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GAP ASSESSMENT ON FOOD SAFETY INCIDENT RECORDING AND REPORTING SYSTEM OF COMPETENT AUTHORITIES

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Report prepared by:

Dr John Woodford, International Expert in Food Safety (Livestock Value Chains)

Report submitted by

Project Manager

UNIDO LDDP Project

Report submitted to

Project Director

Livestock and Dairy Development Project

Department of Livestock Services

Ministry of Fisheries and Livestock

Bangladesh

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Acronyms

AMR	Antimicrobial Resistance
AMU	Antimicrobial Usage
AS&MQC	Animal Slaughter and Meat Quality Control (Act & Rules)
BAHIS	Bangladesh Animal Health Intelligence System
BFSA	Bangladesh Food Safety Authority
BSTI	Bangladesh Standards and Testing Institute
CA	Competent Authority
CC	City Corporations
CDIL	Central Diagnostic and Investigation Laboratory
DC	Deputy Commissioner
DLO	District Livestock Officer
DLS	Department of Livestock Services
FSA	Food Safety Act
LDDP	Livestock and Dairy Development Project
LIMS	Laboratory Information Management System
MoF	Ministry of Food
MoFL	Ministry of Fisheries and Livestock
MoHFW	Ministry of Health and Family Welfare
MRL	Maximum Residue Level
OTC	“over-the-counter” (sales of veterinary medicines)
PoAO	Products of Animal Origin
PVS	Performance of Veterinary Services (WOAH/OIE)
UNIDO	United Nations Industrial Development Organisation
WOAH/OIE	World Organisation for Animal Health (formerly the Organisation Internationale des Epizooties)

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BACKGROUND AND TERMS OF REFERENCE

This report is made as a contribution towards the formulation of recommendations for strengthening the Food Safety Management System related to Products of Animal Origin (PoAO) in Bangladesh and is one component of the assignments given to the International Food Safety Expert (Livestock Value Chains).

This assignment, in turn contributes towards the achievement of **sub-component C2 on food safety and public health by addressing food safety and quality assurance**, as a part of UNIDO's engagement with the World Bank funded Livestock and Dairy Development Project (LDDP) within the Ministry of Fisheries and Livestock (MoFL).

More specifically, the report which follows addresses the following items of the Terms of Reference of the International Food Safety Expert:

MAIN DUTIES

Contribute to the food safety surveillance system and risk management:

- Review existing documentation and past initiatives related to incident management and food safety data collection focusing on public sector organisations;
- Contribute to the assessment of current framework for recording food safety incidents and support the identification of gaps in recording and reporting systems from slaughterhouse stage, including ante- and post-mortem inspection;
- Provide recommendation for improvement in terms of food safety coordination among competent authorities on food safety data sharing;
- Provide recommendations for recording and data management system of competent authorities related to livestock.

OUTPUTS TO BE ACHIEVED

- Inputs to assessment questions of the data recording practices in food safety;
- Brief outcome report with recommendations for recording and data management system related to food safety incidents in the livestock sector provided.

Data recording, documentation, data sharing and communication and data analysis are crucial elements of the process of undertaking **Risk Analysis** to inform the risk-based approach towards prioritisation and resource allocation for food safety management actions, especially those related to surveillance, inspection, and incident management along each of the livestock value chains. This is especially important for countries such as Bangladesh where human and financial resources are very seriously limited and where regulatory controls for food safety are either absent or weak.

METHODOLOGY

1. Data collection

The findings given in this report on the current status of data recording and incident management related to food safety of animal products by public sector organisations is based on an analysis of a variety of sources of information. In the first instance, the Expert has reviewed a series of Reports and other documents provided to him at the start of his consultancy contract in November 2021, and which has been steadily accumulated over the period to date. The most important of these documents were the two World Organisation for Animal Health (WOAH (formerly OIE)) Performance of Veterinary Services (PVS) Evaluation Report of 2011 and the PVS Gap Analysis Report of 2015. In addition, a number of other reports generated by government bodies, FAO experts and others have been reviewed to gain a better understanding of how and what data is collected and how it is used. A full list of the References used in this report are found in Annex 1.

Secondly, the findings are partly derived from the Report following a field mission which was undertaken by the Expert from 17th - 26th January 2022 to undertake a Gap Analysis to make a comparison of the quality of the veterinary services in relation to the management of food safety of animal products in Bangladesh as was recorded in the OIE Performance of Veterinary Services (PVS) Evaluation Report of 2011 and a OIE Gap Analysis Report of 2015, with the current situation. The outcome of this mission is now recorded in a detailed Report entitled: **“Gap Analysis of Food Safety Management along the Major Livestock Value Chains in Bangladesh”** (Woodford et al - June 2022). Additional information has been collected from stakeholder consultations made in a series of two workshops held in Dhaka under the auspices of the LLDP and UNIDO with representatives of the more important public and private sector institutions and agencies involved in the management of food safety of animal products along the major livestock value chains.

Finally, an attempt has been made to probe deeper and identify more precisely what data is being recorded and used by the DLS and other major Competent Authorities (CA's) in relation to food safety regulatory functions and incident management as well as those involved in education and training of personnel responsible for performing food safety regulatory functions. For this purpose, each major regulatory function related to food safety controls was listed and a series of questions were developed in order to discover how that regulatory function was being performed and what data was being generated in the course of performing each regulatory function.

The list of regulatory functions and the questions posed for each function is provided in Annex 2 to this Report. Questionnaires were distributed to DLS officers and other organisations known to UNIDO national experts as being the persons responsible for the overall management of implementation of each of the food safety regulatory functions studied. The responses given to the Questionnaires are provided in Annexes 2 to 5. Annex 6 provides a list of the CA's with responsibility for implementing food safety controls, the departments/sections within those CA's and the legal basis providing their mandates.

2. Data sources - Competent Authorities with responsibility for

performing food safety controls

There are six public sector organisations that have been identified as having some responsibility for performing regulatory functions which are directly related to ensuring the food safety of animal products destined for human consumption in Bangladesh, as follows:

1. Department of Livestock Services (DLS)
2. Bangladesh Standards and Testing Institute (BSTI)
3. Bangladesh Livestock Research Institute (BLRI)
4. City Corporations (CC)
5. Bangladesh Food Safety Authority (BFSA)
6. The Directorate General of Drug Administration (DGDA)
7. The Directorate of National Consumer Rights Protection (DNCRP)

The DLS has primary responsibility for implementation of food safety controls from the level of the livestock producer on the farm, through the livestock value chains including livestock transporters, middlemen involved in marketing of animal products, markets, milk collection points, meat and milk processing facilities, and distributors up to retail sale. These mandates are provided in the Animal Disease Act (2005), Animal Slaughter and Meat Quality Control (AS&MQC) Act (2011) and Rules (2021), the Fish Feed and Animal Feed Act (2010) and the Animal Welfare Act (2019), and their associated Rules.

In general, areas of interest directly related to registration / licensing of livestock and poultry farms and animal product processing facilities under the authority of the Animal Disease Act (2005) / Rules (2008) and the Animal Slaughter and Quality Control Act (2011) and Rules (2021) fall under the responsibility of the Deputy Director, Animal Health under the Director of Administration of the DLS.

The regulation of the registration of animal feed business operators and the safety and quality of animal feeds is administered by the Deputy Director of Farms also reporting up to the Director of Administration.

The Central Veterinary Diagnostic and Investigation Laboratory (CDIL), falls under the responsibility of the Director of Research Training and Evaluation however, the Epidemiology Cell and the QC Laboratory fall under the responsibility of Director of Administration.

The BSTI, under the authority given in the Bangladesh Standards and Testing Institution Act (2003). provides 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 animal products only, thus it does not have overlapping responsibilities for enforcing food safety standards through sampling and testing of samples taken from FRESH animal products, which fall within the mandate of the DLS Laboratories. The BSTI does however have the authority to set standards which would

then be implemented and enforced by other CA's, for instance it has shared (or overlapping) responsibility for defining the Maximum Residue Limits (MRLs) for drug and chemical residues in animal products. The BSTI holds the Codex focal point of Bangladesh.

The BLRI is established within the MoFL but reports directly to the Secretary for Livestock and Fisheries and as such is administratively independent of the DLS. Nevertheless, the BLRI collaborates closely with the DLS and has good laboratory capacities and equipment dedicated to performing diagnostic tests and assays, especially for microbiology, 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 Government core research grant as well as overseas funding from the US-CDC, EMPHNET, One Health Poultry Hub, Fleming fund, World Fish and ILRI.

The City Corporations, acting 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 their own facilities as well as at all privately operated retail outlets within their jurisdictions under the authority delegated to them in Section 26 of the AS&MQC Act (2011). The CCs and Municipal Councils employ some veterinarians themselves as well as borrowing others from the DLS on deputation. In addition, under Section 42 of the City Corporation Act (2009) there is a Schedule III, which provides the City Corporations and Municipalities with a wide range of responsibilities which would otherwise overlap with many of the provisions within the Animal Disease Act and the Animal Slaughter and Meat Quality Control Act in the areas of provision of animal health services and registration / licensing of livestock farms located within their jurisdictions and the food safety of meat and milk from production, through processing up to retail sale.

The BFSA, is established within the Ministry of Food (MoF), under the Food Safety Act (FSA) (2013). The FSA establishes a high level Council, chaired by the Minister in the MoF, known as the National Food Safety Management Advisory Council, made up of 28 members most of whom are Administrators rather than having any specific "technical" expertise.

Section 13 of the FSA 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;

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 a Central Food Safety Management Coordination Committee, comprised of 28 members representing the technical interests of all of institutions with direct or indirect interest in food safety management. Its responsibility is:

- *“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.”*

The DGDA, established within the Ministry of Health and Family Welfare (MoHFW) is responsible for the regulation of the importation, registration, distribution, sale and use of veterinary medicines. As such the DGDA should play a key role in ensuring correct antimicrobial usage (AMU), and the enforcement of regulations related to the application of withdrawal periods of all veterinary medicines used in the treatment of food producing animals, the sale and use of prescription only veterinary medicines. These are important controls associated with the control of drug residues in animal products and antimicrobial resistance (AMR).

The DNCRP was established under the authority of the Consumer Rights Protection Act, 2009 and Rules (2020). The Act makes provisions to protect consumers' rights relating to “food safety” by prohibiting the placing on the market of any “adulterated” food product. Furthermore, the Act makes it a punishable offence to offer for sale any “product” which is inappropriately packaged, falsely labelled, a counterfeit product, or an expired product. The Act establishes a National Consumer Protection Council and a Department for the protection of consumer rights. A District magistrate is authorized to enforce and exercise all the power of a Director General to the Department concerned. The Director General can examine any product, quarantine it, in case of adulteration or even the arrest of offender.

3. Other sources of Food Safety Data collection/Incident management records

In addition to the above CA's the investigation of documentation and records of Food Safety controls and incident management records was extended to the following institutions having responsibilities closely related to Food Safety controls or the development of capacity to undertake such controls:

3.1 “Bengal Meat” – the only private abattoir in Bangladesh which was established in order to explore possibilities to export beef, but which now also supplies a variety of meat products on the domestic marketplace including hotels, restaurants and supermarkets.

3.2 Ministry of Health and Family Welfare – Department of Health – for information on the incidence of food poisoning from ingestion of contaminated food products of animal origin or of zoonotic importance.

3.3 Ministry of Environment – information on the detection of heavy metals or other toxic wastes found to have contaminated the environment or crops being fed to humans or livestock.

Appropriate placing of slaughter facilities and milk processing plants and waste management.

2.3.4 Veterinary Science University Faculty Laboratories (multiple)– findings of research being undertaken to detect the presence of biological, drug and other chemical residues in food products of animal origin or the detection of antimicrobial resistance (AMR) in organisms isolated from poultry, livestock or livestock products.

No responses to the questionnaires were received from the following institutions:

Bengal Meat – ante- and post-mortem inspection of meat

MohFW – Department of Health – food poisoning events, zoonotic disease events

Ministry of Environment – safe disposal of industrial wastes / location of abattoirs, slaughter facilities and milk processing facilities

University Laboratories – collaboration in conduct of research on residues and AMR

ANALYSIS OF DATA RECORDING AND INCIDENT MANAGEMENT

1. Data recording and incident management along the Meat and Egg Value Chains

The following are the more important food safety regulatory controls along the meat and egg value chains and the current levels of enforcement:

1.1 Registration of livestock farms

The legal basis for registration of livestock farms, including poultry farms, is provided in the Animal Disease Act (2005) and the conditions of registration are defined in the Animal Diseases Rules (2008). The District Livestock Office registers livestock and poultry farms at the Upazila level, considering certain compliance requirements related to infrastructure, biosecurity, and waste management facilities. However, the existing process does not consistently guarantee strict adherence to these requirements.

Most commercial / semi-commercial poultry farms are now registered and a list of all registered commercial / semi-commercial poultry farms are held at the DLS headquarters by the Deputy Director Animal Health. The registration of commercial poultry and livestock farm is now carried out by District Livestock officers (DLOs) in accordance with the Animal Disease Rules, 2008, (pages 6661 and 6658). The verification of the submitted documents is done by the local Upazila livestock officer by on-site visits and recommends for registration. The

responses to the Questionnaire distributed to the DLS are provided in Annex 2, Table 2.1.

1.2 Registration of Livestock/Animal product transporters

There is no legal basis for the registration of livestock transporters, however the AS&MQC Rules (2021) specify a number of conditions (disinfection / records to be kept by transporter, cold chain requirements for fresh, chilled or frozen animal products) relating to transport of live animals as well as fresh, chilled or frozen meat. These Rules are not yet being enforced and there are no records of any incidents or non-compliance relating to the documents that should be kept by live animal transporters, required disinfection of vehicles or cold chain deficiencies in vehicles or containers used to transport animals / meat.

1.3 Licensing/registration of abattoirs or other types of slaughter facility

The legal basis for registration / licensing of abattoirs and slaughter facilities are confusing. The Animal Disease Act (2005) & Rules (2008), make provisions requiring any animal product processing facility to be registered, whilst the AS&MQC Act (2011) & Rules (2021) make similar provisions requiring slaughter facilities to be licensed by a Licensing authority within the DLS, either the Director General or an officer delegated with that responsibility.

In the present situation no registration or documentation of slaughter houses or abattoirs located in the District and Upazila levels is being undertaken. However, these offices do have lists of the abattoirs located in each Districts and Upazila.

However, there are no regular inspections being made and no records of any incidents or non-compliance with hygiene standards are being kept by the DLS. However, the District Livestock Officers responding to the questionnaire indicated that some records of non-compliance with standards of hygiene are held by the Mobile Courts who are empowered to adjudicate and apply sanctions under the authority of the Mobile Courts Act (2009). According to the response given to the questionnaire as to which level the DLO would report the results of registration documentation, is reported “upward”, however, the response at the headquarters level indicates that no such records are held there. From this enquiry it may be concluded that the documentation may be held at the District / Upazilla levels and possibly at the Divisional level.

The City Corporation Act (2009) makes provisions for the City and Municipal Corporations to establish slaughter facilities for processing of meat within or without their jurisdictions subject to approval of the Government. Government owned animal product processing facilities are exempted from being registered under the Animal Disease Act (2005).

There is no mention of licensing or registration of privately owned meat processing facilities located in City Corporation or Municipality jurisdictions in the City Corporation Act (2009). Some inspection of slaughter facilities is being undertaken by Hygiene Inspectors and any non-compliance with hygiene standards are investigated, and where necessary, sanctions are imposed by Mobile Courts. Documentation of investigations and sanctions imposed are held by the Mobile Courts and not reported to the DLS.

1.4 Ante-and post-mortem inspection of animals and meat.

The legal mandate for performing ante- and post-mortem meat inspection is provided to the DLS under the AS&MQC Act (2011) & Rules (2021). Detailed rules relating to ante-mortem inspection and certification of slaughter animals, including poultry and meat inspection procedures, albeit in need of some technical revision due to drafting errors, are provided in the AS&MQC Rules (2021). These mandates have been delegated to City Corporations and Municipalities by either “veterinarians” employed directly by the CC’s or Municipal Councils or veterinary inspectors provided to the CC / Municipal authorities on deputation for all food of animal origin processing and retail facilities located within their jurisdictions (Section 26 AS&MQC Rules). At present, the reporting and recording of ante- and post-mortem inspection is compromised by the following:

- Uncertainty regarding the existing rules and regulations surrounding the sharing of ante and post-mortem inspection data from districts or city corporations with the DLS.
- Lack of clarity on where and how the data should be submitted.
- Ambiguity regarding the specific section within the DLS that holds the responsibility for meat inspection.

At present the coverage of ante- and post-mortem inspection at all administrative levels is very patchy, with only some District or Upazilla Livestock Offices undertaking inspections at some slaughter facilities and retail outlets within their jurisdictions, on an ad hoc basis, as and when the workload allows. District Livestock Offices do however maintain lists of the slaughter facilities and retail outlets located in their jurisdictions. There are no records of actual certification of animals as being declared suitable for slaughter (ante-mortem inspection) and no records being kept of any partial or complete organ / carcass condemnations as a result of the detection of conditions which would render the meat as being unfit for human consumption.

Similarly, although the City Corporations do employ an undisclosed number of veterinarians and use some veterinary officers provided by the DLS on deputation, their number is totally insufficient to provide inspection coverage for the many hundreds, if not thousands of butcheries at local bazaars scattered throughout the larger cities and municipalities of Bangladesh. No records of ante- or post-mortem findings are recorded by the few inspectors who are carrying out these inspection duties.

2. Data recording and incident management along the Milk Value Chain

2.1 Registration of milk value chain actors

The legal basis for the registration of milk production (dairy farms) and milk processing facilities is given in the Animal Diseases Act (2005) and the Diseases of Animals Rules (2008). As yet, the DLS has not started to register any dairy producers, milk traders, milk collection centres or milk processing facilities. Some controls are in place to ensure the delivery of safe

milk from the Central Cattle Breeding and Dairy Farm, managed under the overall supervision of the Director of Production and other farms.

The City Corporation Act (2009) requires any private milk production or milk product, marketing or processing facility located within a City Corporation or Municipality jurisdiction to be licensed. No rules relating to such licensing were made available to the expert teams during this assignment.

Furthermore, Sections 15.1 and 15.2 of the City Corporation Act (2009) and the Diseases of Animal Act (2005) make provisions for city corporations to provide animal health services, however their capacity to fulfil this mandate is almost non-existent.

“15.1 A Corporation may, establish and maintain veterinary hospitals and dispensaries, and by by-laws regulate their working and fix the fees to be charged for treatment in such hospitals and dispensaries.

15.2 Under the schedule of section 2 (e) of Animal Disease Act 2005 (Act No. 05 of 2005), a Corporation may undertake measures to control contagious disease among animals and provide measures that shall be adopted for prevention of the spread of such diseases, including the compulsory inoculation of animals, and the subjection to treatment or destruction, as may be necessary of such animals as may be suspected to have been infected with carriers of any such diseases under section 07 of that law.”

2.2 Inspection, sampling and testing of milk along milk marketing and processing chain

There is currently no programme for routine inspection, sampling or testing of milk being collected by milk traders, at milk collection centres or at milk processing facilities. As per the Animal Disease Rule (2008), the responsibility for the registration of milk processing lies with the Director of Animal Health and Administration, who is now referred to as the Director of Administration.

3. Data recording and incident management for Animal Health and Food Safety related controls

3.1 Early detection and reporting of notifiable disease events (Zoonotic diseases)

The occurrence of notifiable disease events is being well managed with the introduction of a web-based data and information management system – The Bangladesh Animal Health Intelligence System (BAHIS), an online-based platform that collects data on animal diseases from the Upazila level on a daily basis. This data is considered secondary data and is initially recorded in the patient registry before being submitted to BAHIS on a daily basis. This

data management system is central to the entire DLS animal health and veterinary public health data and information management system. It can act as the foundation for future

expansion and integration to include data and information derived from other areas of intervention including, for instance, farm registration, animal identification and traceability and veterinary public health (food safety), diagnostic laboratory results. The latter can be linked to the Laboratory Information Management System (LIMS) software which has been introduced at the QC laboratory and which shall be introduced at other veterinary diagnostic laboratories in the near future.

3.2 Animal feed safety control

The mandate for the regulation of the safety and quality of animal feeds has been provided to the DLS under the Fish Feed and Animal Feed Act (2010), the Animal Feed Rules (2013) and the Animal Feed Production and Marketing Guideline (2020).

The licensing of animal feed manufacturers has been pursued very vigorously by the DLS following the detection of chromium residues in animal feeds manufactured using hide trimmings purchased from the Hazaribargh tanneries in Dhaka suburbs some years ago. Since that time almost all known feed manufacturers, at least 284, have now been licensed by the DLS. The licensing of animal feed businesses is supervised and managed by the Deputy Director of Farms under the overall supervision of the Director of Administration. Due to insufficient numbers of appropriately trained inspectors at the field level only some few ad hoc inspections have been undertaken and as yet, there are no records of any incidents related to feed safety. Animal feed businesses use the QC laboratory to perform quality testing of their feeds on a private basis. Although the QC lab is well equipped with the appropriate testing equipment, there is no programme in place to test animal feeds for the presence of hazardous residues or other contaminants. However, in addition to the Quality Control (QC) laboratory, the Animal Nutrition laboratory of the DLS is responsible for assessing the nutritional and certain safety aspects, such as the presence of chromium and lead in animal feeds and feed ingredients.

3.3 Veterinary medicines used to treat food producing animals

The Directorate General of Drug Administration (DGDA) within the Ministry of Health and Family Welfare (MoHFW) implements the Drug Act, (1940), the Drug Rules (1945), the National Drug Policy (2005) and the Drug Control Ordinance (1982). Although Section 6 (iii) of the National Drug Policy (2005) that “no drugs or medicines other than non-prescription, “over-the-counter” (OTC) drugs should be sold or dispensed without prescription” there is no classification of “prescription only” veterinary medicines. Currently there are no rules or regulations listing prescription only veterinary medicines.

There are currently limited initiatives in place to carry out mobile court operations aimed at verifying the appropriateness of veterinary drugs, including antibiotics, vitamin and mineral premixes, etc. Mobile Court activities primarily focus on confirming crucial details such as the legitimacy of the drug manufacturer, expiration dates, and ingredients of the drugs.

There is therefore no enforcement of limitation of OTC sales of antimicrobials or other veterinary medicines. There are no rules relating to the use of veterinary medicines

specifying the requirement for veterinarians, veterinary para-professionals or other end-users to maintain records of the use of veterinary medicines. There is thus no enforcement of withdrawal periods for medicines used to treat food producing animals.

3.4 Quality and Safety standards of animal products and animal feeds - BSTI

The BSTI has the mandate for setting and enforcing the standards for PROCESSED food products only. The mandate for setting standards in relation to food safety of FRESH or raw, unprocessed animal products rests with the DLS. Furthermore, the BSTI relies on the DLS for setting and enforcing quality and safety standards for animal feeds.

BSTI standards are developed through establishment of committees comprised of experts in relation to each commodity and are drawn from a variety of different organisations, including industry and academic institutions. The BSTI standards for processed food products relate more specifically to a description of the commodity and its nutritional qualities, rather than safety standards.

BSTI collects and records all data in paper based hard copy only. No regular data analysis system in place at present. The BSTI is in the process of developing a digitalised data recording and analysis system.

There exists some degree of misunderstanding of the legal mandates, roles and responsibilities between the BSTI and other relevant organizations, having similar responsibilities, especially the BFSA.

4. Capacity building

Training of Livestock Officer and Assistants is provided by the following institutions.

Little information was given in response to the questionnaire other than that the BCS Veterinary Academy maintains lists and copies of course materials for all the courses which they deliver. List of the trainees who have participated or successfully completed training courses in the past are held in paper for by the Director of the Academy. All veterinary para-professional training is undertaken at various colleges including:

BCS Livestock Academy

Institutes of Livestock Science and Technology(ILST)

Veterinary Training Institutes (VTI)

Furthermore, the following training programmes have been implemented in the recent past:

- The Department of Livestock Services (DLS) has developed and disseminated “A Standard Treatment Guidelines (STG) for Poultry, Bangladesh” in collaboration with TAS for FAO-ECTAD. This document serves as a guiding resource for poultry practitioners in the country to prevent and control significant bacterial diseases.

- The Bangladesh AMR Response Alliance (BARA) is actively involved in providing training to both human and veterinary doctors on the appropriate usage of antimicrobials.
- Furthermore, FAO has extended technical assistance to various organizations including the National Veterinary Dean Council (NVDC), Department of Livestock Services (DLS), Bangladesh Veterinary Council (BVC), Bangladesh Veterinary Association (BVA), and Bangladesh College of Veterinary Surgeons (BCVS) to establish a continuing education for Veterinarians (CEVET) forum. The CEVET Forum has been organizing annual CEVET conferences since 2017, focusing on training programs related to antimicrobial resistance and surveillance.

OVERALL CONCLUSIONS

The keeping of records relating to veterinary controls and the management of incidents along each of the animal product value chains is extremely weak. There are a variety of reasons for this, including:

- “The current organizational chart lacks the necessary resources to effectively carry out food safety activities, and it also fails to provide clear guidance on career progression within this domain”
- Absence of policies providing the framework for planning, investment and implementation of food safety controls;
- Inherent weaknesses in the chain of command brought about by existing structural and organisational systems in place within the DLS management structure;
- Insufficient numbers of personnel deployed at all levels within the DLS hierarchy , all multi-tasking, unable to effectively manage the introduction of food safety controls ;
- Insufficiently well-trained personnel deployed at all levels within DLS with responsibility for keeping and making use of food safety control records;
- Inadequate job descriptions provided to personnel at all levels of the DLS detailing food safety control responsibilities;
- Failure of managers to enforce record keeping by the staff directly under their supervision;
- Lack of Standard Operating Procedures detailing requirements for record keeping;

In spite of these shortcomings there are some areas of the veterinary domain where digitised technology has been introduced and where datasets are beginning to be built and used effectively. Amongst these is the BAHIS system whereby clinical records of veterinary interventions made by field personnel are being entered into a database by field level operatives and transferred to the Epidemiology Unit at DLS headquarters. This data is now being used, for instance, to generate information on the range and quantities of antimicrobials

being used by DLS field personnel in the course of managing the day to day treatment of routine clinical cases seen at veterinary hospitals throughout the country. This information is now being used to inform risk assessment of antimicrobial usage (AMU) and will help the senior management within DLS to make important decisions on possibly limiting the use of certain antimicrobials which appear to be being used either excessively or inappropriately. Furthermore, the introduction of the LIMS data and information management in the key laboratories providing veterinary diagnostic and analytical services offers an opportunity to start to build datasets on disease diagnostic and analytical results which can be linked to case data held by the BAHIS database. As and when a programme for monitoring residues and antimicrobial resistance (AMR) are introduced, so such data management systems will come into their own in offering opportunities for risk assessment of antimicrobial and other chemical usage in the field.

Paper-based recording systems have become outdated and are now being replaced by digital recording systems by most modern veterinary authorities throughout the world. Data management software for a wide range of applications is now becoming widely available.

The recommendations which follow will build on the existing digital data management framework which is already in place within the DLS.

RECOMMENDATIONS

One of the most important findings of this analysis has been the somewhat unexpected distribution of responsibilities for food safety and other controls amongst the existing workforce of the DLS. For instance the allocation of responsibility for issuance of import permits and export certification by the Deputy Director of Human Resources under the Director of Administration.

Furthermore, the existing organisational structure of the DLS does not reflect the importance of Veterinary Public Health and the food safety of animal products as key operational areas of a modern Veterinary Authority.

The following list of recommendations represents a pathway to overcome the shortcomings identified through the series of Gap analyses which have been conducted to date.

1. Review and revise the existing Livestock Development Policy to place a stronger emphasis on the importance of Veterinary Public Health as one of the major areas of responsibility within the “Veterinary Authority” of the DLS.
2. Engage with all the partner Competent Authorities to reach agreement on the distribution of their respective roles and responsibilities to avoid duplication, overlaps and gaps in the performance of food safety regulatory controls.
3. Undertake a systematic review of the DLS workforce and structural organisation. Such a review needs to take into consideration the roles, responsibilities and functions of a

modern Veterinary Authority and the development of an organisational structure allowing the establishment of an effective chain of command between the headquarters, through each administrative level down to the District, Upazila and field levels. Annex 7 provides an example of a now modified structural organisation chart for a “Directorate of Veterinary Services”, an earlier version of which was first offered by WOAH experts at the time of the Gap Analysis mission in 2015.

4. Develop job descriptions which accurately define the responsibilities of each member of the workforce identified to undertake food safety control functions, especially in the areas of data recording and reporting of non-compliance and food safety incidents that have been detected during inspections;
5. Undertake a training needs assessment for each level of the workforce to ensure entry level competency of each member of staff to undertake defined responsibilities related to food safety controls.
6. Develop training materials, Guidelines, Standard Operating Procedures. Reporting templates/ formats to be used in the operationalisation of a Training Plan to strengthen capacity to perform food safety control functions.
7. Develop and implement Training Plan – train all inspectorate personnel on enforcement of rules and regulations.
8. Review and revise rules and regulations for food safety controls - quantify and qualify defined standards.
9. Engage a consultancy team to develop an integrated data and information management system incorporating systems for recording regulatory activities related to food safety control management to be linked to the existing BAHIS and LIMS systems already in place.
10. Formulate and implement a monitoring and evaluation programme to provide feedback to Policy and Planning / modify investment / implementation plans accordingly.

ANNEX 1 **References**

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ANNEX 2 List of Regulatory functions and Records of Controls to be assessed

Food Safety Data collection/Incident management – Gap Analysis

Competent Authorities, Regulatory functions and possible/potential data available:

1. DLS – Headquarters, Division, District and Upazila levels –

Human resource management

- 1) Numbers of staff appointed at each level of DLS
- 2) Records of Job Descriptions for all staff positions
- 3) Records of types of training course materials available

- 4) Records of training courses given
- 5) Individual staff member records

Registration/licensing of slaughter facilities at Division (9) District (64) and Upazila (492) levels;

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) Number of slaughter facilities disaggregated by category (based on size/daily throughput, species being slaughtered); (define scale – L, M, S)
- 3) Records of numbers of animals slaughtered daily/monthly by local jurisdiction;
- 4) Numbers of animals rejected at ante-mortem inspection (due to injuries/illness);
- 5) Condemnation records, pathological findings recorded (e.g. C. bovis, Tb, febrile carcase, liver fluke, etc.) (analysis of post-mortem findings at all slaughter facilities).

Registration/licensing of milk traders, milk collection centres at City, Municipality, District/ Upazila levels.

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) Numbers of registered / licensed traders, disaggregated by scale of trade; (Define levels of trade)
- 3) Number of inspections, records of sanctions for non-compliance with standards – analysis of non-compliance.
- 4) Results of any testing of samples for residues ? brucellosis ? (analysis of non-compliance incidents);

Registration/licensing of milk processing establishments:

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) Number of registered / licensed milk collection centres, milk processors;
- 3) Frequency of inspections, recorded results of inspections, sanctions for non-compliance with standards (analysis of non-compliance incidents);
- 4) Results of testing samples of milk for chemical residues or infection / contamination with microorganisms and zoonotic disease pathogens – milk samples from traders, milk collection centres, milk processing facilities; (analysis of prevalence / types of residues detected)

Registration and licensing of animal feed businesses:

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) How are feed businesses defined on basis of scale of production / trade volume ?
- 3) Numbers of registered / licensed animal feed importers;
- 4) Volume of imported animal feeds and raw materials;
- 5) Numbers of feed manufacturers;
- 6) Records of inspections carried out at feed businesses, sanctions applied for non-compliance; (analysis of non-compliance incidents)
- 7) Results of testing samples of animal feeds / raw materials for chemical / biological contaminants (analysis of incidence of residues / contamination of animal feed).

Registration/licensing of rendering plants

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) Number of rendering plants registered / licensed
- 3) Records of inspection of rendering plants
- 4) Records of sanitary incidents detected / sanctions applied

Registration/licensing of animal breeding establishments

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) Number of registered / licensed animal breeding establishments.
- 3) Records of inspections made at animal breeding establishments
- 4) Records of sanitary incidents detected at animal breeding establishments
- 5) Laboratory results of samples collected from breeding animals / breeding materials for safety testing.

Registration of commercial/semi-commercial poultry farms with/without slaughter facilities.

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) Numbers of registered poultry businesses, disaggregated by type of producers.

- 3) Numbers of birds slaughtered / placed on the market.
- 4) Records of inspections, sanctions applied for non-compliance, (analysis of incidents of non-compliance).
- 5) Results of testing for presence of drug / chemical residues in products, zoonotic diseases, food-borne pathogens, AMR pathogens at poultry establishments; (analysis of incidence / types of residues detected in poultry products / micro-organisms demonstrating AMR detected at poultry establishments).

Registration/licensing of animal transporters

- 1) What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
- 2) Numbers of animal transporters registered / licensed
- 3) Records of inspections
- 4) Records of sanctions imposed for non-compliance with standards of hygiene / records of journeys (analysis of non-compliance)

Animal movement permit issuance

- 1) Records of Animal movement permits issued by jurisdiction

2. CDIL/DLS

Provide official diagnostic tests and analyses for detection / confirmation of suspected notifiable diseases, food safety testing services;

1. Results of testing samples from suspected cases of notifiable animal disease events
2. Results of testing animal products for biological and chemical residues.
3. Active and passive surveillance for zoonotic diseases: (analysis of incidence of zoonotic disease events / residues detected etc)
4. Internal Quality Control checks

3. Bangladesh Livestock Research Institute

Provide facilities and services to undertake research and development of animal vaccines and other diagnostic / analytical testing services

1. Results of testing samples of animal products for biological and chemical residues, active surveillance for zoonotic diseases
2. Internal Quality Control checks

4. QC laboratory (DLS)

Provide facilities for testing safety and quality of feeds, medicines and for detection of residues / contaminants in animal products destined for domestic consumption / export

1. Results of testing samples of animal feeds for chemical / heavy metal residues
2. Results of testing for veterinary drug / chemical residues / contaminants in animal products for domestic consumption / export certification.
3. Records of Internal Quality Control checks
4. Records of corrective actions taken based on results of internal control measurements

5. Bangladesh Food Safety Authority

Coordination of regulatory functions / support to evaluation / revision of food safety standards

1. Established databases – data management systems currently in use: (analysis of all food safety data collected by Food Safety CA's & risk analysis to support future planning of food safety controls.
2. What information relevant to food safety is being collected ?

6. Bangladesh Standards and Testing Institute

Setting and enforcement of food safety standards in collaboration with other Competent authorities

1. Records of registered / licensed food (of animal origin) businesses.
2. Records of inspections carried out at registered / licensed businesses.
3. Records of results of testing of samples of animal products derived from inspection activities.
4. Records of food safety incidents detected.
5. What other information relevant to food safety is being collected.

7. Veterinary Science University Faculties (multiple)

Research into prevalence of residues, contamination of animal products, animal feed, AMR)

1. Records of research projects related to food safety of animal products / to detect residues / AMR.
2. Results of testing samples collected for research into prevalence of residues in animal

feeds and animal products / AMR detected).

8. City Corporations/Municipal authorities

Ante- and post-mortem inspection, delegated by DLS under Animal Health Act (2005);

1. Records of numbers of slaughter animals received.
2. Records of numbers / reasons of slaughter animals rejected at ante-mortem inspection.
3. Records of condemnations / pathological lesions detected at post-mortem inspection.
4. Records of hygiene and food safety management controls at slaughter premises.

Inspection of meat slaughter/distribution and retail sale outlets

1. Results of inspections at local slaughter slab / butcheries – ante- and post-mortem inspections, hygiene / food safety management system controls.
2. Records of any sanctions / penalties imposed; (analysis of non-compliance incidents).
3. Records of inspections at poultry wet markets (analysis of non-compliance incidents).
4. Records of sanctions applied (analysis of non-compliance with hygiene / food safety standards).

9. Bengal Meat

DLS/Bengal meat – ante- and post-mortem meat inspection

1. Recording of slaughter animals received at lairage (export/domestic consumption).
2. Records of slaughter animals rejected, at ante-mortem inspection.
3. Condemnations / pathological lesions detected at post-mortem inspection (analysis of diseases detected at post-mortem inspection).
4. Records of food safety management system (HAACP) control measurements.
5. Records of corrections made to food safety management based on results of internal control measurements.

10. Ministry of Health - Department of Health

Human health protection – clinical services

1. Results of testing human samples for suspected cases / outbreaks of food poisoning.
2. Results of testing clinical samples for presence of infection with zoonotic diseases.

11. Department of Environment

Protection of the environment from contamination with harmful chemicals/substances

1. Records of inspections of high risk industries known / suspected to release toxins / harmful wastes into environment.
2. Records of testing industrial sites / waste systems for release of toxins / harmful substances.

12. Directorate General of Drug Administration

Regulation of importation, registration, manufacture, distribution, sale and use of veterinary medicines

Registration/licensing of importers and manufacturers of veterinary medicines and biologicals

1. Records of volume / categories of veterinary medicines / biologicals / raw materials for manufacture, imported.
2. Records / lists of different categories of registered veterinary medicines and biologicals;
3. What criteria as used for registration / licensing - any other conditions to be met to maintain licence ?
4. Records of registered / licensed importers of veterinary medicines and biologicals.
5. Records of registered / licensed manufacturers of veterinary medicines / biologicals in Bangladesh.
6. Records of registered veterinary medicine wholesalers, retailers.
7. In collaboration with BVC, records of registered private veterinary practitioners.
8. Records of inspections undertaken.
9. Records of detections of non-compliance with standards set in Regulations.
10. Records of sanctions applied to importers / manufacturers / wholesalers / retailers / users of veterinary medicines / biologicals.

Questions to be answered for each Competent Authority relating to data

1. What data is collected ? Checklist of sources and types of data that could be available (above).
2. How is data recorded ? – Checklist: Paper / electronic / database Excel spreadsheet / Word Tables / monthly / six monthly / annual reports.

- 3 How and to whom is data reported ?
- 4 Where is the data stored ?
- 5 Do the persons responsible for keeping records carry out any analysis of records ?
- 6 What information is available from food safety data analysis ?
- 7 Is food safety information being used for any purpose ?
- 8 Which CA's use information derived from food safety data ?
- 9 If so, what information and to what purpose is it put ?
- 10 Any information on prevalence of food-borne zoonotic diseases ?

ANNEX 3 Food Safety related Regulatory functions/Incident management - NO records or data available

Regulatory function	What data is collected by DLS?	Is data recorded?	How/to whom data reported?	Where is data stored?	Analysis of records made?	Information derived from food safety data analysis?	Food safety information being used for any purpose?	Data on prevalence of food-borne zoonotic diseases?
Issuance of Animal Movement permit	NONE	NONE	N/A	N/A	N/A	N/A	N/A	N/A
Registration/licensing/inspection of milk traders, milk collection centres at City, Municipality, District/Upazila levels.	NONE	NONE	N/A	N/A	N/A	NONE	NONE	NONE
Registration/licensing/inspection of rendering plants	NONE	NONE	N/A	N/A	N/A	NONE	NONE	NONE
Registration/licensing/inspection of animal transporters	NONE	NONE	N/A	N/A	N/A	NONE	NONE	N/A
Hygiene inspection at local authority slaughter facilities by DLS	NONE	NONE	N/A	NONE	Not done	NONE	NONE	N/A
Registration/licensing/ante-mortem & post-mortem inspection at local authority abattoirs/ slaughter facilities	Lists maintained at District/Upazila levels)	DLO level	N/A	District Livestock Office	Not done	NONE	NONE	NONE

ANNEX 4 Food Safety Regulatory functions/Incident management – Livestock Value Chains – Red meat/ Poultry meat/Milk/Eggs

Regulatory function	Responsible DLS Officer
3.1 Registration of commercial/semi-commercial poultry farms with/without slaughter facilities. – DLS Headquarters	Deputy Director Animal Health, DLS: Dr. Md. Shahinur Alam
Q1. What criteria as used for registration/licensing - any other conditions to be met to maintain licence?	
Q2. Numbers of registered poultry businesses, disaggregated by type of producers;	
Q3. Numbers of birds slaughtered/placed on the market;	
Q4. Records of inspections, sanctions applied for non-compliance, (analysis of incidents of non-compliance);	
Q5. Results of testing for presence of drug/chemical residues in products, zoonotic diseases, food-borne pathogens, AMR pathogens at poultry establishments; (analysis of incidence /types of residues detected in poultry products/micro-organisms demonstrating AMR detected at poultry establishments)	
Questions & Responses – DLS Headquarters level	
What data is collected? Checklist of sources and types of data that could be available (above)	Q-1 As per Animal Disease Act 2005 & Rules (2008) Q-2 Not recorded Q-3 No records Q-4 No inspection Q-5 Ad hoc testing/Lab reports
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/ Word Tables/monthly/six monthly/annual reports.	N/A Not done No records N/A N/A
How and to whom is data reported?	N/A N/A N/A
Where is the data stored?	N/A N/A N/A
Do the persons responsible for keeping records carry out any analysis of records?	N/A N/A N/A
What information is available from food safety data analysis?	N/A No No No
Is food safety information being used for any purpose?	N/A No No No
Which CA's use information derived from food safety data?	N/A N/A N/A
If yes, what information and to what purpose is it put?	N/A N/A N/A
Any information on prevalence of food-borne zoonotic diseases?	N/A N/A N/A
	Hard copy/Periodical reports DG Lab Yes/limited Residues/Zoonoses Limited DLS Not yet being used Limited

Regulatory function		Responsible DLS Officer				
3.3 Registration/licensing of slaughter facilities at Division (9) District (64) and Upazila (492) levels: (District/Upazila level)		Deputy Director Animal Health, DLS: Dr. Md. Shahinur Alam District Livestock Officers				
Q1.	What criteria as used for registration/licensing - any other conditions to be met to maintain licence?					
Q2.	Number of slaughter facilities disaggregated by category (based on size/daily throughput, species being slaughtered); (define scale – L, M, S)					
Q3.	Records of numbers of animals slaughtered daily/monthly by local jurisdiction;					
Q4.	Numbers of animals rejected at ante-mortem inspection (due to injuries/illness);					
Q5.	Condemnation records, pathological findings recorded (e.g. C. bovis, Tb, febrile carcase, liver fluke, etc.) (analysis of post-mortem findings at all slaughter facilities).					
Questions & Responses – District level						
What data is collected? Checklist of sources and types of data that could be available (above)	Q-1	Q-2	Q-3	Q-4	Q-5	
	No Registration/Licensing	List of slaughter facilities	Monthly records maintained	Occasionally But not recorded	No Records	
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/Word Tables/monthly/six monthly/annual reports.	No	Register - No categories	Hard copy monthly reported	N/A	N/A	
How and to whom is data reported?	No	Director	Director	N/A	N/A	
Where is the data stored?	No	DLO	All stages	N/A	N/A	
Do the persons responsible for keeping records carry out any analysis of records?	No	No	No	N/A	N/A	
What information is available from food safety data analysis?	No	No	No	N/A	N/A	
Is food safety information being used for any purpose?	No	No	No	N/A	N/A	
Which CA's use information derived from food safety data?	N/A	N/A	N/A	N/A	N/A	

Regulatory function		Responsible DLS Officers			
3.4 Inspection of meat slaughter/distribution and retail sale outlets – District/Upazilla level		District Livestock Officers/Local authority inspectors			
Q1 Results of inspections at local slaughter slab/butcherries – ante- and post-mortem inspections, hygiene/food safety management system controls.					
Q2 Records of any sanctions/penalties imposed; (analysis of non-compliance incidents)					
Q3 Records of inspections at Poultry wet markets (analysis of non-compliance incidents)					
Q4 Records of sanctions applied (analysis of non-compliance with hygiene/food safety standards)					
Questions & Responses		Q-1	Q-2	Q-3	Q-4
What data is collected? Checklist of sources and types of data that could be available (above)		Commodities inspected	Mobile court documents	No inspection done by DLS	N/A
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/Word Tables/monthly/six monthly/annual reports.		Hard copy Register	Hard copy Register	N/A	N/A
How and to whom is data reported?		DLO/DC*	DLO/DC	N/A	N/A
Where is the data stored?		DLO	DLO/DC	N/A	N/A
Do the persons responsible for keeping records carry out any analysis of records?		No	No	N/A	N/A
What information is available from food safety data analysis?		No	No	N/A	N/A
Is food safety information being used for any purpose?		No	No	N/A	N/A
Which CA's use information derived from food safety data?		N/A	N/A	N/A	N/A
If yes, what information and to what purpose is it put?		N/A	N/A	N/A	N/A
Any information on prevalence of food-borne zoonotic diseases?		No	No	N/A	N/A

*DC = Deputy Commissioner

Regulatory function	Responsible Officers			
3.5 Inspection of meat slaughter/distribution and retail sale outlets – City Corporation/Municipality level	Veterinarian/Veterinary inspector (CC) Area levels			
Q1 Results of inspections at local slaughter slab/butcheries – ante- and post-mortem inspections, hygiene/food safety management system controls.				
Q2 Records of any sanctions/penalties imposed; (analysis of non-compliance incidents)				
Q3 Records of inspections at Poultry wet markets (analysis of non-compliance incidents)				
Q4 Records of sanctions applied (analysis of non-compliance with hygiene/food safety standards)				
Questions & Responses				
What data is collected? Checklist of sources and types of data that could be available (above)	Q-1 commodities	Q-2 Mobile court documents	Q-3 No Inspection	Q-4 No activity
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/Word Tables/monthly/six monthly/annual reports.	Hard copy Register	Hard copy Register	N/A	
How and to whom is data reported?	DLO/DC*	DLO/DC	N/A	N/A
Where is the data stored?	DLO	DLO/DC	N/A	N/A
Do the persons responsible for keeping records carry out any analysis of records?	No	No	N/A	N/A
What information is available from food safety data analysis?	None	None	N/A	N/A
Is food safety information being used for any purpose?	No	No	N/A	N/A
Which CA's use information derived from food safety data?	N/A	N/A	N/A	N/A
If yes, what information and to what purpose is it put?	N/A	N/A	N/A	N/A
Any information on prevalence of food-borne zoonotic diseases?	No	No	N/A	N/A

Regulatory Function		Responsible DLS Officer						
3.6 Registration and licensing of animal feed businesses: -		Deputy Director Farms, DLS: Ms. Zeenat Sultana						
DLS Headquarters level								
Q1.	What criteria is used for registration/licensing - any other conditions to be met to maintain licence of animal feed businesses?							
Q2.	How are feed businesses defined on basis of scale of production/trade volume?							
Q3.	Numbers of registered/licensed animal feed importers;							
Q4.	Volume of imported animal feeds and raw materials;							
Q5.	Numbers of feed manufacturers;							
Q6.	Records of inspections carried out at feed businesses; sanctions applied for non-compliance; (analysis of non-compliance incidents)							
Q7.	Results of testing samples of animal feeds/raw materials for chemical/biological contaminants. (Analysis of incidence of residues/contamination of animal feed);							
Questions/Responses		Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7
What data is collected? Checklist of sources and types of data that could be available (above)	Feed Rules	Only for feed seller as per quantity of sale	Particulars of importer with type of product imported	Particulars of importer with volume of product imported	Copies of License documents	Limited information of ad hoc inspections recorded	Most testing is for Quality -testing – some ad hoc feed safety tests done -	
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/Word Tables/monthly/six monthly/annual reports.	Paper/word table	Paper/word table	Paper/word table	Paper/word table	Paper/word table	Paper/word table	Paper/word table	
How and to whom is data reported?	DG	DLO	DG	DG	DG	DG	Owner/DLO	
Where is the data stored?	DG	DLO	DG	DG	DG	DG	Lab/DLO	
Do the persons responsible for keeping records carry out any analysis of records?	No	No	No	No	No	No	No	No

Regulatory function		Responsible Officer			
3.7 Provide facilities for testing safety and quality of feeds, medicines and for detection of residues/contaminants in animal products destined for domestic consumption/export		Principal Scientific Officer/Head of Quality Control laboratory (DLS)			
Q1. Results of testing samples of animal feeds for microbiological contaminants chemical/heavy metal residues					
Q2. Results of testing for veterinary drug/chemical residues/contaminants in animal products for domestic consumption/export certification.					
Q3. Records of Internal Quality Control checks					
Q4. Records of corrective actions taken based on results of internal control measurements					
Questions & Responses		Q-1	Q-2	Q-3	Q-4
What data is collected? Checklist of sources and types of data that could be available (above)		Submission request, Test results automated	Submission request, Test results automated	Validity check results	Find cause and take corrective measures
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/Word Tables/monthly/six monthly/annual reports.		LIMS software	LIMS software	LIMS software	LIMS software, Hard copy
How and to whom is data reported?		Soft & hard copy - Person/body requesting, lab	Soft & hard copy -Person/body requesting, lab	Soft & hard copy - Lab management	Soft & hard copy - Lab management
Where is the data stored?		I cloud/Archive/ hard copy	I cloud/Archive/ hard copy	I cloud/hard copy	I cloud/ hard copy
Do the persons responsible for keeping records carry out any analysis of records?		Only data of special research	Only data of special research	No	No
What information is available from food safety data analysis?		Microbial/Chemical/Drug residue	Microbial/Chemical/Drug residue	No	No
Is food safety information being used for any purpose?		Yes	Yes	No	No
Which CA's use information derived from food safety data?		DLS/ other stakeholders	DLS/ other stakeholders	No	No
If yes, what information and to what purpose is it put?		Quality and Safety	Quality and Safety	No	No
Any information on prevalence of food-borne zoonotic diseases?		Salmonella, Anthrax, TB, Listeria	Salmonella, Anthrax, TB, Listeria	No	No

Regulatory function		Responsible Officer/ Respondent				
3.8 Setting and enforcement of food safety standards in collaboration with other Competent authorities		Director General – Bangladesh Standards & Testing Institute/ Md. Arafat Hossain Sarker, Assistant Director.				
Q1. Records of registered/licensed food (of animal origin) businesses;						
Q2. Records of inspections carried out at registered/licensed businesses;						
Q3. Records of results of testing of samples of animal products derived from inspection activities;						
Q4. Records of food safety incidents detected;						
Q5. What other information relevant to food safety is being collected						
Questions & Responses – District level	Q-1	Q-2	Q-3	Q-4	Q-5	
What data is collected? Checklist of sources and types of data that could be available (above)	Raw material, list of licensees	Inspection form	Product wise	Case to case	Standard based data in coordination with relevant authorities	
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/	Paper	Paper	Paper	Paper	Paper	
How and to whom is data reported?	DG, Dir, CM*	DG, Dir, CM*/ Chemical	DG, Dir CM*/ Chemical	DG, Dir CM*/ Chemical	DG, Dir, CM*/ Chemical+	
Where is the data stored?	BSTI	BSTI	BSTI	BSTI	BSTI	
Do the persons responsible for keeping records carry out any analysis of records?	No	No	No	No	No	
What information is available from food safety data analysis?	No	No	No	No	No	
Is food safety information being used for any purpose?	No	No	No	No	No	
Which CA's use information derived from food safety data?	No	No	No	No	No	
If yes, what information, to what purpose is it put?	No	No	No	No	No	
Any information on prevalence of food-borne zoonotic diseases?	No	No	No	No	No	

ANNEX 5 Data Recording of Animal Health controls related to Food Safety – Zoonotic disease prevention and Control

Regulatory Function		Responsible Officer DLS				
4.1 Registration/licensing of animal breeding establishments – Headquarters		Director Artificial Insemination, DLS: Dr. Bhobotosh Kanti Sarker				
Q1.	What criteria as used for registration/licensing - any other conditions to be met to maintain licence?					
Q2.	Number of registered/licensed animal breeding establishments.					
Q3.	Records of inspections made at animal breeding establishments					
Q4.	Records of sanitary incidents detected at animal breeding establishments					
Q5.	Laboratory results of samples collected from breeding animals/breeding materials for safety testing.					
Questions/Responses						
1.	What data is collected? Checklist of sources and types of data that could be available (above)	Q-1	Q-2	Q-3	Q-4	Q-5
		Animal Disease Rule-2008	Registration forms	Submitted with renewal application	No	Maintained in the lab
2.	How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/Word Tables/monthly/six monthly/annual reports.	Paper/ word copy	Paper/ word copy	Paper/ word copy	No data	Paper/ word copy
3.	How and to whom is data reported?	DG DLS	DG DLS	DG DLS	Not	Lab/applicant
4.	Where is the data stored?	Director-AI/DD AH	Director-AI/DD AH	Director-AI DD AH	Not	Lab
5.	Do the persons responsible for keeping records carry out any analysis of records?	Yes	Yes	Yes	No	No
6.	What information is available from food safety data analysis?	Zoonotic disease data	Zoonotic disease data	Zoonotic disease data	No data	No
7.	Is food safety information being used for any purpose?	Bull certification	Bull certification	Bull certification	No	No
8.	Which CA's use information derived from food safety data?	DG DLS/Director AI	DG DLS Dir AI	DG DLS/ Director AI	No	No
9.	If yes, what information and to what purpose is it put?	Renewal of Registration	Renewal of Registration	Renewal of Registration	No	No
10.	Any information on prevalence of food-borne zoonotic diseases?	Brucella/ Tb test	Test results	As before	Not recorded	Lab test results

Regulatory Function		Responsible Officer DLS				
4.2 Provide safe AI material and dairy products free of zoonotic diseases and harmful residues		Director Artificial Insemination, DLS: Dr. Bhubotosh Kanti Sarker Central Cattle Breeding and Dairy Farm				
Q1 Examine animals regularly to check zoonotic and reproductive diseases						
Q2 Maintain withdrawal period of antibiotics and other drugs to minimize residual effect of drugs						
Q3 Safety measures for semen and AI instruments to minimize contamination						
Q4 Hygienic measures in milking, preservation, transport and processing of milk						
Q5 Overall farm hygiene management practices						
Questions/Responses		Q-1	Q-2	Q-3	Q-4	Q-5
What data is collected? Checklist of sources and types of data that could be available (above)		Positive cases reported	No response	AI gun disinfected, Others one time use	Operations are not recorded, only materials supplied	No uniform, clean clothing, SS clean buckets, shade cleaning
How is data recorded? – Checklist: Paper/electronic/database Excel spreadsheet/Word Tables/monthly/six monthly/annual reports.		Paper	Paper	Paper	Paper	Paper
How and to whom is data reported?		Director	Director	Director	Director	Director
Where is the data stored?		Farm	Farm	Farm	Farm	Farm
Do the persons responsible for keeping records carry out any analysis of records?		No	No	No	No	No
What information is available from food safety data analysis?		No	N/A	None	None	N/A
Is food safety information being used for any purpose?		N/A	No	No	No	N/A
Which CA's use information derived from food safety data?		N/A	N/A	No	None	N/A
If yes, what information and to what purpose is it put?		N/A	N/A	No	N/A	N/A
Any information on prevalence of food-borne zoonotic diseases?		Records of bull testing/certification	No	No	N/A	N/A

Regulatory Function		Responsible Officer, DLS			
4.3 Official diagnostic tests and analyses for detection/confirmation of suspected notifiable diseases, food safety testing services;		Head of Central Diagnostic and Investigation Laboratory - DLS			
Q1. Results of testing samples from suspected cases of notifiable animal disease events					
Q2. Results of testing animal products for biological and chemical residues,					
Q3. active and passive surveillance for zoonotic diseases: (analysis of incidence of zoonotic disease events/residues detected etc)					
Q4. Internal Quality Control checks					
Questions/Responses		Q-1	Q-2	Q-3	Q-4
1. What data is collected? Checklist of sources and types of data that could be available (above)		Official format	Official format, Residue test not done	All events from sampling to diagnosis	Participate in PT panel by IAEA, AAHL **
2. How is data recorded?		Hard/Soft copy Monthly report	Hard/Soft copy Monthly report	Hard/Soft copy Monthly report	Hard and soft copy
3. How and to whom is data reported?		DG, Director LRI*, paper, email	DG, Director LRI*, paper, email	DG, Director LRI*, paper, email	CDIL
4. Where is the data stored?		CDIL	CDIL	CDIL	CDIL
5. Do the persons responsible for keeping records carry out any analysis of records?		Yes, yearly	Yes, yearly	Yes, for different zoonotic diseases	N/A
6. What information is available from food safety data analysis?		Zoonotic diseases	Zoonotic diseases	Zoonotic diseases	N/A
7. Is food safety information being used for any purpose?		Epidemiological study, Public Health	Epidemiological study, Public Health	Epidemiological study, Public Health	N/A
8. Which CA's use information derived from food safety data?		DLS, Epi Unit, DGHS	DLS, Epi Unit, DGHS	DLS, Epi Unit, DGHS	N/A
9. If yes, what information and to what purpose is it put?		Disease control Program	Disease control Program	Disease control Program	N/A
10. Any information on prevalence of food-borne zoonotic diseases?		Anthrax, AI, Brucella, TB, Rabies	Anthrax, AI, Brucella, TB, Rabies	Anthrax, AI, Brucella, TB, Rabies	N/A

ANNEX 6 Capacity building – LIMITED Data and information available

Value chain actor	BCS Livestock Academy
Regulatory function	Training of Veterinary para-professionals (Veterinary Assistants)
Legal basis for regulatory function	
Responsible Section of DLS/Respondent	Dr. A.B.M. Khaleduzzaman, Director, BCS Livestock Academy
Relevant data collected/available	
1)	Training courses offered – Course material maintained in Register – hard and soft copies
2)	Records of types of courses offered – Hard and Soft copies maintained by Director
3)	Details of course trainees – Lists of trainees maintained in hard copy – Director of Academy
4)	All data held by the Director of the Academy – No analysis of information undertaken
NOTES	A web portal has been developed and waiting for approval of higher authority. They are preparing all the data in the web site as it is permitted by the authority.
	Director, BCS Livestock Academy is only involved in the training of professionals. Paraprofessional training institutes are not linked with this institute but are under the supervision and management of the Director, Research, Training and Evaluation.

ANNEX 7 The major Competent Authorities, Regulatory functions, responsible Departments/sections, Legal basis

Competent Authority	Regulatory function	Department/Section	Legal basis
Department of Livestock Services (MoFL)	Registration of farms (Livestock and Poultry)	Deputy Director Farms	Animal Disease Act (2005) & Rules (2008)
	Registration of animal product processing facilities		Animal Slaughter and Quality Control Act (2011) & Rules (2021)
	Entry and inspection of farms animal product processing facilities		No legal basis
	Registration of livestock transporters		
	Inspection of poultry farms and eggs	DD Animal Health	Animal Disease Act (2005)
	Ante and post-mortem inspection District/Upazilla level	DD Animal Health	DD Animal Health
	Ante and post-mortem inspection – City Corp/Municipality level	CC	
	Prohibition of the sale of diseased poultry at wet markets	DD Animal Health	Animal Disease Act (2005) & Rules
	Animal identification, traceability		No legislation
	Animal disease notification & reporting	DD Animal Health	Animal Disease Act (2005) and Rules (2008)
	Transportation of animals, including issuance of health certificate when passing into/through an “infected area”	DD Animal Health	Animal Disease Act (2005) and Rules (2008)
	Disinfection of premises and vehicles	DD Animal Health	Animal Disease Act (2005) and Rules (2008)/Animal Slaughter and Quality Control Act (2011) & Rules (2021)
	Declaration of an infected area	DD Animal Health	Animal Disease Act (2005) and Rules (2008)
	Collection and testing of samples from animals or animal products	DD Animal Health	Animal Disease Act (2005) and Rules (2008)/Animal Slaughter and Quality Control Act (2011) & Rules (2021)
	Laboratory Confirmation of suspected notifiable disease event	BLRI/CDIL/DD Animal Health	Animal Disease Act (2005) and Rules (2008)
Collection of samples and testing of animal feeds, including raw materials and other ingredients	Deputy Director Farms/PSO QC Lab	Animal Feed Act (2010) & Animal Feed Rules (2013)	
Registration of milk traders/processors	DD Animal Health	Animal Feed Act (2010) & Animal Feed Rules (2013)	

Competent Authority	Regulatory function	Department/ Section	Legal basis
Department of Livestock Services (MoFL)	Registration of animal breeding establishments	Director AI	Animal Disease Act (2005) and Rules (2008)
	Bull certification (Zoonotic disease prevention/control)		
	Issuance of Movement permit		No legal basis
	Licensing of animal feed manufacturers	Deputy Director Farms	Fish Feed and Animal Feed Act (2010) & Animal Feed Rules (2013)
	Regulation of prohibited raw materials/antimicrobials/approved feed additives		
	Laboratory testing for residues/export certification of animal products	QC Laboratory, Savar	Animal Quarantine Act (2005) & Rules
Issuance of Import permit animals and animal products Export certification	DD HR/ Administration	Animal and Animal Product Quarantine Act (2005).	
DGDA	Import, manufacture, distribution, sale and use of Veterinary medicines & biologicals	DGDA/DLS officer	Drug Act, (1940), the Drug Rules (1945), the National Drug Policy (2005) and the Drug Control Ordinance (1982).
BSTI/BFSA	Standards for MRLs	BSTI/BFSA	Food Safety Act

ANNEX 8 Suggested Structure for a “Directorate of Veterinary Services” or “Veterinary Authority” (modified from PVS Gap Analysis 2015)

Directorate of Livestock Services (Director General)

Policy, Planning, Monitoring & Evaluation Unit

Director of Veterinary Services/Veterinary Authority (CVO)

Directorate of Administration

- Human Resources Dept.
- Communication Dept.
- Finance & Admin. Dept.

FUNCTIONS

HR Dept.

- Job Descriptions
- Recruitment
- Promotions
- Capacity building
- Training records
- Entry level – all posts
- CPD – all posts

Communications Dept.

- Press
- Internal communication
- Orders, Notifications
- External communication
- Public awareness
- Animal production & health extension
- Orders/Notices
- Guidelines for FBO's
- OIE/WTO/Trade

Administration

- Finance and budget
- Infrastructures – maintenance & procurement

Directorate of Animal Health

- Clinical & field extension services Dept.
- Epidemiology Dept.
- Animal I/D, MC & T Dept.
- Disease prevention & Control Dept

FUNCTIONS

Clinical Services Dept.

- Management, Training needs, Entry level/CE curricula, Supply of medicines & vaccines
- District clinics
- Upazilla clinics
- Union Council VPPs
- Routine clinical services, AI programmes
- Disease prevention and control
- Animal health extension

Epidemiology Dept.

- Passive disease surveillance
- Outbreak Investigation
- Active disease surveillance programmes
- Sero-surveillance –vaccination
- Disease control programmes

Animal I/D, Movement Control & Traceability Dept.

- Animal & premises registration
- Animal Movement control
- Animal I/D information management – (traceability)

Directorate of Research

- Diagnostic Laboratories Dept.
- BLRI/Vaccine production Dept.
- OA & Research Dept.
- Pilot projects AMR/Residue surveillance

FUNCTIONS

Diagnostic Laboratories Dept.

- CDIL, FDILs, District Labs, Upazilla Labs
- Management, Training needs, entry level/CE curricula, supply of equipment, maintenance of equipment,
- Supply of reagents & consumables
- Supply of sampling equipment, test kits etc.
- Laboratory diagnostic information – record, analyse and distribute in collaboration with Epi Dept.

BLRI/Vaccine production Dept.

- Vaccine production
- National Vet. Lab. QA system
- Research Dept.

QC Laboratory

- Quality and safety testing of Animal feeds
- Residue testing of animal products
- Lab testing for Export Certification

Directorate of Veterinary Public Health

- Food Safety Section.
- VPH Laboratory
- Zoonotic disease Section.
- AMR Section

FUNCTIONS

Food Safety Section.

- Licensing & inspection of Export/Domestic abattoirs, slaughter houses, slaughter slabs.
- Ante- & post-mortem inspection
- Milk trader/ collection centre/processing registration
- Inspection/milk sample collection
- Residue monitoring plan

VPH Laboratory

- Laboratory sanitary testing (HACCP controls)
- Residue testing
- PM sample testing/handling/transportation to FDILs/CDIL

Zoonotic diseases Section.

- One Health programme with MoH – Surveillance, prevention and control of zoonotic diseases

AMR section

- AMR surveillance & control.

Veterinary Drugs Regulatory Cell within DGDA

- Vet drug & biologicals registration
- Inspection of wholesale/retail/ End-user records

Directorate of Trade

- Border Control & Quarantine Dept.
- SPS Notification & Enquiry contact point
- Trade Agreements Dept.
- International Certification Dept.

FUNCTIONS

Border Control & Quarantine Dept.

- Management of BIPs
- Border inspection & quarantine

SPS Notification & Enquiry contact point

- OIE/WTO animal health status notifications
- Sanitary requirements – import of animals & animal products

Trade Agreements Dept.

- Issuance of Import permits (animals/animal products)
- Equivalence/Bilateral trade agreements (import)

International Certification Dept.

- Processing applications for Export permits
- Issuance of international veterinary certificates



Vienna International Centre
Wagramerstr. 5, P.O. Box 300,
A-1400 Vienna, Austria



+43 1 26026-0



www.unido.org



unido@unido.org



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