



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



PERFORMANCE ASSESSMENT OF VETERINARY SERVICES: REPORT OF A STUDY AND FIELD MISSION -

United Nations Industrial Development Organization (UNIDO)
April 2023



WORLD BANK GROUP

Deliverable 1.1.2 on

Performance Assessment of Veterinary Services

(Addressing Public Health & Food Safety Requirements)

Works Package 74, Sub-activity 1.2

Evaluate and conduct a gap assessment of veterinary services of the country against OIE Code addressing overall public health and food safety requirements.

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ACKNOWLEDGEMENT

The authors would like to acknowledge the support provided throughout the undertaking of this activity, by the staffs of the UNIDO office in Bangladesh, Director General, Department of Livestock Services, Bangladesh and relevant officers of the department, the members of staff of the Livestock and Dairy Development Project (LDDP), associated with the UNIDO component of the LDDP. Special thanks to Dr. Md. Golam Rabbani, Chief Technical Coordinator and Mr. Md. Abdur Rahim, Project Director for their continuous support. Special thanks go to Dr Zaki Uz Zaman in his capacity as UNIDO country Representative, Bangladesh for his continuous support to ensure the smooth running of the project. Finally, we would like to thank the multitude of stakeholders who have given up their valuable time to meet with the experts and share their knowledge and experience during visits to their establishments as well as those who participated in the Workshop.

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Abbreviations and Acronyms

ADB	Asian Development Bank
AMR	Anti-microbial resistance
BAB	Bangladesh Accreditation Board
BLRI	Bangladesh Livestock Research Institute
BSTI	Bangladesh Standards and Testing Institute
BVA	Bangladesh Veterinary Association
BVC	Bangladesh Veterinary Council
CA	Competent Authority
CC	Critical Competency
CDIL	Central Disease Investigation Laboratory
CVO	Chief Veterinary Officer
DG	Director General
DGDA	Directorate General Drug Administration
DLS	Department of Livestock Services
FAO	Food and Agriculture Organization of the United Nations
FDIL	Field Disease Investigation Laboratory
FTE	Full Time Equivalent
GAHP	Good Animal Husbandry Practice
GLP	Good Laboratory Practice
GMP	Good Management Practice
HACCP	Hazard and Critical Control Point
HPAI	Highly Pathogenic Avian influenza
HR	Human Resources
HQ	Head Quarters
IHR	International Health Regulations of WHO
IATA	International Air Transport Association
KAP	Knowledge, attitudes and practices
LDDP	Livestock and Dairy Development Project
LoA	Levels of Advancement (OIE PVS critical competencies)
MC	Municipal Council
MERS	Middle East Respiratory Syndrome
MoC	Ministry of Commerce
MoF	Ministry of Food
MoFL	Ministry of Fisheries and Livestock
MoHFW	Ministry of Health and Family Welfare

MRL	Maximum Residue Limit
MSME	Micro, small and medium enterprises
OIE	World Organisation for Animal Health
OIE-PVS	Performance of Veterinary Services Evaluation Tool
OTI	Officers Training Institute
PoAO	Products of animal origin
QA	Quality Assurance
SARS	Severe Acute Respiratory Syndrome
SOP	Standard Operating Procedure
SPS	Sanitary and Phytosanitary Agreement of the WTO
UNIDO	United Nations Industrial Development Organisation
VRI	Vaccine Research Institute
VS	Veterinary Services
VPH	Veterinary Public Health
VSB	Veterinary Statutory Body (see OIE Code definition)
VTI	Veterinary Training Institute
WB	World Bank
WHO	World Health Organization of the United Nations
WTO	World Trade Organization

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EXECUTIVE SUMMARY

The Gap Analysis recorded in this Report is based upon the framework provided in the OIE Performance of Veterinary Services (PVS) Evaluation tool, focussing specifically in the areas of the veterinary domain having a direct or indirect relationship with the food safety of food products of animal origin.

The analysis is based upon a comparison between the baseline situation as recorded in the PVS Evaluation and Gap Analysis Reports undertaken by OIE teams of experts in 2011 and 2015, respectively, and the situation as we find it today.

Considerable progress has been made by the DLS in terms of strengthening its capacity to extend its outreach to livestock keepers in the more remote rural areas beyond the reach of Upazila Livestock Offices. In addition, a number of posts have also been added to the structures to strengthen the chain of command within the DLS headquarters and at Divisional, District and Upazila levels.

However, as yet there has been no significant change in the stated policies of the MoFL with regard to the Livestock services which still place a strong emphasis on quantity of production rather than on ensuring the safety and quality of products.

Whilst it is acknowledged that the Fisheries Department of the MoFL was handed the opportunity to respond to the rapid increase in global demand for fish and shrimp products and was thus provided with the necessary resources to provide the required export certification, until relatively recently, no such justification could be found for the DLS to follow suit. Nevertheless, there is now a growing understanding that food safety does not necessarily need to be driven solely by the exacting demands of importing countries. There is not only a growing demand from consumers who are becoming more aware of food safety issues, there is also an increasing understanding on the part of senior decision makers in government that there is now a need to place a stronger emphasis on the safety and quality of food products placed on the domestic market as well as those destined for export.

The DLS has the legal mandate to take responsibility for ensuring the safety of animal products from the level of production through to the retail sale of fresh, unprocessed animal products along each of the main livestock value chains, however implementation of this mandate is weak. Furthermore, there are a host of other Competent Authorities each having a stake in ensuring food safety, many of whom have limited technical capacity or the capability to perform their functions at all effectively.

The situation is further complicated by the prevailing socio-economic situation characterised by rapid population growth over the past three decades and a livestock sector which is still dominated by many hundreds of thousands of small-scale poor farmers engaged in mixed livestock and crop production based on low levels of inputs and low levels of production. Nevertheless, there are now important changes taking place in the commercialisation of the livestock industry in response to the exponential growth in demand for animal products from middle income populations fuelled by the rapidly growing service industries. There has been a rapid growth in the development of a commercial poultry industry and beef producers

around the country and this is now being closely followed by small to medium scale dairy producers who are gradually linking up to a variety of different milk collection and processing entrepreneurs.

There is thus an urgent need for the DLS to fully embrace its regulatory responsibilities which are ever more important as the livestock industry becomes more intensive and the risks of food contamination through lack of good husbandry practices, inappropriate use of inputs such as veterinary medicines and agro-chemicals and poor standards of management and hygiene at food processing establishments as well as slaughter house and live bird markets (LBMs) are increasing day by day. Till now, quantity of formal meat processing is insignificant (not more than 5%).

A significant turning point for the DLS has been the considerable investment which has been made to strengthen veterinary diagnostic laboratory services, especially with the recent construction of the Quality Control (QC) laboratory alongside the Fisheries QC laboratory at Savar under the same administrative Ministry.

In spite of a serious shortage of manpower, the DLS has within its ranks a large number of well qualified and experienced veterinarians who are able and highly motivated to take on the challenges of establishing a comprehensive food safety regulatory service. This workforce can form the backbone of an emerging regulatory framework as it is put in place. There already exists sufficient laboratory diagnostic and analytical capacity at the national level to satisfy the required safety and quality controls needed to ensure the safety of animal products to be placed on the domestic market as well as for export certification.

What is now needed is a strategically planned roadmap to progressively introduce the regulatory systems to support the processes of ensuring food safety from the farm level along the livestock value chains up to food processing establishments (slaughterhouse, milk processing, meat, milk and egg products etc.) and through to distribution and retail outlets. This process must necessarily involve the engagement of all the key stakeholders to come together and work collectively under the umbrella of the Bangladesh Food Safety Authority (BFSA).

This Report identifies the more important gaps that need to be addressed in order to make the first steps along that path. Whilst many areas of the veterinary legislation have been updated in the recent past, there is nevertheless the need to thoroughly review and revise the primary and secondary legislation relating specifically to the food safety of animal products in order to clearly define the respective roles and responsibilities of the various Competent Authorities involved in ensuring food safety. High priority should therefore be given to a revision of the Livestock Policy in order to place a greater emphasis on the importance of the regulatory roles and responsibilities of the Veterinary Services.

BACKGROUND AND CONTEXT

1. Background

This Report represents the first deliverable to be provided by the Principal Specialist in Food Safety (Livestock Value Chain) and addresses activity 1.1.2 of the Inception Report. The Report comprises an analysis of changes which have taken place relating to the quality of veterinary services in relation to food safety of products of animal origin (PoAO) during the last five years.

The Report contributes towards the achievement of the sub-component C2, the second of the two components of UNIDO's contribution to the World Bank funded Livestock and Dairy Development Project (LDDP), which aims to target each of the important livestock value chains in the country, viz:

- A. Dairy, from small and medium scale mixed crop-livestock systems;
- B. Poultry, including improved scavenging and semi-scavenging systems, broiler/egg production and commercial broiler and egg production systems; and
- C. Red meat from small and mid-scale cattle and small ruminant production units.

The primary direct project beneficiaries have been identified as:

- i. 2,000,000 households engaged in small and medium scale livestock production;
- ii. 1,000 micro, small and medium enterprises (MSME), and service providers (2,000 DLS staff, and 5,000 private veterinarians and others);
- iii. 2,000,000 consumer households through consumer awareness;
- iv. youth, livestock support service institutions, including public livestock research and extension services, and NGOs.

The two components to which the UNIDO is making a contribution to the overall achievement of the of LDDP are:

- a. sub-component A2 on improved climate smart production practices by addressing the aspect of health in animal production
- b. sub-component C2 on food safety and public health by addressing food safety and quality assurance.

As a result, the interventions of UNIDO are being structured into the following two outputs, with the specific objective to improve the food safety system for the protection of public health systems along each of the main livestock value chains:

Output 1: Food assurance and public health systems designed along livestock value chains. This output will focus on:

- i. Gap analysis of existing legislation of food safety enforcement;
- ii. Legal amendments and drafts of regulations for stronger food safety enforcement in relevant value chains,

- iii. Baseline data on current level of food safety in relevant value chains,
- iv. Establishment of foods of animal origin inspection program, and
- v. Support to the establishment of quality assurance schemes (GAP, HACCP, ISO, CODEX).

Output 2: AMR surveillance and risk mitigation programme as well as surveillance and monitoring of microbial chemical and residue hazards are developed. This output will focus on:

- i. conceptual development of AMR surveillance system, monitoring of antimicrobial use and risk mitigation in animal and foods of animal origin, and
- ii. design of surveillance and monitoring programme on biological and chemical hazards in animals and foods of animal origin.
- iii. In liaison with the National Project Coordinator as well as national experts, conduct a gap assessment of veterinary services of the country against international best practices addressing overall public health and food safety requirements:

2. Context

2.1 The importance of the Livestock Sector in the Bangladesh economy

Livestock production is an integral component of the rural economy of Bangladesh, contributing 13.10% to the Agricultural GDP and 1.44% to the national GDP. Although the latter trend is in decline, this is occurring at the expense of a rapidly growing service sector, nevertheless, the rate of growth of the livestock economy stands at 3.8% for 2020/21 and is increasing steadily.

More than 20% of the population of Bangladesh are fully employed in the livestock industry and in excess of 50% are indirectly employed in activities related to the livestock sub-sector.

Currently there are estimated to be 24,540,000, Cattle, 1,500,000 buffalo, 3,679,000 sheep and 25,604,000 goats and 365,852,000 poultry being raised by livestock keepers. The livestock population has been growing steadily over the past twenty years. Bangladesh is self-sufficient in meat and eggs and has an exportable surplus for each of these livestock products. Milk self-sufficiency is well on the way with a growing trend in the level of dairy production.

2.2 Benchmarks and international best practices

The standards and benchmarks against which the Veterinary Services are being assessed are based on those embodied in Chapters 3.1, 3.2 and 3.4 of Volume I of the Terrestrial Animal Health Code¹ (World Organisation for Animal Health) (formerly OIE), the joint FAO/WHO Codex Alimentarius² and the FAO Guidelines for Strengthening National Food Control Systems³.

1 <https://www.oie.int/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online->

2 <https://www.fao.org/fao-who-codexalimentarius/en>

3 <https://www.fao.org/3/y8705e/y8705e00.htm>

One of the flagship programmes of the World Organisation for Animal Health to assist Member Countries to strengthen the quality of their Veterinary Services, the Performance of Veterinary Services (PVS) Pathway has been built on the understanding that for global and national health security, prevention is better than cure, and there has been a steady and growing realisation that targeting ‘risk at source’ in animal populations is a vital strategy in safeguarding the planet from risks from emerging zoonoses, neglected zoonoses and antimicrobial resistance (AMR). 75% of recently emerging infectious diseases affecting humans are of animal origin; and approximately 60% of all human pathogens are zoonotic.

In 2019 the WHO reviewed its ‘Blueprint’ list of diseases to prioritise in public health emergency contexts due to their epidemic potential. It is notable that all seven identified pathogens are zoonoses.

Aligned with this, the recent surge in emerging zoonoses like Ebola virus, novel coronaviruses like SARS, MERS, COVID-19, and zoonotic avian and human influenza, has increased awareness of the opportunity and critical need for a “One Health” approach. Furthermore, it should not be forgotten that neglected zoonoses such as rabies, brucellosis and bovine tuberculosis continue to have a devastating global impact on human health every day and are each best managed at their animal source.

Likewise, the risks associated with the safety of animal feeds and the misuse of veterinary medicines, antimicrobials, agricultural pesticides and insecticides in the production of crops used as animal feeds and for the prevention and treatment of animal diseases, leading to the presence of drug or chemical residues in food products of animal origin and antimicrobial resistance (AMR) can only be managed successfully when effective institutional and organisational management systems, including legislation, are in place.

For this purpose, the OIE, the FAO and the WHO have joined hands in developing a “One Health” approach towards the development of standards and guidelines to help Member Countries to ensure human health, animal health and environmental protection. The implementation of these standards relies on the close collaboration of all stakeholders having an interest or part to play along each of the livestock value chains from the “Farm to Fork”.

The majority of the risks associated with the food safety of PoAO are related to the occurrence of hazards (physical, biological and chemical, including radiation hazards) during:

- i. production of animals and animal products on the farm;
- ii. the transportation and management of animals from the farm to markets and then on to processing establishments;
- iii. the processing of PoAO at food processing establishments, and finally
- iv. the distribution and storage of PoAO at/to retail outlets and consumers.

It is therefore important that the standards that are developed to mitigate such risks should be enforced through clearly defined regulatory systems which identify which Competent Authority is responsible for the enforcement of which standards at each of the above points along each of the main livestock value chains.

3. Livestock Value Chains

The majority of livestock producers in Bangladesh are engaged in mixed smallholder enterprises growing crops and raising livestock for home consumption as well as for sale of any surplus products, usually locally, where access to services and inputs as well as marketing infrastructures are often very limited.

However, there is rapidly growing number of farmers, especially those living in peri-urban areas, who are now investing in semi-commercial and full-scale commercial enterprises, especially in the poultry industry. At the most advanced level commercial poultry producers have invested in state-of-the-art infrastructures for both production and in very few cases for processing poultry products.

Similarly, many farmers have also started to specialise in small to medium-scale dairy farming as well as raising cattle and small ruminants for meat production, in response to a growing demand for meat and milk. A very few large commercial dairy farms have also now been established.

Livestock and livestock products are marketed under a wide variety of informal and formal marketing systems.

The majority of poultry are sold live in “wet markets”, directly to consumers. Almost all are slaughtered in the market place by the seller.

Similarly, ninety percent of milk is sold either by the producer him/herself locally, to neighbouring households, or to local markets, or bought and sold by middlemen either locally or to larger markets at small towns, District municipalities, Divisional or capital cities. The remaining 10% of milk produced is being collected at milk collection centres and processed at large scale commercial enterprises established either as milk cooperatives or commercial milk processors, of which Milk Vita, owned by the Bangladesh Milk Producer’s Cooperative, Pran and Aarong have 80% of the market share for processed milk.

Most red meat consumed in Bangladesh is slaughtered on the side of the road at a basic slaughter slab set up adjacent to a small butcher’s shop situated in the local bazaars.

The main City Corporations, however, operate a number of old and poorly maintained slaughter facilities. The South City Corporation of Dhaka has recently demolished one such old slaughterhouse and replaced it with a modern slaughter facility, albeit requiring adjustments to the structures to enable it to function efficiently and in accordance with good food safety management practices. There are plans to build several more such modern facilities, but these will only touch the tip of the iceberg in terms of satisfying the demand for good quality, safe meat which is increasing rapidly as the purchasing power of a rapidly growing middle class of citizens is emerging.

The only fully commercial meat processing facility in Bangladesh, Bengal Meat, is accredited to the ISO 22000/2015 standard and is employing a Hazard Analysis and Critical Control Point (HACCP) plan. Bengal meat is thus able to export meat and meat products mainly to the Maldives and a few Gulf states such as Kuwait and the United Arab Emirates, etc.. According to the Bengal Meat management, the company is increasingly focussing on placing a variety of fresh meat cuts

and processed meat products on the domestic market, however it has experienced difficulty in competing with the locally slaughtered and butchered cuts of meat which are far cheaper to prepare and which are equally acceptable to most consumers who are largely unaware of any difference in safety or quality standards.

The transportation of animals to slaughter facilities or markets is carried out informally using a variety of vehicle types which are partially regulated through provisions made under the Animal Disease Act (2005) aimed at enforcing standards of cleanliness and hygiene and to regulate the length of transportations. As yet there is no inspectorate established or capacity within the DLS to enforce the provisions of the Animal Disease Act (2005) with relation to transportation of animals effectively, nor to enforce the provisions of the Animal Welfare Act (2019).

At the technical services and inputs end of the livestock value chains the DLS is the main service provider, having well established infrastructures at the central level in Dhaka, at 8 Divisional Livestock Offices, 63 District veterinary Hospitals, 492 Upazila Livestock Offices and Veterinary Hospitals and at 4554 (planned) Union livestock service sub-Centres.

Until recently, most of the staff deployed at DLS livestock centres have been primarily involved in the delivery of routine clinical services, conducting annual vaccination campaigns and providing artificial insemination and other extension services aimed at increasing production and productivity. More recently, a number of new posts have been created and appointments made at headquarters, divisional and district levels, in particular, in order to address some of the key regulatory functions, which have been neglected in the past, including the management of animal disease information (Epidemiology cell), border control (24 Quarantine stations including Border Inspection Posts) and emerging food safety issues, including the licensing and inspection of feed businesses, and the surveillance of drug residues and AMR. There is nevertheless the need for rehabilitation of some infrastructures especially at the District and Upazila levels of administration, throughout the country in order to ensure efficient delivery of services. In particular, it is recognised that there is a need to modernise information management systems to incorporate the adoption of web-based reporting and recording of data, through supply of software and hardware at critical hubs within each level of the DLS administration. Such information management systems should be built on the basis of integrating field animal disease, animal population and livestock producer data with laboratory diagnostic information for analysis to provide information for the purpose of undertaking risk analysis to allow science-based decision making. It is worth mentioning that some progress has taken place in this regard in the course of time. The newly introduced Bangladesh Animal Health Intelligence System (BAHIS) has been adopted in all 492 Upazilas and around 70% (n=344) are regularly transferring secondary data (clinical) to the Epidemiology Cell in the HQ on a daily basis.

Alongside the public sector livestock services there is a rapidly emerging demand for private veterinary services. It is reported that there are currently more than 5,000 veterinarians registered with the Bangladesh Veterinary Council (BVC). Many of these are now employed directly by commercial poultry and dairy farms. Of some concern is that there are also a large number of poorly supervised veterinary para-professionals, albeit most of whom have a technical qualification, (which is as yet not recognised by the BVC), who are also providing private clinical veterinary services, especially in peri-urban areas where there is a higher concentration of emerging semi-commercial livestock keepers who are looking for professional

veterinary services, often with little or no professional veterinary supervision. Furthermore, at present there is almost no enforcement by the Directorate General of Drug Administration (DGDA) of the legal requirements for the supply and use of “prescription only” medicines which are freely available on the open market, a situation which is undoubtedly contributing to the presence of veterinary drug residues in animal products destined for human consumption and the emergence of AMR in organisms associated with livestock production, especially in the poultry industry.

OBJECTIVES AND METHODOLOGY

1. Objectives

The current phase of the UNIDO contribution to the LDDP recorded in this Report has three main objectives.

Firstly, it is to provide a detailed overview and critical assessment of the current status of animal health and veterinary public health services relating specifically to the management of food safety of PoAO destined for human consumption along the main livestock value chains in Bangladesh.

Secondly, our aim is to evaluate the current mandates and practices of each of the Competent Authorities and other actors along the livestock value chains with a shared interest in food safety of PoAO against the standards and best practices embodied within the Sanitary and Phytosanitary (SPS) Agreement of the World Trade Organisation (WTO), OIE Terrestrial Animal Health Code, and the OIE Manual of Diagnostic Tests and Vaccines, the joint FAO/WHO Codex Alimentarius and the FAO Guidelines for Strengthening National Food Control Systems.

Thirdly, through engagement with the key stakeholders and livestock value chain actors we aim to gain consensus for the development of a plan to prioritise the actions necessary to gradually strengthen the existing organisational and institutional systems for the effective management of food safety of products of animal origin destined for human consumption throughout Bangladesh.

This situation analysis thus involves a detailed analysis of knowledge, attitudes and practices (KAP) along each of the animal product value chains which in one way or another affect the safety of animal products destined for human consumption. At each point along the value chains, the main risks associated with food safety will be identified and the current actions being taken to mitigate such risks are recorded. A comparison between risk analysis, existing risk management practices and desired outcomes will then help to identify where shortcomings in terms of risk management exist.

2. Methodology

This Report records the process of undertaking a Gap analysis of the performance of the DLS

and partner institutions involved with the management of food safety of PoAO along the main livestock value chains in Bangladesh.

The Gap analysis relies on a comparison of the situation as recorded in the Findings of the OIE PVS evaluation (2011) and the Gap Analysis (2015) as baseline information, and the situation today using the Recommendations made in each of those Reports, as the basis to determine what progress or changes have been made to improve the quality of the Veterinary Services in these areas of the veterinary domain over the past five years.

The PVS evaluation is divided into four Fundamental Components of the veterinary services:

- ✓ Pillar 1 – Human, Physical and Financial Resources
- ✓ Pillar 2 – Technical Authority and Capability
- ✓ Pillar 3 – Interaction with Stakeholders
- ✓ Pillar 4 – Access to Markets

Under each of these four pillars, 46 Critical Competencies (CC), are evaluated using five possible levels of advancement (LoA). The achievement of a higher level of advancement assumes that the Veterinary Services (VS) are complying with the preceding levels (e.g., the achievement of level 3 assumes compliance with levels 1 and 2 LoA criteria).

For each CC, the OIE provides PVS experts with suggested sources of verification, as a means of providing the evidence, based on the OIE's extensive experience with countries following the PVS pathway.

It should be noted here that the PVS tool in use at the time of the PVS Evaluation conducted in Bangladesh in 2011 was the 5th Edition, published in 2010 and based on 46 CC's. Since that time the PVS tool has undergone a series of refinements, with not only the descriptors for many CC's being amended but also the numbering of some CC's being changed and the descriptors for many of the Levels of Advancement (LoA) also being amended. The modifications primarily had two aims. Firstly, the need to more clearly categorise and define the Critical Competencies so that the PVS Tool became more user-friendly. And, secondly with the aim of ensuring that those with less familiarity in using the PVS Tool, that they would be able to start to make good use of it, such as, for instance, senior decision makers within the Veterinary Services at national level may, in the future, begin to use the PVS tool to undertake a PVS "self-evaluation" exercise. The current version (7th edition [2019]) of the PVS tool also improves coverage, with a clearer incorporation of some more contemporary veterinary issues relating to AMR, One Health and bio-threat reduction in addition to a number of issues of critical importance to the Veterinary Services such as; the implementation of standards, laboratory biosafety and biosecurity, disease outbreak investigation and tracing, risk analysis, livestock markets (domestic trade), and public private partnerships, including veterinary clinical services. Although all these issues were covered to some extent in previous editions, they are now more clearly highlighted and emphasized within the current version.

The current PVS tool thus now has 45 CC's, since some former CCs have been consolidated into parts A, B and C whilst others, related specifically to AMR, safety of animal feed and clinical

veterinary services, have now been added.

For the purposes of this Gap Analysis, the Food Safety Specialist has conducted a partial assessment of the LoA for the 32 selected CC's having a direct or indirect influence on the quality of veterinary services relating to the food safety of POAO. The Evaluation of LoA, based on the findings made during this mission, is given in a Table in Annex 6 of this Report.

The assessment of the status of the veterinary services related specifically to the management of food safety of PoAO also includes a thorough review of a number of reference documents provided to the Team of Experts during the early phase of this project from November 2021 to January 2022 (Listed in Annex 5).

During this phase of the project (November 2021 to January 2022) the Food Safety Specialist, working remotely in collaboration with the national team of UNIDO experts, reviewed all of the available English versions of the relevant legislation as well as the other reference documents gathered by the national team of experts. The team then developed a series of tools to be used to measure progress and change in the quality of the veterinary services. The first of these tools was a "Gap Analysis Matrix" (see Annex 4) which identifies the main findings and Recommendations recorded under selected CC's of the OIE PVS evaluation Report (2011) and the OIE Gap Analysis Mission Report (2015). On the basis of the Recommendations, a Questionnaire was then developed to be answered by senior decision makers within the DLS, in order to verify measurement of the proposed changes to the organisational structure of the DLS, the numbers of personnel to be deployed to perform regulatory functions and other improvements to gradually align the quality of service delivery to the OIE standards. The Questionnaire and Answers provided by the DLS can be found in Annex 5.

The Food Safety Specialist then undertook a field mission to Dhaka from 17th to 27th January 2022. During this mission the Specialist visited several of the more important institutions managed by the DLS as well as other partner institutions and stakeholders (Itinerary of field mission provided in Annex 2). At each of these visits key informant interviews were held and visual observations were made. On the second day of the field mission (18th January) the Specialist spent a half day at a meeting with approximately 24 senior officers of the DLS in order to provide an overview of the above-mentioned Gap Analysis Matrix and Questionnaire. The participants at this meeting were divided into working groups, each of which was tasked with providing answers to a selection of questions allocated to each group on the basis of their particular areas of responsibility. A list of all key persons met during the Field Mission, at the meeting with senior decision makers of the DLS held on 18th January 2022 is given in Annex 3.

The completed answers to the Questionnaire were all returned to the Specialist by the 31/01/22 and the responses are now consolidated into a single document (see Annex 5) and are described in the Chapter 4 of this Report, entitled Findings and Recommendations.

Finally, at the end of the field mission, a 2-day Workshop, at which approximately 35 stakeholders were invited to participate, was held on 26th and 27th January 2022. The Objectives for this Workshop were:

- **WORKSHOP OBJECTIVE 1** – Verify baseline and preliminary findings of change / progress made in relation to food safety management made since 2011/2015.

- **WORKSHOP OBJECTIVE 2** – Present recommendations based on justifications and best practices according to OIE and CODEX standards (Terrestrial Animal Health Code (Chapters 3.1, 3.2 and 3.4), Codex Alimentarius and Codex Food Safety Guidelines).
- **WORKSHOP OBJECTIVE 3** – Engage with and obtain consensus of stakeholders on desired outcomes for food safety of animal products.

A Summary of the Workshop Methodology, Findings and Participants Recommendations is given in Annex 10. The two powerpoint presentations prepared by the Principal Food Safety Specialist which were delivered by himself (Powerpoint 1) in provided in Annex 11) and that delivered by Dr Mehedi Hossain (Powerpoint 2 in found in Annex 12).

GAP ANALYSIS KEY FINDINGS

The key findings and recommendations recorded here are divided under the four pillars corresponding to the Fundamental Components of the PVS Evaluation Tool, which as mentioned above, was used as the basis for developing a framework for measuring change in capacity of the DLS and partner institutions to undertake their respective roles and responsibilities in relation to the management of food safety of PoAO.

1. Pillar 1 - Human, Physical and Financial Resources

1.1 Organisational structures and Institutions, Human resources –DLS

OIE PVS Evaluation Critical Competencies (PVS tool 2019) - 1A, I-1B, Professional staffing of the Veterinary Services (Veterinarians & veterinary paraprofessionals);

I-2 A & I-2 B Competencies of (A) Veterinarians and (B) Veterinary para-professionals;

I-3 - Continuing Education; I-4 – Technical Independence; 1-11 (PVS 2011) Stability of structures and sustainability of policies; I-5 Planning, sustainability and management of policies and programmes (PVS tool 2019); I-6 A Internal coordination, I-6 B External coordination; I-8 Operational funding;

The DLS, within the Ministry of Fisheries and Livestock (MoFL), is the principal organisation with responsibility for the delivery of services to livestock farmers and for ensuring animal health, welfare and veterinary public health, including the safety of products of animal origin (PoAO) destined for human consumption. Alongside the DLS, there are a number of other organisations under separate Ministries, each referred to below, which have a legal mandate to perform some functions which in one way or another contribute to ensuring food safety of PoAO.

At the time of the OIE PVS evaluation and Gap Analysis exercises conducted in 2011 and 2015, respectively it was recorded that the organisational structure of the DLS did not reflect that of an institution which could perform all of the essential services or core functions of a competent authority primarily responsible for the regulation of animal health, welfare and veterinary public health, including the food safety of PoAO, since, apart from an Animal

Health section with a single post within the headquarters structure, there were no actual Departments or Divisions or sub-divisions identified within the D S structure which would be responsible for most of these functions. The few regulatory functions at that time were being performed, in addition to their many other duties, by veterinarians and veterinary technicians, mainly appointed under the Director of Administration and Animal Health, the Director of Extension and the Director of Research, Training and Evaluation and deployed at Divisional, District and Upazila levels. For the most part, these personnel were primarily employed for the purpose of providing routine clinical and extension services, artificial insemination, conducting vaccination campaigns and providing some diagnostic laboratory services at the Field Disease Investigation Laboratories (FDILs). Although there existed a “Veterinary Public Health Section” under the Director of Research, Training and Evaluation, a Principal Scientific Officer (PSO), three Senior Scientific Officers (SSO) and four Scientific Officers (SO) were appointed within this section at the time of the PVS and Gap Analysis missions (2011/2015) (Annex 7a – DLS Organogram 2011). Today, there are two Principal Scientific Officers of Deputy Director level and one Senior Scientific Officer and six Scientific Officers in the current organogram.

During the 1990’s a rapid commercialisation of the livestock sector, especially in the poultry industry started to take place. At that time the total manpower of the DLS was 8,679 and even at that time it was felt to be totally insufficient to cover the needs of the DLS to provide effective animal health and production services down to the village level. Accordingly, a proposal was made to increase the total manpower of the to 27,565. Unfortunately, largely for fiscal and administrative / policy reasons this proposed increase in manpower has not been possible.

Since 2015 very significant progress has been made and a number of new sections and positions have now been added to the DLS organogram at the headquarters and at the Divisional, District, Upazila and Union levels. At the headquarters there have now been established three new sections and a state-of-the-art veterinary investigation laboratory, each of which can play an important role in strengthening the management of food safety of PoAO in the future. These include a Legislation, Registration and Certification Section, an Information and IT Section, an Epidemiology Unit, and the Quality Control (QC) Laboratory.

At the level of the eight Divisional Livestock Offices, two important new staff positions have been added including Deputy Chief Epidemiologist and Deputy Director, Veterinary Public Health, thus strengthening the capacity of the DLS to communicate animal disease information and to coordinate the management of food safety and zoonotic disease control activities between headquarters and the 64 Districts, down to Upazila and Union levels.

- At the District level two offices (Artificial insemination and District Livestock Office) have been provided with positions of Theriogenologist (64) and District Training Officer (64) to strengthen capacity to improve animal breeding and Training capacity.

In addition, twenty-four new land, sea and airport Quarantine Stations, including Border Inspection Posts, have been established and staffed with Veterinary Pathologists (24), Laboratory technicians (24) and additional lay staff.

Furthermore, 3 new Field Disease Investigation Laboratories (FDIL) and 2 (+ an additional 4-5 planned) new Para-professional training institutes and, most importantly, 4,554 Union Livestock Service Centres have been added to the DLS field services, below the Upazila level, in order to allow animal health and other services to reach the more distant rural

farming communities. To date, in addition to the 2000 Livestock Assistants / Livestock Field Assistants deployed at the Upazila level 2,017 Veterinary Field Assistants have so far been recruited to man these Service Centres, providing an opportunity to extend good animal husbandry practices (GAHP) at the smallholder livestock producer level, throughout Bangladesh.

In 2020 a revised organogram was approved with a total manpower of 13,052 positions.

The former Organogram of the DLS at the time of the PVS evaluation of 2011 and the current Organogram can be found in Annexes 7a and 7b.

The Table provided in Annex 8 records the changes in structure of the DLS indicating the new sections and staff positions added to the DLS structure since 2015.

However, although the majority of these new appointments (2,017/4,554) have been made to fill positions at the Union council level, many are assigned to perform coordination and regulatory functions at the Upazila, District, Division and Headquarters levels. These new appointments will help to strengthen the capacity of the DLS to plan and manage the implementation of many of its core regulatory functions as and when appropriate training has been provided.

Apart from an undefined number of veterinarians provided on deputation from the DLS to City Corporations and, in some cases municipal authorities, to perform food safety inspection duties including ante- and post-mortem inspections at some of the larger slaughter facilities and the officers appointed specifically for the purpose of border control, export certification and laboratory analysts, no officers have been appointed to carry out regulatory functions specifically related to food safety of PoAO.

No staff of the DLS are appointed with a Job Description relating to the food safety of PoAO.

The technical independence of the veterinary authorities may be compromised to a certain extent due to decisions being made by administrative authorities without necessarily having a complete understanding of the scientific implications of such decisions.

The City Corporations in Dhaka City (north and south) have recently amended their organogram to include positions for a total of 10 veterinarians and 20 veterinary slaughter inspectors. However, it is recognised that this small cadre of inspectors cannot possibly inspect and certify more than a very small proportion of the meat being processed and consumed by the estimated 11 million population of Dhaka city. It is estimated that there are in excess of several hundred small butcher enterprises located in the small bazaars throughout the City of Dhaka, most of which are only inspected on an irregular basis. The same situation exists in the rest of the country. At the Divisional and Upazila levels the DLS Veterinary Officers and technicians are expected to “multi-task” between providing extension and clinical services as well as performing some meat inspection duties and other regulatory functions, for instance, the licensing and inspection of feed businesses, in their respective jurisdictions.

In general, the internal coordination of activities is well managed along a direct chain of command between the central headquarters to the field via the 8 Divisional Livestock Offices and the 64 District Livestock offices. However, external coordination of activities between the DLS and other Ministries and competent authorities is extremely weak, especially at the administrative level. At the technical level it was found that veterinary colleagues do make

some effort to coordinate activities and communicate with one another. The reasons for a lack of coordination at the administrative level are difficult to ascertain but are partly due to the lack of a legislative framework which requires such coordination to take place, but also due to the fact that food safety regulatory functions are only now emerging as new areas of activity requiring coordination in the deployment of increased human resources and management of infrastructural strengthening.

Senior decision makers in the DLS are aware that the DLS has a responsibility to implement its regulatory mandates embodied in the Animal Health Act (2005), the Animal Slaughter and Quality Control Act (2011), the Animal Quarantine Act (2005), the Fish and Animal Feed Act (2011) and the Animal Welfare Act (2019) and their associated Rules and Regulations. It is therefore widely acknowledged that there is an urgent need to recruit, train and appoint a large new cadre of personnel specifically dedicated to performing each of its regulatory mandates under those Laws, especially those related directly or indirectly to ensuring compliance with standards for the food safety of PoAO at all levels within the administration of the DLS.

In spite of the progress made especially in strengthening the lower echelons of the field veterinary services, there is still an urgent need to revisit the structural organisation of the DLS in order to create a structure through which staff appointments dedicated to the performance of regulatory functions can be made through an effective chain of command from the headquarters at the Directorate level through Divisional, District and Upazila levels in the administration.

It is now strongly recommended that the DLS should undertake a thorough manpower needs assessment to determine how many personnel and what competencies would be required to gradually fill the gaps in performance of each of its regulatory functions.

1.2 Other Competent Authorities with shared responsibility for management of food safety of PoAO

(1) **The Bangladesh Food Safety Authority (BFSA)**, has only recently been established within the Ministry of Food (MoF) under the authority of the Food Safety Act (2013). As yet the BFSA has not really started to fully engage with implementation of all of its responsibilities embodied in the Act, since it is still in the process of recruiting its full complement of staff and inspectors.

The Act establishes a high level Council, chaired by the Minister in the MoF, known as the National Food Safety Management Advisory Council, This Council is made up of altogether 28 members including the Secretaries of thirteen of the Ministries which have a direct or indirect interest in food safety and food security, as well as the Chairpersons and Director Generals of twelve national institutions which can provide technical support to the Authority, amongst one or two other members. The Council is expected to meet twice a year and its mandate is given as being “responsible for formulating food policies and for development of food safety management plans and giving advice on food safety management to the Authority. The vast majority of members of the Council are Administrators rather than having any specific technical” expertise.

The Act then establishes the Authority itself , and under Section 13 gives the Authority the power to:

- ✓ “regulate and monitor the activities related to manufacture, import, processing, storage, distribution and sale of food so as to ensure access to safe food through exercise of appropriate scientific methods, and
- ✓ to coordinate the activities of all the organizations concerned with food safety coordination management.”

Additional powers defining the roles and responsibilities of the BFSA include, amongst many others:

- ✓ to render necessary support to the concerned authorities or organizations in updating and upgrading the food standards or guidelines to the highest level of safety done by the same under existing laws; and
- ✓ to specify food standards and formulate guidelines, where no quality and safety parameter or guideline of such food is determined under existing laws;

In addition, the BFSA is empowered to make regulations to enable the enforcement of all of its powers established under Section 13 of the Act.

Below the Council there is also established a Central Food Safety Management Coordination Committee, having 28 members representing the technical interests of all of the institutions with direct or indirect interest in food safety management and with the responsibility “to ensure necessary institutional support from relevant authorities or organizations for successful performance of the duties and functions assigned to the Authority under this Act.”

During a visit to the BFSA it was learnt that this Coordination Committee has started to engage with some of the member institutions, including the Director Generals responsible for Fish and Livestock within the MoFL, but as yet there has been no formal coordination meeting held.

The Authority shall be comprised of five Divisions, each of which shall be headed by a Director as follows:

- (a) Food Safety Surveillance and Adjudication Affairs;
- (b) Food Safety Laboratory Network Coordination Affairs;
- (c) Food Safety Standardization Coordination Affairs;
- (d) Consumers’ Concerns, Food Safety System and Risk Management; and
- (e) Establishment, Finance, Human Resource and Corporate Affairs of the BFSA.

The Act repeals the Pure Foods Ordinance (1959), however, under section 64, it re-establishes the Pure Food Court, which is responsible for hearing and adjudicating over cases of non-conformity with the provisions of the Act. For this purpose, the Authority is to be staffed with inspectors who, working alongside those of other institutions will help to enforce food safety standards.

Under the authority of the Food Safety Act, the BFSA has promulgated a number of Rules including:

- (a) Control of Trans Fatty Acid Rules (2021)

- (b) Food Traders Obligation Rules (2020)
- (c) Food Touching Materials Rules (2019)
- (d) Food Packing Labelling Rules (2017)
- (e) Food Additives Rules (2017)
- (f) Food Safety (Contaminants, Toxins and Harmful Residues Regulations (2017)
- (g) Food Sampling and Testing Rules (2017)
- (h) Food Safety – Food seizure and Penalties Rules (2014)

(2) **The Bangladesh Livestock Research Institute (BLRI)** is established within the MoFL, but reports directly to the Secretary for Livestock. The BLRI has good laboratory rooms and equipment dedicated to performing diagnostic tests and assays and acting as the national reference laboratory for Highly Pathogenic Avian Influenza (HPAI) and Peste des Petits Ruminants (PPR). In addition, some activities being undertaken by the BLRI in relation to surveillance of AMR are being carried out with financial/technical support of FAO.

(3) **The Bangladesh Standards Testing Institute (BSTI)** established under authority of Bangladesh Standards and Testing Institution Act (2003). The BSTI is mandated, amongst other responsibilities, to provide laboratory services to support each of its mandates for setting and enforcing compliance with standards of metrology, quality and safety for materials, commodities, structures and practices. The BSTI carries out testing of PROCESSED products only, so it would seem that it does not have overlapping responsibilities for enforcing food safety standards through sampling and testing of FRESH animal products which fall within the mandate of the DLS Laboratories, although it does have the authority to set the standards which would then be implemented and enforced by other Competent Authorities. The BSTI holds the Codex focal point of Bangladesh.

(4) **City Corporations, municipal corporations** under the authority of the City Corporation Act (2009) have the authority to establish slaughter facilities and abattoirs and ensure that good hygiene practices and ante- and post-mortem inspection of meat are carried out at its owned facilities as well as at all privately operated retail outlets within their jurisdictions. As mentioned previously in this Report, the City and Municipal Corporations rely on either employing their own veterinarians or make use of DLS veterinary officers provided on deputation from the DLS, for the purpose of conducting ante- and post-mortem inspections. There is however very poor level of coordination and communication between the City Corporations and the DLS with no reporting of the findings of ante- and post-mortem inspections being made to the DLS. Thus, much valuable epidemiological information to the DLS is being lost. The City Corporations do not have sufficient numbers of inspectors to cover the required inspection of more than a very small number of the many hundreds of private small-scale slaughter / butchery facilities found in the bazaars of all their jurisdictions. Furthermore, as recorded in the PVS Evaluation Report (2011), there would appear to be a conflict of interests in the fact that the City Corporations, as the owners of these establishments also conduct regulatory inspections on their own premises and products.

(5) **The Directorate General of Drug Administration (DGDA)** – established within the Ministry of Health and Family Welfare is responsible for the regulation of the importation, registration, distribution, sale and use of Veterinary medicines. At present there is only one veterinarian employed by the DLS who represents the interests of the DLS in terms of

participating in making regulatory decisions of the DGDA. The DGDA has however employed 10 recent graduates at the entry level to perform activities related to regulation of veterinary medicines. Applications for the approval of Veterinary Drugs are submitted to the DGDA who then take advice from the DLS before registration of any newly imported veterinary medicines. However, responsibility for the approval of veterinary diagnostic resources including reagents and chemicals rests with Bangladesh Standards and Testing Institute (BSTI), within the Ministry of Industries.

It has been reported that the DGDA has been active in enforcing the illegal sale of unregistered veterinary medicines, but as yet it has not begun to enforce rules related to the use of “prescription only” medicines, which remain freely available to members of the public, “over the counter”.

(6) **Bangladesh Accreditation Board (BAB)** – established under the authority of the Bangladesh Accreditation Act (2006) is an autonomous body alongside the Ministry of Industries having responsibility for the accreditation of all laboratories performing food safety testing and analyses for official purposes and export certification.

1.3 Professional competencies of veterinarians and veterinary para-professionals, Human resources

PVS Evaluation tool (2019) CC's I-2 A & B, I-3

The capacity of veterinary and livestock officers in terms of their training and skills, in the most part, has been found to be sufficient for the effective performance of each type of function currently being carried out by the DLS. During this mission it has been found that many DLS officers performing advanced technical functions, especially those responsible for performing laboratory tests and analyses and managing Quality Assurance (QA) management systems in the key national veterinary diagnostic laboratories have been provided with a considerable amount of additional Continuing Education (CE) training courses. Most of these courses have been offered through projects associated with providing assistance with the rehabilitation or construction of new infrastructures and the procurement and commissioning of new laboratory instruments. Several training courses have been given to laboratory personnel responsible for performing diagnostic tests and assays related to laboratory confirmation of conformity with food safety standards and certification of products of animal origin through the detection of physical, biological and chemical residues as well as for the determination of the existence of antimicrobial resistance (AMR) in microorganisms associated with livestock production.

It has not been possible during this mission to make an assessment of the capability of personnel responsible for performing functions related to import and export of animals and animal products.

In the first instance, there should be established a Team of experts at DLS headquarters who are capable of undertaking Qualitative Import Risk Analysis in accordance with the Guidelines provided in Chapter 2.1 of the Terrestrial Animal Health Code. The Guidelines provided by the OIE do not specify the methodology for undertaking Risk Assessment itself. This is a complex procedure and training will almost certainly be needed.

In spite of the training referred to above, there remain some important gaps in the

knowledge and skills for carrying out core functions related to ensuring the food safety of PoAO amongst the various value chain actors. One of the most important gaps in capacity within the DLS and other CA's with an interest in food safety has been found in the understanding of the role of and conducting Risk Analysis as a tool for providing risk management decisions for the application of quality management systems, including Good Animal Husbandry Practices (GAHP), Good Management Practices (GMP), Good Laboratory Practices (GLP) and the Hazard Analysis and Critical Control Point (HACCP) management system used in food processing establishments, as well as in all areas of disease surveillance, prevention and control, livestock production, processing of livestock products, the definition of sanitary measures to be imposed on importation of live animals, animal products and other high risk commodities.

The capacity, in terms of their knowledge and skills of the various categories of Livestock Technicians, referred to as Veterinary para-professionals (VPPs) in OIE definitions, is also generally sufficient for the performance of the tasks currently assigned to this cadre of service provider.

In the future as more VPPs are designated to perform certain regulatory functions under professional veterinary supervision there will be a need to review and revise training curricula to reflect the Day One competencies of VPPs. To this end the DLS is recommended to refer to the recently published OIE Competency Guidelines for Veterinary Para-professionals and OIE Curricula Guidelines for Veterinary Para-professionals found on the link below⁴.

Veterinary Education is currently being provided by eleven Veterinary Faculties at Universities all over Bangladesh. Each of these Universities falls under the legally mandated accreditation provided by the Bangladesh Veterinary Council (BVC) under provisions within the Veterinary Council Act (1985). There are two different degree courses recognised by the BVC allowing graduates to be registered as a "veterinary practitioner", namely a combined Bachelor's degree in Animal Health and Production (B.Sc. Vet. Science and Animal Husbandry) and a degree named as Doctor of Veterinary Medicine (DVM). As yet there is incomplete harmonisation of the veterinary degree courses being offered in Bangladesh and these are also not yet fully aligned with the OIE Recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') and the OIE Guidelines on Veterinary Education Core Curriculum.

There are approximately 5,000 veterinarians registered with the BVC, many of whom are now employed within the private sector.

Veterinary technicians are trained at eight Training Institutes administered by the DLS using a standardised curriculum developed by the DLS and the Technical Education Board leading to a 4-year Diploma in Animal Health and Production. Although the Veterinary Council Act of 1986 has recently been updated to include provisions for the registration and regulation of the practice of veterinary acts by veterinary para-professionals (VPPs), as yet no Rules have been promulgated under that provision and no VPPs have as yet been registered. There is thus no accurate record of the number of VPPs currently operating in Bangladesh.

4 <https://www.oie.int/en/what-we-offer/improving-veterinary-services/pvs-pathway/targeted-support/veterinary-and-veterinary-paraprofessional-education/>

1.4 Physical Resources and Financial Resources

PVS Evaluation tool (2019) CC's 1-7 and I-8

Little information is available concerning the actual budget allocated specifically towards provision of services or performance of regulatory functions related to food safety. The majority of financial costs associated with the pilot activities being undertaken in relation to active surveillance of PoAO for the purpose of confirming compliance with food safety standards of PoAO is being performed under projects using funding from a variety of donor organisations, including mainly the Fleming Fund and the Food and Agriculture Organisation (FAO).

The capacity for planning of actions to ensure food safety is weak, although it is one of the key areas of the Annual Performance Agreement (APA) of the DLS. However, there is as yet no specific budget allocation for any of the core regulatory functions related to the food safety of PoAO.

The current insufficient number of personnel employed and facilitated with the necessary tools and mobility to perform core functions related to ensuring compliance with food safety standards is largely due to the fact that there is a serious shortage of funding available through the regular government revenue budget. It can be mentioned here, however, that a few positions have been created in the new organogram in this field.

2. Technical Authority and capability for food safety management

2.1 Technical authority

The Technical authority for performance of regulatory functions related to food safety of animal products along each of the livestock value chains is held by a number of different Competent Authorities (CA's). Table 1 below, identifies the most important CA's, the power / authority under their mandate, the legal texts that provide that authority and it gives an explanation of potential overlaps / issues and gaps as understood by the international Team of Experts to date. It is essential that the international Team of experts is now provided with accurate English translations of each key piece of legislation, including Rules, regulations and any Guidelines which have a legal basis in higher legislation, in order to gain a full understanding of the existing legal mandates and the provisions within the Rules which explain how they are to be administered.

Table 1 Competent Authorities, mandated powers/authority, Legal texts, Notes overlaps/gaps

Competent Authority	Description of power authority	Legal texts	Notes/potential overlaps/Gaps
DLS	Registration of Livestock producers Enforcement of GAHP standards/practices	Animal Disease Act (2005) Regulations	Do the Regulations attempt to define different types of livestock producer premises based on size/number of animals held? Currently farms/establishments are categorized and registered on the basis of Farm/flock size (A, B & C) including other factors (e.g. No objection Certificate (NOC) from Department of Environment). Are there Regulations to define GAHP standards/practices?
DLS	Licensing/ registration of animal transporters Good Hygiene practices Animal Welfare standards (refer to OIE TAHC Chapter 7)	Animal Disease Act (2005) Animal Welfare Act (2019)	No requirement for licensing of animal transporters Currently provisions exist to ensure Disinfection of vehicles used to transport animals and to set standards limiting the duration of a journey/requirement to offload and provide feed and water No Regulations under Animal Welfare Act to set standards for space allocation of animals and to protect animals from extreme climatic conditions during journeys
DLS	Disease surveillance, prevention and control Disease detection, early warning and response	Animal Disease Act (2005) Regulations??	Important for the detection of Zoonotic diseases which may be transmitted to humans working along the livestock value chain and consumers of animal products. Are there any provisions in the Act/Regulations to ensure that, in the event of the report of a suspected case or outbreak of a notifiable animal disease the DLS must (a) always undertake an outbreak investigation and (b) attempt to obtain a laboratory confirmation of the suspected occurrence of a notifiable animal disease ?
DLS	Recording and reporting of notifiable animal disease occurrences. Reporting of notifiable disease occurrences to OIE in accordance with OIE standards (mandatory requirement)	Animal Disease Act (2005)	Are there provisions in the Act or Regulations which require that the DLS establishes a disease surveillance system (active and passive)? Are there provisions in the ACT/Regulations which require the DLS to establish an integrated animal disease information management system ? Such an information management system should ideally be linked to the database for registration of livestock producers as well as database(s) which record the laboratory confirmation of a suspected notifiable disease event and ultimately to a database recording animal identification information Does the current list of “Notifiable diseases” include all zoonotic diseases which occur in Bangladesh as well as other zoonoses which present a risk through entry via imported animals or animal products?
DLS	Animal Identification, movement control and traceability	Disease Control Act (2005) Regulations	Are there provisions in the Act giving the DLS the power to set standards for and establishment of a “National Animal Identification System” to be introduced as well as to specify standards for identification devices and the requirements of owners of livestock to have animals identified and requirements for owners of animals to maintain accurate animal health records of identified animals?
DLS	Licensing/registration of abattoirs, slaughter facilities, retail outlets	Animal Slaughter and Meat Quality Control Act and Regulation (2011)	The City Corporation believes that they also have this authority although the Local Government (City Corporation) Act implies that the CC has authority only to establish slaughter facilities within their respective jurisdictions, but does not appear to provide the CC with the authority for hygiene or meat inspection.

Competent Authority	Description of power authority	Legal texts	Notes/potential overlaps/Gaps
DLS	TRACEABILITY of animal (MEAT) products - Recording of identity of animals received lairage of slaughter facility Application of a traceability system within abattoirs/ slaughter facilities to identify organs and parts of a carcass back to the animal of origin/locality or farm of origin	Unknown	It is important to gradually establish traceability of animals and animal products, which is needed for CONTROL purposes when a veterinary drug residue or any other chemical or biological contaminant is detected ABOVE the MRL for that product
DLS/CCs	Ante- and post-mortem inspection at all abattoirs and slaughter facilities Reporting of ante- and post-mortem findings to DLS	Animal Slaughter and Meat Quality Act (2011) and Rules (2021)	The AS&MQA gives the DLS authority to delegate power to undertake ante- and post-mortem inspection to the City Corporations. In practice the CC and some Municipalities are doing some meat inspection at existing premises using either veterinarians employed directly by themselves or DLS VO's on "deputation". The DLS is conducting ante- and post-mortem inspection at some slaughter facilities located at Divisional/District/Upazila levels, but the inspectors are "multi-tasking" and are not always available for meat inspection duties. There is currently NO reporting of ante- and post-mortem findings to the DLS Epidemiology Cell
Bangladesh Food Safety Authority/ Ministry of Food	Food Safety Act (2013) Food Safety Rules (multiple) (2015 -2021)	Acts as a coordination body providing support services to other institutions already enforcing food safety standards. Promulgates standards which have not yet been made by partner institutions	The BFSA has only recently been established and has not yet recruited a full complement of staff. Some care needs to be taken to avoid unnecessary duplication of effort with other institutions. The BFSA needs to focus on its role as a COORDINATION body to ensure that the roles and responsibilities of each institution involved in food safety are clearly demarcated in order to avoid duplication of effort and to ensure efficient and effective use of scarce manpower and other resources available for the management of food safety programmes.
Ministry of Health and Family Welfare/ Directorate General of Drug Administration	Registration, importation, manufacture distribution sale and use of veterinary medicines National Drug Policies (2005 and 2016)	Drugs Act Drug Act (1940, Drug Control Ordinance (1982) & Drug Rules (1945 and 1946)	This entity is not mentioned in the Drug Control Act of 1982 The DGDA was created through strengthening of the former Drug Regulatory Administration under the National Drug Policy (2005) There are no rules or regulations relating to Prescription Only veterinary medicines or respect for withdrawal periods of veterinary medicines.
Ministry of Commerce	Regulation of Import and Export of animals and animal products	Import Policy 2015-2018 Importation and Export Policy 2021-24	MoC refers to MoFL/DLS for policy, coordination and authorisation for health/quality certification and other issues of import/export of animals and animal products.

Competent Authority	Description of power authority	Legal texts	Notes/potential overlaps/Gaps
Ministry of Industries/ Bangladesh Standards and Testing Institute	Bangladesh Standards and Testing Institution Act(2018)	Sets standards for metrology and safety and quality for all food products	Does not undertake testing of fresh animal products destined for human consumption nor animal feeds. There is unlikely to be any overlap in standard setting or testing activities with those of the DLS
Bangladesh Accreditation Board (BAB)	Bangladesh Accreditation Act (2006)	Carries out accreditation of all laboratories involved in food safety testing for official purposes and for export certification.	The BAB should now become affiliated with international accreditation bodies in order that its own accreditation of Bangladesh institutions is internationally recognised especially where export certification of fish and animal products destined for human consumption are concerned.

2.2 Veterinary Laboratory services - Technical Capability

PVS tool (2019) CC's II-1 A, II-1 B, II-1 C

The DLS, BSTI and the BLRI have sufficient capacity to undertake all of the core functions related to tests and analyses relating to certification of PoAO for both the domestic as well as the export markets for live animals, fresh and processed animal products.

In particular the recently built DLS QC Laboratory at Savar is a state-of-the-art diagnostic facility which is fully equipped and managed in accordance with international standards in terms of its construction, internal management and waste disposal systems. Furthermore, the laboratory is equipped with a solar powered electrical system which is capable of providing 50% of total required power consumption during full operation. At other times the lab sells back excess power to the national grid.

The QC Lab has been accredited by the Bangladesh Accreditation Board (BAB) as well as being ISO/IEC 17025 accredited. At present most of the services provided by this laboratory are in response to the demand for quality testing of animal feeds from private livestock feed business operators and commercial livestock (mainly poultry) production clients. The laboratory is equipped with HPLC, MC, MS, MALDI, ToF and AAS for estimation of a wide range of veterinary medicines chemicals, toxins and heavy metals. The full complement of staff is well trained, many having attended advanced laboratory training courses provided both within the laboratory on the equipment installed and at a variety of overseas laboratories.

There is as yet no national Residue Monitoring Plan in place and there is no routine active surveillance programme in place for detection of residues in PoAO nor for the surveillance of AMR. A number of pilot projects are however being undertaken by several different government institutions with external assistance. A number of studies on both prevalence of residues and AMR are being conducted by some DLS laboratories, for instance the CDIL as the central reference laboratory and two field laboratories, namely FDIL, Joypurhat and FDIL, Feni acting as sentinel laboratories along with the BLRI.

Furthermore, the Fleming Fund, administered by the non-governmental organisation (NGO) Development Alternatives International (DAI), is providing assistance for implementing studies on both prevalence of residues as well as AMR at the BLRI. DAI is also providing technical training and is involved in creating awareness through publication of Newsletters and other media. However, the formal coordination of these pilot projects seems not

sufficient enough, leading to potential repetition of activities and inefficient utilization of scarce resources.

The Central Diagnostic and Investigation Laboratory (CDIL) is established in Dhaka and has the role of supporting clinical veterinary services as well as conducting outbreak investigations to provide laboratory confirmation of the occurrence of suspected cases of notifiable microbial animal diseases. The laboratory is well equipped and staffed and is currently undergoing rehabilitation under funding provided by the Fleming Foundation. Centrally there are other labs (Endoparasite, Ectoparasite, Pathology and Toxicology) also.

At the Divisional/District level there are now 10 Field Diagnostic and Investigation Laboratories (FDIL's). The FDILs are capable of performing laboratory tests largely to support the clinical diagnosis of animals presented at DLS/Upazila veterinary hospitals and clinics. Some FDILs are equipped with more advanced equipment and can thus perform a wider range of diagnostic tests, although in some cases the staff also lack sufficient training to utilise all of the available equipment.

Throughput of samples at most veterinary diagnostic laboratories is compromised by a lack of sufficient resources (mobility of personnel and operational costs) for active surveillance of diseases, residues and AMR as well as insufficient knowledge of clinical pathology by veterinarians who provide clinical veterinary services.

2.3 Quarantine and Border Security

PVS Evaluation tool (2019) CC II-3

The DLS has authority to regulate the importation and export of animals and animal products under the authority of the Animal and Animal Product Quarantine Act (2005).

There are now 24 Quarantine stations established at the three air and sea ports of Dhaka airport, Benapol Landport, Jessore and Chittagong Sea Ports and at 21 border inspection points. Each of these border inspection points is not fully staffed and thus not yet fully functional since they lack the necessary laboratory equipment and facilities for sampling of imported goods, if required. Nevertheless, the border inspection personnel are capable of undertaking routine physical inspections of imported goods to check conformity with documentary requirements.

The issuance of import permits for all imported commodities under the DLS authority (live animals, fresh animal products and pathogenic materials) is undertaken centrally at the DLS headquarters. The issuance of import permits is as yet not necessarily being undertaken fully in accordance with WTO SPS Agreement and OIE standards since the capacity to undertake formal risk analysis has yet to be fully developed. Export certificates in relation to animal health are provided by the same office at DLS headquarters and are being provided largely in conformity with international standards, subject to limitations on laboratory certification which as yet, cannot always be provided in-country.

2.4 Risk Analysis, Passive and Active Disease surveillance, Disease prevention and control

PVS Evaluation tool (2019)CC's II-2, II-4 A, II-4 B and II-6

Passive surveillance is being carried out by veterinarians and veterinary technicians at the Union Veterinary service centres and Upazila veterinary hospitals and livestock offices.

The reporting of suspected notifiable disease events is conducted well in the field but the transfer of animal disease data beyond the District level is still not fully operational due to shortages of computer equipment and poor internet access in many areas. In the past, each District Livestock office was supposed to report on a paper-based reporting system, however this is gradually being replaced by a web-based reporting system, the Bangladesh Animal Health Intelligence System (BAHIS) developed within the Epidemiology Unit within DLS headquarters with FAO assistance. Active surveillance is being carried out for a very few diseases of national importance, including FMD, PPR HPAI, Anthrax and to a lesser extent for Bovine tuberculosis and Brucellosis. The DLS provides free vaccinations for many diseases, however the quantity of vaccines available falls far short of the requirement, since vaccine production is based on a limited budget allocation, rather than being prepared on the basis of risk. As yet there is very little analysis of animal disease information being undertaken at the headquarters level and thus decisions for targeted disease surveillance, prevention and control activities are not being made on the basis of risk analysis.

2.5 Regulation, inspection (including audits), authorisation and supervision of establishments for production and processing of food of animal origin

PVS tool CC's II-8 A, II-8 B (2011), II-7 A, II-7 B (2019)

The DLS has responsibility for ensuring the safety of animal products destined for human consumption and other commercial purposes from the level of production and processing under the Animal Disease Act (2005). Furthermore, the DLS has authority for the licensing and registration and inspection of all slaughter facilities, under the authority of the Animal Slaughter and Quality Control of Meat Act (2011).

The Animal Slaughter and Quality Control of Meat Act however, mentions that the City Corporations and Municipalities shall make use of veterinarians for the purpose of conducting ante- and post mortem inspection of animals and meat at abattoirs and slaughter facilities under their management.

There is no available information on any results of any ante- and post-mortem inspection having taken place at any inspected premises. There is no reporting of animal disease data from slaughter facilities to the DLS Epidemiology Unit.

The Animal Disease Act (2005) and the Animal Disease Rules (2008) provide the DLS with the responsibility for licensing and registration of all milk processing facilities.

At present hygiene and ante- and post-mortem inspection is only being performed on an ad hoc basis at some slaughter facilities by the few veterinary inspectors employed by City Corporations or by veterinary inspectors working from District or Upazila Livestock Offices. The vast majority of meat in Bangladesh is still being consumed in the absence of any inspection or certification for fitness for human consumption.

The only comprehensive programme for hygiene and ante- and post-mortem inspection is being carried out at the export abattoir of Bengal Meat under the irregular supervision of DLS veterinary inspectors in order to allow export certification.

The DLS is planning to construct 192 Upazila slaughterhouses / Wet markets, 20 District slaughterhouses and 3 City Corporation slaughterhouses under World Bank funding through the LDDP.

The DLS has no dedicated manpower who are responsible specifically for the management

of food safety of animal products. In the Dhaka City Corporation (DCC) area there are provisions within their organogram structure for 10 veterinarians and 20 veterinary/slaughter inspectors to cover the inspection of six large slaughter facilities and well over 500 small-scale slaughter slabs and butcheries. However, at present there are only 9 (2-Dhaka South CC (deputed from DLS) & 7- Dhaka North CC (2 of whom deputed from DLS and 5 directly employed by the CC) veterinarians and 8 veterinary/slaughter inspectors (3-Dhaka South CC and 5- Dhaka North CC) currently working in the Dhaka City Corporation jurisdictions. The situation is similar in other City Corporation and municipality areas throughout the country.

2.6 Animal Feed Safety

PVS tool (2019) CC II-7

Authority is given to the DLS to ensure the safety of animal feeds under 3 legislative documents (i) The Fish Feed and Animal Feed Act (2010), (ii) The Animal Feed Rule (2013) and (iii) The Animal Feed Production and Marketing Guideline (2020).

The Deputy Director (Farm), within the DLS is responsible for evaluation of all feed business licence applications and finalizing the licensing procedure on behalf of Director General. At the DLS headquarters there is a central technical committee headed by the Director, (Administration) and a team of 2 officers with 3 additional staff actively involved in the licensing procedure. Below the central committee there is a Regional committee headed by a Divisional Director or Division Livestock Officer, who are responsible for inspecting Feed mill plants within their respective jurisdictions. Upon completing inspection and confirmation of compliance with the standards defined in the Animal Feed Rules (2013), the Divisional Director forwards a signed report of the Regional committee with its recommendation to the Central Committee at DLS for final approval and licensing.

Any person fulfilling the conditions of Schedule 3 of the Animal Feed Act (the company should have technical manpower i.e. Animal husbandry or veterinary graduate) is eligible to be licenced to produce, process, preservation and marketing of feed.

The Animal Feed Rules (2013) require that DLS officers responsible for licensing and inspection of Animal Feed businesses should hold a degree in veterinary medicine. The Animal Feed Rule (2013) goes on to define the standards to be met for eligibility for licensing of animal feed manufacturing operators / businesses for poultry (broiler, layer and breeder) and livestock (cattle and small ruminants) feeds.

The use of antibiotics, steroids, hormones and other harmful chemicals in the animal feeds is strictly prohibited under Section 14 of the Fish Feed and Animal Feed Act (2010). A circular from the MoFL, reference no. 33.01.0000.118.24.467.17-817, dated 20/12/2018 bans the use of meat and bone meal in animal feeds.

Almost all known feed manufacturers (284) have now been licensed by the DLS in accordance with the Fish Feed and Animal Feed Act (2010) and the Animal Feed Rule (2013).

As yet, there has been no specialized training given to officers responsible for licensing / inspection of animal feed businesses. Nevertheless, under some development projects, training on implementation of the legislation has been given to the relevant DLS officers carrying out inspecting procedures of the feed business operators for licensing of feed business operators. Inspection check lists, inspection templates and guidelines on how to inspect feed businesses and manufacturing processes have been distributed to all Regional

officers.

The DLS has been engaging with the major feed manufacturers in order to create greater awareness of the Feed Act and Rules on a regular basis. The DLS is now planning to start a Feed Safety Assurance program with the support of the QC laboratory, Savar, Dhaka. For this purpose, the QC laboratory has been accredited for the analysis of residues of antibiotics, steroids, toxins and other contaminants in animal feeds.

The major feed manufacturing companies, including Aftab Feed Mill, Paragon Feed Mill, Nourish Feed Mill, Quality Feed Mill, Kazi Feeds, Aman Feeds and ACI Godrej, amongst others have established animal nutrition laboratories with diagnostic facilities for ensuring the quality of animal feeds. The DLS intends to facilitate the accreditation of these laboratories in the near future.

2.7 Veterinary Medicines and Biologicals, AMR and AMU

PVS tool CC II-8, II-9, II-10 (2019)

The Directorate General of Drug Administration within the Ministry of Health and Family Welfare (MoHFW) is the Competent Authority with responsibility for the regulation of the importation, registration, manufacture, distribution, sale and use of all drugs, including Veterinary medicines and biologicals. For the purpose of enforcing drug regulatory activities the DGDA implements the Drug Act, (1940), the Drug Rules (1945), the National Drug Policy (2005) and the Drug Control Ordinance (1982). It should be noted that within this legislation there is no definition of “veterinary medicine” or “veterinarian”, furthermore, there is no essential list of veterinary medicines. Although it is stated in Section 6 (iii) of the National Drug Policy (2005) that “no drugs or medicines other than non-prescription (OTC) drugs should be sold or dispensed without prescription” there is no classification of “prescription only” veterinary medicines. In spite of this Policy, it is widely acknowledged that prescription only veterinary medicines are freely available through over-the-counter sales from pharmacies. The failure to enforce “prescription only” regulations is undoubtedly contributing to the presence of veterinary medicine residues in products of animal origin destined for human consumption as well as the emergence of antimicrobial resistance (AMR) in micro-organisms associated with livestock, especially poultry production.

The DLS has one veterinarian acting as a representative on the drug import committee within the DGDA who is requested to give advice when import permits for veterinary medicinal and veterinary biological products are requested by an importer. It is reported that there is a good collaborative working relationship between the DLS and the DGDA but with only one DLS representative on the committee, veterinary decisions can be overruled.

However, the DGDA has been active in ensuring that drug manufacturers are in compliance with Good Manufacturing Practices (GMP), having recently removed the licences from 20 drug manufacturers for repeated violations of standards set in Drug Control Regulations. The DGDA has also been active in enforcing other regulations and has confiscated illegal drugs and fined owners/operators for selling or importing human medicines which have not been registered with the Drug Administration. However, it was reported that as yet there have been no seizures or fines imposed on the illegal importation or sale of non-registered veterinary drugs.

Currently, there is no formal residue monitoring plan in place. However, the NGO Development Alternatives International (DAI) under funding provided by the Fleming Fund

is providing financial and technical support to the BLRI, the CDIL and some selected FDIL's. Through this project a number of pilot studies have already been undertaken, including a Study of the Socio-political Impact of AMR.

The project has been proactive in establishing a One Health platform for AMR, it is providing training for strengthening laboratory capability for the surveillance of AMR and is publishing a 3 monthly Newsletter as well as other media to create awareness amongst health practitioners and veterinarians of the issues related to the misuse of antimicrobials as well as infection prevention stewardship in government hospitals.

2.8 Animal Identification, registration, traceability of animals and animal products

There is currently no authority held by the DLS to implement an animal identification and traceability system. There is no means of tracing animal products back to the farm or area of origin.

3. Pillar 3 - Interaction with Stakeholders

3.1 Communication and Consultation with Stakeholders

PVS tool (2019) CC's III-1, III-2, III-4

Other than the well developed engagement with feed business operators, the DLS does not have any ongoing formal programmes to engage with other stakeholders involved in the management of food safety along the various livestock value chains. However, there is an informal process of engagement between the DLS and the BFSA, which is in its early stages of development. At the technical level there is a good level of consultation taking place between DLS veterinarians and veterinarians involved in some segments of the private sector components of the food industry.

There is an urgent need for the DLS to become actively involved with private sector stakeholders in order to develop public private partnerships (PPP), through which programmes to strengthen food safety management services and regulatory activities can be implemented on the basis of delegation of public functions to private practitioners and cost sharing with the food processing industry.

3.2 The Veterinary Statutory Body

PVS tool (2019) CC III-5

The practice of veterinary medicine is regulated under the Veterinary Council Act (2019) which replaces the Veterinary Council Ordinance (1982). Under this Act the Bangladesh Veterinary Council is authorised to regulate the practice of veterinary medicine by veterinarians

and veterinary para-professionals. As yet there have been no Rules promulgated for the regulation of veterinary para-professionals and so to date, no VPPs have been registered. There are approximately 7,500 veterinarians currently on the BVC register.

The Council has been active in setting and enforcing standards of veterinary education and training and has now established a new training centre within its new purpose-built premises. The BVC plans to provide Continuing Education courses for practicing veterinarians as well as VPPs in the near future.

4. Pillar 4 - Access to Markets

4.1 Veterinary Legislation

PVS tool (2019) CC IV-1

A multitude of references have been made in the foregoing sections of this Report. A more detailed analysis of the Veterinary legislation related to the management of food safety of products of animal origin is to be prepared by the international consultants, Dr Michael Barry and Prof. Samuel Godefroy.

The DLS has recently established a Legislation, Registration and Certification Section under the Director of Administration. However, the DLS lacks the capacity to develop all of the Rules and Regulations that are needed to fully implement its legal mandates for the management of food safety programmes.

4.2 International certification

PVS tool (2019) CC IV-3

The DLS has the authority to provide export certification for the export of animals and animal products under the Animal Disease Act (2005) and the Animal and Animal Product Quarantine Act (2005). The QC laboratory at Savar has the capacity to provide laboratory certification for the export of meat products in compliance with the import requirements of several Middle East countries including the Emirates, Qatar and Kuwait. In order to gain access to higher priced export markets, the QC laboratory will need to gain international accreditation

THE WAY FORWARD - RECOMMENDATIONS

1. The Way Forward

The recommendations given in this Chapter are based partly on those previously made by the OIE which have not yet been implemented and which are based on the international best practices provided in Chapters 3.1, 3.2, 3.4 and the relevant Chapters of Sections 5, 6 and 7 of the OIE Terrestrial Animal Health Code as well as the FAO Guidelines for Strengthening National Food Control Systems.

Most of these recommendations are now supported by those provided by a group of stakeholders at a Workshop held on the 26th and 27th January 2022, (described in detail in Annex 10).

There are many issues and challenges which need to be addressed in order for Bangladesh to bring its food safety standards for PoAO up to an acceptable level in terms of the country's domestic and socio- economic development context and, in the longer term, to achieve closer compliance with international standards in order to facilitate access to international markets for the export of live animals and animal products.

It will not be possible to bring about all the necessary changes at once. The process of change should therefore identify the immediate priorities for adoption and implementation in the short-term, and then map out the future process of change in the medium to long term.

The Way Forward, should therefore map out a process which brings together the key decision makers to help them to find their own solutions to the challenges currently being faced in the livestock production and processing industries. The roadmap will attempt to identify priority actions to make the necessary institutional (policy and legislative) and organisational (structural organisation of Competent Authorities, reporting systems, formal systems for collaboration) changes which can then lead to the introduction of effective regulatory systems to achieve acceptable standards of food safety management for domestically marketed as well as animal products destined for export.

The roadmap should therefore consist of a step-by-step process of stakeholder consultation and engagement to reach consensus with regard to the respective roles and responsibilities of each stakeholder along each of the main livestock product value chains.

2. Recommendations

2.1 Pillar 1 Structural organisation, institutions and human, physical and financial resources

- ✓ **Review of key policy:** The DLS is recommended to undertake a thorough review and revision of the National Livestock Policy (2007). The revised policy should place emphasis on the need for the DLS to embrace its responsibilities embodied in the existing legislation in relation to ensuring the safety and quality of animal products from the level of production and processing up to the point of retail sale to consumers.
- ✓ **Assessment of staff capacities in veterinary services:** It is recommended that the DLS shall undertake a detailed manpower needs assessment in order to determine the numbers of staff required at each level of the Veterinary Services to gradually build the capacity to implement a food safety management programme. It may also be considered to establish a distinct regulatory body within the DLS to accommodate food safety regulation.
- ✓ **Assessment of staff capacities for regulatory function:** The manpower needs assessment should be followed by a Training Needs Assessment (TNA) to ensure that all officers appointed to perform regulatory functions within the food safety management programme are equipped with the necessary knowledge and skills to enable them to perform their duties with complete competence.
- ✓ **Development of strategic documents:** The DLS is recommended to then undertake a Strategic Planning exercise through which a step by step Implementation plan is developed according to the priorities identified on the basis of Risk analysis.

2.2 Technical Authority and Capability

- ✓ **Enhancement of field diagnostic capabilities:** The DLS has considerable Veterinary Diagnostic capacity to support food safety of animal products at the central level. However, Field diagnostic level labs need strengthening in the context of human and

physical resources to specifically address food safety issues.

- ✓ **Development of sampling strategy and framework for food safety testing:** What is now required is the development of linkages between the laboratory diagnostic and analytical services and the points along the livestock value chains where food safety hazards need to be controlled. Such controls are used on a sampling framework based on risk analysis.
- ✓ **Integration of risk analysis principles throughout regulatory services:** The DLS is recommended to seek technical assistance in developing and implementing training on Risk Analysis as applied to animal disease surveillance, prevention and control, the surveillance of drug and chemical residues and antimicrobial resistance and for the introduction of risk-based food safety management systems in food product processing facilities. Risk analysis principles should be applied as the main framework for regulatory decision-making.
- ✓ **Better coordination among competent authorities:** The DLS, in collaboration with the BFSA, is recommended to engage with stakeholders with a shared interest in implementing regulatory functions such that agreement is reached between each stakeholder as to their respective roles and responsibilities to ensure food safety of animal products. In the first instance, it is recommended that such agreements should be formulated as Memoranda of Agreement. Subsequently, the MoA's may then be converted into Rules and Regulations in accordance with the legal basis established in primary legislation.
- ✓ **Creation of standard-setting mechanism:** The DLS is recommended to formulate Guidelines supporting Rules and Regulations in order to set the standards for implementing its core functions with regard to introducing Good Animal Husbandry Practices, Good Management Practices and Good Hygiene Practices at each of the critical control points along each of the livestock value chains.
- ✓ **Initiation of elements for an animal traceability system:** The DLS is recommended to consider developing a livestock producer registration system as the first step in developing an animal identification, movement control and traceability system.

2.3 Consultation with Stakeholders

- ✓ **Better stakeholder engagement:** In collaboration with the BFSA, the DLS is recommended to undertake a Stakeholder mapping exercise. Such an exercise should help to identify the interests of each stakeholder organisation and what formal communication arrangements should be made to ensure regular and timely sharing of information as well as to develop joint programmes through which the optimal use of scarce resources is ensured.
- ✓ **Consideration of cost recovery for private/good nature services:** The DLS is recommended to explore ways of introducing “user pays” fees for private good services in order to help offset the costs of providing private good nature services.
- ✓ **PPP for veterinary functions:** The DLS is recommended to actively engage with the

Bangladesh Veterinary Council and private veterinary services to explore the possibility for delegation of public functions to private veterinarians and veterinary technicians as a public private partnership (PPP).

- ✓ **Development of awareness-raising campaign for consumers and industry on better practices:** The DLS is recommended to develop a Communication Plan through which it shall develop and disseminate information to create awareness amongst consumers of animal products, livestock keepers and all actors along the livestock value chains of the importance of compliance with standards which have been set to ensure the safety of food products of animal origin.

2.4 Access to Markets

- ✓ **Revision of key veterinary acts:** The DLS is recommended to seek technical assistance to review and revise the legislation (laws, rules and regulations) covering the areas of the veterinary domain related specifically to the safety of products of animal origin destined for human consumption.
- ✓ **Better coordinated enforcement mechanisms for PoAO:** The BFSA, in collaboration with all competent authorities with an interest in food safety of PoAO is recommended to explore means of strengthening the enforcement of rules and regulations related to production and processing of PoAO and especially the sale and use of veterinary medicines.

3. Recommendations made by Workshop participants: (27th January 2022)

- Review and update Livestock Development Policy (2007) to incorporate regulatory and trade promotion roles appropriately.
- Rules and regulations must be compatible with the vision of DLS.
- Science-driven technical requirements should be incorporated in Rules and Regulations.
- While preparing Rules and Regulation think horizontally and vertically and include all stakeholders.
- Review existing legal mandates for regulatory functions within DLS.
- Establish regulation & inspection and Trade & Quarantine wing or section within DLS.
- Inform and disseminate the role of root level officers ensuring food safety.
- Place strong emphasis on the enforcement of recently promulgated Animal Slaughter & Meat Quality Control Regulation (2021).
- Create awareness of the issues related to food safety of products of animal origin, motivate stakeholder compliance with and enforce the Rules & Regulations.

- Strengthen capacity development and increase manpower skills in QC lab. Establish QC labs in Rajshahi, Chittagong, Rangpur and Khulna
- QC lab can be used as quality assurance lab to ensure food safety
- CDIL, FDIL, Universities Labs activities should be expedited
- Select the specific existing lab for specific est.
- All animal farms and processing facilities must be registered under DLS.
- There should be a list of essential vet drugs along with human drugs. Appointment of a Director from DLS at DGDA to address the veterinary drugs and activate the Veterinary Cell within DGDA.
- Ensure and strengthen collaboration and coordination between the DLS and other concern/ relevant Competent authorities with shared roles and responsibilities.
- BFSA to play an active role in offering scientific support to food safety regulatory functions of DLS and other food regulators as the apex body.
- Ensure that the labs are well integrated in food regulatory functions
- Formulate and alignment with international practice for GAHP, GAP, GMP, GHP.
- For different primary and processing establishments. Should have a vision to align with internationally acceptable modalities.
- Scientific underpinning of the Rules.
- Practice/Use of International standards.
- Overcome current practice of 'single agency' of food safety enforcement.
- Coordination and collaboration among stakeholder are the main challenges in ensuring food safety.
- Food habit of general people has changed so product diversification is necessary.
- The number of vets should be increased to 5,000 to cover the proper veterinary service.
- Training program for farmers and stakeholders on GAP, GAHP, GMP, GHP & HACCP.
- Reform of the existing rules and regulations in conformity with the international standards set by OIE, Codex Alimentarius, WTO, SPS & TBT.

Regarding overall comment on recommendation about how to overcome the problems or limitations described, it is worth mentioning that a few recommendations are described in this report. UNIDO will prepare separate detail recommendations.

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Annex 1 Terms of Reference - Principal Specialist in Food Safety (Livestock Value Chain)



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Title:	Principal Specialist in Food Safety (Livestock Value Chain)
Main Duty Station and Location:	Home based
Mission/s to:	As required within Bangladesh
Start of Contract (EOD):	ASAP
End of Contract (COB):	15 February 2022
Number of Working Days:	WAE – 31 days

ORGANIZATIONAL CONTEXT

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mission of UNIDO, as described in the Lima Declaration adopted at the fifteenth session of the UNIDO General Conference in 2013 as well as the Abu Dhabi Declaration adopted at the eighteenth session of UNIDO General Conference in 2019, is to promote and accelerate inclusive and sustainable industrial development (ISID) in Member States. The relevance of ISID as an integrated approach to all three pillars of sustainable development is recognized by the 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), which will frame United Nations and country efforts towards sustainable development. UNIDO's mandate is fully recognized in SDG-9, which calls to "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation". The relevance of ISID, however, applies in greater or lesser extent to all SDGs. Accordingly, the Organization's programmatic focus is structured in four strategic priorities: Creating shared prosperity; Advancing economic competitiveness; Safeguarding the environment; and Strengthening knowledge and institutions.

Each of these programmatic fields of activity contains a number of individual programmes, which are implemented in a holistic manner to achieve effective outcomes and impacts through UNIDO's four enabling functions: (i) technical cooperation; (ii) analytical and research functions and policy advisory services; (iii) normative functions and standards and quality-related activities; and (iv) convening and partnerships for knowledge transfer, networking and industrial cooperation. Such core functions are carried out in Departments/Offices in its Headquarters, Regional Offices and Hubs and Country Offices.

The Directorate of Digitalization, Technology and Agri-Business (DTA), headed by a Managing Director, coordinates and mainstreams the Fourth Industrial Revolution (4IR) in its technical cooperation, strategic, normative activities aiming at fostering the inclusive and sustainable development in the era of 4IR. The Directorate creates new and innovative technical cooperation deliverables in the areas of trade, investment, technology innovation and agro-industry and agri-business. The Directorate comprises the Department of Digitalization, Technology and Innovation (DTI) and the Department of Agri-Business (AGR).

The Department of Agri-Business (DTA/AGR) provides a range of technical cooperation services to assist

developing countries add value to the output of their agricultural sector and generate employment opportunities in off-farm activities for rural communities, thereby contributing to increased food security and a sustainable reduction of poverty. The department provides support for the development of agri-business corridors in developing countries in collaboration with International Financial Institutions. The Department drives the Organization's mandates of creating shared prosperity and advancing economic competitiveness. It supports initiatives to build human capital and raise total factor productivity through focused vocational training and industrial skills development activities. With its programmes, the Department addresses the root causes of migration and helps alleviate migration pressures at the origin.

The Sustainable Food Systems Division (DTA/AGR/SFS) promotes ISID through the promotion of food systems that deliver food and nutrition security without compromising economic, social, and environmental bases to generate food security and nutrition for future generations. The Division is responsible for identifying, developing and managing programmes to improve the competitiveness of the food and agribusiness sectors through access to support services, finance, markets and trade opportunities. The Division contributes to the capacity-building of food systems support institutions and skill development agencies through its advisory and convening activities.

PROJECT CONTEXT

This project is developed within the framework of the Livestock and Dairy Development Project (LDDP), a World Bank funded project amounting to 578.66 million USD, with the overall objective to promote productivity growth, enhance market access, and improve risk management among smallholder farmers and agro-entrepreneurs in Bangladesh. Thus, the project development objective is to contribute to productivity improvement, market access, and resilience of smallholder farmers and agro-entrepreneurs operating in selected livestock value chains in target areas.

The project will target all main value chains in the country: i) dairy from small and medium scale mixed crop-livestock systems; ii) poultry from improved scavenging and semi-scavenging systems, and semi-intensified broilers systems; and iii) red meat from small and mid-scale cattle and small ruminant production units. Primary direct project beneficiaries are: i) 2,000,000 households engaged in small and medium scale livestock production; ii) 1,000 MSME, and service providers (2,000 DLS staff, and 5,000 private veterinarians and others); iii) 2,000,000 consumer households through consumer awareness; and iv) youth, livestock support service institutions, including public livestock research and extension services, and NGOs.

UNIDO will contribute to two components of the LDDP, namely; a) sub- component A2 on improved climate smart production practices by addressing the aspect of health in animal production, and b) sub-component C2 on food safety and public health by addressing food safety and quality assurance.

As a result, the interventions of UNIDO will be structured into the following two outputs, with the specific objective to improve the food safety system for the protection of public health systems along the livestock value chains:

Output 1: Food assurance and public health systems designed along livestock value chains. This output will focus on i) Gap analysis of existing legislation of food safety enforcement, ii) Legal amendments and drafts of regulations for stronger food safety enforcement in relevant value chains, iii) Baseline data on current level of food safety in relevant value chains, iv) Establishment of foods of animal origin inspection program, and v) Support to the establishment in quality assurance schemes (GAP, HACCP, ISO, CODEX);

Output 2: AMR surveillance and risk mitigation program as well as surveillance and monitoring of microbial chemical and residual hazards are developed. This output will focus on i) conceptual development of AMR surveillance system, monitoring of antimicrobial use and risk mitigation in animal and foods of animal origin, and ii) design of surveillance and monitoring programme on biological and chemical hazards in animal and foods of animal origin.

UNIDO's response will support Bangladesh in applying food safety and quality control measures in the livestock sector and thus, improving public health through basic food safety standards.

FUNCTIONAL RESPONSIBILITIES

The International Food Safety Expert (livestock Value Chain) will undertake the following activities in close collaboration with UNIDO Country Representative and under the direct supervision of the Project Manager:

MAIN DUTIES	Concrete/measurable Outputs to be achieved	Expected duration	Location
1. Familiarize with the project scope and relevant documentation	Excellent knowledge of project scope and approach	2 days	Home-based
2, In liaison with the National Project Coordinator as well as national experts conduct a gap assessment of veterinary services of the country against international best practices addressing overall public health and food safety requirements: Develop an assessment tool in collaboration with national expert to evaluate changes in veterinary services and their performance in the last 5 years, taking into consideration relevant reports conducted by other UN agencies; In collaboration with UNIDO HQ and national experts develop a report skeleton; Review data collected / received from relevant departments and analyse against the progress made in the past 5 years; Collect a list of recommendations to further improve current practices related to veterinary services; Present outcomes in collaboration with national experts to Department of Livestock Services and other stakeholders involved in veterinary services.	Gap assessment conducted on veterinary services	28 days	Home-based Potential mission to Dhaka, Bangladesh
3. Deliver final narrative report on the delivered duties	Final narrative report	1 day	Home-based

REQUIRED COMPETENCIES

Core Values

WE LIVE AND ACT WITH INTEGRITY: work honestly, openly and impartially.

WE SHOW PROFESSIONALISM: work hard and competently in a committed and responsible manner.

WE RESPECT DIVERSITY: work together effectively, respectfully and inclusively, regardless of our differences in culture and perspective.

Key Competencies

WE FOCUS ON PEOPLE: cooperate to fully reach our potential –and this is true for our colleagues as well as our clients. Emotional intelligence and receptiveness are vital parts of our UNIDO identity.

WE FOCUS ON RESULTS AND RESPONSIBILITIES: focus on planning, organizing and managing our work effectively and efficiently. We are responsible and accountable for achieving our results and meeting our performance standards. This accountability does not end with our colleagues and supervisors, but we also owe it to those we serve and who have trusted us to contribute to a better, safer and healthier world.

WE COMMUNICATE AND EARN TRUST: communicate effectively with one another and build an environment of trust where we can all excel in our work.

WE THINK OUTSIDE THE BOX AND INNOVATE: To stay relevant, we continuously improve, support innovation, share our knowledge and skills, and learn from one another.

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in food science, agriculture, or other relevant discipline with a specialization in the area of food safety or livestock sector.

Technical and Functional Experience:

A minimum of ten (10) years of professional experience in livestock systems or related field. Excellent knowledge of the development status of veterinary services and/or food safety in Bangladesh is highly desirable. Ability to work effectively in multi-cultural teams.

Languages: Fluency in written and spoken English is required.

Annex 2 Mission Itinerary – Principal Specialist Food Safety (Livestock Value Chains)

Date	Time	Agency/Organization
17/01/22	1030 - 1230	LDDP – meeting with senior management
	1200 - 1300	UNIDO – meeting with national team of experts
	1400 – 1530	UN Security Briefing
	1030 - 1130	Meetings with Director General DLS, Director Administration
18/01/22	1130 - 1630	Meeting with DLS – officers in charge of Human resource management, training, food safety, border control (import & export certification), animal disease information management, licensing/ regulation of animal feed safety, / policy / planning / disease surveillance / reporting / prevention and control regulation of import, registration, distribution, sale and use of veterinary medicines.
19/01/22	1130 - 1330	Meeting with Joint Secretary, Bangladesh and senior staff – Bangladesh Food Safety Authority (BFSA)
	1430 - 1630	Meeting with City Corporation (South City and City abattoir under construction)
20/01/22	1030 – 1130	Central Disease Investigation Laboratory (CDIL)
	1145 - 1300	City Corporation Food Testing Laboratory
23/01/22	1030 - 1130	Bangladesh Standards and Testing Institute (BSTI)
	1130 - 1230	Fleming Fund, DAI
	1500 -1600	Team meeting UNIDO office
	1735 - 1830	Bengal Meat – Headquarters, Dhakar
24/01/22	0930 - 1130	Quality Control Laboratory, Savar
	1230 -1330	Fisheries Quality Control Lab, Savar
	1400 - 1700	Hotel prepare Workshop presentation 1
25/01/22	1000 - 1200	Faculty of Vet Science, Sher-e-Bangla Agricultural University Dhaka.
	1220 - 1330	Bangladesh Livestock Research Institute
	1400 - 1630	UNIDO office / Hotel Prepare Workshop presentation 2
26/01/22 and 27/02/22	0900 - 1630	Workshop
28/02/22	1530	Depart Hotel for Dhakar Airport

Annex 3 Persons met during Field Mission of Principal Specialist Food Safety (Livestock Value Chains)

Name	Organisation	Designation
Md. Rejaul Karim	Bangladesh Food Safety Authority	Member, Food consumption and consumer's right
Professor Md. Abdul Alim		Member, Food industry and production
Farid Ahmed	South City Corporation	Chief Executive Authority (Additional Secretary)
Dr. Fazle Shamsul Kabir		Chief Health Officer
Aminul Islam Badal		Veterinary Officer
Dr. S M Shafiqul Islam		Veterinary Officer
Dr. Md. Golam Azam Choudhury	Central Diagnostic and Investigation Laboratory (DLS)	Principal Scientific Officer
Dr. Sukesh Baydho		Upazila Livestock Officer (LR)
Dr. Md. Sadekuzzaman		Upazila Livestock Officer (LR)
Dr. Mrs. Rabeya Begum		Upazila Livestock Officer (LR)
Golam Sarwar	South City Modern Food Testing Laboratory	Team Leader
Md. Mohsin Ali		Director
Elias Jahedi		Chemist
Aminul Islam Badal		Veterinary Officer
Dr. Md. Mostofa Kamal	Quality control Laboratory of DLS, Savar, Dhaka	Lab in charge and Project Director
Dr. Md. Abdul Hannan		Principal Scientific Officer
Elias Jahedi		Chemist
Aminul Islam Badal		Veterinary Officer
Dr. Md. Manik Mia	Quality control Laboratory of Fisheries, Savar, Dhaka	Quality Assurance Manager
Ms. Tanzinah Nasrin		Microbiologist
Mithun Karmakar		Biochemist
Md. Barkatul Alam		Assistant Director
Mohammad Jahangir Alam		Fisheries Technologist
Marzia Sultana		Assistant Director
Dr. Md. Abdus Samad	Bangladesh Livestock Research Institute, Savar, Dhaka	Chief Scientific Officer
A.F.M. Asif	Bengal Meat Processing Industries Ltd.	Chief Executive Officer
Dr Md Lutfor Rahman		Head of Production
Md Al Amin		

Dr John Woodford and Dr Michael Barry (24/25 Jan 2022)

Name	Institution	Designation
Prof. Dr. Md. Shahidur Rashid Bhuiyan	Sher e Bangla Agricultural University (SAU)	Vice Chancellor
Prof. Dr. Lam yea Asad		Dean, Faculty of Animal Science and Veterinary Medicine
Prof. Dr. Anwarul Haq Beg		Chairman, Poultry Science
Prof. KBM Saiful Islam		Chairman, Medicine and Public Health
Dr. Mofassera Akhter		Chairman, Animal Nutrition, Genetics and Breeding
Dr. Md. Asaduzzaman		Chairman, Dairy Science
Dr. Md. Mosaraf Hossain		Chairman, Anatomy, Histology and Physiology
Dr. Mrs. Sharifa Zahan		Chairman, Pharmacology and Toxicology
Dr. Md. Anwarul Haque		Chairman, Surgery and Theriogenology
Name		
Dr. Md. Abdul Hai	Directorate, Research, Training and Evaluation, Department of Livestock Services	Chief Instructor, Institute of Livestock Science and Technology, Gaibandha
Dr. Md. Abu Sufian		PSO, Anthrax
Dr. Md. Boizer Rahman		PSO, Fowl Pox
Dr. Soheli Jahan Mou		SO, Veterinary Public Health

Persons met on 18.01.2022 Department of Livestock Services

Dr. John Woodford, Prof. Samuel Godefroy, Dr Michael Barry.

Name	Designation
Dr. Debashis Das	Director, Admin
Dr. Md. Mahbubul Alam Bhuiyan	Deputy Director, Admin
Dr. Bhabotosh Kanti Sarker	Director, Artificial Insemination
Dr. Safiul Ahad Sarder	Director, Veterinary Hospital
Dr. Md. Reajul Huq	Director, Production
Dr. Ajit Kumar Sarker	Director, Central Poultry Farm
Dr. Abul Hasnat Md Shahadat Hossain	Upazila Livestock Officer (L/R Post), Animal Health
Dr. Mohammad Shahadat Hossain	Upazila Livestock Officer (L/R Post), Planning and Evaluation Cell
Zeenat Sultana	Deputy Director, Farm
Dr. A.B.M. Khaleduzzaman	Deputy Director (Leave, Deputation and Training Reserve Post), Extension
T A B M Muzaffar Goni Osmany	Deputy Director, Epidemiology Unit
Dr. Pallab Kumer Dutta	Deputy Director, HRD
Md. Misbahuzzaman Chandan	Food Safety Expert, LDDP, DLS
Dr. SK Shaheenur Islam	Deputy Chief Epidemiologist
Dr. Md. Sorower Hossain Sikder	Deputy Director (Legislation, Administration/Registration/Certification)
Dr. Nilufa Begum	Director, Research Training and Evaluation
Dipak Ranjan Roy	Director Extension

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
<p>Structural Organisation of the Veterinary Services (VS)</p> <p>I-1A & B No's of Professional & para-professional staff (performing Food Safety regulatory functions)</p>	<p>Lack of a structure within DLS Headquarters and Divisional/District levels dedicated to performance of core regulatory functions</p>	<p>"The (current 2011) Organogram does not reflect the core functions of a [veterinary] regulatory service."</p>	<p>Thoroughly review the organisational structure and functions of the DLS and develop an organisational structure that clearly separates extension services and veterinary clinical services from veterinary regulatory functions. (PVS 2011)</p>
<p>I-1A & B No's of Professional & para-professional staff (performing Food Safety regulatory functions)</p>	<p>A clear and direct chain of command from CVO at H/q level down to field level actors responsible for performing regulatory functions (PVS 2011, Gap Analysis 2015)</p>	<p>"The current organisational structure of the DLS, with five directorates that cut across Animal health and Animal Production seem to lack units dedicated to key [regulatory] functions such as [international trade] and food safety, does not allow the delivery of a coherent, coordinated veterinary service."</p>	<p>"For an effective Veterinary Authority, it is strongly recommended that a Directorate General of Animal Health or Veterinary Services or a Regulatory Wing is established." (Gap conclusions 2015)</p>
<p>I-11 – Management of resources – restructuring of VS</p>	<p>A clear and direct chain of command from CVO at H/q level down to field level actors responsible for performing regulatory functions (PVS 2011, Gap Analysis 2015)</p>	<p>"A major challenge faced in delivering effective Veterinary Services in Bangladesh is the current matrix organisation under the DLS which combines Animal Health and Production."</p>	<p>Proposed Regulatory Wing should include sub-Departments (including Trade & VPH) mandated to perform all veterinary services and regulatory functions covering the veterinary domain with a clear chain of command extending from CVO at H/q to farm level.</p>
<p>CROSS-CUTTING</p> <p>I-2 A & B, I-3</p>	<p>Lack of sub-Directorates / Cells with mandate to perform regulatory functions for (domestic/international trade), food safety and veterinary medicines within current organisational structure of the DLS.</p>	<p>"The current organisational structure fails to deliver a functional veterinary service with an effective Veterinary Authority and also lacks the capacity to manage and deliver effective animal health and veterinary public health programmes."</p>	<ul style="list-style-type: none"> • "Establish a 'Trade Sub-directorate' dedicated to manage international trade affairs (border inspection, SPS requirements and export certification within central VS)" • Coordinate with local governments / municipality corporations and the Food Safety Authority to formally provide ante- and post-mortem inspection services under the management of DLS • A Veterinary Public Health Department, under DLS will lead development of inspection procedures and protocols for national market abattoirs, based on export abattoir practices • "Work with MoH to establish 'veterinary section', under BDA to manage registration, import/manufacture, distribution, sale/use etc. of VMs & biologicals".
<p>I-5, III-1 III-2, IV-1</p>			

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
<p>Numbers of suitably qualified personnel employed for, <i>inter alia</i>.... regulation of Food Safety of animal products</p> <p>CC's I-1A & B</p>	<p>Insufficient numbers of suitably qualified personnel to carry out regulatory functions related to Food Safety of products of animal origin deployed at DLS Headquarters and at Divisional, District/Upazila levels</p> <p>Veterinary Degree curricula not aligned with (OIE) Day 1 competencies for effective animal health service delivery by the DLS</p>	<p>Insufficient numbers of suitably qualified personnel to cover all regulatory activities related to food safety of animal products. (PVS 2011)</p> <p>Veterinary Degree curricula have not been reviewed / revised taking into consideration OIE recommended Day One competencies of new veterinary graduates - (For instance - Epidemiology is not included as a main subject in the curriculum of any of the Veterinary Colleges, thus the importance of disease reporting and the use or usefulness of animal disease occurrence information is not widely understood by the majority of DLOs and ULOs working in the field.)</p>	<p>As defined in the 2007 National Livestock Development Policy, the DLS should consider phasing out the delivery of routine clinical veterinary services of purely private nature, and the possibility of redefining their role in terms of delivery of clinical services placing a far stronger emphasis on the performance of core regulatory services</p> <p>Transferring private nature activities to private veterinarians is likely to improve public service delivery and at the same time curb public spending.</p> <p>There is a need for a thorough review of the structure and functions of the state's veterinary service, with a particular focus of the inclusion of core regulatory functions. (See draft proposed Organograms for a regulatory veterinary service.) (PVS 2011)</p>
<p>I-2A & B, I-3</p>	<p>Insufficient induction and CE training of newly appointed inspectors</p>	<p>Insufficient induction and CE training of newly appointed inspectors</p>	<p>Over the next five years, the number of veterinarians to be increased to 2,130 (current actual figures were not available). This significant increase in the number of veterinarians is required because of the need to develop effective animal and veterinary public health programmes. (Gap 2015)</p>
<p>III-4</p>	<p>Lack of harmonisation between various Degrees approved for registration of Veterinarians by BVC</p> <p>Different course curriculum with different duration offered by different training institutes/UN Agencies/INGOs for providing veterinary service as CLSP/CAHWS</p> <p>Veterinary Para-professionals providing certain services with little or no professional supervision</p>	<p>The Department of Livestock Services has not developed plans for CE. Training is <i>ad hoc</i> and often provided by external entities. (PVS 2011 Ccl-3)</p> <p>"There is no mechanism in place to determine if upon graduation minimum day 1 competencies, to assure the delivery of quality veterinary services, are met." (PVS 2011).</p> <p>As a direct result of the system adopted for promotion within the DLS and in spite of the mostly appropriate initial training and qualifications of the veterinary professionals, many positions in the national Veterinary Services are often staffed without identifying the specific knowledge, skills and abilities necessary for the optimum function of regulatory responsibilities and related services of a "Competent Authority" and without consideration of building a credible regulatory department.</p> <p>"DLS staff personnel are placed in functions for which the necessary knowledge, skills and abilities had not been defined."</p>	<p>Recruit additional veterinarians so that every upazila has 3 VOs, districts have 3 and divisions have 4; central DLS should have approximately 35 veterinarians</p> <p>It is estimated that 94 full time equivalent veterinarians will be required to implement a food safety programme in major slaughterhouses including premises registration and ante- and post-mortem inspections. (Gap 2015)</p> <p>Establish an organized training and development programme to provide appropriate training across a range of subjects for relevant staff.</p> <ul style="list-style-type: none"> • Develop a CE programme which can benefit all areas of technical expertise required by the Competent Authority. • Develop a system to document training effectiveness • Advocate for the need for additional DLS veterinarians to senior staff of MoFL; develop a policy document indicating the imperative of providing an effective field network <p>Develop a standardised national curriculum for veterinary training with reference to OIE standards</p> <ul style="list-style-type: none"> • Harmonise and standardise veterinary education at all veterinary schools via the USB veterinary education strategy document • Review all veterinary schools curricula based on the OIE Day 1 competencies and standardise curricula • Consider assisting the higher performing veterinary school(s) to develop an OIE educational twinning programme through identification and exploration with a developed country veterinary school and OIE • DLS / Veterinary Council to make regulations to ensure adequate supervision of VPPs especially when using prescription only medicines and/or performing official functions

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
<p>Technical independence CC I-4</p>	<p>Technical independence of abattoir/slaughter facility inspectors. Conflict of interests</p>	<p>Many abattoir/slaughter facility inspectors are directly employed by Municipal/local authorities who also own the establishments leading to a conflict of interests. Low salaries may compromise technical decision making of inspectorate personnel</p>	<p>Review the risks of conflicts of interest in abattoir inspection given meat inspectors are employed by municipal corporations, who also own the abattoirs. DLS should manage both inspection of slaughter premises and meat inspection as they are an independent technical authority.</p> <ul style="list-style-type: none"> • Increase salaries, proportionate to responsibilities to be undertaken • Consider establishing a "Regulatory service" within DLS to allow eligibility for higher Grades/scales of payment
<p>Stability of structures and sustainability of policies CC-I-5 (2019)</p>	<p>Human resource management System currently used for promotion of staff to senior positions Lack of career pathways especially in specialised areas where expertise is built over the longer-term – e.g. Laboratory technology</p>	<p>The current civil service policy of relocating personnel every two to three years without regard for expertise does not lead to strengthening of programme activities. Appointments to executive positions are based on technical capability but seniority plays a larger role. As a result, there is a high turnover of people in management positions who achieve these positions shortly before retirement. It is difficult to implement and sustain programmes over time.</p>	<p>Reduce the high turnover of senior level positions in the VS by developing longer term advocacy and strategies to ensure there is stability of leadership and policies</p> <ul style="list-style-type: none"> • Introduce merit-based recruitment to reduce the high turnover of senior positions (DG and CVD). Note that these positions seem to be appointed shortly before the retirement age of 59 • All new positions or promotions should be advertised and require a formal application and interview • Review career pathways for all staff including central, laboratory and field staff to balance the need for broad experience with specialisation • Review the DLS organogram (see CC I.6A) to ensure there is a technical chain of command and that the structure reflects the VS regulatory functions (e.g. trade, animal health, veterinary public health, laboratories, etc.) • Develop longer term VS strategic plans that promote the sustainability of policies and programmes
<p>Operational funding CC I-8 CROSS-CUTTING</p>	<p>Insufficient funds allocated to an operational budget for performing regulatory functions</p>	<p>Operational funding for regulatory functions [...], including veterinary public health is inadequate The livestock and fishery sector contribute approximately 3 % to the National GDP. The operating budget (developmental and non-developmental) of DLS is only approximately 0.63 % of the National budget. Due to the blending of extension/production activities and veterinary clinical activities there is not a stand-alone budget for regulatory veterinary services activities.</p>	<p>To improve budget advocacy and to develop a programme of industry levies and increasing 'user pays' Develop programmes and annual investment plans to cover performance of all regulatory functions, especially those related to Food safety of animal products destined for human consumption.</p>
<p>III-2 Consultation with stakeholders</p>		<p>Priority spending areas/programmes within the MoFL are as follows: 1. Increasing the productivity in the fisheries sector; 2. Increase the productivity of the livestock sector; 3. Strengthening livestock farm management; 4. Development of different species of livestock and increasing productivity. No priority has been given to developing a veterinary regulatory programme which can protect the investments made in the National livestock and poultry population. (PVS, 2011)</p> <p>The DLS depends on development projects to support field activities, an appropriate operating budget has not been developed to support regulatory veterinary services activities. External funding is not necessarily sustainable in the medium to longer term</p>	<ul style="list-style-type: none"> • Develop staff skills in risk analysis and cost-benefit analysis • Develop documented [disease surveillance and control,] food safety [and animal welfare] programmes, with 'Key Performance Indicators' of their proposed outcomes, and rigorous operational plans for all DLS activities with costs and benefits • Identify 'cost centres' where 'levies' might be adopted/increased, such as [in vaccination programmes], export certification, etc.

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
<p>Infrastructures</p> <p>Abattoirs and other slaughter facilities</p> <p>I-7 – Physical resources and capital investment</p> <p>II-8</p>	<p>Sufficient number and suitability of infrastructures to allow introduction of risk-based food safety management systems to satisfy demand for meat that has been certified (by a veterinarian within the DLS chain of command) as being fit for human consumption.</p>	<p>5 slaughterhouses are registered for Dhaka, slaughtering around 200 cattle/buffalo and 400 sheep/goat per day which is way below the actual consumption expected of 15 million inhabitants within this agglomeration.</p> <p>There are no slaughterhouses for poultry (PVS 2011)</p> <p>No adequate infrastructure for the majority of animals being slaughtered in the country (ruminants, poultry, pigs).</p>	<p>The proposed construction of 6 new abattoirs under the Asian Development Bank (ADB) funding highlights the need for immediate action in terms of coordination with all stakeholders involved, especially at Ministry levels and in terms of training an inspectorate with the necessary knowledge and skills to perform meat inspection and laboratory testing functions.</p> <p>The inclusion of the requirement for construction of new slaughter facilities was considered to be beyond the scope of the strategy developed under the Gap analysis in 2015.</p>
<p>Ante- and post-mortem inspection of animals and meat</p> <p>Slaughter facility hygiene management</p>	<p>Authority and capacity of DLS to conduct ante- and post-mortem inspection of animals and meat at all (Domestic / export) abattoirs and other slaughter facilities.</p> <p>Good hygiene practises are in place at all facilities where animal products are prepared and processed</p>	<p>At Dhaka city level, meat inspection is under the responsibility of the Municipality. 5 slaughterhouses are registered for Dhaka, slaughtering around 200 cattle / buffalo and 400 sheep/goat per day which is way below the actual consumption of 15 million inhabitants.</p> <p>Two abattoirs visited demonstrated a poor level of understanding of hygiene practices and under-staffing for inspection of hygiene practices, animals and meat.</p> <p>Positions exist but are not staffed.</p> <p>At district level, VS officers are allegedly daily visiting local slabs for ante and post mortem inspection.</p> <p>No policy document, inspection records, or Standard Operating Procedures at any level were made available to the Evaluation team.</p> <p>Bengal Meat, the only Export abattoir in Bangladesh has a HACCP plan in force</p> <p>There is no official poultry slaughterhouse and most likely most poultry is sold live / processed at “wet markets” and many slaughtered at household / final consumer level.</p> <p>The DLS has been authorised (under the Animal Slaughter and Quality Control of Meat Act (2011) to license and inspect abattoirs, other types of slaughter facilities and meat processing plants and to carry out ante and post-mortem meat inspection and certification but as yet no inspectorate has been established to undertake this responsibility (Gap 2015)</p> <p>There is some confusion within the existing legislation since similar powers and responsibilities to those given to the DLS in the Animal Slaughter and Quality Control of Meat Act (2011) are also provided to the Bangladesh Food Safety Authority (Food Safety Act (2013)) established under the Ministry of Food. Inspectors provided by the Ministry of Health and sometimes by the MoFL are sometimes co-opted from the DLS to some municipal and other local authorities to undertake hygiene inspections, ante- and post-mortem meat inspection and certify meat as being fit for human consumption. (Gap 2015)</p> <p>In practice, there is currently no authority which has a full complement of staff trained to perform slaughterhouse inspections or to undertake ante- and post-mortem meat inspection effectively. (Gap 2015)</p>	<p>Develop program to regulate, authorise and inspect national level establishments (slaughterhouses and milk processors)</p> <ul style="list-style-type: none"> • Review legislation (Animal Slaughter and Quality of Meat Control Act, 2011) against international standards to determine if there are appropriate controls over relevant establishments (e.g. licensing, hygiene standards, premises inspections, etc.); if necessary draft and enact revised legal powers • Develop regulations to implement the Act • Consult with the municipalities and the National Food Safety Authority to reach agreement on respective roles and responsibilities to ensure safety of products of animal origin destined for human consumption. • List key abattoirs and milk processors that supply the domestic markets. • Develop and document inspection protocols and procedures – by Veterinary Public Health Unit <p>Directorate / sub-Directorate Define an enforcement process with penalties to be implemented – including withdrawal of a licence, suspension and temporary approvals</p> <ul style="list-style-type: none"> • Identify and train necessary staff to perform regulatory functions • For major national slaughterhouses (and export) implement regulation, authorisation and inspection for relevant establishments • Consider developing a pilot program for the regulation/inspection of smaller slaughter establishments such as slaughter slabs • Prepare annual reports of activities

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
<p>Veterinary Diagnostic Laboratories</p> <p>CC II-1</p>	<p>Availability and suitability of infrastructures;</p> <p>Laboratory equipment and reagents</p> <p>QMS systems in place / accreditation of Laboratories</p>	<p>The DLS Veterinary Laboratory Diagnostic services are underutilised and lack operational funding.</p> <p>Some personnel deployed at the CDIL lack the knowledge and skills to utilise all of the equipment available to them.</p> <p>Most laboratory personnel at FDILs lack adequate knowledge and skills to perform full range of diagnostic tests which should be available at that level in the service.</p> <p>No formalised or well-structured disease surveillance system through which laboratory samples could be submitted for confirmation of clinical suspicion of suspected notifiable disease notifications to FDILs or the CDIL.</p> <p>Undergraduate veterinary students not trained to use clinical pathology as a diagnostic aid, thus no demand for clinical pathology tests routinely used to assess clinical case at FDILs or at small labs at District or Upazilla Livestock Offices.</p> <p>Teaching clinics at Veterinary Colleges do not utilise laboratory facilities available to them, either for obtaining a better assessment of the cases presented to them or for teaching purposes.</p> <p>Insufficient supply of required reagents and test kits. Some expired reagents still in use.</p> <p>BLRI independent of DLS, reports to Secretary Livestock</p> <p>Only informal, ad hoc communication between the BLRI and CDIL or FDILs. The BLRI is very well equipped and is capable of advanced techniques including PCR and viral nuclear sequencing.</p> <p>7 FDILs, each equipped to a relatively high standard, but lack space and equipment for PCR, necessary for HPAI control.</p> <p>No SOPs for diagnostic test procedures were available at either the CDIL or FDILs.</p> <p>Much equipment obsolete/out of service. Some new lab instruments still in cartons not in use due to lack of space or lack of trained staff to utilise</p> <p>No follow up on the laboratory diagnosis of samples negative to HPAI tests, coming from cases/ outbreaks of high mortality in poultry.</p> <p>There is no regulatory inspectorate system for the inspection of meat at post mortem or for testing imported products of animal origin. Ante-mortem inspection at abattoirs is rudimentary.</p> <p>No facilities exist for undertaking Food safety testing, other than organoleptic and basic microbiological tests.</p> <p>Lack of funding for replacement of broken / non-functional laboratory equipment / instruments or purchase of laboratory reagents.</p> <p>There were almost no trained staff for the repair of instruments/ equipment in the DLS laboratory service.</p> <p>Poultry Research Training Centre at CVASU well equipped but many staff insufficiently well trained or experienced to use much of the new equipment.</p> <p>Two private labs visited very well equipped and well-trained staff performing a wide range of tests, mainly for commercial poultry producers</p> <p>Both labs had good SOPs which were being followed rigorously. Both laboratories were capable of undertaking outbreak investigations, sample collection and performing and interpreting test results</p> <p>Almost no formal QA system employed in any of the Veterinary Diagnostic Laboratories visited, except at VRI (vaccine production) and the BLRI (vaccine development) and the Poultry Research Training Centre, CVASU, which have adopted some QA standards.</p> <p>QA is being practised at Vet Colleges, but not formalised for adoption a routine procedure with SOPs. Almost is no "culture" for formalising standards using SOPs in Bangladesh. Much QA is thus left to chance.</p> <p>QA practices were well established at private veterinary diagnostic laboratories specialised in poultry disease diagnosis and flock health monitoring programmes.</p>	<p>Sufficient laboratories available at Veterinary Colleges and that the BLRI / VRI which could offer placements for CDIL / FDIL lab personnel to be trained in laboratory technology.</p> <p>DLS should undertake a thorough review of the Veterinary Diagnostic technology which needs to be available at each level in the service, taking into consideration, livestock/aquatic production systems, livestock/aquatic population distribution, demands for diagnostic services from different clients, e.g. rural farmers, commercial poultry farms, clinical service providers and the DLS active / passive surveillance systems for confirmation of clinical suspicion of notifiable disease or for disease surveys etc and decide what are "Public" and what are "Private goods services".</p> <p>A plan should be developed for complete overhaul of Veterinary Diagnostic Laboratory services with a view to privatisation of private good services / cost recovery for private goods services, and a new focus be given for DLS to focus service supply based upon Public good needs, including disease surveillance, food safety, import / export inspection, testing and certification</p> <p>Comprehensive training programme to be developed for professional and para-professional (technician level) of all staff for DLS Veterinary Diagnostic Laboratory services at all levels. CPD courses should be developed for basic level as well as advanced and emerging new laboratory technology</p> <p>Veterinary Colleges need to review teaching of veterinary laboratory technology to undertake laboratory tests for clinical service delivery, confirmation of suspected notifiable diseases, food safety / export certification.</p> <p>DLS needs to increase budget request for supplying replacement equipment and for diagnostic test kits and reagents sufficient to undertake a realistic level of confirmatory testing for suspected notifiable disease reported.</p> <p>DLS should develop active and surveillance systems for the reporting of prioritised notifiable diseases and collection and submission of samples for laboratory diagnosis.</p> <p>DLS should consider establishing within Organogram positions for a cadre of engineers specialised in maintenance and repair of laboratory equipment and instruments. Repair / maintenance logs should be developed and used to identify common equipment failures. Engineers should be accredited for the maintenance of Laminar Flow Cabinets.</p> <p>Training modules on QA and the use of SOPs need to be developed as an essential component of in-service training for all laboratory personnel. The Veterinary Colleges or the BLRI would be best equipped with teaching staff who should be familiar with QA standards.</p> <p>It is essential that all teaching, diagnostic, research and vaccine production laboratories adopt and put into practice QA procedures according to SOPs.</p> <p>SOPs should be available in all labs for all diagnostic tests and especially procedures for bio-safety and bio-security</p>

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
<p>Inspection of collection, processing and distribution of other animal products (milk, eggs, honey)</p> <p>CC II-8 B</p>	<p>Certification of food safety of milk, eggs, honey (at least up to point of distribution from processing facilities) should be undertaken by inspectors under the authority of DLS</p>	<p>Some inspection is done at market level by staff from the Ministry of Public Health.</p> <p>Not possible to determine what kind of goods were inspected: eggs, milk, honey, etc.</p> <p>No policy document, inspection records or Standard Operating Procedures were made available to the Evaluation team.</p> <p>Legal basis within Diseases of Animals Act (2005) and Diseases of Animals Rules (2008), empowers the DLS to license and inspect milk processing and retail facilities</p>	<p>The DLS should progressively harmonise standards of practice for food safety at animal product processing facilities (both domestic and export) through the introduction of food safety management systems such as HACCP, which should ultimately lead to ISO 22000/2005 accreditation.</p> <p>A food safety policy should be developed and coordinated between the Ministry of Livestock and Fisheries, the Ministry of Public Health and the Ministry of the Local Government as well as the Municipal Councils.</p> <p>Likely changes in consumption habits accompanied with the development of supermarkets should be monitored in order to design an inspection system and appropriate communication tools based upon risk analysis.</p>
<p>Policies, laws and regulations</p> <p>Stability of structures and sustainability of policies</p> <p>IV-1</p> <p>CROSS-CUTTING</p>	<p>Lack of Policy relating to performance of regulatory functions</p> <p>Overlaps in regulatory authority between the MoFL, Ministry of Commerce, Ministry of Local Government, concerning import regulation of animals and animal products and food safety of animal products</p> <p>Insufficient veterinary influence within Bangladesh Drug Administration and control over importation, manufacture, distribution, sale and use of veterinary medicines</p> <p>Presence of veterinary drug and chemical residues in products of animal origin destined for human consumption</p> <p>AMR</p>	<p>The DLS is authorised (Animal Slaughter and Quality Control of Meat Act (2011) to license and inspect abattoirs and all other types of slaughter facilities and meat processing plants and to carry out ante and post-mortem meat inspection and certification but as yet no inspectorate has been established to undertake this responsibility. (Gap, 2015)</p> <p>“Demand for safer food is growing steadily in the Bangladesh population and this deserves the support from a strong regulatory service entailing inspection and when necessary laboratory testing of animals and animal products.” (PVS, 2011)</p> <p>The enforcement of the Animal Slaughter and Quality Control of Meat Act [...] full implementation of this mandate will take several years. It is not possible to achieve complete coverage of the nation’s meat production. Any certification of animal products following inspection should be absolutely trustworthy.</p> <p>Conflicting authority with the Ministry of Commerce concerning importation policy of animals and animal products (Import Order 2011) relating to day old chicks (DOC) emphasis that the VS does not have the authority and capability to prevent the entry of diseases and other hazards of animals and animal products.</p> <p>Lack of veterinary legislation to support good governance and provide the legal framework for all key activities of the VS.</p> <p>No detailed policy statement or mission for a regulatory veterinary service.</p> <p>No strategic or operational plans in place to support a regulatory veterinary service.</p> <p>Policy, recruitment strategies and placement of human resources and thus implementation capabilities can change from one year to the next depending on the preferences of the Director General who is not always a veterinarian.</p>	<p>Clearly document a procedure and protocol for the development of legislation which brings together the VS and legal experts and includes adequate stakeholder consultation</p> <ul style="list-style-type: none"> • DLS to establish a permanent Veterinary Legislation Working Group to include a lawyer with legal drafting experience to take forward process of review and revision of existing and development of new legislation in accordance with OIE and other international standards • DLS to enter into dialogue with MoH, Ministry of Food and Ministry of Local Government to define respective roles and responsibilities for regulation of food safety and import, manufacture, distribution, sale and use of veterinary medicines and biologicals • Members of VLWG and senior managers of DLS become familiar with Article 3.4 and other OIE Terrestrial Animal Health Code standards & guidelines relevant to veterinary legislation • VLWG to formalise a regular process for review of existing and development of new legislation that brings veterinarians and lawyers together early in the drafting and involves stakeholders (government inter-sectoral and private sector representatives of commercial livestock industry, especially poultry & beef and veterinary medicine manufacturers/importers, animal product processors, including veterinary professionals) • VLWG to include specialised expertise in animal health, veterinary public health, welfare, etc. • Establish formal process of measuring impacts of new legislation • Consider request for an OIE Veterinary Legislation identification Mission <p>A food safety policy, strategy and operational plans should be developed and coordinated between the Ministry of Livestock and Fisheries, the Ministry of Public Health and the Ministry of the Local Government as well as the Municipal Councils.</p> <p>Create a regulatory veterinary services department within the Ministry of Fisheries and Livestock. Clinical veterinary activities should be separated from regulatory activities.</p> <p>The regulatory Veterinary Services should define and set out their policy, objectives and commitment to quality systems and standards.</p> <p>Establish formal coordination arrangements with other relevant government agencies including Ministry of Commerce (sanitary trade issues), MoH (zoonoses, AMR and food safety), Drug Administration (veterinary medicines regulation) and Ministry of Food / Ministry of Local Government/municipal corporations (abattoir licensing and inspections)</p>
<p>I-6B External coordination</p> <p>III-1 Communication</p> <p>III-2 Consultation with stakeholders</p>			

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
Communication / Consultation with stakeholders	Lack of formal communication and consultation with other Ministries and stakeholders such that meetings are required to be minuted and agreed actions are followed-up	The Veterinary Services have not developed appropriate procedures and standards for all providers of relevant activities, i.e. conflicting procedures for importation with the Ministry of Commerce, lack of a coordination mechanism for veterinary public health activities with the Ministry of Health and Family Welfare, coordination of activities with the Local Government/Municipal Councils.	Formal Memoranda of Understanding (MOUs) or legislation should be developed and implemented to create coordination mechanisms between the VS and Ministries or entities such as the Ministry of Commerce, Ministry of Health and Family Services, Department of Fisheries, and Municipalities (for abattoir inspection ...) etc.
External coordination	Lack of Formal agreements between Ministries with shared responsibilities to define precise roles and responsibilities of each partner to ensure effective and efficient performance of key regulatory functions	The Veterinary Services are a member of the drug registration committee which is under the Drug Administration of the Ministry of Health and Family Welfare. Even though DLS has a member on the board, the veterinary decisions can easily be overruled.	<ul style="list-style-type: none"> • Improve liaison with MoH for zoonoses by establishing regular formal coordination meetings; broaden the mandate of the current Avian Influenza group to a generic zoonoses/One Health group covering other zoonoses such as rabies, brucellosis and anthrax, AMR issues (implementation of a joint strategy) and residues issues. • Liaise with the Food Safety Authority to clarify roles in food safety, particularly the DLS role in slaughterhouse premises and meat inspection, in partnership with the Ministry of Local Government/municipal corporations • Liaise with the Drug Administration (a veterinary section is to be developed), to influence and improve veterinary control of veterinary medicines, particularly their distribution and use • Liaise with local councils for rabies and stray dog control • Consider the development of formal MOUs with other agencies including Health, Commerce, Food Safety Authority, Drug Administration and municipal corporations to clarify roles/responsibilities in conduct of regulatory activities.
III-1, III-2			
I-6B			
Identification, Traceability and movement control (Animals)	Traceability of animals and animal products to facilitate detection of source of drug and other residues in animal products destined for human consumption and to meet export certification requirements of trading partners	There is no formal animal identification, movement control and traceability system in place	<ul style="list-style-type: none"> • Develop necessary legislation to regulate animal identification, movement control and traceability in accordance with OIE standards • Consult with dairy/beef industry representatives and develop a standardised approach for animal identification according to purpose (disease control, commercial dairy producers, domestic and export producers (meat/poultry)) • Progressively introduce pilot animal identification for disease control programmes, commercial dairy animals and beef animals destined for export of meat • Establish animal identification information management systems for animal/animal product identification, movement control and traceability. • Monitor sanitary requirements of potential trading partners with respect to identification/traceability requirements • Introduce a formal system and protocols for movement control of animals for animal disease control and domestic market/export traceability as soon as possible • Progressively introduce quality stamping of animal products and batch numbering for purpose of traceability of animal products for domestic/export markets (Note: to be linked to the DLS taking full control of ante and post mortem inspection and certification of animals/meat at all slaughterhouses and so allow through chain traceability) • Work with MoH to ensure inspection and sanction arrangements for domestic retail outlets to ensure only inspected (stamped) meat is sold commercially as per legislation. • Develop a pilot residue testing programme for export products and some products distributed nationally, built on the experience already gained in the aquatic animals' sector (Department of Fisheries) to provide scientific data on the risks posed by residues in Bangladesh.
II-13 A			
Traceability of animal products	Certification for export trade of animal products (meat) in accordance with SPS / OIE standards		
CC II-13 B			

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
<p>Regulation of importation, manufacture, distribution, sale and USE of Veterinary Medicines and Biologicals</p> <p>CC II-9</p> <p>CROSS-CUTTING</p> <p>I-6 B External coordination</p>	<p>Insufficient regulatory control over importation, manufacture, sale and use of veterinary medicines</p> <p>Misuse of VMPPs by animal owners, veterinarians and VPP's through failure to respect withdrawal periods and correct dosage protocols can lead to presence of drug residues in animal products destined for human consumption and AMR</p>	<p>The Bangladesh Drug Administration (under the Ministry of Health and Family Welfare) includes only one representative from DLS on the drug import committee....</p> <p>The collaborative working relationship between the DLS and the Drug Administration is well developed but with only one DLS representative on the committee, veterinary decisions can easily be overruled.</p> <p>During visits to local animal health pharmacies, drugs were found which have been banned for use in animals in most countries (Diclofenac). (PVS, 2011)</p> <p><u>Weaknesses – (PVS 2011)</u></p> <ul style="list-style-type: none"> • “[DLS has] no power of control at prescription and distribution levels. • A fast growing market. • No facility for the testing of veterinary drugs/biologicals. • DLS has no regulatory control of veterinary medicines, biologics, testing kits or reagents used in disease control. 	<ul style="list-style-type: none"> • The veterinary drugs market could be an important source of income for funding Veterinary Services, especially private. In this regard, the role of farmers' associations, that can save money through buying larger quantities and invest their savings in an appropriate prescription by veterinarians, could be explored (see the dairy cattle project linked with the Veterinary Faculty of Mymensingh) • DLS should better define their authority over the importation, registration and distribution of veterinary drugs. (PVS 2011) • DLS laboratories (vaccine production laboratory) could have a role in determining the efficacy/quality of imported drugs and in the reporting and or monitoring of adverse drug reactions. • Work with the Ministry of Health to establish a 'veterinary section', under Bangladesh Drug Administration, to manage the registration, import/manufacture, distribution, sale/use etc. of veterinary medicines and biologicals • Identify priority veterinary public health concerns with Ministry of Health and other stakeholders and investigate and inform the scientific basis for these concerns. Note that there are major political and community concerns over the use of hormones –the evidence for this needs to be reviewed and an appropriate control programme developed, if necessary. • Review and revise legislation as necessary • Consult with veterinarians (public and private sectors), importers/manufacturers, distributors, pharmacies, producers, industry and feed suppliers on how best to promote prudent use of veterinary medicines and biologicals • Develop with the Drug Administration a Veterinary Drug Control Programme to monitor and manage the use of veterinary medicines and biologicals –<u>VPH Department of DLS to take lead role.</u> • Review veterinary medicines and biologicals registration policy – whether it is the necessary to test all products in country or whether external quality assurance and registration data is sufficient. • Train inspectors to identify counterfeit and expired medicines in the retail marketplace. • Use a database to record all registered products (medicines and biologicals) and the quantities produced/imported. • Undertake initial monitoring programme of the production/import, distribution and sale of veterinary medicines and biologicals • Identify critical issues in the management and use of veterinary medicines and biologicals and work to bring veterinary drug distribution and use in the field more under the control of veterinarians and veterinary paraprofessionals (rather than pharmacists). • Undertake a targeted communication and awareness campaign • Continue to monitor the use of veterinary medicines and biologicals

Area of interest/CC's	Issues of concern	Findings - Baseline levels at PVS evaluation 2011/Gap analysis – 2015	Recommendations made at (PVS/Gap) changes/actions to be taken
Residue testing CC II-10	Identification and control of veterinary drug and other chemical residues in animal products destined for human consumption	The DLS has no residue testing programmes (PVS 2011) The PVS Gap Analysis mission was made aware of significant public health concerns over 'hormones' in meat products. There seems little credible evidence for this concern.	<ul style="list-style-type: none"> • In collaboration with Drug Authority develop regulations to set the MRL's for antibiotics, heavy metals, pesticides and insecticides used in Agriculture • Develop a pilot residue testing programme for export products and some products distributed nationally to provide scientific data on the risks posed by residues in Bangladesh • Develop a comprehensive Residue Monitoring Plan based on risk analysis undertaken with stakeholders in the industry. • Develop materials to create awareness of feed operators, livestock producers and other related businesses regarding residues and contaminants which may enter the human food chain via consumption of animal products
Safety and quality of animal feeds NOT INCLUDED IN PVS EVALUATION TOOL USED IN 2011 BUT, some analysis included in Gap Analysis 2015	Safety and quality of animal feed is important in relation to food safety of animal products Common Issues include possible presence of aflatoxins which can be transmitted via milk. Unregulated use of feed additives (growth promotants, anti-microbials)	The DLS have legislation and regulations for control of feed safety; Testing for aflatoxins in feed is available. Some inspections of commercial feed mills; feed samples analysed feed analysis. DLS conducts occasional testing of samples of animal feeds for toxins, salmonella, aspergillus; Fees for testing for commercial feed mills.	Regulation of the Importation and manufacture of animal feeds should be undertaken by the DLS in order to ensure the supply of safe and good quality animal feeds Develop capacity to implement field control of feed safety with necessary supporting testing <ul style="list-style-type: none"> • Review legislation and revise if necessary • Identify and consult with major feed suppliers to develop Feed Safety Assurance Programme • Develop testing for antibiotics, heavy metals and hormones in feed – these are prohibited substances; work with Veterinary Drug Control Programme (CC II.9) to identify major concerns • Train inspectors to identify issues relating to the safety of animal feeds in accordance with defined standards (Regulation) • Assess if international accreditation is required by exporters • Identify private laboratories that might undertake the testing; implement a programme of regulation/accreditation of these laboratories

Annex 5 Questionnaire and Answers to measure changes in the DLS capability and capacity to regulate the food safety of PoAO

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
<p>Structural Organisation of the Veterinary Services (VS) related to Food Safety</p> <p>I-1A & B No's of Professional & para-professional staff (performing Food Safety regulatory functions)</p> <p>I-11 – Management of resources – restructuring of VS</p>	<p>(1) Have any significant changes been made to the structure of the DLS, especially with regard to establishing capacity to undertake regulatory functions related to the food safety of animal products?</p> <p>(2) Please provide an up-to-date Organogram showing all positions within the DLS structure at each administrative level. (Refer to Tables listing staff positions "Establishment", and "in post" at each administrative level)</p> <p>(3) What are the current staffing levels within the DLS structure or under other Competent Authorities specifically related to the regulation of Food Safety of Products of Animal Origin, including the following?</p> <p>(a) Active or passive surveillance of zoonotic diseases, especially food-borne pathogens that affect animals and humans;</p> <p>(b) Animal and meat (ante- and post-mortem inspection) (Ministry of Local Government figures should be given as well as any staff employed within DLS);</p> <p>(c) Health and hygiene inspection of animals traded at livestock markets;</p> <p>(d) Hygiene inspection of abattoirs, slaughter facilities, and milk processing facilities (as for (1))</p> <p>(e) International trade/Border control (i) setting sanitary requirements for import of animals and animal products, (including import risk analysis) (ii) issuance of import permits, conduct of border inspections, (iii) Export certification of animals and animal products;</p> <p>(f) Animal identification or movement control and traceability of animals or animal products processed for human consumption;</p> <p>(g) Monitoring and controlling of veterinary drug and other residues in products of animal origin (meat, milk, eggs) destined for domestic consumption/export;</p> <p>(h) Regulation of import, registration, distribution, sale and use of veterinary medicines especially anti-microbial usage in the livestock industry and the existence or otherwise of organisms that have developed resistance to any anti-microbials (AMR);</p> <p>(i) Setting standards and regulating the safety of animal feeds, especially testing for toxins and controlling the use of growth promotants, antibiotics and other feed additives.</p> <p>(4) Are there any Job Descriptions/ToR's provided to personnel of the DLS/ MoLG/MoHFW which relate specifically to any of the above regulatory functions of the DLS/MoLG/MoHFW?</p>	<p>(1) DLS submitted a proposal to the Govt. through MoFL in an attempt to increase human resource capacity from 8,689 to 27,565 (approximately) (including veterinarians, technicians, and clerical and maintenance staff) in order to cope-up demanding production, health & nutrition, diagnostics and analytical capacities along with boost-up food safety. But, on final approval, an increase of 626 permanent cadre post, 2,567 yearly phase basis non-cadre revenue post has been made that an inadequate addressing to the food safety issues could be started with.</p> <p>(2) Website: www.dls.gov.bd having the full organisational chart along with tiers levels and positions.</p> <p>(3) (a) Non specific yet but an artificial intelligence developed by DLS could be considered sufficient in order to conduct surveillance on zoonotic diseases of livestock and zoo animal capacities.</p> <p>(b) As far as known 03 (Three) Veterinarians were dedicated to serve the purpose in 11 City Corporations (Dhaka – 01, died; Khulna - 02) & recently 05 Veterinarians are interviewed for appointment for the same purpose in Dhaka North City Corporation while the City Corporations are usually hire Veterinarians on Deputation from DLS to accomplish the job, however, Nonetheless, those initiatives are absolutely inadequate considering the necessities of ante or post-mortem inspection. On the other hand, DLS doesn't have any dedicated facilities for the purpose; rather DLS officials out of City Corporation exert the functions on ad hoc fashion.</p> <p>(c) Consistent inspection of health & hygiene of animals at local market level is absolutely absent but infrequently local markets being surprisingly visited by team under local Veterinarians comprising other law enforcing agencies. During festival, Veterinary Medical Team accomplishing the same duty, consistently.</p> <p>(d) Abattoir & slaughterhouse facilities are neither popular nor established yet adequately here in Bangladesh excepting a very few in private sector like Bengal Meat and they have their own inspectors for the purposes. Considerably good number of Milk Processing units like Milk Vita, Pran, Akij (though not enough in number) having their own arrangements to do so. DLS doesn't have any abattoir in its possession but have only one milk processing unit based in CCBS having Veterinarian in order to inspect hygiene.</p> <p>(e) (i) 23 quarantine stations at Land, Sea & Air Ports have been set up recently for the purpose but not yet well-equipped to analyse import risk analysis. (ii) Veterinary Officers working in those stations are not authorised to issue permit rather they inspects & reports HQ in issuance of such permits. (iii) Export certifications are being issued from DLS HQ actively & with a realistic public service easing the system using dedicated software which is found very user friendly.</p> <p>(f) Neither dedicated facilities nor staffs have been deployed for the purpose but could be started with the new set up 64 Veterinary Officers at all district level, Deputy Director & Assistant Director of Planning Cell of DLS HQ, 07 Deputy Directors (Veterinary Public Health) at Divisional level, 01 Assistant Director (Epidemiology Unit) of DLS HQ and 08 Deputy Chief Epidemiologist at Divisional level (Where all those positions are mid-level career Veterinarian) in order to be accomplished the movement control or traceability.</p> <p>(g) A 06 (Absolutely inadequate) member crew headed by a PSO (mid-level career Veterinarian) to run a Quality Control lab have been set-up for the same purpose.</p> <p>(h) Neither dedicated set-up nor Veterinarian have been deployed for the purpose but by a coordinated effort with Deputy Director (HRD) presently working in, newly established QC lab along with Deputy Director (Legislation & Certification) could be able to start accomplishing the work.</p> <p>(i) Newly set QC lab is good enough for the purposes.</p> <p>(4) 7th & 8th Five Year Plan comprising term for nutritional Food Safety issues but there is no dedicated job description directly assigned for the purposes.</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
<p>Structural Organisation of the Veterinary Services (VS) related to Food Safety</p> <p>I-1A & B No's of Professional & para-professional staff performing Food Safety regulatory functions)</p> <p>I-11 – Management of resources – restructuring of VS</p>	<p>(5) Has the DLS established (or proposed to establish) a new department of Veterinary Regulation as a regulatory body (as for instance has been done for Agricultural seed certification authority of DAE)? as recommended by OIE in both PVS & Gap Reports) and under which the following areas of veterinary regulatory functions are included:</p> <p>(a) coordination of regulation of food safety of animal products with local governments/municipality corporations and the Food Safety Authority to ensure provision of effective ante- and post-mortem inspection and control of food safety management at ALL municipal and larger slaughterhouses, <u>including development of a reporting system of ALL ante and post-mortem inspection findings back to DLS Epidemiology cell?</u> (External Coordination).</p> <p>(b) a Veterinary Public Health Department, to develop and introduce standard inspection procedures and protocols for domestic market abattoirs, milk processing facilities and control of zoonotic/food borne diseases in accordance with OIE/Codex standards.</p> <p>(c) to collaborate with MoHEW to establish 'Veterinary Medicines & biologicals division within the BDA responsible for management and coordination of all regulatory functions related to registration, import, distribution, sale and use of Veterinary Medicines and biologicals. (Including development of a Residue Monitoring Plan, regulation of the use of VMs as Feed additives; development of joint programme to monitor use of anti-microbials especially in commercial dairy and poultry industries).</p> <p>(d) a Livestock (international) Trade sub-Directorate to manage international trade of animals and animal products (i)_ setting of sanitary measures in accordance with OIE/SPS standards; (ii) issuance of import permits, border inspection; (iii) export certification within central VS and at Divisional/District levels, if appropriate)</p> <p>(e) to appoint a Head of the Veterinary (Regulatory) Services/ (Directorate) as a veterinarian designated as CVO and OIE Delegate?</p>	<p>(5) No initiatives have been taken yet but is in active consideration. (a) QC lab can analyse as background body but not authorised to coordinate. (b) Not yet but kept in active considerations. (c) Still not addressed but it could start in association with One Health initiatives. (d) Not extended but a limited scale could be initiated with 64 Veterinary Officers at all district level, Deputy Director & Assistant Director of Planning Cell of DLS HQ, 07 Deputy Directors (Veterinary Public Health) at Divisional level, 01 Assistant Director (Epidemiology Unit) of DLS HQ and 08 Deputy Chief Epidemiologist at Divisional level (Where all those positions are mid-level career Veterinarian) in order to be accomplished the agenda. (e) Not yet accordingly but functioning the work by Director Admin in favour of Director General, DLS as CVO of Bangladesh.</p>
<p>(7) If so, is there any evidence – Minutes of meetings, agreed protocols for reporting results of ante- and post-mortem inspection, inspection reports received by Epidemiology cell from Municipal abattoirs?</p>	<p>(6) Have there been any formal discussions held with local governments/ municipality corporations and the Food Safety Authority (MoHFW)/ National Food Safety Management Advisory Council to coordinate and ensure better/effective provision of ante- and post-mortem inspection services at abattoirs/slaughterhouses/other slaughter facilities in accordance with the legal authority provided to the DLS in the Animal Slaughter and Quality Control of Meat Act (2011) (to license and inspect abattoirs and all other types of slaughter facilities and meat processing plants and to carry out ante and post-mortem meat inspection and certification ?),.....as well as/or to enforce the requirement for veterinary inspectors currently employed by Municipalities/local government to report results of inspection to DLS (to be included in animal disease notification database) and to help to identify common disease problems, especially those related to food safety, for future prevention/control activities based on risk analysis.</p>	<p>(6) A provisional meeting and discussions have taken place with..... but no effective results or actions are in action yet. (7) Minutes are available</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
Numbers of suitably qualified personnel employed for, <i>inter alia</i> regulation of Food Safety of animal products	<p>(8) Has the DLS made a needs assessment of the numbers and level of training of veterinarians and veterinary para-professionals (VPP's) required for the efficient operation of core veterinary public health and food safety regulatory activities in accordance with its legal mandates? If so, can the results of the assessment be provided to UNIDO Gap Analysis?</p> <p>(9) Has the DLS increased the number of veterinarians employed within the DLS at all administrative levels to 2,130, of which 94 full time equivalent (FTE) veterinarians would be required to implement a food safety programme in major slaughterhouses including premises registration, hygiene, ante- and post-mortem inspections as recommended in the Gap Report 2015)?</p>	<p>(8) DLS has not conducted such need assessment of the numbers and level of training of veterinarians and veterinary para-professionals (VPP's). However, DLS has submitted an Expression of Interest (EOI) to OIE on national workshop to bring stakeholders together and agree on approach to workforce development. Gap analysis (Revised methodology), Veterinary workforce planning and assessment (new pilot tool). Although, there is no progress.</p> <p>(9) Not exactly 2,130, but 64 Veterinary Officers at all district level, Deputy Director & Assistant Director Planning Cell of DLS HQ, 07 Deputy Directors (Veterinary Public Health) at Divisional level, 01 Assistant Director (Epidemiology Unit) of DLS HQ, and 08 Deputy Chief Epidemiologist at Divisional level (Where all those positions are mid-level career Veterinarian) 82 Veterinarians in total could be assigned by dedication in order to be accomplished.</p>
CC's I-1A & B	<p>(10) If not, how many officers of the DLS are now full-time occupied with conduct of regulatory functions related to food safety of animal products?</p>	<p>(10) None is yet fully occupied. (a) no such staffs are deployed to address absolutely specific to carry-out regulatory work meeting food safety of animal origin neither in DLS nor in any other organisation.</p>
I-2A & B	<p>(a) Does the DLS have any accurate records of the numbers of staff currently responsible for performing regulatory functions related to Food Safety of animal products deployed at each administrative level (not known in 2015) in the employment of other Competent Authorities (e.g. Municipalities/local governments)?</p>	<p>(a) There is no dedicated manpower who are responsible related to Food Safety of animal products. However, these activities are being implemented by ad hoc basis. In Dhaka city corporation (DCC) area (both south and north) there have a provision of 10 veterinarians and 20 veterinary/slaughter inspectors will implement regulatory functions related to Food Safety of animal products. However, in present situation 7 (2-DSCC & 5-DNCC) veterinarian and 8 veterinary/slaughter inspectors (3-DSCC and 5- DNCC) are working in the DCC areas. Additionally, in other city corporation/ municipality areas there have provision of some veterinarians and food safety inspectors.</p>
I-3	<p>If so, how many staff with JDs defining Food Safety regulatory functions are now deployed at each administrative level?</p> <p>(11) Has the DLS taken forward the 2007 National Livestock Development Policy statement regarding a proposed shift towards private sector supply of clinical veterinary services, in conjunction with a locally-based subsidy for poor farmers through issuance of payment vouchers? If so, what action, if any, has been taken to promote/facilitate the expansion of private veterinary entrepreneurs into rural areas? e.g. award of contracts to perform public functions on behalf of DLS;</p> <p>(12) Has any Continuing Education (CE) program been developed for strengthening capacity to perform VPH (Food safety) functions at each administrative level (H/q, Division, District or Upazila)? If so – are any training materials developed and available for review?</p> <p>(13) Is there a formal Training Plan in place to be used for training of newly recruited as well as for staff being promoted into more responsible positions?</p> <p>(14) Are there any formal induction training courses available for newly appointed meat/food hygiene inspectors?</p> <p>(15) Do the veterinary curricula for Vets (Veterinary Degree courses) and VPPs (Livestock Assistants/Veterinary technicians) fulfil Day One competencies, in the national context, and/or according to OIE standards?</p> <p>(16) Are Veterinary curricula at all Vet Universities harmonised so that graduates all have the same level of knowledge and skills (related to food safety of animal products) upon graduation?</p> <p>(17) Have the Bangladesh Vet Council or Bangladesh Vet Association had any involvement in proposing changes in Veterinary curricula, especially related to regulatory functions for food safety of animal products?</p>	<p>(11) No change in DLS putting 2007 policy into practice - At present situation, clinical veterinary services are supported by the government initiatives at the local levels as a service provider. However, in some areas private veterinary services have also tailored to support livestock producers on demand-based. Additionally, the government has planned to provide subsidy to the livestock farmers through insurance payment.</p> <p>(12) Since there is no dedicated manpower, some CE courses on food safety including other issues have been developed and practiced for existing manpower at upazila and district levels. On the initiative of FAO (ECTAD) and Veterinary Dean council, a continuing education in the name of Field Epidemiology has been started working (Materials attached).</p> <p>(13) There is no formal training plan on food safety issue. This is included under overall training plan of DLS. Orientation courses are in action for newly recruited personnel.</p> <p>(14) No routine training programme currently offered by DLS - Some instances training courses of meat /food hygiene inspectors for DCC have been conducted. However, DLS officials (District, upazila and central level) receive training on that issue from other training program.</p> <p>(15) Not yet, but FAO (ECTAD) and Veterinary Dean Council had laid a notion to assess the day zero competencies but in DLS, no such courses have been introduced yet to fulfil day zero competencies neither for Veterinarians nor support staffs. Most of the veterinary schools are in underway to harmonize the veterinary curricula as per OIE standards as they are agreed on dean council decision. However, a few the veterinary schools have adopted the revised curricula and a few schools have twinning program in this regard. Livestock Assistants/ Veterinary technicians have not included under such program.</p> <p>(16) No but graduates from some veterinary schools have advance level of competency.</p> <p>(17) The Bangladesh Veterinary Association has not been actively vocal in order to make such upgradation in curricula alone for a long time.</p> <p>(a) Bangladesh Veterinary Council (BVC) has a Criteria and guidance entitled "BVC Standard for Veterinary Education" for approval of veterinary degree courses in Bangladesh and overseas where food safety in animal product is sparsely addressed (BVC Standard_of_Veterinary_Education.pdf; BVC has some involvement with proposing changes in veterinary curricula through dean council platform (FAO-ECTAD initiative) where regulatory functions for food safety of animal products moderately focused.</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
<p>Technical independence</p> <p>CC I-4</p>	<p>(18) Is the DLS senior management aware that a conflict of interests may exist with Municipal authorities/ local governments owning slaughter facilities and at the same time employing meat/hygiene inspectors? (In other words, not an independent regulatory authority). (This, (as well as being compliant with OIE recommendations) could be a strong justification for taking responsibility for an independent (DLS) Meat/hygiene inspectorate.)</p> <p>(19) Has there been any increase in salaries of Food Safety inspectors in order to ensure technical independence of decisions made by inspectors as to compliance with standards of hygiene or fitness of food for human consumption?</p>	<p>(18) Completely aware of the conflict of interest but none of the steps are up for independent authority yet as it is inter departmental issues. (19) No such notions are made yet.</p>
<p>Stability of structures and sustainability of policies</p> <p>CCI-5</p>	<p>(20) Has the DLS/Civil Service Introduced a merit-based recruitment/promotion system to reduce the high turnover of senior positions? (e.g. DG and CVO noting that these positions seem to be filled by staff shortly before their retirement age of 59?)</p> <p>(21) Has the DLS engaged in discussion with MoFL Human Resources Directorate/Civil Service Commission to develop medium to long term Policy/strategic plans that promote the sustainability of policies and programmes, especially those related to promotion of staff within the DLS according to performance indicators rather than being based solely on age/length of service?</p> <p>(22) Has the DLS developed any plans to keep key officers/staffs with specialised knowledge and skills in the same area of employment following transfer or promotion?</p> <p>(23) Is there any scope to recruit staff into senior positions through competitive exams among cadre officers, ignoring age or seniority?</p>	<p>(20) Not yet (21) Yes - Very recently, issues of performance-based promotions have been talked with MoFL but not yet in action. (22) DLS searching the appropriate officers to posting them in right position according to their specialization. But not always possible as MoFL is able to overrule (23) Yes, there is some scope to deploy the senior officials by taking competitive exam through MoFL approval.</p>
<p>Operational funding</p> <p>CC I-8</p> <p>III-2 Consultation with stakeholders</p>	<p>(24) Has the DLS Developed any Annual Work programmes and Investment plans to cover performance of core regulatory functions, especially those related to Food safety of animal products destined for human consumption in order to secure a budget allocation for these core functions, including ante- and post mortem inspection of slaughter animals/meat, registration/licencing of food processing facilities, hygiene inspection of premises, import/export, domestic trade, animal feeds, veterinary medicines, residues, AMR. If so, has any budget allocation been made? Is the budget allocation sufficient to cover salaries and all operational costs?</p> <p>(25) Has the DLS Developed any staff skills in risk analysis and cost-benefit analysis to support their investment plans?</p> <p>(26) Can the cost of vaccines or export certification/import permission be increased/imposed to maximise income?</p> <p>(27) Can income derived from performing regulatory functions of a “private good” nature be retained by the DLS to offset costs of providing such services?</p> <p>(28) Has DLS developed any ‘Key Performance Indicators’ for expected outcomes in case of regulatory activities like (disease surveillance and) food safety related activities?</p>	<p>(24) Partially reflected in Annual Performance Agreement (APA). There is no specific budget allocation for these core functions. (25) No. (26) No. (27) No. Such income should be deposited in Government account. (28) Partially reflected in APA.</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
<p>Infrastructures, Abattoirs and other slaughter facilities/Physical resources and capital investment</p> <p>CC I-7</p>	<p>(29) Do the DLS have any accurate record of the number of (licensed/registered) abattoirs/slaughter facilities at Divisional municipalities, District/Upazila levels Have any new abattoirs/slaughter facilities been constructed at any Municipalities or at any local authorities since 2015 if so please provide a list of all known abattoirs/slaughter facilities.</p> <p>(30) If not has any refurbishment taken place at any abattoirs/slaughter facilities</p> <p>(31) Does the DLS consider it necessary to improve standards of hygiene and inspection at slaughter facilities of live bird market under cities, districts or Upazilas?</p> <p>(32) How does DLS monitor/ collect sample to/from slaughter facilities?</p>	<p>(29) No. But the initiative will be taken by LDDP project, which has plans for construction of 192 Upazila slaughterhouses/Wet markets, 20 district slaughterhouses and 3 City Corporation slaughterhouses (30) No.</p> <p>(31) Yes, but not yet implemented.</p> <p>(32) Few or no samples are routinely collected from slaughter facilities, but DLS in coordination with FAO, ECTAD collect sample from live bird market.</p>
<p>Regulation, inspection (including audits), authorisation and supervision of establishments for production and processing of food of animal origin</p> <p>/</p> <p>Ante- and post-mortem inspection of animals and meat</p> <p>(CC's II-7A & 7B 2019 PVS)</p>	<p>(33) (33) Has DLS reviewed the Animal Slaughter and Quality of Meat Control Act, 2011 to harmonize with international standards for appropriate controls over relevant establishments (e.g. licensing, hygiene standards, premises inspections, etc.)?</p> <p>(34) Has the DLS prepared any regulations to implement the Act?</p> <p>(35) Has the DLS held any formal discussion with local government and Food Safety Authority for effective implementation of the law?</p> <p>(36) If so what agreement, if any has been reached to ensure collaboration in sharing information derived from ante- and post-mortem inspections?</p> <p>(37) Has the DLS started to implement authorisation procedures (registration, licensing, inspection) at all major slaughterhouses including export abattoirs, poultry slaughter facilities and poultry meat processing facilities?</p> <p>(38) Does the DLS have any official plans agreed for registration, licensing and inspection of milk processing plants?</p> <p>(39) Has the DLS developed a pilot program for the regulation/inspection of smaller slaughter establishments such as slaughter slabs?</p> <p>(40) If so, how many and can any positive outcome be demonstrated from such pilot exercises?</p> <p>(41) Has the DLS developed any training courses for officers to be responsible for carrying out food safety inspectorate functions?</p> <p>(42) Has DLS entered into any relationship with Bengal Meat to provide training on Risk-based food safety management systems?</p> <p>(43) Does the DLS undertake any inspection/audit of Bengal Meat for the purpose of export certification of meat or for control of hygiene management?</p> <p>(44) Is most poultry/poultry meat still being sold at "wet markets"</p>	<p>(33) Yes.</p> <p>(34) DLS already developed the regulation which named 'Animal Slaughter and Quality of Meat Control Regulation, 2021'</p> <p>(35) Not yet.</p> <p>(36) N/A</p> <p>(37) The DLS will start the authorisation procedure after consultation with its stakeholders.</p> <p>(38) The registration, licensing & inspection of milk processing plant is included in the Animal Disease Rules, 2008.</p> <p>(39) No</p> <p>(40) N/A</p> <p>(41) No</p> <p>(42) No</p> <p>(43) The DLS only provide the export certification. In recent time no inspection/audit is carried out for control of hygiene management.</p> <p>(44) Yes.</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
<p>Veterinary Diagnostic Laboratories (CC's II-1.A, B and C 2019 PVS)</p>	<p>(45) Has DLS undertaken a review of the required laboratory capabilities at each level within the VS taking into consideration livestock production systems, known disease prevalence, livestock/aquatic animal population densities, and demand for laboratory diagnostic services? (46) If, so is there a strategic plan developed to ensure that the appropriate laboratory technology is available at each administrative level? (47) Do any of the veterinary diagnostic laboratories available to the DLS have the capability to perform all the necessary tests and analyses to confirm that animal products destined for human consumption are not contaminated with pesticide, veterinary drug residues, mycotoxins, heavy metal or biological contaminants beyond the MRL standards defined in the Codex Alimentarius. (48) Has DLS undertaken any plan to monitor the activity private diagnostic services? (49) Has DLS given priority to strengthen active and passive disease surveillance systems for confirmation of clinical suspicion of notifiable disease through submission of laboratory diagnostic samples or for disease prevalence/control surveillance. (50) Has DLS introduced a programme to levy charges for private laboratory diagnostic (and clinical) services? (51) Have any Veterinary Universities adjusted their training of undergraduates to include the conduct and interpretation of the full range of diagnostic tests required to support clinical medicine, the confirmation of the diagnosis of notifiable animal diseases and food safety of animal products? (52) Has DLS adopted a Training plan to include CE for lab staff to acquire necessary knowledge and skills to utilise all available laboratory equipment? (53) Has DLS recruited a cadre of engineers specialised in maintenance and repair of laboratory equipment and instruments. (54) Have any Veterinary diagnostic laboratories introduced a programme for maintaining accurate Repair/maintenance log records to ensure correct calibration of lab instruments and identify common equipment failures? (55) Have any Engineers been accredited for the maintenance of Laminar Flow Cabinets. (56) Has any veterinary diagnostic laboratory appointed an officer responsible for QA within that laboratory and..... (57) Has DLS developed officially approved and adopted SOPs to be introduced at all teaching, diagnostic, research and vaccine production laboratories to ensure adoption of QA and Good Laboratory Practice standards?</p>	<p>(45) DLS with the help of LDDP project taken initiatives to set mini diagnostic lab in the upazilla level. Also 3 new FDIL (Sirajgonj, Chattogram, Jessore) and 01 disease investigation laboratory in Gopalganj was established. (46) DLS has policy but no written document to ensure laboratory technology at each administrative level (47) Some private diagnostic laboratory (i.e Waffen Research Laboratory Limited) are accredited by BAB and diagnosis different livestock product (feed, milk product, egg etc.) QC lab established in Savar has the capability to perform all the necessary test and analysis. (48) Some private diagnostic laboratory is now diagnosing diseases and analysing livestock products, but DLS has no written plan to monitor such types of activity. (49) HPPI, Rabies, anthrax, TB and Brucellosis active surveillance is going on in DLS through two projects. Under BAHIS passive surveillance also running in DLS. (50) Still not taken any programme. (51) Not completely, BAU, CVASU has the training program for the undergraduates. (52) Lab staff get training when budget is available but has no training plan. (53) (DLS has engineering section but no recruited specialised engineer for maintenance and repair of lab equipment and instruments. CDIL conducts proficiency test with partner laboratories. (54) Not yet, but when needed taken support from private engineering company. CDIL has written order for assigning an officer responsible for QA. (55) Not yet (56) QC Lab, CDIL, VRI and BLRI have QC managers (57) Partially, PCR, AMR and lab disease diagnosis SOP has already been developed and some additional SOP's are being developed.</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
Inspection of collection, processing and distribution of other animal products (milk, eggs, honey) II-8B	<p>(58) Has the Food Safety Authority or the Ministry of Local Government introduced any official system for controlling the safety of animal products being distributed from farms, markets, processing facilities?</p> <p>(59) If so, what records are kept which demonstrate that controls are being undertaken on a routine basis in accordance with a planned schedule of activity based on risk analysis?</p> <p>(60) Has any abattoir (export or domestic) adopted an identification system for tracing animal products back to animal or farm of origin?</p> <p>(61) Has the DLS established a sub-Department for licensing and inspection of milk processing facilities?</p> <p>(62) If so, does this unit have any responsibility for collection and testing of samples of milk for checking for biological or chemical contaminants or residues?</p> <p>(63) Are any milk processing facilities following a HACCP plan or accredited to ISO 22000/2017</p>	<p>(58) Not known yet. DLS has responsibility for distribution and sale of animal products from production to retail sale (Animal Health Act (2005))</p> <p>(59) Not applicable.</p> <p>(60) Not yet introduced so far.</p> <p>(61) Not yet but QC lab under direct supervision of DLS is doing the work in a limited scale.</p> <p>(62) Yes, QC lab is assigned to do so.</p> <p>(63) No yet.</p>
Policies, laws and regulations Stability of structures and sustainability of policies IV-1 Veterinary legislation	<p>(64) Has DLS developed any permanent Veterinary Legislation Working Group to include a lawyer with legal drafting experience to take forward process of review and revision of existing and development of new legislation in accordance with OIE and other international standards?</p> <p>(65) Have DLS entered into dialogue with MoH, Ministry of Food and Ministry of Local Government to define respective roles and responsibilities for regulation of food safety and import, manufacture, distribution, sale and use of veterinary medicines and biologicals?</p> <p>(66) Are any officers within DLS familiar with Chapter 3.4 of the Terrestrial Animal Health Code</p> <p>(67) Has DLS made any proposal to MoFL/MoF to create a Regulatory Veterinary Services Department within the Ministry of Fisheries and Livestock.</p>	<p>(64) Not yet.</p> <p>(65) Not yet.</p> <p>(66) There are few in number.</p> <p>(67) Not yet.</p>
Communication/ Consultation with stakeholders & External coordination III-1, III-2 I-6B	<p>(68) Has DLS established a formal mechanism of liaison with MoH for the prevention and control of zoonotic diseases by establishing regular formal coordination meetings;</p> <p>(69) Can the DLS/MoH broaden the mandate of the current Avian Influenza group to a generic zoonoses/One Health group covering other zoonoses such as rabies, brucellosis and anthrax, AMR issues (implementation of a joint strategy) and residues issues?</p> <p>(70) Has DLS established formal coordination arrangements (MoU) with other relevant government agencies including Ministry of Commerce (SPS/sanitary trade issues), MoH (zoonoses, AMR and food safety), Drug Administration (regulation of veterinary medicines import, manufacture, distribution, sale and use) and Ministry of Food/Ministry of Local Government/municipal corporations (abattoir licensing and inspections)</p> <p>(71) If so name the Committees established and how many DLS personnel are represented on each Committee</p> <p>(72) Does DLS liaise with local councils for rabies and stray dog control?</p>	<p>(68) Not yet except One Health activities.</p> <p>(69) Yes, absolutely, there are scopes working together.</p> <p>(70) Yes, a limited scale over few issues.</p> <p>(71) Documentation is available.</p> <p>(72) Yes</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
Veterinary medicines and biologicals (CC II-8 2019 PVS)	<p>(73) Has the DLS made any attempt to increase its representation on the BDA in order to increase the effectiveness of the regulation of veterinary medicines?</p> <p>(74) Has the DLS defined the roles it should be adopting for the better regulation of the importation, manufacture, distribution, sale and use of veterinary medicines?</p> <p>(75) Has the legislation (primary laws and secondary regulations) covering veterinary medicines been reviewed and revised in order to ensure the safety, efficacy and prudent use of VM's released onto the market in Bangladesh?</p>	<p>(73) Not yet. (74) Yes. (75) Not as such.</p>
Identification and traceability of animals (CC II-12 A 2019 PVS)	<p>(76) Have DLS reviewed legislation and developed Regulations to assure traceability of animals, animal products and Veterinary drug and chemical residues and revise if necessary? Has any system for the identification of animal products been introduced at any export or domestic abattoir/slaughter facility (registration of animals, numbering of carcasses/organs passing along process lines)?</p> <p>(77) Have DLS developed testing for prohibited substances like antibiotics, heavy metals and hormones in feed; work with Veterinary Drug Control Programme (CC II.9) to identify major concerns?</p> <p>(78) Have any of the Veterinary diagnostic laboratories under the direction of the DLS developed the capability to test medicines and vaccines (Laboratory/clinical trials)?</p> <p>(79) Have DLS identified private laboratories that might undertake the testing; implement a programme of regulation/accreditation of these laboratories?</p> <p>(80) Have DLS train staff sufficiently for verification of traceability?</p>	<p>(76) Not exactly so. (77) Yes, through QC lab devotion. (78) Not yet but through the analytical lab QC (79) Not yet. (80) Not exactly so.</p>
Traceability of animal products (CC II-12 B 2019 PVS)	<p>(81) Has the DLS collaborated with the BDA to develop regulations to limit the presence of drug and chemical residues in animal products destined for human consumption? (e.g. setting MRL's)/penalties/control following detection of levels of residues above MRLs.</p> <p>(82) Has the DLS collaborated with the BDA/MoH to develop a Residue Monitoring Plan for all food products including animal products?</p> <p>(83) Has the DLS developed any materials to be broadcast to consumers and other stakeholders of the importance of the prudent use of veterinary medicines, pesticides and insecticides to avoid the contamination of animal products destined for human consumption?</p>	<p>(81) Not yet. (82) Not yet. (83) Not exactly so.</p>

Area of interest/ Theme	Questions to measure changes in the Veterinary Services since the 2015 Gap Analysis (based on Recommendations made in PVS & Gap Analysis Reports)	Answers
Safety of Animal Feeds	<p>(84) Has the legislation governing the safety of animal feeds been reviewed and revised to bring it in line with OIE/international standards?</p> <p>(85) Are there any regulations to define standards to be met for eligibility for licensing of animal feed operators/businesses?</p> <p>(86) Are there any regulations in force to control the use of prohibited additives or ingredients in animal feeds?</p> <p>(87) Has the DLS piloted any Feed Safety Assurance Programme with major national feed producers – review and revise if necessary?</p> <p>(88) Have DLS developed operational plan for wider implementation of the Feed Safety Assurance Programme?</p> <p>(89) Have DLS assessed whether or not international accreditation is required by exporters of animal products?</p> <p>(90) Have all feed manufacturers been registered and licensed?</p> <p>(91) Which, if any and how many, DLS officers are responsible for licensing and inspection of animal feed businesses?</p> <p>(92) Has any specialised training been given to officers responsible for licensing/inspection of animal feed businesses?</p> <p>(93) Have DLS identified and consulted with major feed suppliers to develop Feed Safety Assurance Programme?</p> <p>(94) Does the DLS have the laboratory capacity to test animal feeds for presence of: antibiotics, heavy metals and hormones in feed</p> <p>(95) Are there any private veterinary laboratories which may be accredited to test animal feeds on behalf of DLS?</p> <p>(96) Has the DLS reviewed/harmonised the National Feed Act to include provisions for international accreditation, if required by exporters</p>	<p>(84) Infrequently reviewed, 3 legislative documents governing the safety of animal feeds. These are: i) The Fish feed and Animal Feed Act 2010; ii) Animal feed rule 2013 and iii) Animal feed production and marketing guideline (2020)</p> <p>(85) Animal feed rule (2013) the graduates from Animal husbandry (higher degree from animal nutrition is preferable) and graduates from the Doctor of veterinary medicine in the DLS are the technical people for governing the safety of animal feeds. These technical peoples have some capability to exercise regulatory and administrative control over animal feed safety (OIE PVS tool, II-11 NO. 2). Animal feed rule (2013) defines the standards of poultry (broiler, layer and breeder feeds) and livestock (cattle and small ruminants) feeds to be met for eligibility for licensing of animal feed manufacturing operators/businesses.</p> <p>(86) Partially, In the Fish feed and Animal feed Act (2010) clause 14-there is strictly prohibited to use antibiotic, steroid, hormones and other harmful chemicals in the animal feeds. A circular from the ministry of fisheries and livestock (MOFL), reference no. 33.01.0000.118.24.467.17-817, dated 20/12/2018 ban the use of meat and bone meal in animal feeds.</p> <p>(87) Not exactly so but sudden visit of capacities to review their productions.</p> <p>(88) Not yet, but DLS is going to develop an operational plan for wider implementation of the Feed safety assurance program. A project feasibility study has conducted under the guidance of QC laboratory for implementing feed safety assurance program.</p> <p>(89) Yes, DLS realized that it is essential to accredit the laboratory for the export of animal originated products. Accordingly, QC laboratory, Savar has achieved the accreditation status from the Bangladesh Accreditation Board (BAB) for the analysis of animal originated products regarding export.</p> <p>(90) Almost all feed manufacturers have got the licence from the DLS according to the Fish feed and animal feed act (2010) and animal feed rule (2013). The number of registered feed mill is 284.</p> <p>(91) Deputy Director (Farm), Department of livestock is responsible for scrutiny, evaluation and finalizing the licensing procedure of feed manufacturing plants on behalf of Director General, DLS. There are 2 officers with 3 staffs are actively involved to initiate the process. In this licensing procedure there is a central technical committee headed by Director, administration and regional committee headed by divisional director or DLO for inspecting the feed mill plants regionally. After completing inspection, the signed report of regional committees with recommendation is sent to head office for final approval and licensing.</p> <p>(92) There is no specialized training been given to officers responsible for licensing/inspection of animal feed businesses. However, under the development projects, a regular training to the DLS officers has been going on regarding departmental acts, rules and regulation, inspecting procedures of the feed business operators for licensing feed mills. The inspection check lists and format has supplied to the regional officers and guidelines how to inspect the feed manufacturing processes.</p> <p>(93) DLS has been consulting major feed manufacturing plants in relation to enhancing the regulatory activity, implementing feed act and rules, production, processing commercial feeds regularly. DLS is going to start feed safety assurance program under the QC laboratory, Savar, Dhaka.</p> <p>(94) Yes. DLS has established (QC) accredited laboratory for the analysis of antibiotic, hormones and steroids in animal feeds.</p> <p>(95) The major feed manufacturing companies (Aftab feed mill, Paragon feed mill, Nourish feed mill, Quality feed mill, Kazi feeds, Aman feeds and ACI Godrej etc.) have established animal nutrition laboratory with diagnostic facility for ensuring the quality of animal feeds. These laboratories will be accredited in future.</p> <p>(96) Not yet</p>

Annex 6 Levels of achievement for Selected Critical Competencies

IMPORTANT NOTE – The PVS Evaluation tool (6th Edition) as used for the PVS Evaluation in 2011 was revised and updated with a new version (7th Edition) in 2019 resulting in the following main changes to the numbering and Description of CC's.

1. **CC I-11** (Management of resources and operations) of 6th Edition has been consolidated with **CC I-5** (Planning, sustainability and management of Resources) of PVS tool 7th Edition (2019).
2. Former **CC's II-1** (6th Ed.) (Veterinary Diagnostic Laboratories) and **II-2** (Laboratory Quality Assurance) now expanded into **CC's II-1 A** (Access to veterinary laboratory diagnosis); **II-1 B-** (Suitability of the national laboratory system); and **II-1 C-** (Laboratory quality management systems) (QMS).
3. Former **CC II-2** (Lab QA) now becomes **CC II-2-** (Risk analysis and epidemiology).
4. Former **CC II-3** (Risk analysis) becomes **CC II-3-** (Quarantine and border security)
5. Former **CC II-4** (Quarantine and border security) becomes **CC II-4 –** (Surveillance and early detection) **II-4 A –** (Passive surveillance, early detection and epidemiological outbreak investigation); and **CC II-4 B –** (Active surveillance and monitoring).
6. Former **CC's II-5 A & B** (A Passive & B Active surveillance) becomes **CC II-5** (Emergency preparedness and response).
7. Former **CC II-6** (Early detection and response) becomes **CC II-6** (Disease prevention, control and eradication).
8. Former **CC II-7** (Disease prevention, control and eradication) now becomes **CC II-7** (Animal production and Food Safety); **II-7 A –** (Regulation, inspection (including audits), authorisation and supervision of establishments for production and processing of food of animal origin); **II-7 B –** (Ante- and post mortem inspection at slaughter facilities and associated premises).
9. Former **CC's II-8 A & B** (Food Safety) now become **CC II-8** (Veterinary medicines and biologicals).
10. Former **CC II-9** (Veterinary medicines and biologicals) becomes a new **CC II-9 Antimicrobial Resistance (AMR) and Antimicrobial Use (AMU)**
11. Former **CC II-10** (Residue testing) becomes **CC II-10** (Residue testing, monitoring and management)
12. Former **CC II-11** (Emerging issues) becomes a new **CC II-11 Animal feed safety**
13. Former **CC II-12** (Technical innovation) becomes **CC II-12A & B** (Identification, traceability and movement control) – **II-12 A-** (Premises, herd, batch and animal identification, tracing and movement control); **II-12 B** (Identification, traceability and control of products of animal origin).
14. Former **CC II-13. A & B** (Identification and traceability) **II-13 A** (Animal identification and movement control) and **II-13 B** (Identification and Traceability of products of animal origin) becomes **CC II-13** (Animal Welfare)
15. **CC's III-1, III-2, III-3 & III-4** remain the same;
16. Former **CC III-5** (Veterinary Statutory Body [VSB], **III 5A –** (VSB Authority); **III-5 B –** (VSB Capacity) becomes **CC III-5** (Regulation of the profession by the Veterinary Statutory Body (VSB).
17. **CC III-6** remains the same and
18. **CC III-7 Veterinary Clinical Services**, a new CC, has been added to Component III.
19. Former **CC's IV-1** (Preparation of legislation and Regulations) and **IV-2** (Implementation of Legislation and regulations and stakeholder compliance) now become **CC IV-1 A** (Integrity and coverage of legislation and regulations) and **CC IV B** (Implementation of and compliance with legislation and regulations)
20. The remaining CC's in Component IV change to **CC's IV-2 to CC IV-7** without change of description of their titles

Description of Levels of Achievement at PVS Evaluation 2011, expected LOA's 5 years from Gap Analysis (2015) and Current LOA's during UNIDO evaluation

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edition(2019)
<p>I-1A - Professional and technical staffing of the Veterinary Services</p> <p><i>The appropriate staffing of the VS to allow for veterinary and technical functions to be undertaken efficiently and effectively.</i></p> <p>A. Veterinary and other professionals (university qualification) The appropriate level of staffing of the VS to allow for veterinary and other professional functions to be undertaken efficiently and effectively</p>	<p>Level 1. The majority of veterinary and other professional positions are not occupied by appropriately qualified personnel.</p>	<p>Level 3. The majority of veterinary and other professional positions are occupied by appropriately qualified personnel at <u>local (field) level</u>.</p>	<p>Level 2. The majority of positions requiring veterinary or other professional skills are occupied by appropriately qualified professionals at central and state/provincial levels.</p>
<p>B. Veterinary para-professionals and other technical personnel</p> <p>This covers OIE veterinary paraprofessional categories¹ having trained at dedicated educational institutions with formal qualifications which are recognised by the government or the VSB.</p>	<p>Level 3. The majority of technical positions at local (field) level are occupied by personnel holding appropriate qualifications.</p>	<p>Level 3. The majority of technical positions at local (field) level are occupied by personnel holding appropriate qualifications.</p>	<p>Level 3 The majority of positions requiring veterinary paraprofessional skills are occupied by personnel holding appropriate qualifications. There is a variable level of veterinary supervision.</p>
<p>I-2 A Competency and education of veterinarians (A) and veterinary paraprofessionals (B)</p> <p><i>The capability of the VS to effectively carry out their veterinary and technical functions, as indicated by the level and quality of the qualifications of their personnel in veterinary and veterinary paraprofessional positions.</i></p> <p>A -Veterinarians - This references the OIE Day 1 and advanced competencies, and the OIE model core curricula² for veterinarians</p>	<p>Level 1. The veterinarians' knowledge, skills and practices, are of a variable standard that allow only for elementary clinical and administrative activities of the VS.</p>	<p>Level 2 The veterinarians' knowledge, skills and practices are of a uniform standard sufficient for accurate and appropriate clinical and administrative activities of the VS.</p>	<p>Level 2. The veterinarians' knowledge, skills and practices are of a uniform standard sufficient for accurate and appropriate clinical and administrative activities of the VS.</p>
<p>B- Veterinary paraprofessionals</p> <p>This references the OIE Guidelines on Competencies for Veterinary Paraprofessionals³, including categories of animal health (on farm, at markets or borders), veterinary public health (in slaughter <i>establishments</i>) and laboratory diagnostics who are recognised by the government or the VSB, having received formal training and qualifications from dedicated educational institutions</p>	<p>Level 2. The training of veterinary paraprofessionals is of a very variable standard and allows the development of only limited animal health competencies</p>	<p>Level 3. The training of veterinary paraprofessionals is of a uniform standard that allows the development of only basic animal health competencies.</p>	<p>Level 3. The training and qualifications of veterinary paraprofessionals is of a fairly uniform standard that allows the development of some specific competencies (e.g. vaccination on farms, meat hygiene control, basic laboratory tests).</p>

1 Reference can be made to the OIE Competency Guidelines for Veterinary Paraprofessionals, May 2019, available on the OIE website at <http://www.oie.int/solidarity/veterinary-paraprofessionals/>

2 Reference can be made to the Recommendations on Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality and the OIE Guidelines on Veterinary Education Core Curriculum both available at the OIE website at <http://www.oie.int/solidarity/veterinary-education/>

3 Reference can be made to the OIE Competency Guidelines for Veterinary Paraprofessionals, May 2019, available on the OIE website at <http://www.oie.int/solidarity/veterinary-paraprofessionals/>

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edition(2019)
<p>I-3 – Continuing Education - <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></p>	<p>Level 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.</p>	<p>Level 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.</p>	<p>Level 3. The VS have access to CE that is reviewed and sometimes updated, but it is implemented only for some categories of veterinary professionals and paraprofessionals.</p>
<p>I-4 – Technical independence <i>The capability of the VS to carry out their duties with autonomy and without undue 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></p>	<p>Level 1. The technical decisions made by the VS are generally not based on scientific considerations.</p>	<p>Level 3. The technical decisions are based on scientific evidence but are subject to review and occasional modification based on non-scientific considerations.</p>	<p>Level 2. The technical decisions consider scientific evidence but are routinely modified based on non-scientific considerations.</p>
<p>I-5 – Stability of structures and sustainability of Policies (2011)</p> <p><i>The capability of the VS structure and/or leadership to implement and sustain policies over time.</i></p> <p>I-5 Planning, sustainability and management of policies and programmes (2019) - <i>The capability of the VS leadership and organisation to develop, document and sustain strategic policies and programmes, and also to report on, review and evolve them, as appropriate over time. (2019)</i></p> <p><i>{formerly included in PVS as CC I-11 – Management of Resources and operations}</i> - <i>The capability of the VS to document and manage their resources and operations in order to analyze, plan and improve both efficiency and effectiveness.</i></p>	<p>I-5 Level 1. (2011) 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.</p> <p>I-11 Level 2 The VS routinely use records and/or documented procedures in the management of resources and some operations, but these do not provide for adequate management, analysis, control or planning.</p>	<p>I-5 Level 2 (2011) Sustainability of policies is affected by changes in the political leadership and/or the structure and leadership of the VS.</p>	<p>I-5 Level 2. Some basic policy and programme development and documentation exists, with some reporting on implementation. Sustainability of policies and programmes is negatively impacted by changes in the political leadership or other changes affecting the structure and leadership of the VS.</p>
<p>I-6 Coordination capability of the Veterinary Services</p> <p>I-6 A. Internal coordination (chain of command) - <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></p>	<p>Level 3. There are internal coordination mechanisms and a clear and effective chain of command for some activities.</p>	<p>Level 4. There are internal coordination mechanisms and a clear and effective chain of command at the national level for most activities, especially regulatory functions related to Food safety of animal products.</p>	<p>I-6 A Level 3. There are internal coordination mechanisms and a clear and effective chain of command for some activities, such as for export certification, border control and/or emergency response.</p>

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edition(2019)
<p>I-6 B. External coordination (including the One Health approach)</p> <p>The capability of the Veterinary Authority to coordinate its resources and activities at all levels with other government authorities with responsibilities within the veterinary domain, in order to implement all national activities relevant to the OIE Codes, <u>especially those not under the direct line authority of the Chief Veterinary Officer</u> (or equivalent).</p> <p>Relevant authorities include other ministries and <i>Competent Authorities</i>, such as government partners in public health (e.g. zoonoses, food safety, drug regulation and anti-microbial resistance), environment (e.g. wildlife health), customs and border police (e.g. border security), defence/intelligence (e.g. bio-threats⁴), or municipalities/local councils (e.g. local slaughterhouses, dog control).</p>	<p>Level 2.</p> <p>There are informal external coordination mechanisms for some activities, but the procedures are not clear and/or external coordination occurs irregularly.</p>	<p>Level 3. There are formal external coordination mechanisms with clearly described procedures or agreements (e.g. Memoranda of Understanding) for some activities and/or sectors at the national level.</p>	<p>Level 2. There are informal external coordination mechanisms for some activities at national level, but the procedures are not clear and/or external coordination occurs irregularly.</p>
<p>I-7 Physical resources - <i>The access of the VS to relevant physical resources including buildings, transport, telecommunications, cold chain, and other relevant equipment (e.g. computers).</i></p>	<p>Level 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.</p>	<p>Level 3. The VS have suitable physical resources at national, regional and some local levels and maintenance and replacement of obsolete items occurs only occasionally. (especially for laboratory equipment required for food safety control tests)</p>	<p>Level 3. The VS have suitable physical resources at national, state/provincial and some local levels but maintenance, as well as replacement of obsolete items, occurs irregularly.</p>
<p>I-8 Operational funding - <i>The ability of the VS to access operational resources adequate for their planned and continued activities (e.g. salaries, contracts, fuel, vaccines, diagnostic reagents, personal protective equipment, per diem or allowances for field work).</i></p>	<p>Level 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).</p>	<p>Level 3 Operational funding for the VS is clearly defined and regular, and is adequate for their baseline operations, but there is no provision for new or expanded operations</p>	<p>Level 2. Operational funding for the VS is clearly defined and regular, but is inadequate for their required baseline operations (e.g. basic disease surveillance, disease control and/or veterinary public health).</p>

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edition(2019)
<p>II-1 <i>The authority and capability of the VS to effectively and efficiently use accurate laboratory diagnosis to support their animal health and veterinary public activities</i></p> <p>II-1 A (2019)– Access to Veterinary Laboratory Diagnosis - The authority and capability of the VS to access laboratory diagnosis in order to identify and report pathogenic and other hazardous agents that can adversely affect <i>animals</i> and animal products, including those relevant to public health.</p>	<p>Level 1 - Disease diagnosis is almost always conducted by clinical means only, with laboratory diagnostic capability being generally unavailable.</p>	<p>Level 2 - For major animal <i>diseases</i> and <i>zoonoses</i> of national importance, and for the food safety of animal products, the VS have access to and use a <i>laboratory</i> to obtain a correct diagnosis.</p>	<p>Level 4. For animal <i>diseases</i> of zoonotic or economic importance not present in the country, but that exist in the region and/or that could enter the country, the VS have access to and use a <i>laboratory</i> to obtain a correct diagnosis.</p>
<p>II-1 B -Suitability of national laboratory System (2019) (formerly “infrastructures” 2011) - The sustainability, effectiveness, safety⁵ and efficiency of the national (public and private) laboratory system (or network), including infrastructure, equipment, maintenance, consumables, personnel and sample throughput, to service the needs of the VS.</p>	<p>Not evaluated</p>	<p>Level 3 The national laboratory system generally meets the needs of the VS. Resources and organisation are managed effectively and efficiently, but funding is insufficient for a sustainable system, and limits throughput. Some laboratory biosafety and <i>biosecurity</i> measures are in place.</p>	<p>Level 3. The national laboratory system generally meets the needs of the VS. Resources and organisation are managed effectively and efficiently, but funding is insufficient for a sustainable system, and limits throughput. Some laboratory biosafety and <i>biosecurity</i> measures are in place.</p>
<p>II-2 Laboratory Quality Assurance (2011)-<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 and participation in relevant proficiency testing programmes</i></p> <p>II-1 C (2019)- Laboratory Quality Management Systems (QMS)<i>The quality and reliability of veterinary laboratory testing servicing the public sector VS as assessed by the use of formal QMS including, but not limited to, attainment of ISO 17025 accreditation⁶ and participation in proficiency testing programmes.</i></p>	<p>Level 1 - No laboratories used by the public sector VS are using formal QA systems. (2011 & 2019)</p>	<p>Level 2 – (2019) One or more laboratories servicing the public sector VS, including the major national animal health reference laboratory, are using formal QMS.</p>	<p>Level 3. Most major laboratories servicing the public sector VS are using formal QMS. There is occasional use of multi-laboratory proficiency testing programmes.</p>

5 Recommended reading: OIE Biological threats reduction strategy (2015)

6 Recommended reading: ISO 17025 specifications as at <https://www.iso.org/standard/39883.html>, <https://www.iso.org/standard/66912.html>

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edition(2019)
<p>II-2 Risk analysis and epidemiology (2019) - The authority and capability of the VS to base its <i>risk management</i> and <i>risk communication</i> measures on <i>risk assessment</i>, incorporating sound epidemiological principles</p>	<p>Level 1. Risk management decisions are not usually supported by scientific risk assessment.</p>	<p>Level 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.</p>	<p>Level 1. Risk management and risk communication measures are not usually supported by risk assessment.</p>
<p>II-8 (2011)/II-7 (2019) Animal production Food Safety</p> <p>The authority and capability of the VS to assure the safety of food of animal origin for domestic and export markets</p> <p>II-7 A. (2019) Regulation, inspection (including audits), authorisation and supervision of establishments for production and processing of food of animal origin</p> <p>The authority and capability of the VS to establish and enforce sanitary and food hygiene standards for establishments that produce and process food of animal origin, including slaughter, rendering, dairy, egg, honey and other animal product processing establishments.</p> <p>Includes the regulation, initial authorisation of establishments, and the ongoing inspection of establishments and processes, including the identification of and response to non-compliance, based on HACCP principles. It includes external coordination between Competent Authorities as may be required.</p>	<p>Level 1. Regulation, authorisation and inspection of relevant establishments are generally not undertaken in conformity with international standards.</p>	<p>Level 3. Regulation, authorisation and inspection of relevant establishments are undertaken in conformity with international standards in all premises supplying throughout the national market.</p>	<p>Level 2. Regulation, authorisation and inspection of relevant establishments and processes are undertaken in conformity with international standards in some selected premises (e.g. export premises).</p>

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edition(2019)
<p>II-7 B (2019) – Ante- and post-mortem inspection -The authority and capability of the VS to implement and manage the ante-mortem inspection of animals destined for slaughter and the post-mortem inspection of carcasses and meat products at slaughter facilities and associated premises, including to ensure meat hygiene and safety, and for the collection of information relevant to livestock diseases and zoonoses.</p> <p><i>This includes standards relating to veterinary and veterinary paraprofessional supervision and inspection, and protocols applied for ante- and post-mortem inspection findings, based on HACCP principles. It includes external coordination between Competent Authorities as may be required.</i></p>	<p>Level 1. Ante- and post mortem inspection and collection of disease information (and coordination, as required) are generally not undertaken in conformity with international standards.</p>	<p>Level 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.</p>	<p>Level 1. <i>Ante- and post-mortem</i> inspection is generally not undertaken in conformity with international standards.</p>
<p>II-9 Veterinary Medicines and biologicals –(2011)<i>The authority and capability of the VS to regulate veterinary medicines and biologicals, i.e the authorisation, registration, import, production, labelling, distribution, sale and use of these products.</i></p> <p>II-8 Veterinary Medicines and biologicals (2019) - The authority and capability of the VS to regulate veterinary medicines, and biologicals, in order to ensure their quality and safety, as well as their responsible and prudent use, including as medicated feed.</p> <p>This includes the marketing authorisation/registration, import, manufacture, quality control, export, labelling, advertising, distribution, sale (includes dispensing) and use (includes prescribing) of these products.</p>	<p>Level 1 - The Veterinary Authority cannot regulate veterinary medicines and biologicals</p>	<p>Level 2 –(2011) The VS has some capability to exercise administrative control over veterinary medicines and biologicals.</p>	<p>Level 2. The VS have some capability to exercise regulatory and administrative control over the import, manufacture and market authorisation (registration) of veterinary medicines and biologicals to ensure their safety and quality, but cannot ensure their responsible and prudent use in the field.</p>

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edition(2019)
<p>II-9 Antimicrobial Resistance (AMR) and Antimicrobial Use (AMU) (2019) - The authority and capability of the VS to manage AMU and AMR, and to undertake surveillance and control of the development and spread of AMR pathogens in animal production and animal origin food products, via a One Health approach⁷.</p>	Not Measured	Not defined	<p>Level 2. The VS are contributing or have contributed to a national AMR action plan. The action plan has initiated some activities to collect AMU/AMR data or control AMR e.g. awareness campaigns targeting veterinarians or farmers on the prudent use of antimicrobials. The use of antimicrobials for growth promotion is discouraged.</p>
<p>II-10 Residue testing –(2011) <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></p> <p>II-9 Residue testing, monitoring and management (2019)</p> <p>The capability of the VS to undertake residue testing and monitoring programmes for veterinary medicines (e.g. antimicrobials and hormones), chemicals, pesticides, radionuclides, heavy metals, etc. and respond appropriately to adverse findings.</p>	<p>Level 1. No residue testing programme for animal products exists in the country</p>	<p>Level 3.(2011 PVS) A comprehensive residue testing programme is performed for all animal products for export and some for domestic consumption.(2011)</p> <p>Level 3 (2019 PVS) A comprehensive residue <i>monitoring</i> programme is conducted for all animal products for export and some for domestic consumption based on limited risk analysis. Documented protocols exist for preventing residue risks (e.g. withholding periods for veterinary drugs) and for responding to breaches of Maximum Residue Limits.</p>	<p>Level 2. Some residue testing is being undertaken, such as for research or pilot purposes and/or it is conducted only on specific animal products for export.</p>

⁷ Recommended reading : WHO Global Action Plan (2015) at: <http://www.who.int/antimicrobial-resistance/global-action-plan/en/> and OIE Strategy on Antimicrobial Resistance and the Prudent Use of Antimicrobials (2016) at: http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/PortailAMR/EN_OIE-AMRstrategy.pdf

Critical Competency Descriptors now taken from PVS tool 7th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7th Edition(2019)
<p>II-11 Animal feed safety (2019 PVS)</p> <p>The authority and capability of the VS to regulate animal <i>feed</i> safety e.g. processing, handling, storage, distribution and use of both commercial and on-farm produced animal <i>feed</i> and <i>feed</i> ingredients.</p> <p>This includes <i>feed</i> safety risks such as swill feeding, feeding by-products, ruminant feed bans, the use of antimicrobials in <i>feed</i>, as well as managing risks of microbial, physical and toxin contamination of <i>feed</i>.</p>	Not measured	Not defined	Level 2. The VS have some capability to exercise regulatory and administrative control over animal feed safety.
<p>II-12. Identification and traceability (2019)</p> <p>II-12 A. Premises, herd, batch and animal identification, tracing and movement control - The authority and capability of the VS, in coordination with producers and other stakeholders, to regulate the identification of animals, to trace their history and location(s), and to control domestic movements for the purpose of animal disease control, food safety, trade or other legal requirements under the VS mandate.</p>	Level 1 –(2011) The VS do not have the authority or the capability to identify animals or control their movements.	Level 3 – (2011) The VS implement procedures for animal identification and movement control for specific animal sub populations as required for disease control, in accordance with relevant international standards.	Level 1. The VS do not have the authority or the capability to regulate the identification of animals, either individually, by batch, or by premises, or to trace and control their movements.
<p>II-12 B. Identification, traceability and control of products of animal origin The capability of the Veterinary Authority, in coordination with Competent Authorities (such as food safety authorities) and other stakeholders as appropriate, to achieve whole-of-chain traceability, including the identification, tracing and control of products of animal origin for the purpose of food safety, animal health or trade.</p>	Level 1. (2011) The VS do not have the authority or the capability to identify or trace products of animal origin.	Level 2. (2011) 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).	Level 1. The VS do not have the capability or access to information to identify or trace products of animal origin.
<p>II-13 Animal welfare (2019)- The authority and capability of the VS to legislate and implement the animal welfare standards of the OIE as published in the Terrestrial Code.- This requires consultation and coordination with Competent Authorities, non-governmental organisations and other stakeholders, as appropriate.</p>	Level 1. The OIE standards are generally not implemented.	Level 3. (2011) All of the OIE standards are implemented but this is primarily for the export sector.	Level 2 There is limited national legislation or regulations on <i>animal welfare</i> covering some of the OIE standards, with limited stakeholder or public awareness.
<p>III-1. Communications <i>The capability of the VS to keep stakeholders informed, in a transparent, effective and timely manner, of VS activities and programmes, and of developments in animal health and food safety.</i></p>	Level 2. The VS have informal communication mechanisms.	Level 3. The VS maintain an official contact point for communications but it is not always up-to-date in providing information.	Level 2. The VS have informal communication mechanisms with some stakeholders e.g. with the larger commercial livestock or related companies.

Critical Competency Descriptors now taken from PVS tool 7th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7th Edition(2019)
<p>III-2. Consultation with stakeholders <i>The capability of the VS to consult effectively with stakeholders on VS activities and programmes, and on developments in animal health and food safety.</i></p>	<p>Level 2 The VS maintain informal channels of consultation with stakeholders.</p>	<p>Level 3. The VS maintain a formal consultation mechanism with stakeholders.</p>	<p>Level 2. The VS maintain informal channels of consultation with some non-government stakeholders (e.g. only the larger commercial livestock or related companies)</p>
<p>III-3 Official representation and international collaboration (2019) The capability of the VS to regularly and actively participate, coordinate and provide follow-up on relevant meetings and activities of regional and international organisations including the OIE, Codex Alimentarius Commission, WTO SPS Committee, WHO, FAO and Regional Economic Communities.</p>	<p>Level 2. The VS sporadically participate in relevant meetings and/or make a limited contribution.</p>	<p>Level 3. The VS actively participate in the majority of relevant meetings.</p>	<p>Level 2. The VS sporadically participate in relevant meetings or activities and/or make a limited contribution.</p>
<p>III-4 - Accreditation / authorisation / delegation - <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></p>	<p>Level 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 <u>related to Food safety of animal products destined for human consumption.</u></p>	<p>Level 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.</p>	<p>Level1. The public sector of the VS has neither the authority nor the capability to accredit/authorise/ delegate official tasks to the private sector or NGOs.</p>
<p>III-5 Regulation of the profession by the Veterinary Statutory Body (VSB)⁸ - The authority and capacity of the VSB to effectively and independently maintain educational and professional standards for <i>veterinarians</i> and <i>veterinary paraprofessionals</i>. Regulation includes licensing or registration of those veterinarians and veterinary paraprofessionals that meet educational standards, and the ongoing oversight of their professional competence and conduct.</p>	<p>Level 2. The VSB regulates veterinarians only within certain sectors of the veterinary profession and/or do not systematically apply disciplinary measures.</p>	<p>Level 3. The VSB regulates veterinarians in all relevant sectors of the veterinary profession and apply disciplinary measures.</p>	<p>Level 2. The VSB regulates <i>veterinarians</i> only within certain sectors of the veterinary profession and/or does not systematically apply educational standards or disciplinary measures.</p>

8 Recommended reading: Focus on Veterinary Statutory Bodies, Dec 2014 <http://www.oie.int/fileadmin/vademecum/pdf/Veterinary%20statutory%20bodies.pdf>

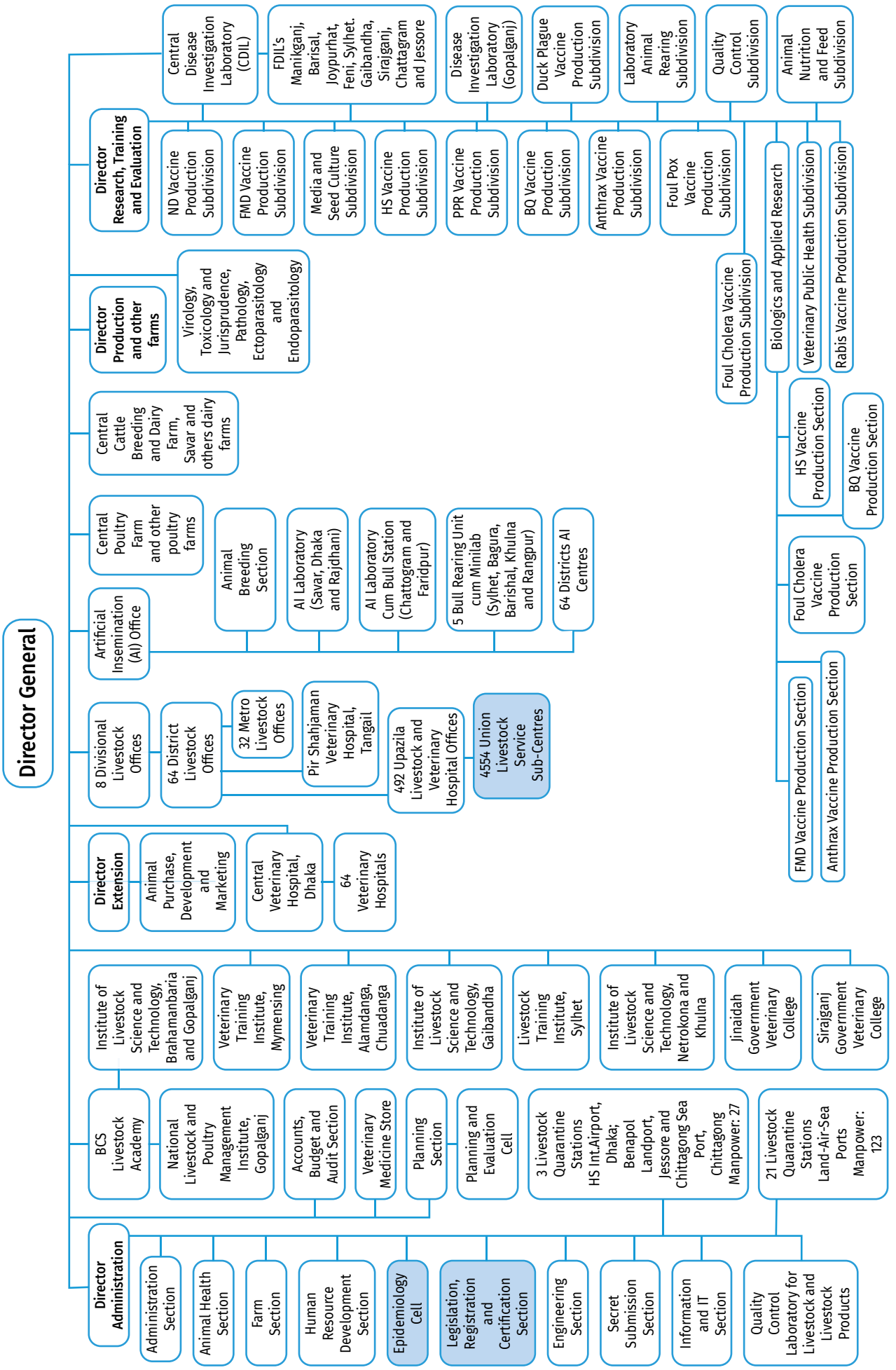
Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edi- tion(2019)
<p>III-6. Participation of producers and other stakeholders in joint programmes - The capability of the VS and stakeholders to formulate and implement joint programmes in regard to animal health and food safety.</p>	<p>Level 1. Producers and other stakeholders only comply and do not actively participate in programmes.</p>	<p>Level 2. Producers and other stakeholders are informed of programmes and assist the VS to deliver the programme in the field.</p>	<p>Level 2 Producers and other non-government stakeholders are informed of programmes by the VS and informally assist the VS in programme delivery in the field (e.g. industry groups helping to communicate the programme with their membership).</p>
<p>IV-1. Preparation of legislation and regulations <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 warranty its quality with respect to principles of legal drafting and legal issues (internal quality) and its accessibility, acceptability, and technical, social and economical applicability (external quality).</i></p> <p>IV-1 (PVS 2019) Legislation and regulations - The effectiveness of veterinary legislation and regulations.</p> <p>A Integrity and coverage of legislation and regulations</p> <p>The authority and capability of the VS to develop or update veterinary legislation to ensure its quality and coverage of the veterinary domain.</p> <p>This competency covers the quality of legislation considering the principles of legal drafting, its impact, and suitability for implementation.</p> <p>This competency includes formal collaboration with other legal drafting professionals, other relevant ministries and <i>Competent Authorities</i>, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas of the veterinary domain. It also covers stakeholder consultation relevant to veterinary legislation.</p>	<p>Level 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.</p>	<p>Level 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.</p>	<p>Level 2 Veterinary legislation and regulations cover some fields of the veterinary domain. The VS, working with legal professionals, have some authority and capability to develop or update national legislation and regulations.</p>

Critical Competency Descriptors now taken from PVS tool 7 th Ed. (2019)	Level of Achievement PVS 2011	Expected level of advancement at GAP 5 years from 2015	Current LOA using PVS tool 7 th Edi- tion(2019)
<p>IV-2. Implementation of legislation and regulations and stakeholder compliance <i>The authority and capability of the VS to ensure that stakeholders are in compliance with legislation and regulations under the VS mandate.</i></p> <p>IV-1 B. (PVS 2019) Implementation of and compliance with legislation and regulations</p> <p>The authority and capability of the VS to ensure compliance with legislation and regulations across the veterinary domain through communications and compliance inspection activities.</p> <p>This competency includes formal collaboration with other relevant ministries and <i>Competent Authorities</i>, national agencies and decentralised institutions that share responsibility for implementation, or have mutual interest in relevant areas.</p>	<p>Level 1. The VS have no or very limited programmes or activities to ensure stakeholder compliance with relevant legislation and regulations.</p>	<p>Level 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.</p>	<p>Level 2. The VS implement some programmes or activities comprising targeted communications and awareness raising on stakeholder legal obligations,</p>

Annex 7A DLS Organogram 2011



Annex 7B Current Organogram of DLS 2022



Annex 8 Changes in DLS Organisational Structure and Staff appointments since 2015

Department/Administrative level	Title of post/Grade	Added	Deducted
Legislation, Registration and Certification Section/Headquarters (New Section)	Deputy Director - 5 th grade	1	
	Law Officer (lawyer) - 6 th grade	1	
	Admin. Officer - 10 th grade	1	
	Office Assistant 16 th grade	1	
	Supporting Staff - 20 th grade	1	
Information and IT Section/ Headquarters (New section)	Asst. Programmer - 9 th grade	1	
	Asst. Maintenance Engineer	1	
	Data entry operator	1	
	Computer Operator - 13 th grade	1	
	Supporting Staff - 20 th grade	1	
Accounts, Budget and Accounts Section/Headquarters (Existing)	Director - 3 rd grade	1	
	Deputy Director - 4 th grade	0	1
	Assistant Director - 9 th grade	1	
Planning Section/Headquarters (Existing section)	Director - 3 rd Grade	1	
	Livestock Economist - 4 th grade	0	1
	Deputy Director - 5 th grade	1	
	Asst. Director - 9 th grade	1	
Epidemiology Unit (New Unit)	Asst. Director Animal Quarantine - 5 th grade	1	
	Veterinary Surgeon - 9 th grade	1	
	Superintendent - 10 th grade	1	
	Office Asst./computer operator	1	
	Supporting Staff	1	
Veterinary Public Health Section/ Headquarters (Existing section)	Principal Scientific Officer - 5 th grade	1	
	Sen Scientific Officer - 5 th grade	0	3
	Senior Scientific Officer - 6 th grade	1	
CDIL Laboratories Virology/ Pathology/ Toxicology/ Ecto/Endoparasite	Chief Scientific Officer - 3 rd grade	5	
	Senior Scientific Officer 5 th grade	0	5
Field Disease Investigation Laboratories (8)	Senior Scientific Officer 6 th grade	5	
	Senior Scientific Officer 5 th grade	0	5
Field Disease Investigation Laboratories Sirajganj, Chattogram, Jessore (3) (New Laboratories)	Principal Scientific Officer - 5 th grade	3	
	Senior Scientific Officer - 6 th grade	9	
	Lab technician	3	

Department/Administrative level	Title of post/Grade	Added	Deducted
Field Disease Investigation Laboratory, Gopalganj (New Laboratory)	Principal Scientific Officer - 4 th grade	1	
	Senior Scientific Officer - 6 th grade	1	
	Scientific Officer - 9 th grade	2	
	Veterinary Surgeon - 9 th grade	2	
	Compounder - 14 th grade	1	
	Lab Technician - 16 th grade	2	
Divisional Livestock Office (08)	Director - 3 rd grade	8	
	Deputy Director - 4 th grade	0	8
	Asst. Director- 5 th grade	0	8
	Deputy Chief Epidemiologist - 5 th grade	8	
	Deputy Director Veterinary Public Health 5 th grade	7	
District Livestock Office (64)	District Training Officer - 5 th grade	64	
District Artificial Insemination Center (64)	Theriogenologist - 6 th grade	64	
Union Livestock Service Center (4,554) (New)	Veterinary Field Assistant - 14 th grade	2017	
Central Veterinary Hospital (Dhaka Headquarters)	Director - 3 rd grade	1	
	Chief Veterinary Officer- 4 th grade	0	1
District Veterinary Hospital (64)	Veterinary Officer - 5 th grade	64	
BCS Livestock Academy, Savar, Dhaka	Director - 3 rd grade	1	
	Principal - 3 rd grade	0	1
	Asstt. Professor - 5 th grade	0	3
	Associate Professor - 5 th grade	3	
	Asst. Professor - 6 th grade	6	
	Lecturer	7	
	Research Officer - 5 th grade	1	
Veterinary Training Institute, Mymensingh, Alamdanga (2) Para-professional training institute	Director - 3 rd grade	2	
	Principal - 5 rd grade	0	2
	Asst. Professor - 5 th grade	0	
	Associate Professor - 5 th grade	2	
	Asst Professor - 6 th grade	4	
Livestock Training Institute, Sylhet, (Para-professional training institute)	Director - 3 rd grade	1	
	Principal - 5 rd grade	0	1
	Asst. Professor - 5 th grade	0	
	Associate Professor - 5 th grade	1	
	Asst Professor - 6 th grade	2	
	Lecturer - 9 th grade	1	
Institute of Livestock Science and Technology Gaibandha	Director - 3 rd grade	1	
	Principal - 5 rd grade	0	1

Department/Administrative level	Title of post/Grade	Added	Deducted
Institute of Livestock Science and Technology, Netrokona, Khulna (2)	Director - 3 rd grade	2	
	Chief Instructor - 5 th grade	2	
	Senior Instructor - 6 th grade	8	
	Senior Instructor (Arts) - 6 th grade	2	
	Instructor Livestock - 9 th grade	12	
	Instructor Arts - 9 th grade	4	
	Instructor Humanities - 9 th grade	2	
Institute of Livestock Science and Technology, Gopalganj, Brahmanbaria (2)	Principal - 4 th grade	2	
	Chief Instructor - 5 th grade	2	
	Senior Instructor - 6 th grade	16	
	Veterinary Surgeon - 9 th grade	2	
	Animal Production Officer - 9 th grade	2	
Animal Quarantine Station Dhaka (Airport), Chattogram (Sea Port), Jessore (Land Port) (3)	Veterinary Pathologist - 9 th grade	3	
	Lab Technician - 16 th grade	6	
	Office Assistant - 16 th grade	3	
	Dresser - 18 th grade	3	
	Lab Attendant - 19 th grade	3	
	Security guard - 20 th grade	3	
Animal Quarantine Station, Land Port (21)	Veterinary Pathologist - 9 th grade	21	
	Lab Technician - 16 th grade	21	
	Office Assistant - 16 th grade	21	
	Dresser - 18 th grade	18	
	Lab Attendant - 19 th grade	21	
	Security guard - 20 th grade	21	
Quality Control Laboratory, Savar, Dhaka	Senior Scientific Officer - 6 th grade	1	
	Scientific Officer - 9 th grade	2	
	Sub Assistant Engineer (Biomedical) - 10 th grade	1	
	Personal Assistant - 13 th grade	1	
	Head Assistant/Accountant - 14 th grade	1	
	Supporting staff - 20 th grade	1	
Regional Poultry Farm (2)	Avian Pathologist - 6 th grade	2	
Other Govt. Poultry Farm (8)	Avian Pathologist - 6 th grade	8	
Central Cattle Breeding Station, Savar, Dhaka	Theriogenologist - 6 th grade	1	
Livestock and Dairy Development Farm (6)	Theriogenologist - 6 th grade	6	
TOTAL		2545	40

Annex 9 Livestock Economy at a Glance

Table 6.1. Livestock population of Bangladesh (in lakh number)

Species	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Cattle	231.95	233.41	234.88	236.36	237.85	239.35	240.86	242.38	243.91	245.45
Buffalo	14.43	14.50	14.57	14.64	14.71	14.78	14.79	14.86	14.93	15.00
Sheep	30.82	31.43	32.06	32.70	33.35	34.01	34.68	35.37	36.07	36.79
Goat	251.16	252.77	254.39	256.02	257.66	259.31	261.00	2.67	264.35	266.04
Total Ruminant	528.36	532.11	535.90	539.72	543.57	547.45	551.33	555.28	559.26	563.28
Chicken	2428.66	2490.11	2553.11	2617.70	2683.93	2751.83	2821.45	2892.83	2966.02	3041.06
Duck	457.00	472.54	488.61	505.22	522.40	540.16	558.53	577.52	597.16	617.46
Total Poultry	2885.66	2962.64	3041.72	3122.93	3206.33	3292.00	3379.98	3470.35	3563.18	3658.52
Total Livestock	3414.02	3494.75	3577.62	3662.65	3749.90	3839.45	3931.31	4025.63	4122.44	4221.80

Table 6.2. Contribution of Livestock and Poultry in the National Economy of Bangladesh (2020-21)

Contribution of Livestock in Gross Domestic Product (GDP) (Constant Prices)	1.44%
GDP growth rate of Livestock (Constant Prices)	3.80%
GDP volume (Current prices) (Crore Taka)	50301
Share of Livestock in Agricultural GDP (Current prices)	13.10%
Employment (Directly)	20 %
Employment (Partly)	50 %

Table 6.3. Production of Milk, Meat and Eggs

Products	Unit	Fiscal Year									
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Milk	Lakh Metric Ton	34.60	50.70	60.92	69.70	72.75	92.83	94.01	99.23	106.80	119.85
Meat	Lakh Metric Ton	23.30	36.20	45.21	58.60	61.52	71.54	72.06	75.14	76.74	84.40
Egg	Crore number	730.38	761.74	1016.80	1099.52	1191.24	1493.31	1552.00	1711.00	1736.00	2057.64

Table 6.4. Demand, production and availability of milk, meat and eggs (2020-21) #

Name of the Product	Demand	Production	Availability
Milk	154.94 Lakh Metric Ton (250 ml/day/head)	119.85 Lakh Metric Ton	193.38 (ml/day/head)
Meat	74.37 Lakh Metric Ton (120 gm/day/head)	84.40 Lakh Metric Ton	136.18 (gm/day/head)
Egg	1765.92 Crore number (104 number/year/head)	2057.64 Crore numbers	121.18 (number/year/head)
# The estimated population of the country on 1st July, 2020: 16 crore 98 lakhs			

Table 6.5. Livestock contribution in GDP

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21(p)
GDP*	1.90	1.84	1.78	1.73	1.66	1.60	1.53	1.47	1.46	1.44
Growth Rate of GDP	2.68	2.74	2.83	3.08	3.19	3.31	3.40	3.54	3.56	3.80

* GDP calculated at constant price (Source: BBS); (p) denotes Provisional; Prepared by Dr. Hossan Md. Salim, Planning Section, DLS

Annex 10 Workshop Outline, Working Group Findings and Recommendations

National Stakeholder Workshop

“Strengthening the Legal and Institutional Capacity for the Management of Food Safety of Products of Animal Origin”.

26th – 27th January 2022

Facilitated by

Dr John Woodford

Dr Michael Barry

Prof. Samuel Godefroy

Dr Ainul Haque

Dr Mehedi Hossain

Dr Rajiur Rahman

Acronyms

BFSA	Bangladesh Food Safety Authority, within Ministry of Food
BSTI	Bangladesh Standards and Testing Institute, within the Ministry of Industries
BVC	Bangladesh Veterinary Council
CDIL	Central Disease Investigation Laboratory
DAE	Department of Agricultural Extension, within the Ministry of Agriculture
DGCR	Directorate of National Consumer Rights Protection, within the Ministry of Commerce.
DGDA	Directorate General of Drug Administration, within the Ministry of Health
DLS	Department of Livestock Services, within the Ministry of Fisheries and Livestock
FBO	Food Business Operator
MoLPA	Ministry of Law and Parliamentary Affairs

The Context

A two-day workshop on January 26 – 27th January 2022 was hosted by UNIDO-LDDP on “Strengthening the Legal and Institutional Capacity for the Management of Food Safety of Products of Animal Origin”. The objective of the workshop was to engage the key stakeholders in the Food Safety ecosystem of Bangladesh including policymakers, regulators, academics, scientists, legal experts, and industry representatives. Senior members from the key government agencies across the food chain attended including from Ministries of Agriculture, Food, Health, Commerce, Fisheries and Livestock, and Science and Technology.

The Workshop had the following objectives,

1. Objective 1 to verify baseline and preliminary findings of progress made since 2011 / 2015.
2. Objective 2 to present recommendations based on justifications according to OIE and Codex standards, with reference to best practices in the OIE Terrestrial Animal Health Code and the Codex Alimentarius Food Safety Guidelines.
3. Objective 3 to engage participants and obtain consensus of stakeholders on desired outcomes of the safety of foods of animal origin.

Objectives 1 and 2 were delivered through three presentations and plenary discussions beginning with Dr John Woodford, UNIDO International Expert who presented on the “Veterinary OIE Guidelines on the Regulatory Requirements to Ensure Food Safety of Animal Products” with specific emphasis on the OIE Terrestrial Animal Health Code as a basis for the Bangladesh regulatory system.

Dr. Samuel Godefroy, UNIDO International Expert presented a Mapping of Food Regulatory Functions, providing a review of Codex Guidance on Effective Food Regulatory Functions, a review of Indicators of Performance of Key Food Regulatory Functions, and Support to Recommendations to Enhance the Performance of Food Regulatory Functions Supporting Food

of Animal Origin.

Dr. Md. Mehedi Hossain, UNIDO National Expert presented “The State of Play, Gap Analysis to assess capacity of DLS and other Competent Authorities to perform regulatory functions related to Food Safety of Products of Animal Origin”.

Stakeholder Engagement Breakout Sessions

Workshop delegates were divided into the following 5 themed groups, each supported by a UNIDO coordinator.

- 1) **Food Safety Standard Setting** - to consider the developing of requirements for Food of Animal Origin, Acceptable Veterinary Applications, Acceptable feed additives, Acceptable Pesticides, Microbiological criteria, Production Approaches (Halal, organic etc...)
- 2) **Management of Food Business Operators** - to consider the requirements of registration, including the relevant institution, the conditions of Registration including Good Hygienic Practices, Good Animal Husbandry Practices, Ante and Post-Mortem meat inspection, Control of Registration, Licensing, Inspection etc...
- 3) **Management of Veterinary Medicines (Food Safety and AMR issues)** – to consider medicine approval, Compliance Verification: Import control, authenticity, distribution and Oversight on the administration, sale, use, and administration by Veterinary Professionals.
- 4) **Scientific Support: Detection, Monitoring, and Surveillance** – to consider Residue Monitoring Programmes, Support to MRL Setting, AMR detection and characterization.
- 5) **Management of International Trade** - Contribution to OIE and Codex Standards, to consider Setting Requirements for Import and Export Management, Contribution to international Standards development, Translation of International Standards into National Requirements.

In the first breakout session, the groups were asked to consider the following questions in relation to their thematic area.

1. Which Authority / Authorities currently manage the function?
2. What laws / regulations does such authority use?
3. Is there a good coordination / collaboration with other partners if needed?
4. What is the main output of the function: e.g., Regulations, Guidance, Data, Reports?

Each group reported on their findings with a high level of engagement in subsequent discussions relating primarily to the scope of authorities and their respective legislative acts.

In the second breakout session, the groups were asked to consider their vision of a future within their respective themes, with effective food safety controls and specifically to consider the following.

5. How would you suggest this function be improved?

- Vision for Success: in 2035, How would you see this function performing and contributing to the overall enhanced food control system?
- Involvement of other parties / competent authorities
- Involvement of Stakeholders
- Benchmarking Against International Guidance / Standards

Stakeholder Engagement Breakout Findings

Food Safety Standard Setting

This group, facilitated by Prof. Samuel Godefroy and Dr. Abu Abdullah was requested to consider the developing of requirements for Food of Animal Origin, including acceptable Veterinary applications, acceptable feed additives, acceptable pesticides, Microbiological criteria, Production Approaches including Halal, organic and other criteria.

The authorisation for **Veterinary Drugs** rests with the Directorate General of Drug Administration (DGDA), within the Ministry of Health. It is also responsible for their allocation and control.

Applications for the approval of Veterinary Drugs are submitted to DGDA, while applications for the approval of vaccines and premixes are submitted to the Department of Livestock Services (DLS), within the Ministry of Fisheries and Livestock. Applications for the approval of veterinary diagnostic resources including reagents and chemicals rests with Bangladesh Standards and Testing Institute (BSTI), within the Ministry of Industries.

The regulations pertaining to Veterinary Medicine are the Mobile Court Act 2009 and the Animal Disease Act 2005.

The group were of the view that great collaboration between the listed Departments was required. They suggested that the main output of this function was the development of Regulation.

Feed Additives are regulated by the Directorate of National Consumer Rights Protection (DGCR), within the Ministry of Commerce and by DLS and BSTI.

The regulation of Feed Additives is within the Animal Disease Act 2005 and the Animal Feed Act 2010. They reported poor coordination between departments, the main role of which is regulation, guidance, and data collection.

Pesticides are regulated by DLS, DGDA, by the Department of Agricultural Extension (DAE), within the Ministry of Agriculture, in addition to the Ministry of Commerce and the Ministry of Environment. They are mandated by the Pesticide Rules 1985.

Coordination needs to be improved according to the group especially between DLS, DAE and DGDA as the primary output is Regulation and Guidance on the control and prevention of malpractices of pesticides.

Microbiological Criteria are overseen by DLS, and the Ministry of Agriculture and Ministry of Food, supported by BFSA. Relevant legislation are the Food Safety Act 2013 and the Animal Disease Act 2005. Greater collaboration is required especially between Ministries of Agriculture and Ministry of Science and Technology and the Directorate General of Health Services.

Working Group Recommendations

1. Develop a new Department within DLS with specific responsibility for animal protection and animal quarantine. This should be developed with the involvement of BFSA, the Bangladesh Veterinary Council (BVC). This should be benchmarked against international guidance and standards of OIE, ISO, Codex and be compatible with the SPS provisions of WTO.
2. Develop a National Inspectorate with DLS as the competent authority and with the involvement of Ministry of Cooperative, Ministry of Commerce, Producer Groups, processors and traders (milk, meat, eggs). The BVC should be part of the competency. The inspectorate should be benchmarked against international guidance and standards of OIE, ISO, Codex and be compatible with the SPS provisions of WTO.
3. Develop a Laboratory in charge (CSO) with the DLS as the Competent Authority and with the involvement of Producer Groups, processors and traders (milk, meat, eggs). Arrangements should be developed to align and link other partners and authorities including BVC, BFSA, IPH, City corporation, and NNI. The inspectorate should be benchmarked against international guidance and standards of OIE, ISO, Codex and be compatible with the SPS provisions of WTO.
4. Develop formal training programmes for officers and technicians including home and abroad modules on Good Laboratory Practices (GLP) and HACCP and within the competency of DLS. Arrangements should be developed to align and link other partners and authorities including BVC, BFSA, IPH, City corporation, and NNI. The inspectorate should be benchmarked against international guidance and standards of OIE, ISO, Codex and be compatible with the SPS provisions of WTO.
5. Strengthen District level animal protection and animal quarantine activities by creating an additional Position of Deputy Director within DLS.
6. Develop a Dairy Development Policy and establish a Dairy Development Board within the competency of DLS and in close cooperation with the Ministry of Law and Parliamentary Affairs (MoL&PA). The Board should involve stakeholders representing farmers, processors and traders and benchmarked against international best practice.

Management of Food Business Operators

This group, facilitated by Dr. John Woodford and Dr. Ainul Haque was requested to consider the requirements of the registration of Food Business Operators (FBO's), including the relevant institution, the conditions of Registration including Good Hygienic Practices, Good Animal Husbandry Practices, Ante and Post-Mortem meat inspection, Control of Registration, Licensing, Inspection etc...

There is provision for the registration of **farms** within the Animal Disease Act 2005, however

there are no rules to define categories of farm and the registration of farms has not commenced. The same Act refers to the disinfection and cleaning of animal **transportation** vehicles and duration of transport but does not require their licensing or registration.

City and Municipal Corporations manage ante and post-mortem inspection plus hygiene inspection in **Meat Processing Facilities**. Some Veterinary inspectors are deputed from DLS, while others are employed directly. At Upzilla level, DLS is responsible; sometimes Veterinary officer inspects but has many other duties, so inspections are not done routinely. There is insufficient manpower at Upzilla level.

The relevant legislation for Food Business Operators is the Disease of Animals Act 2005 for farmers. The Slaughter of Animals Act gives authority for licensed slaughter facilities to DLS for ante and post-mortem inspection while the Slaughter Rules define some conditions of slaughter. The Animal Welfare Act (2019) relates to the Transport and Slaughter of Animals.

Coordination between relevant agencies is not good however DLS is working with DGDA and BFSA and in some instances with local upzilla administration and some city corporations. The outputs to date include Good Animal Husbandry Practices being progressively introduced and adopted, Good Management Practices such as HACCP being progressively introduced. Good animal welfare is being addressed by addressing the Safe and clean transportation of animals.

Working Group Recommendations

1. Establish a Veterinary Public Health Directorate by 2030 involving other competent authorities including Local government, City Corporations and Municipality, Union parishad, Milk-vita and Local government Meat inspection services
2. Develop specific Job Descriptions, including roles and responsibilities for personnel of BFSA and DLS. This is proposed as an essential step towards enhanced cooperation between agencies.
3. Veterinary pharmacovigilance to be established, activating a Veterinary unit within DGDA. This must include Laboratory networking.
4. Develop a programme for formal, structured stakeholder participation including food safety awareness from farmers to consumers, farmer training, forums to develop technology transfer, and to develop a culture of compliance amongst all stakeholders.
5. Develop a process to promote conformity of national rules, standards and guidelines with international standards (5 scale – Reach -4) including OIE, Codex, WTO SPS and promoting the principles of GAP, GAHP, GHP, GMP and implementation of HACCP.

Management of Veterinary Medicines (Food Safety and AMR issues)

This group, facilitated by Dr. Giasuddin was requested to consider the approval of Veterinary Medicines, compliance verification including import control, authenticity, distribution, and the oversight on the sale, use and administration by veterinary professionals.

The administration of Veterinary Medicines is shared across the Department of Drug

Administration, Department of Livestock Services, and the Bangladesh Food Safety Authority. These agencies operate within the legislative frameworks, namely the Fish Feed and Animal Feed Act 2010, the Animal Feed Rules 2013, the Food Safety Act 2013, the National Drug Policies 2016 and the Drug Control Ordinance 1982.

There is coordination and collaboration amongst stakeholders, but the participants believe there is opportunity to strengthen the collaboration. Regarding AMR, the One Health Bangladesh initiative is strong with the One Health Secretariat established.

Regulations and Guidelines are in place but due to a lack of human resources, there is low compliance.

Different organizations have been working on AMR in Animal Health sectors. A sectorial working group with DLS, academia, research and private organization has been recently developed to share data on AMR under the aegis of the Fleming Fund. A module in Bangladesh Animal Health Information System (BAHIS) regarding AMR is going to be developed.

BAHIS intends to collect data of the frequency of use of antibiotics in large animal and poultry establishments. A dashboard is also under development within the One Health Secretariat to share sectoral AMR data.

Working Group Recommendations

1. Deputise DLS officials to the Veterinary department of DGDA for the coordination and collaboration of veterinary issues.
2. Deploy separate veterinary inspection teams in the field for monitoring of veterinary medicines. Empower the veterinary inspection through legislation for compliance and enforcement of compliance with the current acts and rules.
3. Develop a formal stakeholder forum comprised of representatives from the Directorate of national consumer's right protection, CAB, producer's association, BFSA, Institute of Public Health, Associations relating to safe food production and supply, NGOs and relevant UN bodies.
4. Review and develop national guidelines, protocols and standards benchmarked against international standards and guidelines. These should include the development and implementation of national treatment guidelines.
5. Development of awareness to farmers and consumers relating to safe food production and consumption.

Scientific Support: Detection, Monitoring, Surveillance

This group, facilitated by Dr. Raijur Rahman was requested to consider residue monitoring programmes, the setting of Maximum Residue Limits (MRL's) and AMR detection and characterization.

The detection, monitoring and surveillance of food safety is managed by a number of

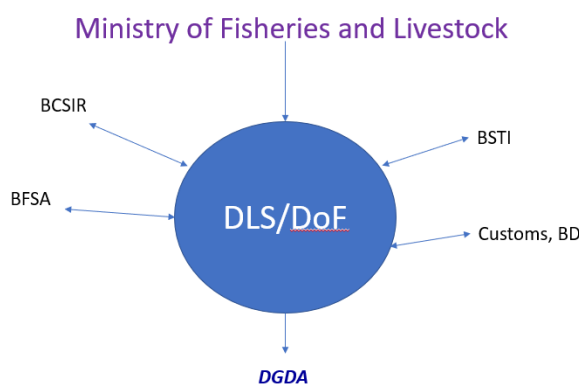
authorities. Foods of animal origin are monitored by DLS supported through the Quality Control Laboratory and the Central Disease Investigation Laboratory (CDIL) both of which operate under the mandate of DLS, within the Ministry of Fisheries and Livestock. The mandate for these functions is granted through the Animal Slaughter and Quality Control Act 2011, the Animal Feed Rule 2013 and the Animal Disease Act 2005.

Fish and fishery products are monitored by the Department of Fisheries within the Ministry of Fisheries and Livestock with specific focus on Fin fish (Aquaculture), Shrimp (Bagda shrimp, Galda Shrimp and Harina Shrimp), Fish Feed, and dried fish. These controls are mandated by Fish and Fish Product (inspection and quality control rules 1997 – amended in 2008), the Fish and Fish Product (inspection and quality control act 2020), the Fish Feed Rules 2011, and the Public University Rules (e.g. BAU, CVASU etc.).

According to the participants, DLS is collaborating with other stakeholders including BSTI, BLRI, BFSA, ICDDRB, public and private universities, while the Department of Fisheries is collaborating with BLRI, NFSL, BAEC, BCSIR for testing purposes.

Working Group Recommendations

1. To supply safe foods to consumers at home and abroad, Bangladesh needs to implement the existing Food Safety Act and Rules through interaction with national and international stakeholders.
2. Current legislative acts and rules should be updated as well as new laws promulgated in accordance with the national, regional, and international standards following the OIE, CODEX and WHO.
3. To implement an effective surveillance plan for animal and fish foods, a master SOP and working SOP need to be prepared for proper testing in competent authority accredited labs which must be in accordance with international guidelines.
4. The following matters need to be taken into consideration, laboratory facilities, trained scientists, provision of adequate funding and collaboration with relevant national and international laboratories.
5. Consideration should be given the following interagency competency mapping to ensure effective detection, monitoring, and surveillance.



6. A comprehensive surveillance plan is required for meat, milk, eggs and leather targeting antibiotics, heavy metals, microbial toxins, veterinary drug residues, dyes, hormones, steroids, drug excipients, food and feed additives.
7. Effective measures to manage noncompliance are required including resources for investigation, preventive measures, awareness and training, and follow-up testing.
8. Measures are required to ensure the implementation of laws in collaboration of politicians, administration, and stakeholders.
9. Establish of surveillance cells within DLS and DoF to maintain and coordinate the testing of laboratories and support for detection, monitoring, and surveillance.

Proposed timelines

2013	Surveillance and monitoring cells formation MoFL
2025	Formation of separate food safety and quality control cells in DLS and DoF
2030	Short term surveillance programme
	Establishment of regional labs for implementation of surveillance programmes
	Adequate lab facilities with appropriate trained manpower
	Establishment of automated Animal Food processing plants with less human involvement
	Enforcement of basic 04 section in all modern animal food processing plants, R&D, Production, QC and QA to ensure internal quality control before external and 3rd party surveillance and monitoring
2035	Mid-term surveillance programme
2041	Long-term surveillance programme
	Fully compliant with international bodies like OIE, CODEX, WHO
	Phaseout of live animal and bird's market

Management of International Trade, Contribution to International Standards

This group, facilitated by Dr Mehedi Hossain was requested to consider the setting of requirements for import and export management, the contribution to international standards development and the translation of International Standards into National Requirements.

The requirements for Import and Export management are primarily set by DLS and the Ministry of Commerce. Imported foods and feed are governed by the Import Policy Order 2015-18, the Animal Quarantine Act, 2005, the Animal Disease Act, 2005, the Fish Feed & Animal Feed Act, 2010 and the Animal Feed Rules, 2008. The group is of the opinion that there is good coordination amongst the relevant agencies.

With regard to engagement with international standards setting organizations, BSTI is the national contact point for Codex Alimentarius while DLS adopts a passive role within the OIE.

The translation of International Standards into National Requirements is currently managed by BFSA, BSTI, and DLS. The related national regulations and standards are

BSTI Standard Catalogue, 2018, (List of International Standard Adopted as National Standard (BDS) p124-289)

National Livestock Development Policy, 2007

National Poultry Development Policy, 2008

Food Safety Act, 2013

Food Safety (Food-Hygiene) Regulations, 2018

Food-Safety (Contaminants Toxins and Harmful residues) Regulations, 2017

Food Safety (Packed Food Labelling) Regulations, 2017

Food Safety (Sample Collection & Testing) Regulations, 2017

Working Group Recommendations

1. Improve coordination and collaboration between BSTI, Ministry of Industry, Ministry of Commerce, NBR, BFSA, DoF, DAE, BLRI, and law enforcing agencies.
2. Develop a common database to support import and export functions.
3. Harmonize the relevant rules and regulations to avoid duplication and ambiguity.
4. Establishment of Separate Trade Body in DLS which will control the quarantine stations and Certification and Registration of international trade. This should enable a single national point for trade facilitation and the availability of information on import and export requirements.
5. Improve coordination and collaboration with primary producers, manufacturers, processors, trade associations, importers and exporters.
6. Develop capacity building resources for importers and exporters
7. Set targets for gradual improvement of national standards in accordance with International standards including Codex, OIE and ISO accreditation.
8. Create incentives for compliance with higher standards such as opportunities for the export of products to developed countries.
9. Develop Zoning and Compartmentalization to facilitate international trade.

Annex 11 Powerpoint Presentation 1 – Dr J.D. Woodford – The Veterinary Domain



"Strengthening the Legal and Institutional Capacity for the Management of Food Safety of Products of Animal Origin"

UNIDO

United Nations Industrial Development Organization

26th January 2022



slide 1



The Veterinary Domain OIE Guidelines on the Regulatory Requirements to Ensure Food Safety of Animal Products

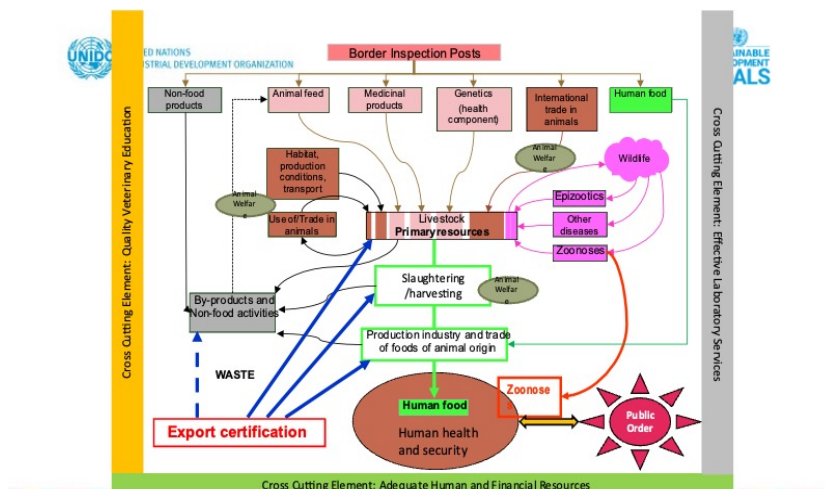
(Terrestrial Animal Health Code - Chapter 3.4)

<https://www.oie.int/en/whatwe-do/standards/codesand-manuals/terrestrial-code-online-access/?id=169&L=1&htmlfile=sommaire.htm>

Dr John Woodford

International Food Safety Expert (Livestock Value Chain)

slide 2



slide 3

Competent Authorities – Article 3.4.5

- **Competent Authorities** should be legally mandated, have the necessary technical, administrative and infrastructure capacity and be organised to ensure that all necessary actions are taken in a timely, coherent and effective manner to address animal health, welfare and **veterinary public health** matters of concern.
- **Veterinary legislation** should provide for a **Chain of Command** that is effective, as short as possible, and with all responsibilities clearly defined from the central level to those responsible for the implementation of legislation in the field.
- Where **more than one Competent Authority** is involved, for example in relation to environmental, **food safety** or **other public health matters**, including **biological threats** and natural disasters, a reliable system of **coordination and cooperation** should be in place, including **clarifying the respective roles and responsibilities of each Competent Authority** with a shared interest

slide 4

OIE Guidelines on the Regulatory requirements to ensure Food Safety of Animal Products - Terrestrial Animal Health Code Chapter 3.4

- 1 Human Food Production Chain - Article 3.4.12
- 2 Animal production – Article 3.4.8
 - §3 Animal Reproduction (Safety of Animal breeding & genetic material, [ova, semen, embryos])
 - §4 Animal Feed
 - §5 Animal By-products - Article 3.4.8
- 3 Veterinary Medicinal Products - Article 3.4.11
 - §3 Authorisation of VMP's
 - §5 Retailing, distribution & USE of VMP's
- 4 Import and export procedures and veterinary certification - Article 3.4.13
- 5 Animal Welfare – Article 3.4.10 – (Ref: Chapter 7 TAHC)

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Human Food Production Chain – Article 3.4.12

Veterinary legislation should provide a basis for actions to safeguard the human food production chain through controls at all critical steps, consistent with national food safety standards and taking into account the **risk** of accidental and deliberate contamination.

The role of the **Veterinary Services** in food safety is described in more detail in Chapter 6.2. TAHC.

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Human Food Production Chain – Article 3.4.12 – 1. General provisions

Veterinary legislation should provide a basis for actions to address the following elements:

1. the conduct of ante - and post-mortem inspections at **slaughterhouses/abattoirs** in accordance with **Chapter 6.3;**
2. controls over all stages of the production, processing and distribution of food of animal origin;
3. recording all significant animal and public health events that occur during primary production and **slaughter;**
4. giving operators of food production facilities the primary responsibility for compliance with food safety requirements, including traceability established by the **Competent Authority;**
5. inspection for compliance with food standards, where this is relevant to health or safety;
6. inspection and audit of facilities;
7. prohibition of the marketing of products not fit for human consumption; and
8. provisions for recall from the marketplace of all products likely to be hazardous for human or animal health

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Human Food Production Chain- Article 3.4.12

2. Products of animal origin intended for human consumption

Veterinary legislation should provide a basis for actions to address the following elements:

1. Health standards, including measures to control diseases and monitoring and enforcement of maximum residue levels (MRL); and
2. The use of visible marks that indicate the product complies with the health standards.
3. The **Competent Authority** should have the necessary powers and means rapidly to withdraw any products deemed to be hazardous from the food chain or to prescribe uses or treatments that ensure the safety of such products for human or animal health.

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Human Food Production Chain - Article 3.4.12

3. Operators responsible for facilities and establishments pertaining to the food chain

Veterinary legislation should provide a basis for actions to address the following elements as appropriate:

1. Registration of facilities and establishments by the **Competent Authority;**
2. The use of **risk-based** management procedures; and
3. Prior authorisation of operations that are likely to constitute a significant **risk** to human or animal health.

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Animal reproduction – Article 3.4.8 - §3

Veterinary legislation should provide a basis for actions to address:

1. The health regulation of animal reproduction in relation to the ***risk*** of disease transmission (prevention of zoonotic diseases transmitted to humans via food products– e.g. Brucellosis).
2. Health regulations may be implemented at the level of ***animals, genetic material, establishments or operators.***

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Animal feed – Article 3.4.8 § 4

Veterinary legislation should provide a basis for actions to address the following elements:

1. definition of the animal ***feed*** subject to the legislation;
2. standards for the production, composition, packaging, labelling and quality control of animal ***feed*** in relation to the biological, chemical and physical ***risks***;
3. registration and, if necessary, approval of facilities and the provision of health requirements for relevant operations;
4. distribution and use of animal ***feed*** in relation to the biological, chemical and physical ***risks***; and
5. recall from the market of any product likely to present a hazard to human health or animal health.

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Animal by-products – Article 3.4.8 § 5

Veterinary legislation should provide a basis for actions to address the following elements:

1. Definition of the animal by -products subject to the legislation;
2. Rules for sourcing, collection, transport, processing, ***use*** and disposal of animal by -products;
3. Registration and, if necessary, approval of facilities and the provision of health requirements for relevant operations.

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Veterinary Medicinal Products – Article 3.4.11 § 3

Authorisation of veterinary medicinal products

- ***Veterinary legislation*** should ensure that only authorised ***veterinary medicinal products*** may be placed on the market.
- Special provisions should be made for:
 1. ***veterinary medicinal products*** incorporated into ***feed***;
 2. establishment of ***maximum residue limits*** for active substances and ***withdrawal periods*** for relevant ***veterinary medicinal products*** containing these substances; and
 3. restrictions of use of ***veterinary medicinal products*** for ***food-producing animals***

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Import and export procedures and veterinary certification – Article 3.4.13

Veterinary legislation should provide a basis for actions to address the elements referred to in TAHC:

- **Section 2** - Import Risk Analysis, Criteria applied by the OIE for assessing the safety of commodities
- **Section 5** - Trade measures, import/export procedures and veterinary certification, in accordance with SPS Agreement

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Animal Welfare – Article 3.4.10

Veterinary legislation should provide a basis for actions to address the ***animal welfare*** related requirements in Section 7 of the TAHC. Consideration should be given to an understanding that animals are sentient beings and should be allowed to enjoy the internationally adopted animal welfare standards including the following 5 Freedoms:

- ✓ **Freedom from hunger and thirst;**
- ✓ **Freedom from discomfort;**
- ✓ **Freedom from pain, injury and disease;**
- ✓ **Freedom to express normal and natural behaviour;**
- ✓ **Freedom from fear and distress.....**

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Animal Welfare – Article 3.4.10 / Section 7 TAHC

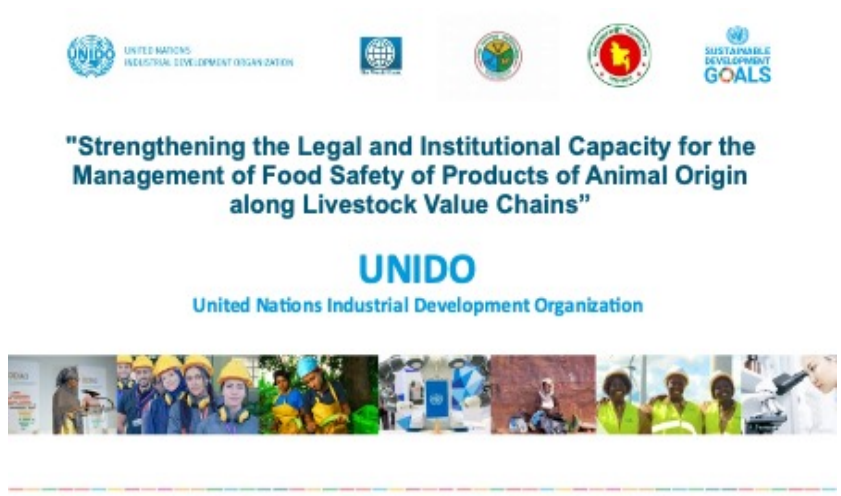
To this end, the legislation should contain, as a minimum, a legal definition of **cruelty as an offence**, and provisions for direct intervention of the **Competent Authority** in the case of cruelty or neglect.

Legislation should make provisions to ensure the principles described in the relevant Articles of Section 7, including in particular:

- Animal production in poultry, beef and dairy production systems;
- Transport of animals, by air, land and sea;
- At slaughter, and for humane killing for purpose of disease control;
- Animals for experimentation, research and education

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Annex 12 The State of Play - Gap Analysis to assess capacity of DLS and other Competent Authorities to perform regulatory functions related to Food Safety of Products of Animal Origin (PoAO)



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Theme 1	OIE PVS / Gap Findings (Baseline situation)	Main Recommendations	Progress made since 2011/2015 – (CURRENT SITUATION)
Organisational structure at DVS Numbers of suitably qualified personnel employed by DLS to perform regulatory functions related to Food Safety of PoAO	DVS does not have a structural organisation that reflects capability to perform food safety regulatory functions DLS does not have sufficient personnel in current establishment designated to perform regulatory functions related to VPH and Food safety	<ol style="list-style-type: none"> Establish Regulatory Body in DLS & sub-divisions / cells responsible for Regulatory functions: <ol style="list-style-type: none"> Safety of Animal production in puts (Animal feed, Animal breeding / genetics, Animal by-products processing / usage) VPH – Food safety of animal products, registration, retail and USE of VMP's International trade – Import permits, import border control procedures, Export certification of animals & animal products Progressively recruit & train personnel to perform core regulatory functions 	Proposal to increase staffing level of DLS from 8,689 total employees (including veterinarians, technicians, clerical and maintenance staff) to approximately 27,565, partially realised through current establishment of 13,052 positions within DLS mainly at District / Upazila levels for extension / clinical service delivery, BUT..... No significant change in structure of Organogram at DLS headquarters other than appointment of: 8 new Deputy Directors (VPH) appointed at DLS Divisional level 24 new Veterinary inspectors appointed to conduct import controls at newly established Border Inspection Posts at Ports of Entry along international land borders with India. STRUCTURAL ORGANISATION OF DLS AT HEADQUARTERS AND BELOW DOES NOT REFLECT CAPABILITY TO PERFORM REG FUNCTIONS RELATED TO FOOD SAFETY OF POAO INSUFFICIENT NUMBERS OF SUITABLY QUALIFIED PERSONNEL TO PERFORM VPH REGULATORY FUNCTIONS TO ENSURE FOOD SAFETY OF POAO

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Theme 2	OIE PVS / Gap Findings (Baseline situation)	Main Recommendations	Progress made since 2011/2015 – (CURRENT SITUATION)
Policies, strategic planning, regulatory control of Food safety of PoAO	<p>Current DLS policy biased towards extension / production – missing responsibility for regulatory functions</p> <p>Variety of Competent Authorities (CA's) performing some required regulatory functions to ensure food safety of PoAO</p> <p>Overlaps in current legislation in force and lack of clarity as to respective roles and responsibilities for each of the CA's involved.</p> <p>Lack of cohesion, collaboration / communication</p>	<ul style="list-style-type: none"> DLS review and revise Livestock Policy to reflect regulatory functions related to food safety of PoAO Establish a One Health coordination Committee under NFSA to facilitate coordination between Competent Authorities with similar interests in regulating food safety of PoAO; One Health Committee to commission review of the food safety components of current legislation and.... Strategic planning exercise to identify gaps and overlaps and reach agreement on respective roles of CA's to overcome duplication of effort and ensure efficiency of food safety regulatory controls Amend primary and secondary legislation to accommodate agreed mandates of respective CA's and set standards for food 	<ul style="list-style-type: none"> Livestock Policy missing reference to regulatory functions National Food Safety Authority established under Food Safety Act (2015) as umbrella organisation with responsibility for coordination of regulation of food safety by "relevant Competent Authorities". Animal Disease Act (2005) provides DLS with authority to license milk processing / retail facilities & carry out inspection to ensure food safety of raw milk prior to being processed – Regulations notified recently and about to be implemented Animal Slaughter & Quality Control Act (2011) provides DLS with mandate for licensing of slaughter facilities/ retail shops & to conduct ante- & post-mortem inspection & certification of meat as being fit for human consumption. City Corporation Act provides the City Corporations, municipalities and local authorities with the authority to establish slaughter facilities in their

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Theme 3	OIE PVS / Gap Findings (Baseline situation)	Main Recommendations	Progress made since 2011/2015 – (CURRENT SITUATION)
Food Safety standards – production, processing, distribution, hygiene, food safety control management systems, laboratory accreditation, residues, AMR	<ul style="list-style-type: none"> Limited No. of food safety standards set to date Lack of coherent management of food safety regulatory activities One Meat Export abattoir with HACCP plan in place Variety of laboratories some of which beginning to introduce QMS 	<ul style="list-style-type: none"> Review and revise principal legislation as appropriate and prepare secondary legislation to facilitate implementation of provisions related to food safety of PoAO; DFSA to engage with existing CA's to coordinate efficient implementation of food safety management systems to collect information to informing RISK-BASED approach towards overcoming food safety issues Progressively develop systems for routine surveillance of residues / AMR Strengthen capacity of relevant CA's to perform their respective roles related to food safety of PoAO 	<ul style="list-style-type: none"> Several new Acts promulgated along with some Rules and Regulations but not being fully implemented Existing Competent Authorities often operating independently without sufficient coordination to ensure efficient utilisation of limited resources Excellent STATE OF THE ART accredited laboratory facilities available at DLS / BSTI / FITQC / BLRI but lacking appropriate linkages to production and processing facilities to allow effective ACTIVE surveillance of residues or AMR Good cooperation between QC / other laboratories Fleming Fund & several other "projects" undertaking pilot programmes to establish baseline data on residue / AMR burdens Laboratory capacity building well underway Food safety management systems poorly developed

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Theme 4	OIE PVS / Gap Findings (Baseline situation)	Main Recommendations	Progress made since 2011/2015 – (CURRENT SITUATION)
Compliance Verification, Inspection & Enforcement along Livestock value chains from farm to certification of animal products	<p>The DLS and other CA's do not have workforces dedicated to perform inspection or enforcement functions along livestock value chains</p> <p>Existing primary legislation makes provisions for setting food safety standards through promulgation of rules, but few rules have been prepared / promulgated</p>	<ul style="list-style-type: none"> DLS and other CA's recommended to appoint sufficient numbers of officers / inspectors to perform inspection controls to ensure compliance with all required food safety standards along livestock value chains DLS and other CA's with authority to set standards should formulate and enact Rules that set appropriate food safety standards along livestock value chains 	<ul style="list-style-type: none"> The City Corporation undertakes ante- and post-mortem inspection using some few "veterinary officers" on deputation from DLS and the remainder through "veterinarians" under direct contract at very few City / municipal abattoirs Most meat consumed in Bangladesh is slaughtered and sold on the street by butcher retailers without any inspection or certification Only one abattoir (Bengal Meat) is implementing a risk-based food safety management system There are no Rules that specify food safety management for premises which process animal origin products Veterinary Science curricula include HACCP as a component of the VPH curriculum at some Faculties There is very limited capacity within any CA to inspect or audit premises to ensure compliance with standards for risk-based food safety management systems, mainly lack of trained personnel The DRA is not yet in a position to inspect veterinary drug retail outlets to enforce legislative limitation of access to prescription only VMPs The Veterinary Council does not have a dedicated cadre of inspectors to enforce veterinary practice standards

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Theme 5	OIE PVS / Gap Findings (Baseline situation)	Main Recommendations	Progress made since 2011/2015 – (CURRENT SITUATION)
Resources required to ensure food safety of PoAO (Human, Physical and Financial)	Respective Competent Authorities have insufficient human, physical and financial resources to perform regulatory functions related to food safety of PoAO	<ul style="list-style-type: none"> Respective CA's to review and revise policy, develop strategic /implementation plans to accommodate implementation of regulatory functions along livestock value chains Respective CAs to recruit and train sufficient numbers of personnel to progressively implement regulatory activities along livestock value chains Procure sufficient equipment / vehicles to enable implementation of regulatory functions effectively Provide sufficient regular government revenue budget to cover capital and operational costs for implementation of food safety regulatory actions along livestock value chains 	<ul style="list-style-type: none"> State of the Art Laboratory facilities established with sufficient numbers of staff to initiate active surveillance of drug / chemical residues / contaminants and AMR in relation to food safety of PoAO Laboratories are well equipped but have limited budget allocation to procure supplies of all necessary reagents required to conduct an increasing number of tests / analyses for active surveillance Insufficient numbers of qualified personnel to undertake required inspection and other regulatory actions along livestock value chains Very limited availability of necessary physical resources to allow effective performance of regulatory functions Operational funds currently available are provided through external projects which negatively impacts sustainability.

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Theme 6 (a)	OIE PVS / Gap Findings (Baseline situation)	Main Recommendations	Progress made since 2011/2015 – (CURRENT SITUATION)
Public awareness, Principal stakeholders, value-chain actors, consumer rights,	<p>Limited understanding amongst consumers, stakeholders, producers and processors of value of quality and safety of animal products</p> <p>Insufficient Communication of standards embodied in legislation</p>	<ul style="list-style-type: none"> Create awareness of consumers on premium value of safe and high quality animal products Create awareness amongst stakeholders along value chains of Good Management / Production / Processing / Practices Engage stakeholders in creation of joint ventures / PPP's Consider to use mass media / innovative approaches towards creating awareness of important food safety issues amongst consumers / producers / processors / retailers 	<ul style="list-style-type: none"> Major CA's have good understanding of existing challenges related to Food Safety management; Some public awareness created through Press / TV publications of certain perceived / potential food safety issues; Poor standards of practice amongst value chain actors related to application of good hygiene and other important food safety standards;

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Theme 6 (b)	OIE PVS / Gap Findings (Baseline situation)	Main Recommendations	Progress made since 2011/2015 – (CURRENT SITUATION)
Responsibilities of animal producers, food / feed business operators, traders / animal product vendors, animal health service providers	<p>Insufficient understanding of responsibility of livestock producers and processors to ensure SAFE production / processing practices GHP / GMP etc.</p> <p>Weakness in Knowledge, Attitudes and Practices (KAP) of key individuals involved in implementing food safety management systems</p>	<ul style="list-style-type: none"> Create awareness amongst stakeholders along livestock production value chains of Good Management / Production / Processing / Practices Ensure producers and processors of livestock products understand legal obligations to produce and process safe products destined for sale and human consumption Engage stakeholders in creation of joint ventures / PPP's 	<ul style="list-style-type: none"> Major CA's have good understanding of existing challenges related to Food Safety management; Some public awareness created through Press / TV publications of certain perceived / potential food safety issues; Poor standards of practice amongst value chain actors related to application of good hygiene and other important food safety standards; DLS has existing network of extension agents at Upazila / Union Council levels; Unregulated access to VMP's & widespread misuse of antimicrobials in commercial to small-scale livestock production systems; Only one veterinarian representing DLS in interests in Drug Regulatory Authority; Recently revised Vet legislation includes authority of Vet Council to regulate practise of vet services by Veterinarians & Veterinary Para-professionals

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¹ <https://www.fao.org/3/y8705e/y8705e00.htm>



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