Animal Health Unit (AAHU) in the Animal Health Department comprises one professional officer and one technician. In BAHA there is only one professional with the capacity to maintain the disease surveillance, prevention and control services to the Belizean aquaculture industry. These programmes are essential to exports of shrimp that are worth an estimated BZ\$35-45M annually. There is a need for professional backup and longer term succession planning for the AAHU.

The fundamentally sound personnel management system reported in 2009 is still in place. Job responsibilities are stated and there is systematic use of performance appraisal, with results linked to the payment of increments in salary according to published pay scales. As part of the development of a BAHA Strategic Plan, Core Values of BAHA have been drafted in a series of staff workshops.

**Strengths:**

- The majority of existing veterinary and other professional positions are occupied by appropriately qualified personnel

**Weaknesses:**

- There are too few veterinary and professional staff positions
- There are few Belizean graduates in veterinary medicine.
- Overloading of professional staff, no opportunity for development of specialised skills.

**Recommendations**

- Recruitment of two veterinarians (one in headquarters, one based in the field) in the short term and, subject to workload assessment, another two in the medium term.
- Succession planning for veterinary and professional staff should be identified as a priority and an HR strategy identified.
- BAHA and the VSB should liaise with the Ministry of Education to identify strategies to improve the supply of Belizean graduates in veterinary medicine.

<b>I-1. Professional and technical staffing of the Veterinary Services</b> <i>The appropriate staffing of the VS to allow for veterinary and technical functions to be undertaken efficiently and effectively.</i>  <b>B. Veterinary para-professionals and other technical personnel</b>	<b>Levels of advancement</b>
	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) levels 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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The staffing of the VS is appropriate to allow veterinary functions to be undertaken efficiently and effectively.</i>
<b>2. Result / Expected level of advancement:</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.

**Evidence** (listed in Appendix 6): E3/15, E9, E10, E20, E44, E45, E47, E48, H35 - H38.

### **Findings:**

Shortfalls in the operational budget have prevented permanent recruitment. In the Food Safety Department there are currently only 4 inspectors monitoring 7 slaughter facilities, 4 poultry plants, 1 dairy and 2 processed foods facilities and 2 inspectors monitoring 9 fish processing facilities (plus 3 sea cucumber facilities that work 6 months of each year), 12 aquaculture farms and 2 processed food facilities. By the end of the year there will be one more shrimp farm in operation as well as a tilapia farm and processing plant. In the Animal Health Department, the increased workload presented by new programmes for disease surveillance, control and eradication have been handled by technical staff employed on short term contracts using external funding. However, during the evaluation, the PVS Team was informed that funding had been provided by the GOB for the permanent recruitment of a veterinarian and 11 paraprofessional staff who had been employed under the IDB project.

### **Strengths:**

- The majority of technical positions in headquarters and at local (field) levels are occupied by personnel holding appropriate qualifications.

### **Weaknesses:**

- Insufficient food safety inspectors to deal with inspection and disease surveillance at abattoirs and food processing plants, especially if the numbers increase.

### **Recommendations:**

- Recruit additional inspectors for food safety inspection (note that the numbers required may increase in future).
- Encourage veterinary paraprofessionals to register themselves with the VSB.

I-2 Competencies of veterinarians and veterinary para-professionals	Levels of advancement
<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>A. Professional competencies of veterinarians including the OIE Day 1 competencies</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 specialised 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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to efficiently carry out their veterinary functions, as measured by the academic qualifications of their personnel in veterinary and other professional positions.</i>
<b>2. Result / Expected level of advancement:</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.).
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.

**Evidence** (listed in Appendix 6): E7, E43 (Aquatic), E45, E47, E48, E49, H32 to H34 inclusive. Interviews with BAHA staff and the industry

### **Findings:**

The level of advancement 3 remains appropriate. There is no veterinary school so veterinarians employed by BAHA are trained outside the country. The AAHP has a university degree (Cuba) and post-graduate training at the OIE reference laboratory for crustacean diseases in the USA. The Administrator of the CIL Food safety laboratory has a doctorate in biochemistry from Texas A&M, USA.

BAHA's professional staff has many opportunities for continuing education (see critical competency I-3). In the years 2009-2014 BAHA has benefited from an IDB project that had the objective of enhancing human and technical capacity, including training, surveillance, inspection and laboratory capability. Through their participation in workshops, conferences and training activities organised by the OIE, OIRSA, FAO, CAC and other organisations, BAHA veterinarians can attain competency in the areas identified in the OIE Day 1 competencies.

The small number of permanent professional staff (4 veterinarians, 1 analytical chemist and 1 AAHP) makes it difficult for any individual to develop specialised skills in areas such as epidemiology. If the staffing of professional positions could be increased to a sustainable level, it may be possible to provide opportunities for short-term assignments to counterpart organisations or research centres to support the obtaining of specialised skills.

### **Strengths:**

- Professionals have many opportunities for continuing education.

**Weaknesses:**

- There is little opportunity to develop specialised skills in needed areas.

**Recommendations:**

- Provide opportunities for short-term assignments to counterpart organisations or research organisations to provide opportunities to develop specialised skills.

B. Competencies of veterinary para-professionals	Levels of advancement
	1. The majority of veterinary para-professionals have no formal entry-level training.
	2. The training of veterinary para-professionals is of a 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.
	<b>4. 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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to efficiently carry out their technical functions, as measured by the qualifications of veterinary para-professionals</i>
<b>2. Result / Expected level of advancement:</b>
4. The training of veterinary para-professionals is of a uniform standard that allows the development of some specialist animal health competencies (e.g. meat inspection).
5. The training of veterinary para-professionals is of a uniform standard and is subject to regular evaluation and/or updating.

**Evidence** (listed in Appendix 6): E7, E44 to E48 inclusive. E49, H32 to H34 inclusive. Discussions with BAHA staff and industry representatives.

### **Findings:**

Animal health assistants and other technicians employed by BAHA normally hold an Associate Degree (2 years study) in agriculture, science, laboratory technology or other relevant discipline from the University of Belize. In some cases, technical staff has a bachelor degree in science or agriculture.

On-the-job training is important to acquire a skills base and is practiced as much as possible.

BAHA paraprofessional officers are not routinely trained in enforcement procedures, which may limit their effectiveness in the field.

### **Strengths:**

- The basic training of veterinary paraprofessionals is of a uniform standard that allows the development of some advanced competencies (e.g. meat inspector, technician).

### **Weaknesses:**

- Lack of training in enforcement procedures.
- Short term unavailability of supervisors from time to time.

### **Recommendations:**

- Veterinary paraprofessional staff working in regulatory programmes (animal health, food safety and quarantine) should be trained in enforcement procedures.
- Backup should be provided from a small BAHA headquarters compliance and legal unit with specialized skills, experience and responsibility to support field staff.

I-3 Continuing education (CE) <sup>14</sup>	Levels of advancement
<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>	1. The VS have no access to 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.
	<b>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.</b>
	5. The VS have up-to-date CE that is implemented for all relevant personnel and is subject to regular evaluation of effectiveness.

Terrestrial Code reference(s): Appendix 1

1. Specific objective
<i>The VS have the capability to maintain and improve the competence of their personnel in terms of relevant information and understanding; measured in terms of the implementation of an annually reviewed training programme.</i>
2. Result / Expected level of advancement:
<b>2. The VS have access to continuing education (internal and/or external programmes) on an irregular basis but it does not take into account needs, or new information or understanding.</b>
3. The VS have access to continuing education that is reviewed annually and updated as necessary, but it is implemented for less than 50% of the relevant personnel.
<b>4. The VS have access to continuing education that is reviewed annually and updated as necessary, and it is implemented for more than 50% of the relevant personnel.</b>
5. The VS have up-to-date continuing education that is implemented for all relevant personnel.

**Evidence** (listed in Appendix 6): E7, E44, E48, H32 – 34 inclusive.

### **Findings:**

The level of advancement was increased from 2 (2009) to 4. Thanks to the support of external organisations, including the OIE, FAO, OIRSA and donors, BAHA officials have access to a large, varied and pertinent series of training opportunities.

Training of professionals and paraprofessionals is focused on the acquisition of technical skills, which is understandable. However, individuals with management responsibilities also need training in management-related competencies.

### **Strengths:**

- A variety of training and capacity building activities are offered to relevant staff.
- There is a systematic process of planning attendance at training activities.

### **Weaknesses:**

- Little training in management related competencies.
- Performance appraisal does not take proper account of participation in continuing education or needs.

### **Recommendations:**

- Performance appraisal should take into account CE accomplishments and needs.
- Professionals and paraprofessionals who have managerial responsibilities should receive training in management-related competencies.

<sup>14</sup> Continuing education includes Continuous Professional Development (CPD) for veterinary, professional and technical personnel.

<b>I-4 Technical independence</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>Levels of advancement</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

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability 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. Result / Expected level of advancement:</b>
3. The technical decisions are based on scientific evidence but are subject to review and possible modification based on non-scientific considerations.
4. The technical decisions are based only on scientific evidence and are not changed to meet non-scientific considerations.
5. The technical decisions are made and implemented in full accordance with the country's OIE obligations (and with the country's WTO SPS Agreement obligations where applicable).

**Evidence** (listed in Appendix 6): E8, E48, E49; H16; discussions with Technical Directors.

### **Findings:**

The level of advancement 3 reported in 2009 is still applicable. The BAHA governance structure provides for technical decisions to be taken at the appropriate level.

The recommendation in the PVS report (2009) that BAHA Board members be obliged to disclose potential conflicts and reclude themselves from certain decisions has not been followed up.

The BAHA Terms and Conditions of Employment have provisions on staff independence and integrity. Directors of the technical departments advised that they are vigilant and that, in the past, inspectors have been dismissed for improper conduct.

The VSB has developed a draft Code of Conduct and Ethics that would apply to BAHA veterinarians who run private practices.

### **Strengths:**

- BAHA has an appropriate governance structure.
- Directors are aware of the potential risks of misconduct and investigate allegations.

### **Weaknesses:**

- Board members should be obliged to declare potential conflict of interest and reclude themselves from certain decisions.

### **Recommendations:**

- Rules on conflict of interest for application to Board members should be adopted.
- Once the VSB Code of Conduct and Ethics has been finalised, a copy should be provided to all veterinarians in Belize.

I-5 Stability of structures and sustainability of policies	Levels of advancement
<i>The capability of the VS structure and/or leadership to implement and sustain policies over time.</i>	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 VS
	3. Sustainability of policies is not affected or is slightly affected by changes in the political leadership and/or the structure and leadership of 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</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to implement and sustain policies over time.</i>
<b>2. Result / Expected level of advancement:</b>
4. There are generally only minor changes in the organisational structure of the public sector of the VS following a change in the political leadership and these have little or no effect on sustainability of policies.
5. The organisational structure of the public sector of the VS generally remains stable for longer periods (e.g. 5 years) and is only modified based on an evaluation process, with little or no effect on the sustainability of policies.

**Evidence** (listed in Appendix 6): E1, E2, E8 to E11 inclusive; H16.

**Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

The level of advancement 4 reported in 2009 is still applicable. BAHA is a stable organisation, founded on modern legislation. Ministerial transitions have not altered the overall structure or directions of BAHA. Many of the recommendations in previous PVS Reports and in reports of FAO and IDB have been / are being implemented. BAHA is developing a Strategic Plan.

**Strengths:**

- BAHA has a modern legislative base.
- Continuity of senior staff, providing corporate memory.

**Weaknesses:**

- Lack of systematic arrangements for self-audit of policies and programmes.

**Recommendations:**

- Complete the BAHA Strategic Plan with a view to reinforcing the alignment of BAHA's goals and programmes with overall directions of the GOB.
- Consider the implementation of a systematic process for monitoring and evaluation of policies and programmes.

<b>I-6 Coordination capability of the Veterinary Services</b> <b>A. Internal coordination (chain of command)</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>Levels of advancement</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.	

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to coordinate national activities, including disease control and eradication programmes, food safety programmes and responses to emergency situations.</i>
<b>2. Result / Expected level of advancement:</b>
3. There are coordination mechanisms with a clear chain of command for some activities, but these are not coordinated / implemented throughout the country.
4. There are coordination mechanisms with a clear chain of command at the national level for most activities, and these are uniformly implemented throughout the country.
5. There are agreed coordination mechanisms that can be implemented as necessary to address all activities.

**Evidence** (listed in Appendix 6): E9 to E11 inclusive; E16.

**Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

For Part A, Internal coordination (chain of command), a level of advancement 4 (compared with 3 in the initial evaluation) is warranted.

BAHA is small and officials must work in collaboration with each other. Progress has been made in terms of training programs and the conduct of disease simulation exercises. More disease simulations are planned, including one on FMD. BAHA officials demonstrate a willingness to work in a coordinated and organised manner.

**Strengths:**

- Training and simulation exercises have been conducted and more are planned.
- The corporate culture prizes collaboration to achieve good results.

**Weaknesses:**

- The shortage of veterinarians in BAHA means that the Directors of Animal Health and Food Safety cannot always make themselves available to staff in a timely manner.
- If the CVO is absent from Belize there is a risk that the chain of command for dealing with an animal disease incursion will not function with a satisfactory level of efficiency.

**Recommendations:**

- Recruitment of a veterinarian or other professional as backup for the CVO.

<b>B. External coordination</b>	<b>Levels of advancement</b>
<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). Relevant authorities include other ministries and Competent Authorities, national agencies and decentralised institutions.</i>	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.
	<b>3. There are formal external coordination mechanisms with clearly described procedures or agreements for some activities and/or sectors.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to coordinate national activities, including disease control and eradication programmes, food safety programmes and responses to emergency situations.</i>
<b>2. Result / Expected level of advancement:</b>
<b>3. There are coordination mechanisms with a clear chain of command for some activities, but these are not coordinated / implemented throughout the country.</b>
4. There are coordination mechanisms with a clear chain of command at the national level for most activities, and these are uniformly implemented throughout the country.
5. There are agreed coordination mechanisms that can be implemented as necessary to address all activities.

**Evidence** (listed in Appendix 6): E9, E14, E56, E57, H43. Discussion with representatives of relevant Ministries and Agencies of the GOB.

### **Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

Critical competency I-6B refers to the coordination between the veterinary services (BAHA) and relevant authorities, including Ministries and national agencies. BAHA should improve coordination with other government bodies in the following three cases.

#### **Ministry of Health (also see CC II-5 and II-8)**

There is a “two tier system” for food inspection in Belize. Major abattoirs and food processors using HACCP systems (mainly export premises) are inspected by BAHA but small slaughterhouses, butchers premises and some on-farm (‘under the tree’) operations are inspected by the public health inspectors of the MOH or not inspected at all. The PVS Team was informed that MOH does not charge for inspection and that standards are lower. Public health inspectors do not have ready access to veterinary advice and there is no provision of information on ante-mortem or post-mortem findings to BAHA. Some joint training of BAHA and MOH inspectors has been offered but this is sporadic. There are no figures on the number of animals slaughtered at uninspected establishments. The slaughter of livestock in establishments without inspection is a threat to food safety and a weakness of the animal disease surveillance system.

The MOH – BAHA MOU on Food Safety provides for the holding of quarterly meetings to share information and evaluate the status of food safety programmes but these meetings do not occur on a regular basis. Similarly, the national Zoonotic Diseases Commission has not met for some time. If the efforts of technical managers to improve cooperation have not had the desired results, the initiative should be taken at a higher level within BAHA and its counterpart agencies.

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### **Ministry of Natural Resources and Environment**

A representative of this Ministry expressed a desire to work with BAHA on wildlife diseases, providing BAHA with an opportunity to explore possibilities for collaboration within the 'One Health' context.

### **Customs and Excise Department**

There is generally good coordination between BAHA and Customs agents in border posts. However, BAHA was not included in the implementation of the ASYCUDA World system<sup>15</sup>.

See Critical Competency II-4 (Quarantine)

#### **Strengths:**

- BAHA is recognised as the lead agency on animal health and food safety in Belize.
- There is generally good coordination at border posts.

#### **Weaknesses:**

- Lack of collaboration with MOH and Ministry of Natural Resources and Environment.

#### **Recommendations:**

- Improve communication and collaboration with MOH.
- Initiate a dialogue with the Ministry of Natural Resources and the Environment with respect to potential areas for collaboration on diseases in wildlife.

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<sup>15</sup> <http://www.asycuda.org/asyversions.asp>

I-7 Physical resources	Levels of advancement
<i>The access of the VS to relevant physical resources including buildings, transport, telecommunications, cold chain, and other relevant equipment (e.g. computers).</i>	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.
	<b>3. The VS have suitable physical resources at national, regional and some local levels and maintenance and replacement of obsolete items occurs only occasionally.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have access to relevant physical resources including buildings, transport telecommunications, cold chain, and other relevant equipment (e.g. computers).</i>
<b>2. Result / Expected level of advancement:</b>
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.

**Evidence** (listed in Appendix 6): E17, E19, E20, E60, H28, H29

### **Findings:**

The level of advancement previously reported (3) remains appropriate.

Improvements in the physical resources available to BAHA in large part reflect time-limited projects and donations with no on-going provision for maintenance or replacement of assets at end of their useable life. With respect to laboratory services, the IAEA donated GC/MS equipment for detection of pesticides to the CIL Food Safety laboratory in Belize City and the IDB provided a PCR machine that is currently used for testing shrimp. Funds from this IDB project will also be used to renovate the BAHA District Office, Orange Walk and the CIL and to build a new PCR Laboratory at the Central Farm, Cayo. The Quarantine Department also benefited from the IDB project, with the provision of two new offices and the refurbishment of the Placencia Building and Quarantine Headquarters. Incinerators were restored to working order and the department received four new cars and a golf cart.

The Animal Health Department is in short supply of vehicles, with a total of five. One is at Orange Walk, one at Belize City (assigned to the AAHO), one at Central Farm (shared between the CVO, DVO and inspectors), one at Big Creek and one at Bullet Tree animal movement check point. The last mentioned vehicle and that assigned to the AAHP should soon be replaced. There is a perception that the Animal Health Department is 'hard' on its vehicles. However, the rough roads and high mileage undoubtedly contribute to rapid attrition.

The SWEEP project has a fleet of 11 vehicles (one for each of 8 teams, plus one for each of the Veterinary coordinator, the Field director and the Project director) and 12 motorcycles. There were more cars but some were not renewed.

### **Strengths:**

- Thanks to IDB and donor projects the standard of physical infrastructure is fairly good.

**Weaknesses:**

- There is no allocation in the annual budget for the maintenance or eventual replacement of physical resources.

**Recommendations:**

- When the BAHA accounting system is modernised, capacity for estimating the financial requirements for maintenance and calculation of depreciation of physical resources should be included.

I-8 Operational funding	Levels of advancement
<i>The ability of the VS to access financial resources adequate for their continued operations, independent of political pressure.</i>	1. Funding for the VS is neither stable nor clearly defined but depends on resources allocated irregularly.
	<b>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.
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the ability to access financial resources adequate for their continued operations, independent of political pressure.</i>
<b>2. Result / Expected level of advancement:</b>
<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>
<b>4. Funding for new or expanded operations is on a case-by-case basis.</b>
5. Funding for all aspects of VS activities is adequate; all funding is provided under full transparency and allows for full technical independence.

**Evidence** (listed in Appendix 6): E6, E17, E19, E20, E59, E60, E64, H24, H26 to H29 inclusive.

**Findings:**

The budget situation of BAHA is little changed since 2010. BAHA has an annual operating budget of approx. BZ\$ 3.2 M (US\$1.6M). Of this total, some BZ\$1.2 million (US\$0.6M) is provided by the GOB and BZ\$2 million (US\$1M) comes from fees for services. Operational expenses total about BZD 700,000 (US\$350,000) per annum. While the baseline budget has remained relatively unchanged during several years, the workload has continued to increase, mainly with support from externally funded projects. The PVS Team found no evidence that BAHA undertakes financial risk analysis or cost efficiency analysis in relation to new or expanded operations.

The total revenue from fees and charges has increased, mainly due to the inspection and certification functions of the Quarantine department. The level of BAHA fees is established in legislation. They are low and they have not been increased since 2008. BAHA should have the capacity to make annual adjustments to the fees, based on the real costs of providing inspection and certification services. Movement of the fees from Regulations to Ministerial Orders could help to facilitate periodic updating.

The PVS Team was informed that modernisation of BAHA's accounting systems will be identified as a corporate priority in the new Strategic Plan.

In November 2013, BAHA requested supplemental funding of BZ\$1.5M (US\$750,000) for the fiscal year 2014-2015 due to a projected budget shortfall of BZ\$382,000 (US\$191,000). During the mission, the PVS Team was informed that the GOB had given favourable consideration to BAHA's request and had approved additional funding that would enable the recruitment of one veterinary officer and 11 technicians as well as 2 staff in the Plant Health Department. It is unclear if this represents a 'one off' supplement for the current fiscal year or whether it will continue into the budget for FY 2015-6.

With the support of donors and the IDB, BAHA has achieved some good progress, notably regarding the maintenance of quarantine and border security and the implementation of cattle identification and disease surveillance programmes. However, the concerns about the lack of sustainability of BAHA programmes in light of the baseline budget remain.

**Strengths:**

- BAHA has credibility and a good record in implementing projects.

**Weaknesses:**

- High dependency on user fees and on externally funded projects.
- Lack of financial support for 'public good' activities.
- Cumbersome process for increasing the fees charged for services.

**Recommendations:**

- Increase core funding to enable BAHA to carry out its public good functions.
- Update the current scale of fees based on the real costs of providing services.
- Take action to facilitate the periodic updating of the fees.

I-9 Emergency funding	Levels of advancement
<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>	1. No funding arrangements exist and there is no provision for emergency financial resources.
	<b>2. Funding arrangements with limited resources have been established, but these are inadequate for expected emergency situations (including emerging issues).</b>
	3. Funding arrangements with limited resources have been established; additional resources for emergencies may be approved but approval is through a political process.
	4. Funding arrangements with adequate resources have been established, but in an emergency situation, their operation must be agreed through a non-political process on a case-by-case basis.
	5. Funding arrangements with adequate resources have been established and their rules of operation documented and agreed with interested parties.

Terrestrial Code reference(s): Appendix 1

1. Specific objective
<i>The VS have the capability to access extraordinary financial resources in order to respond to emergency situations or emerging issues; measured by the ease with which contingency and compensatory funding (i.e. arrangements for compensation of producers in emergency situations) can be made available when required.</i>
<b>2. Result / Expected level of advancement:</b>
<b>2.</b> Contingency and compensatory funding arrangements with limited resources have been established, but these are inadequate for expected emergency situations (including emerging disease issues).
<b>3.</b> Contingency and compensatory funding arrangements with limited resources have been established; additional resources for emergencies may be approved but approval is through a political process.
<b>4.</b> Contingency and compensatory funding arrangements with adequate resources have been established, but in an emergency situation, their operation must be agreed through a non-political process on a case-by case basis.
<b>5.</b> Contingency and compensatory funding arrangements with adequate resources have been established and their rules of operation documented and agreed with stakeholders.

**Evidence** (listed in Appendix 6): E3/E15, E52, H3; discussion with BAHA staff and BLPA.

### **Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

The level of advancement 2 remains applicable. There is provision in the BAHA Act for the Minister to award compensation 'for the compulsory slaughter of any healthy animal under the provisions of the Act' [s58(1)] to a farmer whose animals are destroyed following the detection of infection but apparently no established policy on the payment of compensation. This situation was reported in the OIE Gap Analysis report (2010). With the implementation of active surveillance for TB and brucellosis, there is a draft BAHA Manual on TB but compensation policies present a practical problem. Compensation policies should normally be addressed in contingency plans for highly contagious animal diseases such as AI and FMD.

### **Strengths:**

- There is a legal base for the payment of compensation to farmers.

### **Weaknesses:**

- Unclear policies on compensation.

### **Recommendations:**

- Establish and implement a compensation policy for disease control programmes.

<b>I-10 Capital investment</b> <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>	<b>Levels of advancement</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to access additional investments, over time, that lead to a sustained improvement in the VS.</i>
<b>2. Result / Expected level of advancement:</b>
3. The VS regularly secure funding for improvements in operational infrastructure, through extraordinary allocations from the national budget or from other sources, but these are allocated with constraints on their use.
4. The VS secure adequate funding for the necessary improvements in operational infrastructure through extraordinary allocations, including from stakeholders.
5. The VS routinely secure adequate funding for the necessary improvements in operational infrastructure.

**Evidence** (listed in Appendix 6): E17, E19, E20, E59, E60, H24, H26 to H29 inclusive.

**Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

The level of advancement (3) reported in 2009 is still applicable. Funding for the maintenance and improvement of operational infrastructure is mainly obtained from projects and donations.

**Strengths:**

- Thanks to external projects the physical infrastructure is fairly good.

**Weaknesses:**

- There is no allocation in the annual budget for the maintenance or replacement of physical resources at end of their usable life.

**Recommendations:**

- When the BAHA accounting system is modernised, capacity for estimating the financial requirements for maintenance and calculation of depreciation of physical resources should be included.

<b>I-11. Management of resources and operations</b>	<b>Levels of advancement</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>	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.

Terrestrial Code reference(s): Appendix 1

**Evidence** (listed in Appendix 6): E17, E19, E20, E59, E60, H24, H26 to H29 inclusive.

**Findings:**

Note: this critical competency has been introduced since the initial PVS Evaluation. The level of advancement 3 reflects the availability of records, documents and management systems and their use to a limited extent for the control of efficiency and effectiveness.

While the baseline budget has remained relatively unchanged during several years, the workload has continued to increase. However, the PVS Team found no evidence that BAHA undertakes financial risk analysis or cost efficiency analysis in relation to new or expanded operations.

New activities and increase in expenditure depend on revenue from external sources (see critical competency I-8). With the support of donors and the IDB, BAHA has achieved some good progress, notably regarding the maintenance of quarantine and border security and the implementation of cattle identification and disease surveillance programmes.

BAHA technical managers are skilled in preparing project proposals and managing projects. However, they need training in administrative and financial management to help them to monitor and improve operational efficiency and effectiveness.

**Strengths:**

- Willingness of external organisations to support BAHA.
- Strength of BAHA managers in project management.

**Weaknesses:**

- High dependency on projects to achieve technical objectives.
- Technical managers are not trained in administrative and financial management.

**Recommendations:**

- Provide sustainable core funding to support performance of 'public good' activities.
- Train technical staff who have management responsibility in administrative and financial management.

## III.2 Fundamental component II: Technical authority and capability

This component of the evaluation concerns the authority and capability of the VS to develop and apply sanitary measures and science-based procedures supporting those measures. It comprises eighteen critical competencies.

For all sections of this chapter, the critical 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.

### Critical competencies:

<b>Section II-1</b>	<b>Veterinary laboratory diagnosis</b> A. Access to veterinary laboratory diagnosis B. Suitability of national laboratory infrastructures
<b>Section II-2</b>	<b>Laboratory quality assurance</b>
<b>Section II-3</b>	<b>Risk analysis</b>
<b>Section II-4</b>	<b>Quarantine and border security</b>
<b>Section II-5</b>	<b>Epidemiological surveillance and early detection</b> A. Passive Epidemiological surveillance B. Active Epidemiological surveillance
<b>Section II-6</b>	<b>Emergency response</b>
<b>Section II-7</b>	<b>Disease prevention, control and eradication</b>
<b>Section II-8</b>	<b>Food safety</b> A. Regulation, authorisation and inspection of establishments for production, processing and distribution of food of animal origin B. Ante and post mortem inspection at abattoirs and associated premises C. Inspection of collection, processing and distribution of products of animal origin
<b>Section II-9</b>	<b>Veterinary medicines and biologicals</b>
<b>Section II-10</b>	<b>Residue testing</b>
<b>Section II-11</b>	<b>Animal feed safety</b>
<b>Section II-12</b>	<b>Identification and traceability</b> A. Animal identification and movement control B. Identification and traceability of products of animal origin
<b>Section II-13</b>	<b>Animal welfare</b>

#### ----- Terrestrial Code References:

- Chapter 1.4. on Animal health surveillance.
- Chapter 1.5. on Surveillance for arthropod vectors of animal diseases.
- Chapter 2.1. on Import risk analysis.
- Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General Organisation / Procedures and standards.
- Point 1 of Article 3.2.4. on Evaluation criteria for quality systems.
- Point 3 of Article 3.2.6. on Evaluation criteria for material resources: Technical.
- Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection.
- Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National animal disease reporting systems.
- Points 1-5 of Article 3.2.9. on Veterinary public health controls: Food hygiene / Zoonoses / Chemical residue testing programmes / Veterinary medicines/ Integration between animal health controls and veterinary public health.
- Sub-point f) of Point 4 of Article 3.2.10. on Veterinary Services administration: Formal linkages with sources of independent scientific expertise.
- Points 2 and 5-7 of Article 3.2.14. on National information on human resources / Laboratory services / Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.
- Article 3.4.12. on Human food production chain.
- Chapter 4.1. on General principles on identification and traceability of live animals.
- Chapter 4.2. on Design and implementation of identification systems to achieve animal traceability.
- Chapter 4.12. on Disposal of dead animal.
- Chapter 6.2. on Control of biological hazards of animal health and public health importance through ante- and post-mortem meat inspection.
- Chapter 6.3. on Control of hazards of animal health and public health importance in animal feed.
- Chapters 6.6. to 6.10. on Antimicrobial resistance.
- Chapter 7.1. Introduction to the recommendations for animal welfare.
- Chapter 7.2. Transport of animals by sea.
- Chapter 7.3. Transport of animals by land.
- Chapter 7.4. Transport of animals by air.
- Chapter 7.5. Slaughter of animals.
- Chapter 7.6. Killing of animals for disease control purposes.

II-1 Veterinary laboratory diagnosis	Levels of advancement
<b>A Access to veterinary laboratory diagnosis</b> <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>	1. Disease diagnosis is almost always conducted by clinical means only, with no access to and use of a laboratory to obtain a correct diagnosis.
	2. For major zoonoses and diseases of national economic importance, the VS have access to and use a laboratory to obtain a correct diagnosis.
	3. For other zoonoses and diseases present in the country, the VS have access to and use a laboratory to obtain a correct diagnosis.
	<b>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.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to identify and record pathogenic agents, including those relevant for public health, that can adversely affect animals and animal products.</i>
<b>2. Result / Expected level of advancement:</b>
4. For diseases of zoonotic or economic importance not present in the country, but known to exist in the region and/ or that could enter the country, the VS have access to and use a laboratory to obtain a correct diagnosis.
5. In the case of new and emerging diseases in the region or world, the VS have access to and use a network of national or international reference laboratories (e.g. an OIE Reference Laboratory) to obtain a correct diagnosis.

**Evidence** (listed in Appendix 6): E9, E11, E12, E21, E22, E38 to E42 inclusive, H22 to H24 inclusive, H35 to H39 inclusive, P1-17, PA1-10; discussion with BAHA staff.

### **Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

BAHA has in-country access to laboratory diagnosis through the work of the CIL and the Aquatic Animal Health Laboratory (AAHL) in Belize City and the CVL at the Central Farm, Cayo. There are no private animal health or food safety laboratories in Belize.

The CIL, in the Food Safety Department, has a run-down infrastructure and problems with the supply of reagents. Refurbishment funded by the IDB was under way at the time of the mission. The Director of the laboratory, who is also the Deputy Director of the Food Safety Department, is well qualified for the position. The laboratory tests for residues of pesticides and veterinary drugs in foods using GC/MS equipment donated by the IAEA. Shrimp samples are sent overseas for testing.

The laboratory also does microbiological testing, some of which the GOB funds as a public good activity. On a cost recovery basis, CIL conducts testing for salmonella, vibrio and coliforms in shrimp for export. In November the laboratory will participate in a joint study with MOH and the Caribbean Public Health Agency, funded by PAHO, aimed at the quantification of the burden of foodborne illness. For technical training, the laboratory depends on external funding; a request to the EU for support under the 'Better Training for Safer Foods' project is pending.

On the CIL work site the AAHL tests shrimp samples by PCR, using equipment donated by the IAEA. The Aquatic Animal Health Professional (AAHP) is responsible for testing and providing feedback on the results to the shrimp farming industry, which covers the costs of this testing. Some positive samples are sent to an OIE Reference Laboratory (RL) on crustacean diseases for confirmation. The AAHL participates in proficiency testing with the

RL. The work done by the AAHP enables BAHA to demonstrate the absence of OIE listed crustacean diseases and provides information needed for disease control, for example in relation to early mortality syndrome (EMS), which is in the region but exotic to Belize.

The CVL is part of the Animal Health Department. The Laboratory Director retired in 2012 and was not replaced. The Head Technician, who has worked at the CVO for 12 years, effectively has responsibility for the management of the laboratory. With the inception of the TB and brucellosis surveillance project (SWEEP) in 2011, a large part of the laboratory is dedicated to testing blood samples for brucellosis. All have been negative to date.

BAHA funds some testing done at the CVL but active disease surveillance programmes generally depend on industry funding.

For most diseases, confirmatory testing is done at offshore laboratories.

The IDB project will provide for the construction of a new PCR laboratory on the CVL site, scheduled for completion within the next 12 months. Once the building is completed, it is planned to move the aquatic disease testing facility from Belize City to the Central Farm, Cayo. At the time of the mission, the arrangements for management of the expanded CVL/PCR facility were unclear.

**Strengths:**

- For diseases of zoonotic or economic importance in the region, whether present in Belize or not, BAHA has access to and uses a laboratory to obtain a correct diagnosis.
- Improvements are being made to the CIL infrastructure.

**Weaknesses:**

- Neither CIL nor CVL has a formal QA system in place
- The CVL has not had a qualified professional Laboratory Director since 2012.
- The laboratory infrastructure for testing of aquatic animals is inadequate.

**Recommendations:**

- Recruit a Laboratory Director for the CVL to oversee the new PCR laboratory and related work.
- Make arrangements for the aquatic animal health officer to have appropriate professional backup.
- Consider the formation of a CIL-CVL network to facilitate communication and sharing of experience in the implementation of formal QA systems.

II-1 Veterinary laboratory diagnosis	Levels of advancement
<b>B. Suitability of national laboratory infrastructures</b> <i>The sustainability, effectiveness and efficiency of the national (public and private) laboratory infrastructures to service the needs of the VS</i>	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
	<b>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</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to identify and record pathogenic agents, including those relevant for public health, that can adversely affect animals and animal products.</i>
<b>2. Result / Expected level of advancement:</b>
4. For diseases of zoonotic or economic importance not present in the country, but known to exist in the region and/ or that could enter the country, the VS have access to and use a laboratory to obtain a correct diagnosis.
5. In the case of new and emerging diseases in the region or world, the VS have access to and use a network of national or international reference laboratories (e.g. an OIE Reference Laboratory) to obtain a correct diagnosis.

**Evidence** (listed in Appendix 6): E9, E11, E21, E22, E38 to E42 inclusive, H22 to H24 inclusive, H35, H36, H37, H38, H39, P1-17, PA1-10; discussion with BAHA staff.

### **Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

The level 3 reflects problems with core funding and resulting shortfalls in the staffing and physical resources allocated to the laboratory system (see Part A). The laboratories depend on donations and projects for the supply of much of their equipment and consumables. Managers spend considerable time on the development and management of projects.

In the comments under critical competency I-8 it is noted that the fees established in legislation have not been increased since 2008. The fees for laboratory testing, like any other activity, should be adjusted periodically to reflect the cost of providing the service.

BAHA has made provision for the accreditation of private laboratories. This could provide a practical option for expanding the laboratory network without requiring the GOB to make a significant investment in new buildings, equipment and staff.

### **Strengths:**

- Experience of senior laboratory staff.

### **Weaknesses:**

- Staff shortages and lack of sustainable funding for equipment and consumables.

### **Recommendations:**

- Recruit a Laboratory Director for the CVL.
- In the short term, increase core funding for the laboratories.

- In the longer term, if consistent with the GOB's strategic priorities, encourage the private sector to consider the establishment of accredited private laboratories.

II-2 Laboratory quality assurance	Levels of advancement
<i>The quality of laboratories (that conduct diagnostic 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>	1. No laboratories used by the public sector VS are using formal QA systems.
	<b>2. Some laboratories used by the public sector VS are using formal QA systems.</b>
	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.

Terrestrial Code reference(s): Appendix 1

1. Specific objective
<i>The VS apply formal quality assurance systems and take part in relevant proficiency testing programmes for laboratories (that conduct diagnostic testing or analysis for chemical residues, antimicrobial residues, toxins, or tests for biological efficacy, etc.).</i>
2. Result / Expected level of advancement:
2. Some laboratories used by the public sector VS are using formal quality assurance systems.
3. All laboratories used by the public sector VS are using formal quality assurance systems.
4. All the laboratories used by the public sector VS and most or all private laboratories are using formal quality assurance systems.
5. All the laboratories used by the public sector VS and most or all private laboratories are using formal quality assurance programmes that meet OIE, ISO 17025, or equivalent QA standard guidelines.

**Evidence** (listed in Appendix 6): E9, E11, E15, E21, E22, H24, H35 to H39 inclusive, P1-17, PA1-10; Discussion with BAHA staff.

### **Findings:**

There is a strong interest by senior laboratory personnel in the implementation of formal QA systems but it has been difficult to make progress due to the shortage of staff and equipment. The CIL is developing documentation as a precursor to the implementation of QA and a consultant is scheduled to visit and review this in January 2015.

The Head Technician at CVL is committed to the introduction of QM systems and is working towards this goal but in the absence of a professional Laboratory Director since 2012 it has been difficult to make progress.

The AAHL has also introduced elements of QA and participates in proficiency testing organised by an OIE RL. The results of these rounds were positive in 2012 and less so in 2013. The conduct of PCR testing for crustacean diseases depends on a single professional with a technician for support. If this officer is away for any reason the quality of testing cannot be guaranteed.

BAHA has made provision for the accreditation of private laboratories. The requirements for laboratory accreditation include compliance with ISO/IEC 17025. The PVS Team doubts the capacity of BAHA staff to evaluate compliance with ISO/IEC 17025 standard unless they are themselves practising QA systems.

The establishment of a CIL-CVL network could help to facilitate communication and the sharing of experience in the implementation of QM and formal QA systems.

**Strengths:**

- The Director of CIL is preparing QA documentation for review by a consultant.
- The Head Technician (CVL) and the AAHP are taking steps to implement QM.

**Weaknesses:**

- Lack of formal QA or QM systems in laboratories.
- Unsatisfactory results in proficiency testing for crustacean diseases in 2013.

**Recommendations:**

- Recruit a Laboratory Director at the CVL with a clear mandate for the implementation of QA during a defined period.
- Make arrangements for the AAHP to have professional backup.
- Consider the formation of a CIL-CVL network to facilitate communication and sharing of experience in the implementation of QA systems.

<b>II-3 Risk analysis</b> <i>The authority and capability of the VS to base its risk management measures on risk assessment.</i>	<b>Levels of advancement</b>
	1. Risk management measures are not usually supported by risk assessment.
	2. The VS compile and maintain data but do not have the capability to carry out risk analysis. Some risk management measures are based on risk assessment.
	<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.</b>
	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).

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to base their risk management decisions on a scientific assessment of the risks.</i>
<b>2. Result / Expected level of advancement:</b>
3. The VS can systematically compile and maintain relevant data and carry out risk assessment. Scientific principles and evidence, including risk assessment, generally provide the basis for risk management decisions.
4. The VS systematically conduct risk assessments in compliance with relevant OIE standards, and base their risk management decisions on the outcomes of these risk assessments.
5. The VS are consistent in basing sanitary decisions on risk analysis, and in communicating their procedures and outcomes internationally, meeting all their OIE obligations (including WTO SPS Agreement obligations where applicable).

**Evidence** (listed in Appendix 6): E9, E10, E15, E18, E50.

**Findings:**

The Directors of Food Safety and Animal Health have undertaken relevant training and have conducted risk analyses on diverse import requests.

**Strengths:**

- Some officials have been trained in the use of risk assessment
- Risk assessment is used in making decisions on the granting of import permits

**Weaknesses:**

- BAHA veterinarians have little opportunity to develop specialised expertise.

**Recommendations:**

- Professional staff should continue developing skills in the use of risk assessment.

II-4 Quarantine and border security	Levels of advancement
<i>The authority and capability of the VS to prevent the entry and spread of diseases and other hazards of animals and animal products.</i>	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.
	<b>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>16</sup> relating to the import of animals and animal products.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to prevent the entry and spread of diseases and other hazards related to animals and animal products.</i>
<b>2. Result / Expected level of advancement:</b>
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>9</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.

**Evidence** (listed in Appendix 6): E10, E14, E58, E64, H31, P18-27. Discussion with Customs Agency. Meeting with representative of SENASICA (Mexico) at Santa Elena border inspection post.

Also see comments under critical competency I-6B.

### **Findings:**

The Quarantine department has received significant investments in staffing training, buildings, equipment and vehicles. Quantitative indicators show that the department has increased its productivity and generates increasing revenue to BAHA based on 'fee for service'. Collaboration with OIRSA facilitates coordination with counterpart agencies in the region.

The Quarantine Department has the strongest track record in taking enforcement action. It is also the Department that needs to be most vigilant in preventing misconduct, due to the ease with which inspectors at border inspection posts use their power for personal gain. The PVS Team commends the policy of rotating quarantine inspectors on a regular basis to mitigate the risk of inappropriate work practices, and the actions taken when problems were found.

There is generally good coordination between BAHA and Customs staff at border inspection posts. However, BAHA was not included in the implementation of the ASYCUDA World system<sup>17</sup>.

<sup>16</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

<sup>17</sup> <http://www.asycuda.org/asyversions.asp>

As international trade is a core function and growing workload for BAHA, the modernisation of the Import/Export informatics systems should be a priority. At the Port of Belize, the PVS Team was informed that efforts of the Customs Agency to implement a targeted, risk based approach to containerised freight are frustrated by BAHA's requirement to open and inspect nearly all containers, including low risk products such as canned foods (checked for expiry date and can integrity). The implementation of a risk-based approach to inspection could help BAHA reduce its workload by working more efficiently. To do this, the BAHA Quarantine department will need guidance from the technical departments. The design of a risk-based system is a rather specialised function and the obtaining of external advice (e.g. from OIRSA or a consultant) should be considered.

The informal movement of cattle across the border to Guatemala presents a quarantine risk in relation to which BAHA staff maintains a high level of vigilance at the border. During the mission the CVO was invited by his counterpart in Guatemala to establish official conditions for the export of cattle.

**Strengths:**

- Generally good collaboration with the Customs and Excise Department
- Positive relationships between border officials in Belize, Mexico and Guatemala

**Weaknesses:**

- BAHA is not benefitting from opportunities to improve efficiency in border posts.
- "Informal" trade represents a quarantine risk.

**Recommendations:**

- Modernise informatics systems for import and export and develop an electronic interface with Customs.
- Expedite the establishment of health conditions for the export of cattle to Guatemala.

<b>II-5 Epidemiological surveillance and early detection</b>	<b>Levels of advancement</b>
<p><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></p> <p><b>A. Passive epidemiological surveillance</b></p>	1. The VS have no passive surveillance programme.
	2. The VS conduct passive surveillance for some relevant diseases and have the capacity to produce national reports on some diseases.
	<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.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to determine, verify and report on the sanitary status of the animal populations under their mandate.</i>
<b>2. Result / Expected level of advancement:</b>
3. The VS conduct passive surveillance 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 on most relevant diseases. Appropriate field networks are established for the collection of samples and submission for laboratory diagnosis of suspect cases with evidence of correct results obtained. Stakeholders are aware of and comply with their obligation to report the suspicion and occurrence of notifiable diseases to the VS.
5. The VS regularly report to stakeholders and the international community (where applicable) on the findings of passive surveillance programmes.

**Evidence** (listed in Appendix 6): E3, E5, E11, E15 to 17, E51, E61, H23, H25, H29, H30, H4 to H7, H9; meetings with BAHA staff and BLPA.

### **Findings:**

This critical competency is at the level of advancement 3.

In response to calls from the public, industry and private veterinarians, BAHA officials visit farms and collect samples for investigation, notably to rule out AI and ND in poultry; CSF in pigs; and rabies, BSE and FMD in cattle. Definitive diagnosis is obtained in offshore laboratories. Passive surveillance is an important activity of the Animal Health Department, notably in light of the intention to submit dossiers to the OIE for official recognition of BSE negligible risk status and CSF free status.

The capacity to undertake passive surveillance has been strengthened by the promulgation of an S.I. on the identification of cattle and the establishment of the BLR. The lack of identification systems for other livestock species is a potential weakness. The response to calls from farmers near the border with Guatemala is a high priority, due to the quarantine risks associated with unofficial cross border movement.

One problem facing the passive surveillance system is the slaughter of cattle and pigs in abattoirs without BAHA supervision. It is likely that these are mostly young animals, which are not in the target group for BSE testing. However, this is a potential loss of information on animal diseases. The small number of official veterinarians is a potentially serious weakness in that it affects the capacity of BAHA to respond rapidly to calls and the timely conduct of investigations. Recently some BSE samples were unsuitable for testing due to problems with

collection in the field. Notwithstanding these points, Belize has a national system for animal disease surveillance and a good record of reporting findings to the OIE in a timely manner.

**Strengths:**

- Advances in the identification and traceability of cattle.
- The GOB commitment to submit dossiers to the OIE for official recognition of Belize's status for BSE and CSF.

**Weaknesses:**

- No surveillance information is collected for animals slaughtered at some facilities.
- Livestock other than cattle are not identified.
- The small number of official veterinarians in the field.

**Recommendations:**

- Increase veterinary staffing in the field
- Critical review of capacity to meet future needs for TB surveillance in abattoirs
- Consider the development of identification systems for swine, to support the dossier on CSF free status.

II-5 Epidemiological surveillance and early detection	Levels of advancement
<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>B. Active epidemiological surveillance</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.
	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.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to determine, verify and report on the sanitary status of the animal populations under their mandate.</i>
<b>2. Result / Expected level of advancement:</b>
2. The VS conduct active surveillance for some relevant diseases (of economic and zoonotic importance) but apply it only in a part of susceptible populations and/or do not update it regularly.
3. The VS conduct active surveillance for some relevant diseases and apply it to all susceptible populations but do not update it regularly.
4. The VS conduct active surveillance 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.

**Evidence** (listed in Appendix 6): E3, E5, E11, E15 to 17, E51, E61, H23, H25, H29, H30, H4 to H7, H9; meetings with BAHA staff and BLPA.

### **Findings:**

This critical competency merits a level of advancement of 4 (from level 2 in 2009), due mainly to the SWEEP project, which aims to demonstrate that Belize is free from TB and brucellosis (self-declaration). In addition, there is active surveillance for CSF near the borders.

In 2012 BAHA and SENASICA (Mexico) signed a cooperation agreement on cattle health. The conditions of this agreement include the establishment of a cattle identification system and surveillance for TB, brucellosis and BSE, including the submission of a BSE dossier to the OIE. There is difficulty in collecting sufficient BSE diagnostic samples partly due to the shortage of official veterinarians.

Under the SWEEP, which is externally funded, BAHA hired 10 veterinarians and about thirty technicians. These veterinarians were accredited under the new legal framework. The project funding, which terminates at the end of 2015, should allow for the completion of three national rounds of testing and the operation of the BLR (to which the farming industry also contributes). After three complete rounds, Belize may be able to satisfy the OIE requirements. However, the OIE requires a further two years of active surveillance before a free country or zone can rely on abattoir based surveillance alone. The source of funding needed to maintain active surveillance in 2016 and 2017 has not yet been identified.

About 20,000 cattle are exported (informally) and about 5,000 are slaughtered annually. BAHA may have some problems in establishing an adequate level of abattoir surveillance for TB, given the unknown number of cattle slaughtered at abattoirs without supervision.

**Strengths:**

- The TB and brucellosis project (SWEEP) and BLR.

**Weaknesses:**

- Doubts about the sustainability of active surveillance programmes.
- Uncertainty about the capacity to collect sufficient BSE surveillance samples.

**Recommendations:**

- Increase the core budget to allow BAHA to maintain sufficient official veterinarians, compatible with disease surveillance.
- That the GOB, BAHA and the livestock industries work together to establish a sustainable budget base for TB and brucellosis testing after the SWEEP ends.
- Action should be taken to facilitate the preparation of a BSE dossier, including the recruitment of an official veterinarian to deal with this (and other surveillance issues).

<b>II-6 Emergency response</b> <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>	<b>Levels of advancement</b>
	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.
	<b>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.</b>
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	

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to detect and respond rapidly to a sanitary emergency (such as a significant disease outbreak or food safety emergency).</i>
<b>2. Result / Expected level of advancement:</b>
4. The VS have an established procedure to make timely decisions on whether or not a sanitary emergency exists. The VS have the legal framework and financial support to respond rapidly to sanitary emergencies through a chain of command. They have national contingency plans for some exotic diseases.
5. The VS have national contingency plans for all diseases of concern through coordinated actions with all stakeholders through a chain of command.

**Evidence** (listed in Appendix 6): E26-E29 inclusive, E53; Discussion with BAHA and industry.

### **Findings:**

Note: this critical competency has been amended since 2009, to include reference to the updating and testing of contingency plans.

There are contingency plans for AI, FMD, CSF and for the shrimp farming industry. The AI contingency plan has been tested and there are plans to undertake simulations of FMD, CSF and an aquatic animal disease, using IDB funding.

The level of advancement for critical competency I-9 (Emergency funding) was 2, reflecting the lack of policies on of compensation in a disease outbreak.

### **Strengths:**

- BAHA has a clear legal authority and demonstrated operational capacity to respond rapidly to sanitary emergencies through a chain of command.
- The availability of funding from IDB to enable the testing of contingency plans.

### **Weaknesses:**

- Shortfalls in the number of Animal Health staff.
- Dependence on short term funding.
- Lack of clear GOB policies on the payment of compensation in a disease outbreak.

### **Recommendations:**

- Increase BAHA's core budget to assure core programmes.
- Establish a policy on compensation in the situation of a reportable disease outbreak

<b>II-7 Disease prevention, control and eradication</b>	<b>Levels of advancement</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>	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability 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. Result / Expected level of advancement:</b>
<b>2.</b> The VS implement prevention, control and eradication programmes for some diseases and/or in some areas with little or no scientific evaluation of their efficacy and efficiency.
<b>3.</b> The VS implement prevention, control and eradication programmes for some diseases and/or in some areas with scientific evaluation of their efficacy and efficiency.
<b>4.</b> The VS implement prevention, control and eradication programmes for all relevant diseases but with scientific evaluation of their efficacy and efficiency of only some programmes.
<b>5.</b> The VS implement prevention, control and eradication programmes for all relevant diseases with scientific evaluation of their efficacy and efficiency consistent with relevant OIE international standards.

**Evidence** (listed in Appendix 6): E3, E11, E15, E17, P28; Discussion with BAHA staff and industry.

### **Findings:**

The level of advancement is 3, reflecting the fact that disease prevention, control and eradication programmes are implemented for several important diseases and that scientific evaluation of efficacy and efficiency is sometimes carried out by external agencies. BAHA does not routinely conduct self-audit of programmes.

The Quarantine Department works in collaboration with the other technical departments to control disease risks at the international borders. In common with other members in Central America, BAHA benefits from OIRSA support for building capacity in border control.

Findings relevant to this CC are presented under critical competencies I-9 and II-6, II-2 and III-6 and IV-7. Notwithstanding the progress achieved, the underlying problem of insufficient core funding means that the sustainability of technical programmes cannot be assured.

### **Strengths:**

- Capacity to undertake programmes in relation to most of the significant diseases.

### **Weaknesses:**

- Insufficient core funding threatens the sustainability of programmes.

### **Recommendations:**

- Increase BAHA's core budget to assure core programmes.
- Consider the establishment of a small unit in BAHA headquarters with responsibility for auditing the efficiency and effectiveness of all of BAHA's technical programmes.

<b>II-8 Food safety</b> <b>A. Regulation, authorisation and inspection of establishments for production, processing and distribution of food of animal origin</b>	<b>Levels of advancement</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>	1. Regulation, authorisation and inspection of relevant establishments are generally not undertaken in conformity with international standards.
	<b>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.
	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).

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to implement, manage and coordinate veterinary public health measures, including programmes for the prevention of specific foodborne zoonoses and general food safety programmes.</i>
<b>2. Result / Expected level of advancement:</b>
<b>3. Management, implementation and coordination are generally undertaken in conformity with international standards only for export purpose and for products that are distributed throughout the national market.</b>
4. Management, implementation and coordination are generally undertaken in conformity with international standards for export purpose and for products that are distributed throughout the national and local markets.
5. Management, implementation and coordination are undertaken in full conformity with international standards for products at all levels of distribution (throughout the national and local markets, and direct sales).

**Evidence** (listed in Appendix 6): E9, E12, E14, E15, E51, E56, E57, E68, H2, H3, H40, P29-43; P44-53; Discussion with BAHA staff and operators of abattoirs and other food processing facilities.

Note: this critical competency was modified since 2009.

### **Findings:**

The Food and Drugs Act (Chapter 291), the Public Health Act (Chapter 40), the Meat (Post Mortem) Inspection Regulations (S.I. 20 of 1970) and the Slaughter of Animals Act (Chapter 154) provide for the Minister of Health to appoint authorized officers to perform inspections of slaughterhouses for the purpose of licensing, humane slaughter and control of hygiene in food establishments. Under Section 11 of the Food and Drug Act, the Minister of Health has the authority to make regulations regarding the preparation, handling, transport and sale of food for human consumption.

A MOU between BAHA and MOH on food safety indicates that BAHA has legal authority to regulate the inspection, approval and certification for all food processing plants without prejudice to the provisions of the Public Health Act. The Ante Mortem Inspection Regulations call for inspection of animals by a BAHA officer and BAHA is designated as the sole organization responsible for assuring compliance with a HACCP food safety system.

Other than for fish products, the legislation for meat and dairy products falls under the MOH and there is a lack of legislative support (including official protocols and manuals) for BAHA inspection of food products.

BAHA inspects the larger abattoirs (none are export listed) and the food processing establishments that use HACCP, mainly exporters of shrimp and processed foods. Only MOH has the authority to intervene at the retail level. BAHA charges for inspection while the MOH does not; also, the BAHA standards are considered to be stricter. Animal slaughter without BAHA inspection has implications for food safety and for animal disease surveillance.

The BAHA-MOH MOU provides for the holding of quarterly meetings to share information and evaluate food safety programmes but these meetings do not occur on a regular basis.

**Strengths:**

- BAHA has legal authority and expertise in food inspection.

**Weaknesses:**

- Lack of active consultation or cooperation between BAHA and MOH.

**Recommendations:**

- Develop effective arrangements for consultation and cooperation with MOH.

B. Ante and post mortem inspection at abattoirs and associated premises (e.g. meat boning/cutting establishments and rendering plants).	Levels of advancement
<p><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></p>	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.

Terrestrial Code reference(s): Appendix 1

1. Specific objective
<p><i>The VS have the authority and capability to implement, manage and coordinate veterinary public health measures, including programmes for the prevention of specific foodborne zoonoses and general food safety programmes.</i></p>
2. Result / Expected level of advancement:
<p>3. Management, implementation and coordination are generally undertaken in conformity with international standards only for export purpose and for products that are distributed throughout the national market.</p>
<p>4. Management, implementation and coordination are generally undertaken in conformity with international standards for export purpose and for products that are distributed throughout the national and local markets.</p>
<p>5. Management, implementation and coordination are undertaken in full conformity with international standards for products at all levels of distribution (throughout the national and local markets, and direct sales).</p>

**Evidence** (listed in Appendix 6): E9, E12, E14, E15, E51, E56, E57, E68, H2, H3, H40.

Note: this critical competency was modified since 2009.

### **Findings:**

The level of advancement (3) reflects the fact that major abattoirs operate under BAHA inspection, which allows for the collection of disease information and implementation of food safety standards in broad conformity with international standards.

The legislation provides that BAHA or MOH inspectors should perform inspections for licensing, humane slaughter and control of hygiene in food establishments. Livestock slaughtered for the purpose of human consumption must be subject to ante mortem and post-mortem inspection.

The MOU indicates that BAHA is responsible for the implementation and enforcement of the relevant legislation as it relates to on-farm production and the regulation of food processing establishments. The MOH, having the mandate to protect the public's health, maintains the overall responsibility and authority to safeguard the quality and safety of the total food supply.

MOH inspectors do not have recourse to veterinary advice. BAHA inspectors do not have full time veterinary supervision but have recourse to veterinary advice when needed.

**Strengths:**

- Major abattoirs fall under the legal authority and supervision of BAHA.

**Weaknesses:**

- Small slaughter operations are under the authority of the MOH.
- The slaughter of many livestock in uninspected facilities presents risks to food safety.
- Lack of consultation and cooperation between BAHA and MOH.

**Recommendations:**

- Develop effective arrangements for consultation and cooperation with MOH.

C. Inspection of collection, processing and distribution of products of animal origin	Levels of advancement
<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>	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 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).

[Note: This critical competency primarily refers to inspection of processed animal products and raw products other than meat (e.g. milk, honey etc.). It may in some countries be undertaken by an agency other than the VS.]

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to implement, manage and coordinate veterinary public health measures, including programmes for the prevention of specific foodborne zoonoses and general food safety programmes.</i>
<b>2. Result / Expected level of advancement:</b>
3. Management, implementation and coordination are generally undertaken in conformity with international standards only for export purpose and for products that are distributed throughout the national market.
4. Management, implementation and coordination are generally undertaken in conformity with international standards for export purpose and for products that are distributed throughout the national and local markets.
5. Management, implementation and coordination are undertaken in full conformity with international standards for products at all levels of distribution (throughout the national and local markets, and direct sales).

**Evidence** (listed in Appendix 6): E9, E12, E14, E15, E51, E56, E57, E68, H2, H3, H40, P29-43, PA12-23. Discussions with staff of BAHA and MOH and with representatives of food processing plants.

Note: this critical competency was modified since 2009.

### **Findings:**

The level of advancement (3) reflects the authority and capability of BAHA to implement food safety programmes in conformity with international standards for exported food products and for some products that are distributed throughout the national market.

The legislation provides for both BAHA and the MOH to regulate food inspection and food safety. The implementation of HACCP systems is the sole province of BAHA. Facilities processing foods for export, including packers of farmed shrimp, are required to implement HACCP systems; hence, BAHA is the inspecting authority. The abattoirs that distribute meat nationally and the single dairy processing plant also fall under BAHA authority. The BPA is collaborating with BAHA in a national testing programme for salmonella and campylobacter. In addition, the CIL will participate in a joint study with MOH and the Caribbean Public Health Agency, funded by PAHO, aimed at the quantification of the burden of foodborne illness.

### **Strengths:**

- BAHA has the legal authority and expertise to implement food safety programmes (including HACCP) that comply with international standards in some sectors.

**Weaknesses:**

- The 'two tier' system of inspection
- Lack of consultation or cooperation between BAHA and MOH.

**Recommendations:**

- Develop effective arrangements for consultation and cooperation with MOH.

II-9 Veterinary medicines and biologicals	Levels of advancement
<i>The authority and capability of the VS to regulate veterinary medicines and veterinary biologicals, 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>	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 biologicals in order to ensure their responsible and prudent use.</b>
	3. The VS exercise regulatory and administrative control for most aspects of the regulation related to the control over veterinary medicines and veterinary biologicals, including prudent use of antimicrobial agents 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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to regulate veterinary medicines and veterinary biologicals.</i>
<b>2. Result / Expected level of advancement:</b>
2. The VS have only limited capability to exercise administrative control (including registration) over the usage, including import and production, of veterinary medicines and veterinary biologicals.
3. The VS exercise quality control (technical standards) over the import, production and distribution of veterinary medicines and veterinary biologicals.
4. The VS exercise complete control over registration, sale and usage of veterinary medicines and veterinary biologicals.
5. The VS implement systems to monitor the use of veterinary medicines, veterinary biologicals and their side effects (pharmacovigilance).

**Evidence** (listed in Appendix 6): E3/E15, E9, E12, H20, H43; discussion with BAHA staff and visit to animal feed retailers; P54-61.

Note: this critical competency has been modified since 2009 and now makes explicit reference to the OIE standards on prudent use of antimicrobial substances.

### **Findings:**

The situation is basically unchanged from that reported in 2009. This is of greater concern, given that the OIE has called on all Member countries to play their part in addressing the problem of antimicrobial resistance at the global level<sup>18</sup>. There is legal authority under the BAHA Subsidiary Regulations and the Veterinary Surgeon's Act but no active regulatory programme. A variety of veterinary products, including antibiotics and commonly used vaccines, are on sale to the public. Apart from exports of farmed shrimp there is no routine testing of food of animal origin for residues of veterinary drugs. Some testing of plant products for pesticide residues is undertaken under coordination of the Pesticides Control Board, on which BAHA is represented by the Plant Health Department.

Given the lack of public awareness of the risks associated with inappropriate use of antimicrobials and residues of veterinary drugs in food, steps to impose restrictions on the general sale of such products are likely to encounter opposition from farmers in the absence of a sound communications strategy.

<sup>18</sup> <http://www.oie.int/en/for-the-media/press-releases/detail/article/solidarity-against-antimicrobial-resistance/>

The establishment of regulatory control over veterinary medicines and biological products will require the commitment of significant resources to inspection and enforcement and a campaign to educate the public and raise awareness on the part of the farming community.

**Strengths:**

- Regulatory authority exists.

**Weaknesses:**

- Lack of a regulatory programme for the control of veterinary medicines and vaccines.
- Lack of residue testing for food of animal origin consumed in Belize.

**Recommendations:**

- That senior management of BAHA engage with counterparts at the MOA and MOH to discuss approaches to the control of veterinary medicines, including a residue monitoring programme.

II-10 Residue testing	Levels of advancement
<i>The capability of the VS to undertake residue testing programmes for veterinary medicines (e.g. antimicrobials and hormones), chemicals, pesticides, radionuclides, metals, etc.</i>	1. No residue testing programme for animal products exists in the country.
	<b>2. Some residue testing programme is performed but only for selected animal products for export.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to undertake residue testing programmes for veterinary medicines (e.g. antimicrobials and hormones), chemicals, pesticides, radionuclides, metals, etc.</i>
<b>2. Result / Expected level of advancement:</b>
<b>2. Some residue testing programmes are performed but only for selected animal products for export.</b>
3. A comprehensive residue testing programme is performed for all animal products for export and some for domestic consumption.
<b>4. A comprehensive residue testing programme is performed for all animal products for export and/or domestic consumption.</b>
5. The residue testing programme is subject to routine quality assurance and regular evaluation.

**Evidence** (listed in Appendix 6): E3/E15, E9, E12; Discussion with BAHA staff.

**Findings:**

The MOU between BAHA and MOH provides, *inter alia*, that BAHA will perform tests/analyses on food samples as part of inspection and foodborne disease surveillance. However, testing for drug residues in animal products is limited to the testing of shrimp exported to EU, on a cost recovery basis. In the absence of residue testing, the situation with chemical or drug residues in the domestic food supply is unknown.

**Strengths:**

- Residue testing of shrimp has allowed Belize to develop valuable export markets.

**Weaknesses:**

- There is no organised residue testing of animal products.

**Recommendations:**

- That senior management of BAHA engage with counterparts at the MOA and MOH to discuss approaches to the control of veterinary medicines, including a residue monitoring programme.

II-11 Animal feed safety	Levels of advancement
<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>	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.

*Terrestrial Code* reference(s): Appendix 1

**Evidence** (listed in Appendix 6): E9, E11, E14, E18, H20, P58-61; visits to animal feed stores and discussion with BAHA staff.

Note: this critical competency was introduced since 2009.

**Findings:**

There is legal authority to regulate animal feed in terms of animal disease and food safety risks. However, this issue does not receive much attention from BAHA staff at present. Animal feed stores sell veterinary medicines and vaccines to the public (P58-61) and offer advice to customers on matters such as the addition of antibiotics to feed and water.

The importation of animal feed is an area of disease risk for Belize. All importations require the issuance of an import permit. All shrimp feed is imported and the granting of an import permit is based on a risk assessment and normally an inspection of the supplying premises, in which the aquatic animal health officer participates. The FAO/IFIF Manual of Good Practices for the Feed Industry, which is based on the Codex Alimentarius Code of Practice on Good Animal Feeding<sup>19</sup>, is used to guide the assessment of risks.

**Strengths:**

- There is legal authority to regulate animal feed
- Importation of animal feed is the subject of risk assessment and an audit of the exporting facilities.

**Weaknesses:**

- There is little capacity to deal with the regulation of animal feed.

**Recommendations:**

- When resources allow, the domestic production and sale of animal feed and, in particular, the issue of antibiotic usage in feed, should be addressed.

<sup>19</sup> <http://www.ifif.org/pages/t/IFIF+FAO+Feed+Manual>

II-12. Identification and traceability	Levels of advancement
<b>A Animal identification and movement control</b>  <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 animal disease control, food safety, or trade or any other legal requirements under the VS/OIE mandate.</i>	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).
	<b>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.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to identify animals and animal products under their mandate and trace their history, location and distribution.</i>
<b>2. Result / Expected level of advancement:</b>
2. The VS can document the history of some animals and animal products.
3. The VS have procedures in place to identify and trace selected animals and animal products as required for disease control and food safety purposes, in accordance with relevant international standards.
4. The VS and their stakeholders have coordinated national procedures in place that can identify and trace animals and animal products as required for disease control and food safety purposes.
5. The VS, in cooperation with their stakeholders, carry out audits of their traceability procedures.

**Evidence** (listed in Appendix 6): E4, E5, E11, E15, E17, E24, E51 (CSF); E61, H15, H30, P62-64; Meeting with the BLPA on the Belize Livestock Registry.

Note: this critical competency was modified since 2009.

### **Findings:**

The level of advancement is 3 (previously 2). The promulgation of S.I. 77 (2011) Animal Identification Regulations established the legal framework for the implementation of the Belize Livestock Registry (BLR), which provides for the identification of cattle farms and owners, and the identification and traceability of cattle. This initiative was driven by the desire of Belize to export live cattle to Mexico and the terms of the General Cooperation Agreement between BAHA and SENASICA (Mexico), which includes under the title 'Conditions', the establishment of an identification system for all cattle in Belize.

The legal authority for the BLR is vested in BAHA but the BLPA is responsible for its management and administration. The BLR is based on the OIRSA regional standard for bovine traceability<sup>20</sup>. The BLR running costs are approximately BZ\$50,000 per month, 15% of which is currently funded by a levy of BZ\$10 per head on the slaughter and the export of cattle; the TB and brucellosis project (SWEEP) funds the rest. The BLPA is considering options to maintain the BLR when the SWEEP ends in 2015.

The BLPA representatives advised of industry concern about non-compliance with the rules on identification and on the lack of enforcement action by BAHA to date (see CC IV-2). The BLR will be audited by an expert from OIRSA shortly. Some improvements could be made to enhance the usefulness of the BLR to disease control programmes.

<sup>20</sup> <http://oirsa.rastreabilidad.org/>

There is no system for the identification or traceability of other terrestrial livestock. Identification systems are used to identify families of shrimp in selective breeding for productivity and disease resistance.

**Strengths:**

- The Belize Livestock Register (BLR) enables identification and tracing of cattle.

**Weaknesses:**

- Uncertainty about continued funding for the BLR after the SWEEP project ends.
- Lack of an identification programme for other livestock species.

**Recommendations:**

- The identification of other livestock species should be addressed, starting with swine, to support the preparation of a dossier for submission to the OIE on CSF freedom
- BAHA and the cattle industry should collaborate in addressing the sustainability of cattle identification and testing programmes, including enforcement action.

<b>B. Identification and traceability of products of animal origin</b>	<b>Levels of advancement</b>
<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>	1. The VS do not have the authority or the capability to identify or trace products of animal origin.
	<b>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).</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to identify animals and animal products under their mandate and trace their history, location and distribution.</i>
<b>2. Result / Expected level of advancement:</b>
2. The VS can document the history of some animals and animal products.
3. The VS have procedures in place to identify and trace selected animals and animal products as required for disease control and food safety purposes, in accordance with relevant international standards.
4. The VS and their stakeholders have coordinated national procedures in place that can identify and trace animals and animal products as required for disease control and food safety purposes.
5. The VS, in cooperation with their stakeholders, carry out audits of their traceability procedures.

**Evidence** (listed in Appendix 6): E4, E5, E11, E15, E17, E24, E51 (CSF); E61, H15, H30; Meeting with the BLPA on the Belize Livestock Registry.

Note: this critical competency was modified since 2009.

**Findings:**

There is no formal system for tracing food products, such as meat, milk and eggs, but food recalls have been implemented by the Food Safety Department of BAHA in liaison with MOH.

**Strengths:**

**Weaknesses:**

- There is no formal system for tracing the movement of animal products

**Recommendations:**

- Continue liaison with MOH on matters relating to food safety.

II-13 Animal welfare	Levels of advancement
<i>The authority and capability of the VS to implement the animal welfare standards of the OIE as published in the Terrestrial Code.</i>	1. There is no national legislation on animal welfare
	<b>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)
	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.

*Terrestrial Code* reference(s): Appendix 1

**Evidence** (listed in Appendix 6): E14, E51, P33-34, P37; meetings with BAHA staff and abattoir operators.

Note: this critical competency was introduced since 2009.

### **Findings:**

Relevant legislation comprises the Cruelty to Animals Act (Chapter 115 revised, 2000); the Animals (Control of Experiments) Act (Chapter 148 Revised, 2000); the Slaughter of Animals Act (Chapter 154 revised, 2000)<sup>21</sup> and the Pounds Act (Chapter 89 Revised 2000). The MOH is responsible under the Animals (Control of Experiments) Act.

There is no legislation relating to animal transport or killing for purposes of disease control.

The Slaughter of Animals Act provides for the Minister of Health to appoint authorized officers to perform inspections of slaughterhouses for the purpose of licensing, humane slaughter and control of hygiene in food establishments. It requires that animals be instantaneously slaughtered or stunned to render them insensible to pain and that slaughtering or stunning be effected by use of a mechanically operated instrument in proper repair.

BAHA staff are aware of animal welfare but there is no specific programme in place.

A veterinary consultant has been engaged to prepare a report on the topic of animal welfare.

### **Strengths:**

- There is legislation on some aspects of animal welfare relevant to the OIE standards
- A consultant has been engaged to report on the topic of animal welfare.
- 

### **Weaknesses:**

- Animal welfare is not high on the GOB or BAHA agenda at this time.

### **Recommendations:**

- That the CVO nominate an OIE Focal Point for Animal Welfare once there is a veterinarian with capacity to take on this additional role.

<sup>21</sup> <http://www.belize.gov.bz/web/lawadmin/index2.html>

### III.3 Fundamental component III: Interaction with interested parties

This component of the evaluation concerns the capability of the VS to collaborate with and involve stakeholders in the implementation of programmes and activities. It comprises seven critical competencies

#### Critical competencies:

<b>Section III-1</b>	<b>Communication</b>
<b>Section III-2</b>	<b>Consultation with interested parties</b>
<b>Section III-3</b>	<b>Official representation</b>
<b>Section III-4</b>	<b>Accreditation / Authorisation / Delegation</b>
<b>Section III-5</b>	<b>Veterinary Statutory Body (VSB)</b>
	<b>A. VSB authority</b>
	<b>B. VSB capacity</b>
<b>Section III-6</b>	<b>Participation of producers and other interested parties in joint programmes</b>

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*Terrestrial Code* References:

Points 6, 7, 9 and 13 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards / Communication.

Point 9 of Article 3.2.1. on General considerations.

Points 2 and 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services.

Sub-point b) of Point 2 of Article 3.2.6. on Administrative resources: Communications.

Article 3.2.11. on Participation on OIE activities.

Article 3.2.12. on Evaluation of the veterinary statutory body.

Points 4, 7 and Sub-point g) of Point 9 of Article 3.2.14. on Administration details / Animal health and veterinary public health controls / Sources of independent scientific expertise.

Chapter 3.3. on Communication.

III-1 Communication	Levels of advancement
<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. 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>	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.

Terrestrial Code reference(s): Appendix 1

1. Specific objective
<i>The VS have the capability to keep stakeholders informed, in a transparent, effective and timely manner, of VS activities and programmes, and of developments in animal health and food safety.</i>
2. Result / Expected level of advancement:
<b>2. The VS have informal communication mechanisms.</b>
3. The VS maintain an official contact point for communications but they are not always up-to-date in providing information.
<b>4. The VS contact point for communications provides up-to-date information, accessible via the Internet and other appropriate channels, on activities and programmes.</b>
5. The VS have a well developed communication plan, and actively and regularly circulate information to stakeholders.

**Evidence** (listed in Appendix 6): E8; E33, E34; E35 to E37 (aquatic); E49; E53 to 55; E57; E64; E65; H18; H19; H21; H31; BAHA Internet site <http://www.baha.bz/news.html>

The level of advancement for this competency has improved, with the appointment of a senior BAHA official as the focal point for communication with interested parties. The responsible person is also the designated Belizean contact point under the WTO SPS and TBT Agreements. Regular meetings with the MOA and Ministry of Foreign Trade are held to discuss developments in the WTO committees.

While a BAHA-MOH agreement on Food Safety provides for quarterly meetings to share information and evaluate the status of food safety programmes, these meetings do not occur, nor has the national Zoonotic Diseases Commission met for some time.

There is an indication that the Ministry of Forestry, Fisheries and Sustainable Development would like to initiate discussions with BAHA on the issue of wildlife diseases.

Meetings are held with representatives of the terrestrial and aquatic animal industries to discuss current disease issues and results of animal health surveillance. The CVO has been interviewed on the radio to promote the importance of animal health and veterinary care. However, there is little evidence of communications directed at smallholders and family farms.

BAHA has an internet website which contains useful information but does not appear to have been updated recently. Other avenues of communication include a quarterly BAHA e-Newsletter and printed pamphlets on animal health and quarantine issues. There is a corporate culture of openness and willingness to collaborate with stakeholders. Communication is included amongst the BAHA values. The PVS Team commended the GOB's transparency in placing previous PVS reports on the OIE internet site.

**Strengths:**

BAHA's commitment to transparency and willingness to collaborate with stakeholders.

**Weaknesses:**

- Lack of effective communication and collaboration with MOH.
- Little evidence of communications directed at smallholders and family farms.

**Recommendations:**

- Regularly update information provided on the BAHA internet site.
- Establish communication and collaboration with MOH.

III-2 Consultation with interested parties	Levels of advancement
<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. 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>	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.
	<b>4. The VS regularly hold workshops and meetings with interested parties.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability to consult effectively with stakeholders on VS activities and programmes, and on developments in animal health and food safety.</i>
<b>2. Result / Expected level of advancement:</b>
<b>4. The VS regularly hold workshops and meetings with stakeholders.</b>
<b>5. The VS actively consult with and solicit feedback from stakeholders regarding proposed and current activities and programmes, developments in animal health and food safety, interventions at the OIE (Codex Alimentarius Commission and WTO SPS Committee where applicable), and ways to improve their activities.</b>

**Evidence** (listed in Appendix 6): E8; E33, E34; E35 to E37 (aquatic); E49; E53 to 55; E57; E64; E65; H18; H19; H21; H31;

**Findings:**

The level of advancement 4 is still applicable (see comments on critical competency III-2). The PVS Team commended the appointment of a focal point for communication and the conduct of annual meetings with stakeholders to exchange information on developments in the OIE, CAC and WTO. If possible, more regular and detailed discussion should be undertaken.

**Strengths:**

- The appointment by BAHA of a focal point for communications.

<b>III-3 Official representation</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>Levels of advancement</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 a limited contribution.
	<b>3. The VS actively participate<sup>22</sup> in the majority of relevant meetings.</b>
	4. The VS consult with interested parties and take into consideration their opinions in providing papers and making interventions in relevant meetings.
	5. The VS consult with interested parties 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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the capability 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. Result / Expected level of advancement:</b>
<b>3. The VS participate actively 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.

**Evidence** (listed in Appendix 6): E7, E8,

[http://www.rr-americas.oie.int/in/paisesmiembros/in\\_paisesmiembros\\_pf.htm](http://www.rr-americas.oie.int/in/paisesmiembros/in_paisesmiembros_pf.htm).

### **Findings:**

Officials from BAHA have participated regularly in meetings and other activities organised by the OIE, the CAC, OIRSA, FAO and others, especially at the regional level.

This area of competence will benefit from the recent appointment of an official as the OIE Focal Point on Communication who is also the designated focal point for the WTO SPS and WTO Committees. This will support coordination and cooperation amongst officials responsible for technical (SPS) areas and those handling Belize's broader WTO obligations.

As noted under critical competency IV-3, BAHA has lost some capacity to make interventions at meetings of the international standard setting organisations due to the departure of experienced officials and the reduction in the number of veterinarians overall. Nonetheless, BAHA has nominated Focal Points in most of the areas recommended by the OIE and the nominated officials are building capacity by attending relevant regional and global meetings. BAHA senior management should support the regular attendance of BAHA officials in relevant training and meetings of the OIE, Codex and OIRSA, to rebuild international professional networks.

### **Strengths:**

- Regular participation in meetings and activities organised by the OIE and other international and regional organisations.

<sup>22</sup> *Active participation* refers to preparation in advance of, and contributing during the meetings in question, including exploring common solutions and generating proposals and compromises for possible adoption.

**Weaknesses:**

- The shortage of experienced veterinarians with capacity and time to maintain a close engagement with the OIE and other relevant organisations (e.g. CAC).

**Recommendations:**

- Give priority to active engagement with the international standard setting organisations such as the OIE and CAC.

III-4 Accreditation / authorisation / delegation	Levels of advancement
<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>	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 interested parties.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The public sector of the VS has the authority and capability to accredit / authorise / delegate the private sector (e.g. private veterinarians and laboratories), to carry out official tasks on its behalf.</i>
<b>2. Result / Expected level of advancement:</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.
3. The public sector of the VS develops accreditation / authorisation / delegation programmes for certain tasks, but these are not routinely reviewed.
4. The public sector of the VS develops and implements accreditation / authorisation / delegation programmes, and these are routinely reviewed.
5. The public sector of the VS carries out audits of its accreditation / authorisation / delegation programmes, in order to maintain the trust of their trading partners and stakeholders.

**Evidence** (listed in Appendix 6): H10; E16.

### **Findings:**

The level of advancement 3 reflects the introduction of legal provisions for the official accreditation of veterinarians and laboratories. For veterinarians, the requirements for accreditation include current registration under the Veterinary Surgeon's Act and the completion of training. The accreditation framework has been used to accredit Mexican and Belizean veterinarians working on the TB and brucellosis eradication project (SWEEP).

The training and evaluations should be based on a framework such as the Manual for Accredited Veterinarians described in the S.I. This was not available at the time of the PVS mission. Its development could be expedited by taking into account existing models such as the USDA National Veterinary Accreditation Programme<sup>23</sup>.

For laboratories, the S.I. sets very strict requirements for accreditation including compliance with ISO/IEC 17025. No private laboratories have applied for accreditation to date. The PVS Team doubted that BAHA staff would have expertise to evaluate compliance with ISO/IEC 17025 standard if they are not working with QA in BAHA laboratories (see CC II-2). The implementation of formal QA by BAHA laboratories should be supported for reasons of international harmonisation and would also give BAHA officials experience to help them to accredit private laboratories if required in future.

<sup>23</sup> [http://www.aphis.usda.gov/animal\\_health/vet\\_accreditation/downloads/nvap\\_ref\\_guide.pdf](http://www.aphis.usda.gov/animal_health/vet_accreditation/downloads/nvap_ref_guide.pdf)

**Strengths:**

- Modern legal framework for accreditation of veterinarians and laboratories

**Weaknesses:**

- Lack of a BAHA Manual for Accredited Veterinarians
- Lack of capacity to evaluate compliance with ISO/IEC 17025.

**Recommendations:**

- Produce a BAHA Manual for Accredited Veterinarians.
- Support the implementation of formal quality assurance by BAHA laboratories.

<b>III-5 Veterinary Statutory Body (VSB)</b> <b>A. VSB authority</b>  <i>The VSB is an autonomous regulatory body for veterinarians and veterinary para-professionals.</i>	<b>Levels of advancement</b>
	1. There is no legislation establishing a VSB.
	2. The VSB regulates veterinarians only within certain sectors of the veterinary profession and/or does not systematically apply disciplinary measures.
	3. The VSB regulates veterinarians in all relevant sectors of the veterinary profession and applies disciplinary measures.
	<b>4. The VSB regulates functions and competencies of veterinarians in all relevant sectors and veterinary para-professionals according to needs.</b>
5. The VSB regulates and applies disciplinary measures to veterinarians and veterinary para-professionals in all sectors throughout the country.	

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The Veterinary Statutory Body is an autonomous authority responsible for the regulation of the veterinarians and veterinary para-professionals. Its role is defined in the Terrestrial Code.</i>
<b>2. Result / Expected level of advancement:</b>
3. The Veterinary Statutory Body regulates veterinarians and veterinary paraprofessionals only within certain sectors of the VS (e.g. public sector but not private sector veterinarians).
4. The Veterinary Statutory Body regulates veterinarians and veterinary paraprofessionals throughout the VS.
5. The Veterinary Statutory Body is subject to evaluation procedures in respect of autonomy, functional capacity and membership representation.

**Evidence** (listed in Appendix 6): E13; H11 to H14 inclusive; meeting with the Veterinary Surgeon's Board of Belize 17/7/2014.

### **Findings:**

Note: this critical competency was modified since the initial PVS Evaluation.

The current level of advancement is 4 (level 3 in 2009). This is in part due to the OIE decision to separate *authority* and *capacity* of the VSB in this critical competency.

The Veterinary Surgeon's Act (2000) makes it clear that the VSB has the authority to register veterinarians, veterinary specialists and animal health assistants. The employment or retention of an animal health assistant or partner who is not registered under the Act can be grounds for a veterinarian to lose registration. The VSB is independent of BAHA but retains close linkages as the CVO (*ex officio*) is the designated Chairman.

The VSB is small but has several valuable initiatives under way.

There is no veterinary education establishment in Belize, so all veterinarians working in Belize are trained overseas. The VSB recently adopted an initiative requiring that veterinarians seeking registration for the first time pass an exam based on the OIE Day 1 competencies. Based on registration fees collected during several years, the VSB is taking steps to require that veterinarians undertake continuing professional development. The VSB proposes to deliver two training sessions during the next three years. A draft document on Standards of Veterinary Practice and Ethics is currently under discussion.

The VSB is aware of the problems associated with the use of veterinary medicines (also see CC II-9) and has called on BAHA to activate the Veterinary Drugs Control Committee in an attempt to address this issue.

**Strengths:**

- Modern legislation giving the necessary powers to the VSB

**Weaknesses:**

- The VSB relies on a small group of dedicated professionals to do its work.

**Recommendations:**

- BAHA, the MOA, veterinarians and industry should increase support for the VSB
- Once the standard of ethics has been finalised, a copy should be distributed to all veterinarians in BAHA.

<b>B. VSB capacity</b>	<b>Levels of advancement</b>
<i>The capacity of the VSB to implement its functions and objectives in conformity with OIE standards.</i>	1. The VSB has no capacity to implement its functions and objectives.
	<b>2. 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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The Veterinary Statutory Body is an autonomous authority responsible for the regulation of the veterinarians and veterinary para-professionals. Its role is defined in the Terrestrial Code.</i>
<b>2. Result / Expected level of advancement:</b>
3. The Veterinary Statutory Body regulates veterinarians and veterinary paraprofessionals only within certain sectors of the VS (e.g. public sector but not private sector veterinarians).
4. The Veterinary Statutory Body regulates veterinarians and veterinary paraprofessionals throughout the VS.
5. The Veterinary Statutory Body is subject to evaluation procedures in respect of autonomy, functional capacity and membership representation.

**Evidence** (listed in Appendix 6): E13; H11 to H14 inclusive; meeting with the VSB 17/7/2014.

**Findings:**

Note: this critical competency has been modified since the initial PVS Evaluation.

The current level of advancement is 2 (3 in 2009). This is in part due to a modification of the critical competency, viz. the separation of authority and capacity of the VSB. The level 2 reflects the lack of capacity to address the issue of 'informal' veterinary practice. It is a difficult issue to resolve, in part due to the lack of veterinarians in some districts.

Although there is a legal provision, no animal health assistants are registered with the VSB.

**Strengths:**

- The VSB is aware of problem areas and is trying to address them.

**Weaknesses:**

- There is little capacity to address the problem of 'informal' veterinary practice

**Recommendations:**

- BAHA, the MOA, veterinarians and industry should increase support for the VSB.

<b>III-6 Participation of producers and other interested parties in joint programmes</b> <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. 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>	<b>Levels of advancement</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 programme in the field.
	3. Producers and other interested parties are trained to participate in programmes and advise of needed improvements, and participate in early detection of diseases.
	<b>4. Representatives of producers and other interested parties negotiate with the VS on the organisation and delivery of programmes.</b>
	5. Producers and other interested parties are formally organised to participate in developing programmes in close collaboration with the VS.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS and stakeholders have the capability to formulate and implement joint programmes in regard to animal health and food safety.</i>
<b>2. Result / Expected level of advancement:</b>
4. Representatives of producers and other stakeholders negotiate with the VS on the organisation and delivery of programmes.
5. Producers and other stakeholders are formally organised to participate in developing programmes in close collaboration with the VS.

**Evidence** (listed in Appendix 6): E24; E52; E61; E62; E63; H29. Meeting with the BLPA on 17/7/2014; meeting with Project Director SWEEP 17/7/2014. Meeting with staff at shrimp farms (18/7/2014 and 21/7/2014).

### **Findings**

Important progress has been achieved since 2009, notably the promulgation of a S.I. on cattle identification and the implementation of the BLR under the authority of BAHA and the management of the BLPA; an MOU (2011) between BAHA and BPA supporting the Belize Poultry Improvement Plan (BPIP) and national surveillance for poultry diseases, and funding from the Shrimp Growers' Association for BAHA to undertake systematic surveillance for diseases and chemical residues as a basis for export certification.

Some of the most important projects depend on funding by external donors. Belize enjoys good support from OIRSA, donor organisations and the IDB but it would be unwise to assume that the support will always be there. In addition, the PVS Team was informed of potentially significant problems of non-compliance with the rules on cattle identification and testing.

### **Strengths:**

- Joint programmes such as the BLR and the BPIP
- Support from OIRSA, donor organisations and the IDB.

### **Weaknesses:**

- Dependence on external funding
- Difficulty in ensuring that all producers comply with requirements

### **Recommendations:**

- BAHA must strengthen its enforcement capabilities (see CC IV-2).
- Implement public awareness and promote compliance to ensure that producers comply with the requirements of long term projects

### III.4 Fundamental component IV: Access to markets

This component of the evaluation concerns the authority and capability of the VS to provide support in order to access, expand and retain regional and international markets for animals and animal products. It comprises eight critical competencies.

#### Critical competencies:

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

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*Terrestrial Code* References:

Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards.

Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection.

Points 1 and 3 of Article 3.2.8. on Animal health controls: Animal health status / National animal disease reporting systems.

Sub-point g) of Point 4 of Article 3.2.10. on Veterinary Services administration: Trade performance history.

Article 3.2.11. on Participation in OIE activities.

Points 6 and 10 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Membership of the OIE.

Chapter 3.4. on Veterinary legislation.

Chapter 4.3. on Zoning and compartmentalisation.

Chapter 4.4. on Application of compartmentalisation.

Chapter 5.1. on General obligations related to certification.

Chapter 5.2. on Certification procedures.

Chapter 5.3. on OIE procedures relevant to the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization.

Chapters 5.10. to 5.12. on Model international veterinary certificates.

IV-1 Preparation of legislation and regulations	Levels of advancement
<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). 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>	1. The VS have neither the authority nor the capability to participate in the preparation of national legislation and regulations, which result in legislation that is lacking or is outdated or of poor quality in most fields of VS activity.
	2. The VS have the authority and the capability to participate in the preparation of national legislation and regulations and can largely ensure their internal quality, but the legislation and regulations are often lacking in external quality.
	<b>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.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<p><i>The VS have the authority and capability to actively participate in the preparation of national legislation and regulations, and to implement animal health and food safety regulations for animals, animal products and processes under their mandate.</i></p>
<b>2. Result / Expected level of advancement:</b>
<p>3. The VS have the authority and the capability to participate in the preparation of national legislation and regulations, and to implement the resulting regulations nationally.</p>
<p>4. The VS consult their stakeholders in participating in the preparation of national legislation and regulations, and in implementing regulations to meet national needs.</p>
<p>5. The VS consult their stakeholders in implementing regulations to meet international trade needs.</p>

**Evidence** (listed in Appendix 6): E22; E30; H2 - H10 inclusive;

### **Findings:**

Note: this critical competency was modified since the initial PVS Evaluation.

S.I.'s on surveillance and control of BSE; TB and brucellosis; national accreditation of veterinarians, and cattle identification have been promulgated. Stakeholders are consulted during the development of new legislation. Legal support from the MOA and the SGD ensure the internal quality of the legislation. International (OIE) and regional (OIRSA) standards are referenced as appropriate. However, the finalisation of some important pieces of veterinary legislation has been delayed, in part due to competing demands on technical managers.

### **Strengths:**

- Government assigns priority to key legislative developments
- Legal support from the MOA and SGD
- Consultation with stakeholders during the development of new legislation

### **Weaknesses:**

- Delay in finalising regulations on reportable diseases of terrestrial and aquatic animals and on developing new Bills on Animal Health and Food Safety

### **Recommendations:**

- Finalise key items of veterinary legislation without delay.

IV-2 Implementation of legislation and regulations and compliance thereof	Levels of advancement
<i>The authority and capability of the VS to ensure compliance with legislation and regulations under the VS mandate.</i>	1. The VS have no or very limited programmes or activities to ensure compliance with relevant legislation and regulations.
	<b>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 instances of non-compliance in most relevant fields of activity.
	4. Veterinary legislation is implemented in all domains of veterinary competence and the VS work to minimise instances of non-compliance.
	5. The compliance programme is regularly subjected to audit by the VS or external agencies.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to ensure that stakeholders are in compliance with animal health and food safety regulations under the VS mandate.</i>
<b>2. Result / Expected level of advancement:</b>
2. The VS implement a programme consisting of inspection and verification of compliance with regulations relating to animals and animal products, report instances of non-compliance, but generally do not take further action.
3. If necessary, the VS impose appropriate penalties in instances of non-compliance.
4. The VS work with stakeholders to minimise instances of non-compliance.
5. The VS carry out audits of their compliance programme.

**Evidence** (listed in Appendix 6): E14; E65; H5; discussion with BAHA staff and with BLPA

### **Findings:**

Note: this critical competency was modified since 2009.

Apart from the work of the Quarantine Department, the PVS Team did not find evidence to support a higher level of advancement for this CC. The recommendations of the Gap Analysis (2010) on the need to improve enforcement have not yet been addressed. There is a level of non-compliance with the requirements of new programmes (e.g. cattle identification and TB / brucellosis testing). The shortage of senior staff in the field can throw an unreasonable burden on inspectors, who lack formal training in legal procedures (e.g. evidentiary needs for prosecutions). There is a need for a specialised compliance and legal enforcement unit comprising officials with knowledge of the law and experience in taking cases to the courts to support technical field staff.

The sale of veterinary medicines and biological products is not regulated.

### **Strengths:**

- Achievements of the BLR and SWEEP project
- BAHA field staff have good 'intelligence' on the livestock sector.

### **Weaknesses:**

- Lack of BAHA enforcement action to date in face of known non-compliance with cattle identification and TB/brucellosis testing requirements.

### **Recommendations:**

- Review and strengthen the legal framework for enforcement of the BLR and SWEEP
- Form a specialised compliance and enforcement unit in BAHA to support field staff. Staff with regulatory responsibilities should be trained in enforcement procedures.

3 International harmonisation	Levels of advancement
<p><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></p>	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.
	<b>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.</b>
	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>24</sup> , and use the standards to harmonise national legislation, regulations and sanitary measures.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability 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>
<b>2. Result / Expected level of advancement:</b>
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, and use the standards to harmonise national legislation, regulations and sanitary measures.

**Evidence** (listed in Appendix 6): H3; E7; OIE Regional Commission website.

**Findings:**

BAHA's capacity to review and comment on international standards has declined since 2009 due to the departure of senior officials and the reduction in the number of veterinarians overall. BAHA has nominated Focal Points in most of the areas recommended by the OIE and the nominated officials have generally attended relevant training seminars. In addition, there is good participation in training activities offered by OIRSA and donors. Each of the four veterinarians in BAHA has multiple responsibilities, which can lead to difficulties in maintaining engagement with the standard setting organisations.

**Strengths:**

- New S.I.'s make reference to OIE and OIRSA standards as appropriate.

**Weaknesses:**

- Lack of capacity and time for close engagement with the OIE and CAC.

**Recommendations:**

- Prioritise engagement with international organisations (notably the OIE and CAC).
- BAHA Senior management should continue to support the attendance of BAHA officials in relevant training and meetings.

<sup>24</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.

IV-4 International certification <sup>25</sup>	Levels of advancement
<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>	1. The VS have neither the authority nor the capability to certify animals, animal products, services or processes.
	2. The VS have the authority to certify certain animals, animal products, services and processes, but are not always in compliance with the national legislation and regulations and international standards.
	<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.</b>
	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to certify animals, animal products, services and processes under their mandate, in accordance with the national legislation and regulations, and international standards.</i>
<b>2. Result / Expected level of advancement:</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.

**Evidence** (listed in Appendix 6): E8; E10; E67 (p.41); H30; meetings at Caribbean Chicken plant 22/7/2014; Belize Aquaculture Ltd. (18/7/2014) and Paradise Farm (21/7/2014);

### **Findings:**

BAHA has the capacity to certify some products in accordance with international standards. Certification programmes are based on a chain of command from the farm to the processing plant and good communication between the animal health and food safety departments. BAHA has a reputation for integrity and transparency which supports export certification.

The signing of a MOU between BAHA and SENASICA (Mexico) in November 2012 provided a starting point for the export of cattle from Belize to Mexico, although few cattle have been exported to date. The formal approval by SENASICA of the export corral at Santa Elena has been delayed but it is hoped that it will soon be finalised.

The most significant export of animal products is of farmed shrimp and the aquaculture sector continues to grow. Belizean companies are also exporting processed food products and seeking new markets. For food exports, the shortage of human resources to carry out inspection and audit QA and HACCP programmes may be a limiting factor unless recruitment is undertaken. BAHA has little capacity to control the use of veterinary medicines. There is no programme to test for residues in products of animal origin according to international standards (e.g. CAC GL 71/2009).

### **Strengths:**

- BAHA staff are familiar with the requirements of export markets.
- The legal authority of BAHA for certification of agricultural/animal products is clear.

<sup>25</sup> Certification procedures should be based on relevant OIE and Codex Alimentarius standards.

**Weaknesses:**

- Shortages of professional and technical staff in the field and in the laboratory can lead to difficulties in ensuring complete coverage of farms and food processing facilities for inspection, testing and certification
- In the absence of effective control over the use of veterinary medicines and lacking a residue testing programme for foods of animal origin (other than exported farmed shrimp), the situation with drug residues is unknown.

**Recommendations:**

- If industry demand for the development of export markets continues to grow, it will be necessary to recruit staff to the animal health and food safety departments, including for laboratories, to support inspection, testing and certification of export consignments.
- Consideration should be given to the establishment of a surveillance plan for residues.

<b>IV-5 Equivalence and other types of sanitary agreements</b>	<b>Levels of advancement</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>	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.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to negotiate, implement and maintain equivalence and other types of sanitary agreements with trading partners.</i>
<b>2. Result / Expected level of advancement:</b>
3. The VS have implemented equivalence and other types of sanitary agreements with trading partners on selected animals, animal products and processes.
4. The VS actively pursue the development, implementation and maintenance of equivalence and other types of sanitary agreements with trading partners on all matters relevant to animals, animal products and processes under their mandate.
5. The VS actively work with stakeholders and take account of developments in international standards, in pursuing equivalence and other types of sanitary agreements with trading partners.

**Evidence** (listed in Appendix 6): H30

**Findings:**

BAHA has the capacity to implement equivalence and other types of sanitary agreements with trading partners on selected animals, animal products and processes. In June 2009 the MOA and the Secretariat of Agriculture, Livestock, Rural Development, Fishing and Food through the National Health, Food Safety and Quality Assurances Service of Mexico (SAGARPA) signed an MOU to harmonise sanitary requirements. Following this, in November 2012, BAHA signed a Cooperation Agreement with SENASICA, a decentralised agency of SAGARPA, on 'Matters of Cattle Sanitation'. In keeping with this Agreement, BAHA is implementing cattle identification, TB and brucellosis testing and surveillance for BSE, amongst other activities.

**Strengths:**

- BAHA has a sanitary agreement with its Mexican counterpart agency

**Weaknesses:**

- If BAHA does not succeed in meeting the undertakings in the MOU planned future exports may not eventuate

**Recommendations:**

- To maintain an adequate level of veterinary expertise to be able to negotiate and fulfil agreements on equivalence and other sanitary matters.
- Prioritise the submission of a BSE dossier to the OIE.

<b>IV-6 Transparency</b>	<b>Levels of advancement</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>	1. The VS do not notify.
	2. The VS occasionally notify.
	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.</b>
	5. The VS, in cooperation with their interested parties, carries out audits of their transparency procedures.

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability to notify the OIE of their sanitary status and other relevant matters (and to notify the WTO SPS Committee where applicable), in accordance with established procedures.</i>
<b>2. Result / Expected level of advancement:</b>
4. The VS regularly inform stakeholders of changes in their regulations and decisions on the control of relevant diseases and of the country's sanitary status, and of changes in the regulations and sanitary status of other countries.
5. The VS, in cooperation with their stakeholders, carry out audits of their transparency procedures.

**Evidence** (listed in Appendix 6): H3; E3; E33 to E37; E52; H21; H25. OIE internet site.

### **Findings:**

At the time of the mission, the information Belize has provided to the OIE is up to date, although some small anomalies were found in the information on the website. The notifiable diseases of terrestrial and aquatic animals are defined in the Act establishing BAHA, specifically in the 'definitions'. Under the Act, the Minister also has the power to declare diseases by Order. There are some inconsistencies in the list of notifiable diseases and these should be addressed in the proposed new regulations on this topic.

The CVO has designated a focal point for reporting sanitary information but carries out this function himself. Neither the designated focal point nor the CVO has much time to dedicate to this important function. Officials of BAHA have established arrangements for sharing information on the disease status of Belize and countries in the region with interested parties.

### **Strengths:**

- Communication with stakeholders
- The competence and dedication of BAHA staff to fulfil obligations to the OIE.

### **Weaknesses:**

- Inconsistencies in the approach to the definition of notifiable diseases (based on the approach in the BAHA Act) cause some uncertainties as to the status of diseases and these are reflected in the reporting of sanitary information to the OIE.
- The lack of a full time deputy for the CVO threatens BAHA's capacity to provide timely and accurate information to the OIE.

### **Recommendations:**

- Maintain veterinary expertise in headquarters and in the field to support the priority activities of disease surveillance, early warning and reporting to the OIE.
- Staff a position of Deputy Director for Animal Health in BAHA headquarters, with responsibility to support the CVO in all matters that affect relationships with national and international authorities for animal health (terrestrial and aquatic).
- Finalise new regulations on reportable diseases without delay.

<b>IV-7 Zoning</b>	<b>Levels of advancement</b>
<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>	1. The VS cannot establish disease free zones. <sup>26</sup>
	<b>2. As necessary, the VS can identify animal sub-populations with distinct health status suitable for zoning.</b>
	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).

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability 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>
<b>2. Result / Expected level of advancement:</b>
2. As necessary, the VS can identify animal subpopulations with distinct health status suitable for zoning.
3. The VS have implemented biosecurity measures that enable them to establish and maintain disease free zones for selected animals and animal products, as necessary.
4. The VS collaborate with their stakeholders to define responsibilities and execute actions that enable them 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).

**Evidence** (listed in Appendix 6): E3; E15; E16; H4, H9; meeting with representatives of the Blue Creek community 21/7/2014.

### **Findings:**

The S.I.'s on TB and brucellosis allow the Minister to declare a TB or brucellosis free zone in Belize and recognise zones in other countries that are free from these diseases. In addition, BAHA has established three internal animal movement control points.

While no disease free zone has yet been implemented, the Blue Creek district could soon qualify for TB and brucellosis freedom, based on OIE standards. The Blue Creek community has expressed interest in the establishment of an official free zone, which may be feasible, from a technical perspective. The establishment of a zone would necessitate documentation, the writing of SOPs and the conduct of surveillance, with workload implications for the community and for BAHA. The DVO in the North, who is also the OIE Focal point for disease reporting, the BAHA poultry specialist, the Drug Registrar and the deputy CVO, has little capacity to take on additional duties relating to the implementation of a zone.

### **Strengths:**

- There is a legal base for the implementation of zoning for TB and brucellosis.
- Likely feasibility of the implementation of a TB/brucellosis free zone in Blue Creek.

### **Weaknesses:**

- There is no legal base for the implementation of zoning for other diseases/species.

<sup>26</sup> If the VS has the authority and capability but chooses not to implement zoning, this CC should be recorded as "not applicable at this stage"

**Recommendations:**

- If the cattle industry formally requests the establishment of a free zone for TB and brucellosis and commits resources to maintaining such a zone, BAHA should consider the staffing implications for the Animal Health Department and should complete any necessary recruitment action prior to the implementation of the free zone.

IV-8 Compartmentalisation	Levels of advancement
<i>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).</i>	<b>1. The VS cannot establish disease free compartments.</b> <sup>27</sup>
	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).

Terrestrial Code reference(s): Appendix 1

<b>1. Specific objective</b>
<i>The VS have the authority and capability 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).</i>
<b>2. Result / Expected level of advancement:</b>
2. As necessary, the VS can identify animal subpopulations with a distinct health status suitable for compartmentalisation.
3. The VS have implemented biosecurity measures that enable them to establish and maintain disease free compartments for selected animals and animal products, as necessary.
4. The VS collaborate with their stakeholders to define responsibilities and execute actions that enable it to establish and maintain disease free compartments for selected animals and animal products, as necessary.
5. The VS can demonstrate the scientific basis for any disease free compartments and can gain recognition by other countries that they meet the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

**Evidence** (listed in Appendix 6): E3; E15; E16; H4, H9; meeting at BAL 18/7/2014;

**Findings:**

The level of advancement is 1, reflecting the fact that there is no legal authority to enable BAHA to establish a disease free compartment. The use of compartmentalisation could be applicable to shrimp and poultry farming industries, especially as these industries already fund the conduct of disease surveillance.

**Strengths:**

- Availability of information to enable the identification of animal subpopulations (shrimp) that are suitable for compartmentalisation.

**Weaknesses:**

- There is no legal authority for the implementation of compartmentalisation.

**Recommendations:**

- Develop a legal base for the implementation of compartmentalisation.

<sup>27</sup> If the VS has the authority and capability but chooses not to implement compartmentalization, this CC should be recorded as "not applicable at this stage"



## PART IV: CONCLUSIONS

The VS of Belize has at its core BAHA, a relatively small organisation staffed by competent people, with a modern legislative base and management system. The relationship between BAHA and interested parties is positive and there is generally good collaboration.

The main shortcoming, which underlies most of the findings in this report, relates to BAHA's financial position. Approximately one third of the core budget is provided by the Government of Belize and two thirds is from 'fee for service' or revenue provided by the private sector. BAHA depends on externally funded projects and loans for the implementation of some key programmes and for the maintenance or upgrading of infrastructure. Obvious problems with this financial model are the lack of capacity to sustain long term programmes and difficulty in making a commitment to activities that do not directly reflect industry priorities. Programmes for disease surveillance, prevention and control are in the former category and various 'public good' functions, such as basic public health inspection are in the latter.

With an increased number of national regulatory programmes BAHA is challenged to develop and implement a number of essential policies and functions such as compliance and enforcement, decisions on the management of infected herds (including compensation) and the acknowledged "informal" movement of cattle from Belize to Guatemala. BAHA requires additional full time personnel to tackle these challenges – they are not problems that can be addressed through time limited projects.

Monitoring and evaluation of BAHA programmes is mainly conducted by external organisations in relation to specific projects or loans. BAHA does not implement self-audit of the effectiveness or efficiency of its core programmes.

The approach to veterinary public health should be reassessed. The current focus is on inspection to satisfy export markets and little attention is paid to the quality of food consumed domestically. The PVS Team recommends that BAHA take responsibility for establishing a dialogue within the Government of Belize to propose a national programme for domestic food safety and quality.

The PVS Team commended the initiative to establish a strategic plan and recommended that this be finalised without delay. BAHA management may wish to consider requesting a further PVS Pathway mission to provide advice on the development of the laboratories and the application of QA systems.



## PART V: APPENDICES

### Appendix 1: Terrestrial Code references for critical competencies

Critical Competences	Terrestrial Code references
<b>I.1.A</b> <b>I.1.B</b> <b>I.2.A</b> <b>I.2.B</b>	Points 1-5 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / Independence / Impartiality / Integrity / Objectivity. Points 7 and 14 of Article 3.1.2. on Fundamental principles of quality: General organisation / Human and financial resources. Article 3.2.5. on Evaluation criteria for human resources. Article 3.2.12. on Evaluation of the veterinary statutory body. Points 1-2 and 5 of Article 3.2.14. on Organisation and structure of Veterinary Services / National information on human resources / Laboratory services.
<b>I.3</b>	Points 1, 7 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / General organisation / Human and financial resources. Article 3.2.5. on Evaluation criteria for human resources. Sub-point d) of Point 4 of Article 3.2.10. on Veterinary Services administration: In-service training and development programme for staff. Point 9 of Article 3.2.14. on Performance assessment and audit programmes.
<b>I.4</b>	Point 2 of Article 3.1.2. on Fundamental principles of quality: Independence.
<b>I.5</b>	Point 1 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 9 of Article 3.2.14. on Performance assessment and audit programmes.
<b>I.6.A</b> <b>I.6.B</b>	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Article 3.2.2. on Scope. Points 1 and 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 4 of Article 3.2.10. on Performance assessment and audit programmes: Veterinary Services administration.
<b>I.7</b>	Point 2 of Article 3.2.4. on Evaluation criteria for quality system: "Where the Veterinary Services undergoing evaluation... than on the resource and infrastructural components of the services". Points 2 and 3 of Article 3.2.6. on Evaluation criteria for material resources: Administrative / Technical. Point 3 of Article 3.2.10. on Performance assessment and audit programmes: Compliance. Point 4 of Article 3.2.14. on Administration details.
<b>I.8</b> <b>I.9</b> <b>I.10</b>	Points 6 and 14 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / Human and financial resources. Point 1 of Article 3.2.6. on Evaluation criteria for material resources: Financial. Point 3 of Article 3.2.14. on Financial management information.
<b>I.11</b>	Points 7, 11 and 14 of Article 3.1.2. on Fundamental principles of quality: General organisation / Documentation / Human and financial resources. Point 4 of Article 3.2.1. on General considerations. Point 1 of Article 3.2.2. on Scope. Article 3.2.6. on Evaluation criteria for material resources. Article 3.2.10. on Performance assessment and audit programmes.
<b>II.1A</b> <b>II.1B</b> <b>II.2</b>	Point 9 of Article 3.1.2. on Fundamental principles of quality: Procedures and standards. Point 1 of Article 3.2.4. on Evaluation criteria for quality systems. Point 3 of Article 3.2.6. on Evaluation criteria for material resources: Technical. Point 5 of Article 3.2.14. on Laboratory services.
<b>II.3</b>	Chapter 2.1. on Import risk analysis
<b>II.4</b>	Points 6 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / Procedures and standards. Point 2 of Article 3.2.7. on Legislation and functional capabilities: Export/import inspection. Points 6 and 7 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.

<p><b>II.5.A</b> <b>II.5.B</b></p>	<p>Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National animal disease reporting systems. Sub-points a) i), ii) and iii) of Point 7 of Article 3.2.14. on Animal health: Description of and sample data from any national animal disease reporting system controlled and operated or coordinated by the Veterinary Services / Description of and sample reference data from other national animal disease reporting systems controlled and operated by other organisations which make data and results available to Veterinary Services / Description and relevant data of current official control programmes including:... or eradication programmes for specific diseases. Chapter 1.4. on Animal health surveillance. Chapter 1.5. on Surveillance for arthropod vectors of animal diseases.</p>
<p><b>II.6</b></p>	<p>Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National animal disease reporting systems. Sub-point a) of Point 7 of Article 3.2.14. on Animal health and veterinary public health controls: Animal health.</p>
<p><b>II.7</b></p>	<p>Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National animal disease reporting systems. Sub-point a) of Point 7 of Article 3.2.14. on Animal health and veterinary public health controls: Animal health. Chapter 4.12. on Disposal of dead animal.</p>
<p><b>II.8.A</b> <b>II.8.B</b> <b>II.8.C</b></p>	<p>Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Article 3.4.12. on Human food production chain. Points 1-5 of Article 3.2.9. on Veterinary public health controls: Food hygiene / Zoonoses / Chemical residue testing programmes / Veterinary medicines/ Integration between animal health controls and veterinary public health. Points 2, 6 and 7 of Article 3.2.14. on National information on human resources / Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls. Chapter 6.2. on Control of biological hazards of animal health and public health importance through ante- and post-mortem meat inspection. <b>References to Codex Alimentarius Commission standards:</b> Code of Hygienic practice for meat (CAC/RCP 58-2005). Code of Hygienic practice for milk and milk products (CAC/RCP/ 57-2004). General Principles of Food Hygiene (CAC/RCP 1-1969; amended 1999. Revisions 1997 and 2003).</p>
<p><b>II.9</b></p>	<p>Points 6 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / Procedures and standards. Points 3 and 4 of Article 3.2.9. on Veterinary public health controls: Chemical residue testing programmes / Veterinary medicines. Sub-point a) ii) of Point 6 of Article 3.2.14. on Animal health and veterinary public health: Assessment of ability of Veterinary Services to enforce legislation. Chapters 6.6. to 6.10. on Antimicrobial resistance.</p>
<p><b>II.10</b></p>	<p>Points 3 and 4 of Article 3.2.9. on Veterinary public health controls: Chemical residue testing programmes / Veterinary medicines. Sub-points b) iii) and iv) of Point 7 of Article 3.2.14. on Veterinary public health: Chemical residue testing programmes / Veterinary medicines.</p>
<p><b>II.11</b></p>	<p>Chapter 6.3. on Control of hazards of animal health and public health importance in animal feed.</p>
<p><b>II.12.A</b> <b>II.12.B</b></p>	<p>Point 6 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation. Chapter 4.1. on General principles on identification and traceability of live animals. Chapter 4.2. on Design and implementation of identification systems to achieve animal traceability.</p>
<p><b>II.13</b></p>	<p>Section 7 on Animal Welfare</p>

<b>III.1</b>	Point 13 of Article 3.1.2. on Fundamental principles of quality: Communication. Sub-point b) of Point 2 of Article 3.2.6. on Administrative resources: Communications. Point 4 of Article 3.2.14. on Administration details. Chapter 3.3. on Communication.
<b>III.2</b>	Point 13 of Article 3.1.2. on Fundamental principles of quality: Communication. Point 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 4 and Sub-point g) of Point 9 of Article 3.2.14. on Administration details and on Sources of independent scientific expertise. Chapter 3.3. on Communication.
<b>III.3</b>	Article 3.2.11. on Participation on OIE activities. Point 4 of Article 3.2.14. on Administration details.
<b>III.4</b>	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Point 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Article 3.4.5. on Competent Authorities.
<b>III.5.A</b> <b>III.5.B</b>	Point 6 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation. Point 9 of Article 3.2.1. on General considerations. Article 3.2.12. on Evaluation of the veterinary statutory body. Article 3.4.6. on Veterinarians and veterinary para-professionals.
<b>III.6</b>	Points 6 and 13 of Article 3.1.2. Fundamental principles of quality: Veterinary legislation / Communication. Points 2 and 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 7 of Article 3.2.14. on Animal health and veterinary public health controls. Point 4 of Article 3.4.3. on General principles: Consultation.
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<b>IV.2</b>	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection. Point 6 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities.
<b>IV.3</b>	Point 6 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation. Article 3.2.11. on Participation in OIE activities. Points 6 and 10 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Membership of the OIE.
<b>IV.4</b>	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation / Procedures and standards. Point 2 of Article 3.2.7. on Legislation and functional capabilities: Export/import inspection. Sub-point b) of Point 6 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities: Export/import inspection. Chapter 5.2. on Certification procedures. Chapters 5.10. to 5.12. on Model international veterinary certificates.
<b>IV.5</b>	Points 6 and 7 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation / General organisation. Sub-point g) of Point 4 of Article 3.2.10. on Veterinary Services administration: Trade performance history. Chapter 5.3. on OIE procedures relevant to the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization.
<b>IV.6</b>	Point 6 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation. Points 1 and 3 of Article 3.2.8. on Animal health controls: Animal health status / National animal disease reporting systems. Chapter 5.1. on General obligations related to certification.
<b>IV.7</b> <b>IV.8</b>	Point 6 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation. Chapter 4.3. on Zoning and compartmentalisation. Chapter 4.4. on Application of compartmentalisation.



## Appendix 2: Glossary of terms

Terms defined in the Terrestrial Code that are used in this publication are reprinted here for ease of reference.

### **Animal**

means a mammal, bird or bee.

### **Animal identification**

means the combination of the identification and registration of an animal individually, with a unique identifier, or collectively by its epidemiological unit or group, with a unique group identifier.

### **Animal identification system**

means the inclusion and linking of components such as identification of establishments/owners, the person(s) responsible for the animal(s), movements and other records with animal identification.

### **Animal welfare**

means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter/killing. Animal welfare refers to the state of the animal; the treatment that an animal receives is covered by other terms such as animal care, animal husbandry, and humane treatment.

### **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 OIE Aquatic Animal Health Code in the whole territory.

### **Disease**

means the clinical and/or pathological manifestation of infection.

### **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.

**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.

**Meat**

means all edible parts of an animal.

**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.

**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.

**Risk analysis**

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

**Risk assessment**

means the evaluation of the likelihood and the biological and economic consequences of entry, establishment and spread of a hazard within the territory of an importing country.

**Risk management**

means the process of identifying, selecting and implementing measures that can be applied to reduce the level of risk.

**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.

**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) legislation**

means the collection of specific legal instruments (primary and secondary legislation) required for the governance of the veterinary domain.

**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 Code and the OIE Aquatic Animal Health Code in the territory. The Veterinary Services are under the overall control and direction of the Veterinary Authority. Private sector organisations, veterinarians, veterinary paraprofessionals or aquatic animal health professionals are normally accredited or approved by the Veterinary Authority to deliver the delegated functions.

**Veterinary statutory body**

means an autonomous regulatory body for veterinarians and veterinary para-professionals.

**Wildlife**

means feral animals, captive wild animals and wild animals.

**Zoonosis**

means any disease or infection which is naturally transmissible from animals to humans.



### Appendix 3. List of persons met or interviewed

The names, positions and organisations of all the people who participated in site visits, meetings and inspections with the PVS Team may be found in the document E69 (list of persons met).

#### Participants list & contacts for OIE PVS Mission Meeting with Stakeholders July 17<sup>th</sup>, 2014

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14	Emir Cruz	Managing Director	BAHA	Belmopan	822137 8/0818/ 0197	82202 71/30 84	<a href="mailto:emir.cruz@baha.org.bz">emir.cruz@baha.org.bz</a>
15	Raymond Barkman	General Manager	<b>Quality Poultry</b>	Spanish Lookout	823011 3/6104 496	82302 48	<a href="mailto:raymond@qualitypoultryproducts.com">raymond@qualitypoultryproducts.com</a>
16	Evelio Cocom	Belize Livestock Registry Manager	BLPA	Agriculture Showgrounds	621681 0		<a href="mailto:cocom_41@hotmail.com">cocom_41@hotmail.com</a>
17	Johan Penner	Owner	Penner's Meat Producers	Shipyard, Orange Walk	650869 1		
18	Sair Pech	Animal Health Assistant	BAHA	Orange Walk	302138 8	32223 01	<a href="mailto:sair.pech@baha.org.bz">sair.pech@baha.org.bz</a>

19	Orlando Habet	Consultant/ Manager	BPA	Red Creek, Esperanza	824322 1	82432 35	<a href="mailto:belizepoultry@yahoo.com">belizepoultry@yahoo.com</a>
20	Alistair Macpherson	CEO	BLPA	Mile 47.5, George Price Hwy	822388 3/6023 193		<a href="mailto:almacblpa@gmail.com">almacblpa@gmail.com</a>
21	Ernie Thiessen	Chairman Pig Council, Producer	Livestock Marketing Association	Spanish Lookout	674980 7		<a href="mailto:ernieth@western dairies.com">ernieth@western dairies.com</a>
22	Kenton Plett	BOD		Spanish Lookout	674 3626		<a href="mailto:kentonrplett@gmail.com">kentonrplett@gmail.com</a>
23	David Padilla	Asst. General Manager	<b>Quality Poultry</b>	Spanish Lookout	823011 3/6104 496	82302 48	<a href="mailto:david@qualitypoultryproducts.com">david@qualitypoultryproducts.com</a>
24	Paul Penner	Associatio n Chairman	SLC Livestock Marketing	Spanish Lookout	662595 0		<a href="mailto:Paulpenner72@gmail.com">Paulpenner72@gmail.com</a>



#### Appendix 4: Timetable of the mission and sites/ facilities visited by Drs Kahn (SK) and Stemshorn (BS) – July 2014

Date	Assessor	Time	Location	Activities
July 13	SK & BS	All day	Central Farm, Cayo	Opening workshop with BAHA Directors
July 15	SK & BS	AM	Port of Belize, Belize City	Deputy Comptroller of Customs
July 15	SK & BS	AM	Port of Belize, Belize City	Port of Belize Limited Quarantine Office
July 15	SK & BS	PM	Port of Belize, Belize City	Meeting with representative of Ministry of Fisheries
July 15	SK & BS	AM	Belize City	Central Investigation Laboratory (Food Safety) and Aquatic Health Laboratory
July 16	SK & BS	AM	Belmopan	Minister of Natural Resources and Agriculture (and Deputy Prime Minister)
July 16	SK & BS	AM	Belmopan	Deputy Chief Environmental Officer, Environment Department
July 16	SK & BS	AM	Belmopan	National Communicable Diseases Focal Point, Ministry of Health
July 16	SK & BS	PM	Belmopan	Prosser Fertilizer and Agrotec Company (unannounced visit)
July 16	SK & BS	PM	Belmopan	Belize National Sanitary Cattle Plan (SWEEP) Project Office
July 17	SK & BS	AM	St. Ignacio	Breakfast with Drs Gongora and DePaz
July 17	SK & BS	AM	Belmopan	National Stakeholders Meeting
July 17	SK&BS	PM	Belmopan	Belize Livestock Producers Association & Belize Livestock Registry
July 17	SK & BS	PM	Belmopan	Meeting with Veterinary Surgeon's Board of Belize
July 18	SK & BS	AM	Stann Creek	Belize Aquaculture Limited
July 18	SK & BS	PM	Big Creek Port	Meeting with staff: BAHA Quarantine Office
July 19	SK & BS	AM	Mile 68 Western Highway, Cayo	Visit to abattoir Running W Brand Meats
July 19	SK & BS	AM	Western Dairies Spanish Lookout	Review of dairy factor
July 19	SK & BS	PM	Reimer's Feed Mill Spanish Lookout	Review of Feed store
July 21	SK	AM	Central Farm	Discussion with CVL staff (BAHA)
July 21	SK	PM	Central Farm	Meeting with Director of Food Safety BAHA and Finance Director, BAHA.
July 21	BS	AM	Paradise Shrimp Farm	Review of shrimp farm and processing plant
July 22	SK	AM	Blue Creek Cattle Committee	Discussion with members of committee
July 22	SK	PM	Caribbean Chicken Processing plant	Visit to plant and discussion with BAHA staff

<b>Date</b>	<b>Assessor</b>	<b>Time</b>	<b>Location</b>	<b>Activities</b>
July 22	BS	AM	Belmopan	Finance Director, BAHA Human Resources Director, BAHA
July 22	BS	PM	Belmopan	Meeting with Assistant Director, Quarantine Department, BAHA
July 23	SK	AM	Orange Walk	Meeting with staff : BAHA District Office
July 23	SK	PM	Border Inspection Post Santa Elena	Meeting with Quarantine staff (BAHA) and with representative of SENASICA
July 23	BS	AM	Central Farm	Discussion with CVL staff
July 23	BS	PM	Belmopan	Meeting with representative of the Ministry of Health
July 23	BS	PM	Belmopan	Meeting with representative of OIRSA
July 24	SK & BS	PM	Central Farm	Presentation of preliminary findings to BAHA Officials
July 25	SK & BS	AM	Belmopan	Closing meeting with senior officials and stakeholders

## Appendix 5: Air travel itinerary

ASSESSOR	DATE	From	To	Flight No.	Departure	Arrival
B Stemshorn	13/7/2014	Ottawa	Belize City	UA 6447/1410	0603	1433
	26/7/2014	Belize City	Ottawa	UA 1595/3578	1249	2319
S. Kahn	12/7/2014	Buenos Aires	Belize City	AA 908/2454	2255	1025
	26/7/2014	Belize City	Buenos Aires	AA 1419/909	1335	0620



## Appendix 6: List of documents used in the PVS evaluation

E = Electronic version

H = Hard copy version

P = Photograph

Ref	Title	Author / Date / ISBN / Web	Related critical competences
<b>PRE-MISSION DOCUMENTS</b>			
E1	<i>OIE PVS Evaluation Report 2008/9</i>	<a href="http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/FinalReport-Belize.pdf">http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/FinalReport-Belize.pdf</a>	All
E2	<i>OIE PVS Gap Analysis Belize</i> April 2010	<a href="http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/GapAnalysisReport-Belize.pdf">http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/GapAnalysisReport-Belize.pdf</a>	All
E3	<i>BAHA submission: Baseline data</i>	M. DePaz 4/7/2014	multiple
E4	<i>Belize Agricultural Services Program Loan Proposal</i>	Inter-American Development Bank circa 2010	multiple
E5	<i>Belize National Sanitary Cattle Plan Project. Interim Narrative Report</i>	August 2011 to June 2013	multiple
E6	<i>PGIA DATA 2013: Import and Export Statistics for animals and animal products</i>	BAHA; July 4, 2104	Chapter IV
E7	<i>Report on International Travel 2008-2014</i>	BAHA; July 4, 2014	I-2, I-3, III-3 (T & A)
<b>MISSION DOCUMENTS</b>			
<b>A. GENERAL</b>			
E8	<i>BAHA and the SPS</i>	Presentation by D. Cabb SPS Enquiry Point 14/7/14.	Chapter IV CC 1-4, II-7
E9	<i>Presentation on BAHA Food Safety programmes</i>	M. Figueroa, Director, Food Safety 14/7/2014	I-1, II-8
E10	<i>Presentation on BAHA Quarantine programmes</i>	M. Garcia, Director, Quarantine 14/7/2014	I-1, II-4
E11	<i>Presentation on BAHA Animal Health programmes</i>	M. DePaz CVO, 14/7/2014	Various CCs T & A
E12	<i>Regulatory Programme For Control Of Residues In Food.</i>	BAHA Food Safety Programme 2014.	II-2, II-10, Aquatic
E13	<i>Veterinary Surgeons Act</i>	Chapter 326 Rev. 2000	IV-1; III-5
E14	<i>BAHA Act Subsidiary Regulations: fumigation; ante-mortem inspection; food safety; import controls; quarantine fees; fish/fish product inspection; vet drugs</i>	BAHA Act Ch. 211 Oct 2003	Chapter II and CC IV
E15	<i>BAHA submission: Baseline data -revised during the mission</i>	M.DePaz 4/7/2014	multiple
E16	<i>Bovine Tuberculosis Manual</i>	BAHA, March 2014, 35pp	II-5 II-7

Ref	Title	Author / Date / ISBN / Web	Related critical competences
E17	<i>ROM Findings &amp; Recommendations on Belize National Cattle Sanitary Plan ("Cattle sweep", 2011-2014)</i>	National Authorising Office	I-7 to I-11, II-5, IV-2
E18	<i>IRA: Shrimp Feed</i>	BAHA December 2013	II-3, II-7, II-11-Aquatic
E19	<i>Revenues and Expenses 2013-14</i>	Finance Director, BAHA	I-7 to I-11
E20	<i>BAHA Budget Proposed 2014-2015</i>	Finance Director, BAHA	I-7 to I-11
E21	<i>CDVL Documents folder 1</i>	Compiled July 21, 2014	II-1; II-2
E22	<i>CDVL Documents folder 2</i>	Compiled July 22, 2014	II-1; II-2
E23	<i>No document</i>		
E24	<i>Belize Livestock Registry Forms.</i>	BLPA 2014.	II-12.A
E25	<i>Inspection Procedures: Ports</i>	R. Manzanero, BAHA, 2004	II-4
E26	<i>AI simulation announcement</i>	BAHA February 2013	I-6, II-6, II-7
E27	<i>AI simulation announcement</i>	BAHA February 2014	I-6, II-6, II-7
E28	<i>AI simulation programme</i>	BAHA February 2014	I-6, II-6, II-7
E29	<i>AI simulation report</i>	BAHA undated	I-6, II-6, II-7
E30	<i>Aquatic Animal Health (Reportable Diseases) Regulations - Draft</i>	No. xxx of 2013	IV-1, IV-6 Aquatic
E31	<i>No document</i>		
E32	<i>P. Monodon at Paradise Farm</i>	Hank Bauman, May 2014	II-4, II-7 A
E33	<i>Invitation to Stakeholder Meeting</i>	BAHA, July 2014	III-1, III-2
E34	<i>Agenda for Stakeholder Forum</i>	BAHA February 2014	III-1, III-2
E35	<i>National Reportable Aquatic Animal Diseases in Belize</i>	BAHA June 2014	II-5 A
E36	<i>Email to aquaculture stakeholders</i>	BAHA June 2014	II-5, III-1, III-2 A
E37	<i>Minutes: 2<sup>nd</sup> Meeting of Aquaculture Stakeholder User Group</i>	BAHA May 2014	II-5, III-1, III-2 A
E38	<i>Results from the University of Arizona's "Ring Test".</i>	BAHA March 2012	II-1, II-5 A
E39	<i>Report on proficiency testing</i>	BAHA February 2012	II-1, II-5 A
E40	<i>Report on proficiency testing</i>	BAHA September 2012	II-1, II-5 A
E41	<i>Report on proficiency testing</i>	BAHA March 2013	II-1, II-5 A
E42	<i>Report on proficiency testing</i>	BAHA August 2013	II-1, II-5 A
E43	<i>TOR Aquatic Health Officer</i>	BAHA HRD 2008	I-1, I-2 A
E44	<i>Procedures for performance appraisal and recruitment</i>	BAHA HRD undated	I-1; I-2; I-3
E45	<i>Salary Pay Scale 2005 Revised</i>	GOB	I-1; I-2
E46	<i>Training Plan Apr. 2103 - May 2014</i>	BAHA	I-3
E47	<i>Job Descriptions</i>	BAHA	I-1, I-2
E48	<i>Employment Terms and Conditions</i>	BAHA undated	I-1; I-2; I-3
E49	<i>BAHA Statement of values</i>	SMM Team July 2014	I-2, I-4
E50	<i>Import risk analysis pork products</i>	BAHA 2011	II-3
E51	<i>Review of CSF programme</i>	OIRSA November 2012	II-5, II-7, II-8, II-13, IV-3
E52	<i>TB quarantine farm</i>	DePaz January-July 2014	II-7, IV-2, IV-6

Ref	Title	Author / Date / ISBN / Web	Related critical competences
E53	<i>AI Simulation (IDB project)- report</i>	DePaz to IDB, 2014	I-6, II-6, III-1, III-2,
E54	<i>Agenda of SPS/TBT Committee</i>	BAHA July 2014	I-6, III-1, III-2, III-3, IV-3
E55	<i>Participants at SPS/TBT Committee</i>	BAHA July 2014	I-6, III-1, III-2, III-3, IV-3
E56	<i>Draft MOU: BAHA and MOH</i>	August 13 (no year)	I-6, II-8, III-2
E57	<i>Signed MOU: BAHA and MOH</i>	2001	I-6, II-8, III-2
E58	<i>Update on IT Project</i>	July 2014	I-6, II-4, III-2
E59	<i>BAHA Revenue 2013-14</i>	BAHA July 2013	I-8, I-9, 1-11
E60	<i>Expense Analysis 2014</i>	Finance Director, BAHA	I-7 to I-11
E61	<i>Application for SWEEP 2011</i>	BAHA	II-5, III-6
E62	<i>MOU BAHA and BPA</i>	BAHA	II-5, III-6
E63	<i>Poultry Improvement Plan 2011</i>	BAHA	II-5, III-6
E64	<i>Email from D. Cabb</i>	BAHA	I-6, II-4, III-1 to III-3
E65	<i>BAHA e News letter</i>	BAHA June 2014	III-1, III-2
E66	<i>Central Bank Report 2012</i>	Central Bank of Belize	Background A
E67	<i>Country Environmental Analysis: Competitiveness and Sustainable Development IDB</i>	<a href="http://idbdocs.iadb.org/wsdo/cs/getdocument.aspx?docnum=35005771">http://idbdocs.iadb.org/wsdo/cs/getdocument.aspx?docnum=35005771</a>	Background A
E68	<i>Strengthening food control systems</i>	De Shields FAO conference	I-6B, II-8, IV-2
E69	<i>List of persons met</i>	PVS Team	All
E70	<i>Opening and closing meetings: participants</i>	PVS Team	All

H1	<i>Country Programme Framework – Belize 2011-2015</i>	FAO	Background
H11	<i>Register of Veterinary Surgeons</i>	VSB 2014	III-5 A&B
H12	<i>Agenda Board Meeting July 2014</i>	VSB 2014	III-5 B
H13	<i>Minutes Board Meeting May 2014</i>	VSB 2014	II-5 B
H14	<i>Draft Standards of Practice and Ethics for veterinarians</i>	VSB 2014	II-5 B,
H15	<i>Estandar Regional de Trazabilidad Bovina</i>	OIRSA 2013	II-12 A&B
H16	<i>Email re BAHA Board of Directors</i>	BAHA 30/1/2014	I-4, I-5, III-2
H17	<i>Visitor Registration Form</i>	BAL May 2014	II-7, IV-8, A
H18	<i>Pamphlet on role of BAHA</i>	BAHA, undated	III-1
H19	<i>Quarantine Department Pamphlet</i>	BAHA, undated	III-1
H20	<i>Broiler Feeding and Management</i>	Reimer's Feed Mill, undated	II-9, II-11
H21	<i>Pamphlet "Help us Protect Belize"</i>	BAHA, undated	III-1
H22	<i>Swine Fever Regulations</i>	S.I. No. 46 of 2007	II-1, II-5; II-7
H23	<i>Lab reports on brucellosis testing</i>	BAHA March and June 2014	II-5, II-7
H24	<i>Pamphlet "The Veterinary Diagnostic Laboratory" (+ fees)</i>	BAHA, undated	1-8, II-1; II-2
H25	<i>Epidemiological surveillance for poultry diseases – laboratory form</i>	BAHA, undated	II-5, III-6

Ref	Title	Author / Date / ISBN / Web	Related critical competences
H26	<i>Letter to Ministry of Finance requesting increase in GOB funding for 2014-15; with annexes</i>	BAHA, Nov. 20, 2013	I-8, I-9, I-10
H27	<i>End of Year Profit/Loss statements for FY ending March 31, 2010-2014</i>	Finance Director, BAHA	I-8, I-9, I-10
H28	<i>IDB Project Financial Statement as of July 17,2014</i>	Finance Director, BAHA	I-7, I-8, I-9, I-10
H29	<i>Overview of Contributions to “Cattle Sweep Project” by EU, GOB, BLPA &amp; SENASICA/OIRSA</i>	Finance Director, BAHA	I-7, I-8, I-9, I-10
H30	<i>Belize/Mexico Sanitary Agreement</i>	BAHA Nov. 2012	II-5, II-7, IV-5
H31	<i>Email</i>	<i>SPS Enquiry Point and OIE FP Communications</i> BAHA	II-4, III-1, III-2
H32 H33 H34	<i>Performance appraisals</i>	BAHA, Jan 2013, Apr 2014, July 2014	I-1; I-2; I-3
H35 H36	<i>Job descriptions and qualifications : Laboratory Technician</i>	BAHA undated (H35) and March 2002 (H36)	I-1; I-2; II-1, II-2
H37	<i>Letter recommending a promotion of a laboratory technician</i>	BAHA August 6, 2012	I-1; I-2; II-1, II-2
H38	<i>Report OIE National Focal Point workshop: Veterinary Laboratories</i>	D. Yah, BAHA. 3/12/2012	II-2
H39	<i>Report on Audit of brucellosis test lab at Central Veterinary Laboratory</i>	SENASICA August 27, 2012	II-1; II-2
H40	<i>Records of poultry slaughter at Caribbean Chicken</i>	BAHA, June 2014	II-8
H41	<i>Invitation to attend meeting with OIE PVS Experts</i>	Director of Animal Health, BAHA, July 21, 2014	III-6, IV-6
H42	<i>Issues, Challenges and Options for Belize’s Agricultural Sector</i>	D. Budram, IICA The Belize Agricultural Report, Feb-Apr 2014, 24 p3	Background
H43	<i>Pesticide Control Board Celebrates 25<sup>th</sup> Anniversary</i>	The Belize Agricultural Report, Feb-Apr 2014, 24 p9	II-10
H44	<i>Miscellaneous articles about trade</i>	Invest Belize Vol. 2 2014 <a href="http://www.belizeinvest.org.bz">www.belizeinvest.org.bz</a>	Background

<b>MISSION DOCUMENTS</b>			
<b>B. LEGISLATION</b>			
<b>Ref</b>	<b>Title</b>	<b>Author / Date / ISBN / Web</b>	<b>Related critical competences</b>
<b>H2</b>	<i>Food and Drugs Act</i>	Ch. 291 of 2000	<b>IV-1</b>
<b>H3</b>	<i>BAHA Act</i>	Ch. 211 of 2000	<b>IV-1</b>
<b>H4</b>	<i>Prevention, Control and Eradication of Bovine Brucellosis Regulations</i>	SI No. 22 of 2012	<b>IV-1, II-7, IV-7</b>
<b>H5</b>	<i>Animal Identification Regulations</i>	SI No. 77 of 2011	<b>III-6, IV-1</b>
<b>H6</b>	<i>Eradication of BSE Regulations</i>	SI No. 23 of 2012	<b>IV-1, II-7</b>
<b>H7</b>	<i>Identification Regulations: Amendment</i>	SI No. 49 of 2012	<b>IV-1, II-7</b>
<b>H8</b>	<i>BSE Import/Export</i>	SI No. 50 of 2012	<b>IV-1, II-7</b>
<b>H9</b>	<i>Prevention, Control and Eradication of Bovine Tuberculosis Regulations</i>	SI No. 51 of 2012	<b>IV-1, II-7, IV-7</b>
<b>H10</b>	<i>National Accreditation Programme</i>	SI No. 59 of 2012	<b>II-2, III-4, IV-1</b>
<b>H22</b>	<i>Swine Fever Status</i>	SI No. 46 of 2007	<b>II-5; II-7</b>
<b>E13</b>	<i>Veterinary Surgeons Act</i>	Chapter 326 Rev. 2000	<b>IV-1; III-5</b>
<b>E14</b>	<i>BAHA Act Subsidiary Regulations covering inter alia: ante-mortem inspection; food safety; import controls; quarantine fees; fish/product inspection; vet drugs</i>	BAHA Act Ch. 211 Oct 2003	<b>I-8, II-4, II-7, II-8, II-9 A</b>
<b>E30</b>	<i>Aquatic Animal Health (Reportable Diseases) Regulations</i>	SI No. xxx of 2013	<b>II-5, II-7, IV-1 A</b>

<b>MISSION DOCUMENTS</b>			
<b>C. PHOTOGRAPHS</b>			
<b>Ref</b>	<b>Title</b>	<b>Author / Date / ISBN / Web</b>	<b>Related critical competences</b>
<b>P1 to P17</b>	<i>Central Veterinary Diagnostic Laboratory</i>	July 21 & 25, 2014	<b>II-1A&amp;B</b> <b>II-2</b>
<b>P18 to P27</b>	<i>Quarantine Offices and Documents at Port of Belize and Big Creek</i>	July 15 & 18, 2014	<b>II-4</b>
<b>P28</b>	<i>Zoonoses Poster</i>	July 16, 2014	<b>II-7</b> <b>III-1</b>
<b>P29 to P43</b>	<i>Swine Slaughter at Running W Brand Meats, Mile 68 Western Highway Cayo</i>	July 19, 2014	<b>II-8B</b> <b>II-13</b>
<b>P44 to P53</b>	<i>Western Dairies, Spanish Lookout</i>	July 19, 2014	<b>II-8C</b>
<b>P54 to P61</b>	<i>Retail Sale of Veterinary Drugs and Vaccines at Prosser Agrotec, Belmopan, and Reimer's Feeds, Spanish Lookout</i>	July 16 & 19, 2014	<b>II-9</b>
<b>P62 to P64</b>	<i>Posters on BLR, Cattle Identification and Traceability</i>	July 17, 2014	<b>II-12 A&amp;B</b> <b>III-1</b>
<b>P65</b>	<i>Stakeholder's Meeting</i>	July 17, 2014	<b>III-1</b>
<b>Aquatic Photographs</b>			
<b>PA1 to PA10</b>	<i>Aquatic Lab</i>	July 15, 2014	<b>II-1 A&amp;B</b> <b>II-2</b>
<b>PA11 to PA23</b>	<i>BAL Food Safety Policy Paradise Farms Shrimp Processing Plant and HACCP Documentation</i>	July 18 & 21, 2014	<b>II-8</b>
<b>PA24 to PA33</b>	<i>Access control, water purification and contained breeding tanks at Belize Aquaculture Ltd and Paradise Farms</i>	July 18 & 21, 2014	<b>IV-12</b>

## Appendix 7: Organisation of the OIE PVS evaluation of the VS of Belize

### **Assessors Team:**

- Team leader: Dr Sarah Kahn
- Technical expert: Dr Barry Stemshorn

### **References and Guidelines:**

- Terrestrial Animal Health Code (especially Chapters 3.1. and 3.2.)
- OIE PVS Tool for the Evaluation of Performance of VS
  - Human, financial and physical resources,
  - Technical capability and authority,
  - Interaction with stakeholders,
  - Access to markets.

### **Dates: 13 – 26 July 2014**

### **Language of the audit and reports: English**

### **Subject of the evaluation:** VS as defined in the Terrestrial Animal Health Code

- Inclusive of aquatic animals
- Inclusive of other institutions / ministries responsible for activities of VS

### **Activities to be analysed:** All activities related to animal and veterinary public health:

- Field activities:
  - Animal health (epidemiological surveillance, early detection, disease control, etc)
  - quarantine (all country borders),
  - veterinary public health (food safety, veterinary medicines and biological, residues, etc)
  - control and inspection.
- Data and communication
- Diagnostic laboratories
- Research
- Initial and continuous training
- Organisation and finance.

### **Persons to be present:** see Appendix 3

### **Sites to be visited:** see Appendix 4

### **Procedures:**

- Consultation of data and documents
- Comprehensive field trips
- Interviews and meetings with VS staff and stakeholders,
- Analyse of practical processes

### **Provision of assistance by the evaluated country**

- Completion of missing data as possible
- Administrative authorisation to visit designated sites
- Logistical support

### **Reports:**

- a fact sheet or MS PowerPoint® will be presented at the closing session
- a report will be sent to the OIE for peer-review no later than one month after the mission
- the current levels of advancement with strengths, weaknesses and references for each critical competence will be described,
- general recommendations may be made in agreement with the VS.

### **Confidentiality and publishing of results**

The results of the evaluation are confidential between the country and the OIE and may only be published with the written agreement of the evaluated country.