



INSTITUTIONAL CAPACITY ASSESSMENT

*The Food Safety and Halal
Food Authority in
Khyber Pakhtunkhwa & Its
Food Control Functions*

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Disclaimer

This document was developed by Dr. Samuel Godefroy, PhD, Senior Food Safety Regulatory Expert at the United Nations Industrial Development Organization (UNIDO).

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1. Executive Summary

This study targeted the review of the food regulatory functions and an initial institutional capacity assessment of the Food Safety and Halal Authority (FSHA) of the Province of Khyber Pakhtunkhwa (KP) (the Authority) in the Republic of Pakistan as it relates to the Agency's food control functions associated with meat control – cattle meat value chain.

This study was conducted as part of the inception phase of the Project Agri-food and Agro-industry Development Assistance in Pakistan (PAFAID) – an initiative funded by the Japan International Cooperation Agency (JICA) and implemented by the United Nations Industrial Development Organization (UNIDO).

In the province of Khyber Pakhtunkhwa, PAFAID focused on the cattle value chain, with integrated interventions gathering both enhancements in production, as well as securing an enabling environment to support this value chain, with a particular emphasis on the food regulatory environment.

The study followed a methodological approach, evaluating key food regulatory functions and the way they were addressed by the Authority. Findings were supported by information collected from the public domain (publications, presentations) as well as the results of a questionnaire administered to key informants in the Authority and the Department of Livestock at the Ministry of Agriculture.

This study concluded to the existence of an overall enabling food regulatory environment facilitated by a modern legislation under which the Authority was created with the needed mandate and the relevant regulation-making authorities.

Although a young structure, the Authority has the potential to evolve towards a robust food/meat regulator, with the consideration of some targeted structural and operational enhancements.

The pursuit of a stronger operationalization of key food regulatory functions such as standard setting, inspection programs and other compliance verification efforts, as well as incident management will contribute to a better coverage of the Authority's mandate.

In particular, the incident management function needs to be further reviewed to ensure that decisions are taken with the support of a robust scientific assessment and that conclusions are drawn based on a non-bias approach. Recommended enforcement decisions need to be also considered in a manner that is more commensurate with the level of risk that may be encountered.

The current governance structure adopted by the Authority will need to be further reviewed to ensure a stronger support to the decision-making process and a broader engagement with stakeholders, on an on-going basis.

The collaborative approach between the Directorate and the Authority on the one hand and that between the food regulators and regulated parties, such as the newly created working group on meat and meat products, need to be further enhanced toward a stronger engagement and a more robust collaboration.

Compliance promotion also needs to be further promoted as opposed to a strict punitive approach of enforcement, with the inclusion of targeted awareness and education initiative. Moving towards

incentive-based compliance verification methods with a stronger emphasis on the crucial responsibility of food business operators (meat producers and other operators in the supply chain) and the enabling and supportive roles of food regulatory functions, beyond strict law enforcement methods will contribute progressively to a culture change with incremental improvements. Such improvements will need to be tracked as part of a planning and evaluation framework that could be established by the Authority and its partners to support an even more structured enhancement plan of its food regulatory functions.

Overall, the value chain approach that was initiated through collaboration between the Authority and the Department, will need to be further strengthened in planning, executing and evaluating the performance of food regulatory functions by the Department and the Authority - as the key regulators of the sector -, to ensure the consistency and full coverage of such food regulatory functions from the animals to the meat products and to further promote this vital sector for the economic and human development in the region.

2. Abbreviations

AFSO	Assistant Food Safety Officer
CAC	Codex Alimentarius Commission
FAO	Food and Agriculture Organization (United Nations)
FSHA	Food Safety and Halal Authority
FSO	Food Safety Officer
FST	Food Safety Teams
KP	Khyber Pakhtunkhwa
KPFSHA	Khyber Pakhtunkhwa Food Safety and Halal Authority referred to in this report as the “Authority”
MRL	Maximum Residue Level
PCR	Polymerase Chain Reaction
PFAID	Project Agri-Food and Agro-industry Development
PKR	Pakistani Rupee
SOP	Standard Operating Procedure
SPS	Sanitary and Phytosanitary
UNIDO	United Nations Industrial Development Organization

RECOMMENDATIONS

1. *It is recommended that the KPFSHA utilize the authorities available through the Act to develop the food safety management regulatory requirements, including standards related to the meat value chain.*
2. *It is recommended that the upcoming food safety / meat safety requirements anchor their foundations in Codex standards and in risk considerations, such that regulatory measures used for risk management be commensurate with the level of risk introduced by a possible infraction or noncompliance.*
3. *It is recommended that the Authority establish a list of priorities for meat-related standard setting and revision, in consultation with the stakeholder community, including federal agencies and other food authorities in Pakistan*
4. *It is recommended that the Authority mobilizes its Expert Committee structure, enabled by the Law, to dedicate resources for the development of priority meat-related standards.*
5. *It is recommended that the Authority, in collaboration with the Department, and food / meat producers and operators, develop voluntary guidance related to the setup and operation of meat-related establishments and butcher shops.*

These technical guidance documents should reference best (international) practices but be adapted to the local context, including resource levels of operators in the KP Province. They should also foster an incremental enhancement approach.

6. *It is recommended that the Authority effectively communicates concerning these standards and guidance documents in a dedicated space, readily accessible to the stakeholder community. Standards, guidelines and relevant food regulatory texts should be readily accessible on the Authority's website, as a matter of best practice.*
7. *It is recommended that a structured food safety regulatory training curriculum be developed and deployed in manner to accompany the development of FSOs / AFSOs in their compliance verification and inspection mandate. The curriculum should emphasize the collaborative nature between regulators and regulated parties on risk-based approaches and on the benefit of incentive-driven food regulatory approaches.*
8. *It is recommended that FSOs / AFSOs be equipped with a more complete food inspection kit to support their effective operation in the field.*
9. *It is recommended that Standard Operating Procedures (SOPs) be developed and deployed for food inspection (including inspection of meat production establishments) to support consistency of compliance verification operations, in particular through the integration of risk-based approaches. These SOPs and their application should be included in the training program directed to FSOs / inspection staff.*
10. *With the development of standards and food safety guidance documents, for example a meat hygiene manual, to be applied in food / meat production establishments, it is recommended to support the uptake of these preventive approaches through education campaigns and incentive-driven compliance (verification) policies directed to the meat production sector. Several of these efforts could be directed to Butcher Shops as a key part of the supply chain. The compliance policy should promote the incremental VADE approach: **Voluntary Compliance; Assisted Compliance; Directed Compliance; Enforced Compliance.***
11. *It is recommended that food / meat safety incident management, including interventions associated with meat production / sale establishments, be structured with the creation of an*

Incident Management Unit entrusted with analyzing the information related to a given incident and issuing a recommendation of action to field staff. This approach would reduce the concentration of information collection and decisions (currently held by one single individual). It would separate information collection as well as execution / implementation (devolved to field staff) from analysis and decisions (devolved to the Incident Management Unit).

- 12. It is recommended to train members of a newly created food Incident Management Unit within the Authority to conduct rapid risk assessments and situational analysis, to provide recommendations of action to field staff in a timely manner.*
- 13. It is recommended to enable data collection and analysis of food / meat safety incidents to support prioritization of food safety interventions and effectiveness of measures to address food risks. This data collection should also help assess the performance of the compliance verification programs, contributing to priority setting and to the assessment of the overall food control system*
- 14. It is recommended that the KP Authority leverages its existing presence in Social Media and strengthen its pro-active communication, particularly in relation with other facets of the Authority's food regulatory mandate. As such, it would be important for the Authority to rely upon a Food Risk Communication Strategy with the associated implementation plan, which would support the Authority's food regulatory mandate and its strategic direction to engage with stakeholders and partners.*
- 15. It is recommended to establish adequate conformity assessment services, including product certification and testing, and where needed, encourage the private sector as a potential investor and operator of these services.*
- 16. It is recommended that investments in food laboratory testing be considered through a collaborative approach between the Department and the Authority, such that resources could be shared for the benefit of the mandates of both organizations. Such collaboration could also be envisaged with the support of other academic organizations operating in the region and with a track record in the area of food /meat safety.*
- 17. It is recommended that the Authority examine its governance structure and decision-making processes for food regulatory functions with the intent of strengthening them. For example, it is recommended that:*
 - a. The Authority enable the operationalization of the expert committees for the technical and scientific advisory capacity, where needed.*
 - b. The Authority consider the creation of an internal food regulatory committee to support internal dialogue and discussions and to support advice on key food regulatory decisions*
 - c. The Authority consider developing a performance evaluation framework and set the mechanisms to assess the performance of its food control / regulatory functions*
 - d. The Authority consider enhancing its stakeholder engagement processes through mechanisms similar to the Working Group on Meat and Meat Products, and that the latter mechanism be further leveraged and enhanced to support a more robust engagement with the food stakeholder community*
- 18. It is recommended that the collaborative approach between the Directorate and the Authority be further strengthened towards a continuum of interventions along the meat value chain (from the feed and its inputs to the animal and up to meat and its by-products)*

3. Background and Objectives of the Study

This report serves to introduce the institutional capacity assessment of the Food Safety and Halal Authority (FSHA) of the Province of Khyber Pakhtunkhwa (KP) in the Republic of Pakistan as it relates to the Agency's food control functions associated with meat control – cattle meat value chain.

This report was developed as part of the inception phase of the Project Agri-food and Agro-industry Development Assistance in Pakistan (PAFAID) – an initiative funded by the Japan International Cooperation Agency (JICA) and implemented by the United Nations Industrial Development Organization (UNIDO).

PAFAID aims to support quality and safety improvements, as well as to introduce value addition for the livestock sector and the apple production value chain in Khyber Pakhtunkhwa and Baluchistan respectively. The ultimate goal of this assistance program is to avail provinces of Pakistan with better products destined for its local markets by decreasing post-harvest loss and wastage and by improving food safety compliance. Not only will this assist the targeted sector gain a competitive advantage in local food production but also open more export opportunities to regional and international markets. Through the sustainable development of these targeted value chains, the livelihood of producers and other service providers throughout the value chain will be vastly improved.

In the province of Khyber Pakhtunkhwa, the project focused on the cattle value chain, with integrated interventions gathering both enhancements in production, as well as securing an enabling environment to support this value chain, with a particular emphasis on the food regulatory environment. The project counterparts and beneficiaries in Khyber Pakhtunkhwa include the key food regulatory authorities in the Province:

- ❖ The Khyber Pakhtunkhwa (KP) Food Safety and Halal Food Authority, referred to as **the Authority** from this point forward in this report.
- ❖ The Department of Livestock and Dairy Development of the Ministry of Agriculture of KP, referred to as **the Department** from now onward in this report.

This study targeted the review of food regulatory functions and offers an initial institutional assessment of the KP Food Safety and Halal Food Authority, with a discussion of their enabling nature and support to the meat value chain. It offers proposed recommendations to enhance the performance of these food regulatory functions related to the meat sector; in addition to, offering further support for investments and developments achieved to date. The report contributes recommendations of enhancements for consideration by the Authority in the context of the next phase of implementation of PAFAID.

4. Study Methodology

This study was conducted in close collaboration with the local food safety expert supporting PAFAID in KP Province, Dr. Muhammad Sohaib, Assistant Professor, Department of Food Science and Human Nutrition, University of Veterinary and Animal Sciences in Lahore Pakistan, and Mr. Gabor Molnar, UNIDO Project Manager.

The study leveraged the administration of a questionnaire covering key aspects of food regulatory performance of the Authority as well as the Department. The questionnaire was developed by Dr. Sohaib, with input from the author of this study and the Project Manager. Key informants from the Authority and the Department were asked to provide input, which was then subsequently summarized by Dr. Sohaib. The results of the data gathered through the questionnaire were supplemented by additional questions from the author of this study.

This study also relied upon the examination of reference documents, for example legislative and regulatory texts, and publications in the form of reports of previous food-related interventions in Pakistan with emphasis on food safety, as well as those available in the peer reviewed literature. The support documentation will be referenced throughout the report.

It was intended that the study would also be supported by a field visit to the KP Province in March 2020 in order to further collect data and information. However, the COVID-19 Pandemic and subsequent travel disruptions, prevented such plans from being carried out. Continued engagement with the project management team and follow-up discussions with the national consultant and local expert Dr. Sohaib were undertaken as measures to mitigate this situation.

This capacity evaluation was designed to address aspects of performance of the Authority in its key food regulatory functions as a food competent authority, defined in the guideline issued by the Codex Alimentarius Commission (CAC) through its foundational text CAC/GL 82-2013: Principles and Guidelines for National Food Control Systems¹.

This led to a systematic approach, which examined:

- A. The food legislative and regulatory context – food legislation and regulations and their enabling role in the Authority’s performance as a meat control authority.
- B. The standard setting approach – to support enhanced guidance and more clarity in expected food safety performance of the regulated parties.
- C. The inspection functions of the Authority covering both programming and implementation.
- D. Food Incident management in relation to violations of food regulatory provisions and / or identifying and addressing possible public health risks.
- E. Foodborne illness outbreak management.
- F. Risk communication.
- G. Horizontal operational aspects such as human resources management and training, planning and monitoring and the scientific capacity of the Authority, including food laboratory activities.

For each of the areas described above, the Authority’s current performance status was discussed, along with proposed areas of enhancement for consideration, to inform the design of interventions and to support the subsequent period of PAFAID’s implementation.

5. Study Findings

¹ Codex Alimentarius Commission, CAC/GL 82-2013: Principles and Guidelines for National Food Control Systems. Joint FAO/WHO Food Standards Programme.

5.1. Food Safety Legislative and Regulatory Environment

Pakistan is a federation made of four provinces (Balochistan, Khyber Pakhtunkhwa (KP), Punjab and Sindh), which are the federating units, while Gilgit-Baltistan, Islamabad, and Azad Jammu and Kashmir are administered by the Federal Government². The system of governance has been progressively moving towards decentralization with a stronger mandate given to provinces. The food and agriculture mandate has been transferred to the oversight to the Ministry of National Food Security and Research². Coordination between the different functions and departments with responsibilities related to the Sanitary and Phytosanitary (SPS) responsibilities at the federal level were made complicated subsequent to a 2010 change, which divided the responsibilities of the Ministry of Food, Agriculture, and Livestock into two portfolios, one in charge of food and agriculture and one in charge of livestock and dairy³.

Food related legislation has existed for a number of years but is known to be relatively outdated and fragmented. It was covered amongst other texts by the Pakistan Pure Food Laws of 1963 and the Pure Food Ordinance of 1960. Both laws tend to manage compositional issues and prohibit adulteration of food, while defining some authorities for inspection and enforcement⁴. Food safety provisions also exist within the Pakistan Standards and Quality Control Authority Act of 1996. Efforts to develop a modern food safety legislation failed to produce a tangible progress and a draft legislation, although developed, has been “stalled” since 2013³. It is not sure however, whether some of the key requirements related to the commodity of interest (**meat**), such as veterinary drug approvals and Maximum Residue Levels (MRLs), as well as microbiological criteria are governed by federal rules, although some functions such as that of the Chief Veterinary Officer (CVO), as well as the National Veterinary Laboratory are identified as part of the Federal Arsenal.

Given the focus of the study, this report will review primarily the provincial food safety legislative and regulatory environment of KP – in particular on the Authority and the Department – to discuss their enabling nature and support with respect to the regulatory programs administered by the Authority.

The Authority and the Directorate share the food regulatory mandate over the meat value chain, in a manner where the Authority act as the product (post-mortem) regulator, overseeing standard setting, inspection, compliance and enforcement and associated functions (sampling, testing) and where the Department acts as the (ante-mortem) animal health regulator as well as the custodian for the development of the cattle value chain. The Department and the Authority collaborate with local governments in exercising their regulatory mandate. The Department anchors its mandate in the Animals Slaughter Control Act (2016), as well as the recently developed “KP Agricultural and Produce Markets Act”. Other Acts were also identified in relation with the “Animal Feed Stuff and Compound Feed Act” and the “KP livestock Breeding Act”, which are still under development.

² Evaluation of FAO’s Contribution to the Islamic Republic of Pakistan, 2012-2017, (2017), office of Evaluation, Food and Agriculture Organization of the United Nations (FAO), www.fao.org/evaluation

³ Pakistan Quality Infrastructure Toolkit, Case Studies, Martin Kellermann, World Bank Group, 2019

⁴ Food Safety in Pakistan, <http://www.indiaenvironmentportal.org.in/content/350783/food-safety-in-pakistan/>, accessed in May 2020.

For the Authority, the key piece of legislation, which would also represent the key legislation governing food in the KP Province, along with the establishment of the KP Food Safety and Halal Food Authority (KPFSHA) in 2014, is the KPFSHA Act.

Upon examination of this Act, it was identified that the Act fulfills all the requirements of a modern food safety (and quality) legislation, for example the Act:

- ❖ Offers a legal definition of food, including its different states.
- ❖ Gives the Authority the broad mandate to act for the benefit of consumer protection.
- ❖ Equips the Authority to oversee food production, processing and sale, with all the food regulatory functions advocated by the Codex Alimentarius Commission (CAC) – in particular standard setting, the development of compliance and enforcement programs including registration of food businesses, their inspection and follow-up.
- ❖ Enables the Authority to address food contamination, adulteration and misrepresentation.
- ❖ Defines, clearly, the functions of a food safety officer and their prerogatives. It even offers immunity to those who occupy these functions when they exercise their mandate “in good faith”.

The Law also offers regulation-making authorities to the KPFSHA and specifies the governance structure of the Authority, particularly the composition of the Board. Such composition also invokes the multi-stakeholder nature of the Board with inclusion of representatives from consumer organizations, food industry groups, the academic community and various ministries and departments with areas of oversight that touch upon food production. However, it was also noted that the number of representatives on the Board, as stipulated by the Act, may be too large in comparison to other structures with a similar mandate.

Most food regulatory functions such as licencing of establishments, recalls and even accreditation of food testing laboratories are enabled by the Law in support of the KPFSHA. The Authority is also equipped – through the Law – with a specific financial authority along with the associated accountability requirements. While the Law does not necessarily reference Codex standards, nor recommends the need to follow the risk analysis paradigm in food regulatory development, it mentions in section 8(3) that the Authority should “exercise its functions ... in accordance with well-established scientific principles and international best practices”.

It is the opinion of the author of this study that the Law under which the Authority was established and operates is **an advanced food legislative mechanism** and equips it well to exercise its mandate on all food, including the meat value chain.

The study also examined the KP Food Safety and Halal Food Authority Regulations:

- ❖ Appointment and Conditions of Service (promulgated on 22 December 2017).
- ❖ Appointment of the Expert Committees (promulgated on 12 March 2018).
- ❖ Sealing and De-sealing of food business premises (promulgated on 12 March 2018).
- ❖ Financial Audits Regulations (promulgated on 12 March 2018).
- ❖ Delegation of Powers (published on 12 March 2018).

- ❖ Appeal Regulations (published on 12 March 2018).
- ❖ Licencing and Registration Regulations (promulgated on 12 March 2018) which covers registration of slaughterhouses and meat shops. Schedule V of this regulation deals specifically with the Halal requirements.

The examination of these regulations identified the high level of detail provided by the Regulations in relation to the operational aspects of the Authority, in particular, the human and financial resources management requirements set in the “Appointment and Conditions of Service” regulations.

It was evident that the regulation-making authorities were put into application for several organizational requirements, such as the setup of the Expert Committee, the Delegation of Powers, the Financial Audits, but also for the purposes of operationalizing some of the regulatory functions, such as the Licencing and Registration requirements, as well as the appeal mechanism that could be invoked by regulated parties.

In examining the legislative and regulatory environment in support of the KPFSHA, it is the author’s opinion that such an environment has its basis in a modern framework that is enabling with respect to the design and operationalization of the food regulatory functions needed by the Authority to exercise its mandate, including on the meat value chain.

While regulations have been developed (in a thorough and detailed manner) to address the set-up and to govern specific aspects of the operations of the Authority, a very limited number of regulations were developed to cover food regulatory functions, based on the information available at the time of the conduct of this study. The current study has only identified a regulation related to the registration of establishments, one related to licencing and another covering the appeal process.

There is potential to rely upon the current environment but to develop a companion set of regulations and standards needed by the meat production sector to create a more predictable environment and to offer better guidance destined for operators and food safety officers.

- *Recommendation #1: It is recommended that the KPFSHA utilize the authorities available through the Act to develop the food safety management regulatory requirements, including standards related to the meat value chain.*
- *Recommendation #2: It is recommended that the upcoming food safety / meat safety requirements anchor their foundations in Codex standards and in risk considerations, such that regulatory measures introduced for risk management be commensurate with the level of risk introduced by a possible infraction or noncompliance.*

These recommendations are in line with previous conclusions of development programs, such as FAO’s, where it was acknowledged that more work is needed to “modernize regulations ... to create an enabling environment for sustainable agricultural development in Pakistan.”²

5.2. Review of KPFSHA's Standard Setting Approach

Drawing from the examination of the information available and the results of the survey conducted with the KPFSHA, informants did not identify a clear set of food safety standards related to the meat production sector recently enacted by the Authority.

While other requirements exist through the previous set of regulatory requirements, including those valid at the federal level, there is an opportunity to use the enabling environment provided by the Authority's act and associated regulation-making authorities to review existing provisions and / or to develop additional guidance in the form of standards, where applicable. The enabling (legislative and regulation-making authority) environment goes as far as to specify the conditions to mobilize expert groups in order to accomplish this, in particular, the "Appointment of the Expert Committees" and the "Delegation of Powers" regulations offer the necessary foundations – along with the provisions of the Act – for this purpose.

It is therefore possible that the Authority, in collaboration with the Department, engage with stakeholders and develop a consultative process to identify specific priorities of standard setting needed by the meat sector. The author of this study suggests to consider the following standard setting opportunities:

- A. Standards related to the authorized veterinary substances that may be used to treat meat producing animals, including their maximum residue values (MRLs).
- B. Standards related to food additives that can be used in the KP Province – in collaboration with the Department.
- C. Standards related to analytical methods that can be applied to monitor the residue levels of veterinary substances in meat and other tissues: offal, liver, kidney, lungs, as applicable.

In the context of the possible development of the above three categories of standards, it is recommended to consider any national standards adopted at the federal level and seek alignment, where possible with Codex requirements, while ensuring their validity for the population of the KP Province, with the relevant exposure assessment

- D. Standards related to microbiological criteria and presence of pathogens in final (meat-related) products available for sale in the KP Province and associated analytical methods.

These standards are considered as outcome-based standards – i.e. parameters that can be verified in final products available for sale. They need to be supported by additional guidance related to:

- ❖ Good husbandry practices to be established and propagated by the Department, in collaboration with the Authority.
- ❖ Requirements of slaughterhouse operations, including prerequisite programs, and minimum preventive measures.
- ❖ Requirements of meat retail establishment operations and butcher shops.

Consideration can be given to develop the latter requirements in the form of voluntary guidance documents for adoption and dissemination to operators and producers, with the incremental enactment as regulatory measures in accordance with the level of uptake.

It is therefore recommended that:

- *Recommendation #3: The Authority establish a list of priorities for meat-related standard setting and revision, in consultation with the stakeholder community, including federal agencies and other food authorities in Pakistan*
- *Recommendation #4: The Authority mobilizes its Expert Committee structure, enabled by the Law, to dedicate resources for the development of priority meat-related standards.*
- *Recommendation #5: The Authority, in collaboration with the Department, and food / meat producers and operators, develop voluntary guidance related to the setup and operation of meat-related establishments and butcher shops.*

These technical guidance documents should reference best (international) practices but be adapted to the local context, including resource levels of operators in the KP Province. They should also foster an incremental enhancement approach.
- *Recommendation #6: The Authority effectively communicates concerning these standards and guidance documents in a dedicated space, readily accessible to the stakeholder community. Standards, guidelines and relevant food regulatory texts should be readily accessible on the Authority's website, as a matter of best practice.*

5.3. Compliance Verification and Inspection Functions

The Authority has the mandate to ensure compliance verification, in addition to all enforcement actions associated with food requirements, including food safety requirements related to meat and meat-related products. This mandate is clearly spelled out in the Act, including inspection authorities.

Four of the regulations available at the time of the review are related directly or indirectly to the inspection / compliance verification mandate include:

- ❖ The Registration of Food Establishments Regulation.
- ❖ Sealing of Premises Regulations.
- ❖ Appeal Regulations.
- ❖ Appointments and Conditions of Service Regulations.

Instances of non-compliance, including their associated penalties, are referenced in the Act. There is even an incentive-driven approach defined in the Act. Section 46 describes the possibility of a (financial) reward to any “person who has made an exceptional effort towards accomplishing the objectives of the Act”. Although not clearly indicated in the Act, this may be directed to the Authority’s personnel in order to stimulate their efforts toward achieving food safety and consumer protection incentives. This fact (reward being dedicated to staff) was further confirmed by the survey results

5.3.1. Legal Powers

Powers associated with compliance verification interventions, including inspection, are well described in the Act and offer sweeping capabilities, such as: access, sampling, seizing, sealing of premises. Food safety officers (FSO) and Assistant Food Safety Officers (AFSO) are

empowered to exercise these functions. This category of personnel represents the “technical human resource capacity” of the Authority, which, according to the survey (questionnaire administered to the Authority’s key informants) reached 39 out of 200 personnel.

The survey results also indicated the upcoming growth of the FSO capacity with the foreseen hiring of 60 FSO / AFSO and 18 Assistant Directors (by April 2020).

Additionally, the Act offers immunity to the Authority’s staff (including FSOs) in the conduct of their duties.

5.3.2. Personnel / Training

The credentials of the FSO / AFSO category of personnel are defined in the regulations (appointments and conditions of service). A minimum of a Bachelor in Science degree in food science and technology or a related discipline is required for this category of personnel to assume their functions. The regulations go as far as to detail the conditions for the assessment of staff qualifications upon recruitment. It was not clear from the information available whether this category of personnel would benefit from an on-boarding process for the purposes of preparing them to exercise their mandate.

A similarly high level of credential was also assigned to Deputy Directors, which are also technical functions, requiring up to a Ph.D. in food sciences and technology or related discipline.

Deputy Directors are in charge of the Authority’s regional offices in the districts and support the deployment and organization of the Authority’s mandate in these territories. FSOs are in charge of the food safety mandate in towns of a given district and supervise food safety teams (FSTs) at that level. AFSOs tend to be the personnel in charge of daily inspection reports, according to the survey results administered for the purposes of this study.

The survey also highlighted the pivotal role of this category of (technical) personnel in the Authority’s performance of its regulatory mandate, i.e. making the majority of the regulatory decisions in the field and those related to the operation of food establishments, including meat establishments. The survey did report on limited training that FSOs / AFSOs seem to have accessed in relation to the execution of their duties (primarily in relation with food adulteration for color determination (1 day) and in relation with Halal foods (2 days)). However, there does not appear to be an inspection training nor a development curriculum for the food regulatory functions of FSOs / AFSOs.

5.3.3. Tools

Although the Authority seems to benefit from a satisfactory physical environment, limited tools seem to be available to inspection personnel and FSOs. The survey conducted for the purposes of this study reports the availability of thermometers as one of the key instruments used to carry out inspection and other food regulatory duties for the cattle meat value chain. It was also reported that the authority professionals performed physical inspection for meat and meat-based products in the KP province, as part of their compliance verification practices.

5.3.4. Procedures / Protocols

The examination of the information available, including the survey results administered with the Authority's informants, did not allow to locate procedures and protocols developed for the purposes of instructing FSOs / AFSOs and food inspection staff.

The requirements detailed in the "Registration Regulations" offer a set of parameters that could be systematically investigated in the context of inspections. Similarly, some methodical approaches related to information requests and verification are identified in the "Sealing, De-sealing of Food Premises Regulations". These indications are however not sufficient to ensure a consistent approach for compliance verification protocols, including those that must be applied to the meat production sector.

Overall, it is also apparent from the setup of the food regulatory functions associated with compliance verification that there is a strong interest to promote compliance and deter infractions through the current system setup. There is also a strong interest to anchor decisions and food regulatory functions in knowledge with the heavy reliance upon university graduates in specialized scientific disciplines.

The system setup does not seem however driven to enable accompanying measures to the food production sector, nor does it seem to be equipped to operate in a manner where consequences – i.e. food regulatory decisions – are commensurate to risk. The predominantly "punitive" and enforcement driven approach should be combined with an incentive driven, education-oriented environment, directed to accompany the meat production sector following incremental measures, where food regulatory staff consider their functions in the context of a partnership with the sector, in order to evolve in an environment that instils trust and collaboration between regulators and regulated parties. This may require a gradual culture change when embraced by the Authority's senior leadership.

Given the modern legislative and regulatory arsenal with which the Authority is equipped and considering the commitment expressed towards enhancement and progress, the Authority and its leadership are well positioned to lead this change.

As a result of these observations, a set of recommendations have been developed in relation to the inspection and compliance verification mandate of the Authority as follows:

- *Recommendation #7: It is recommended that a structured food safety regulatory training curriculum be developed and deployed in manner to accompany the development of FSOs / AFSOs in their compliance verification / inspection mandate. The curriculum should emphasize the collaborative nature between regulators and regulated parties on risk-based approaches and on the benefit of incentive-driven food regulatory approaches.*
- *Recommendation #8: It is recommended that FSOs / AFSOs be equipped with a more complete food inspection kit to support their effective operation in the field.*
- *Recommendation #9: It is recommended that Standard Operating Procedures (SOPs) be developed and deployed for food inspection (including inspection of meat production establishments) to support consistency of compliance verification operations, in particular*

through the integration of risk-based approaches. These SOPs and their application should be included in the training program directed to FSOs / inspection staff.

- *Recommendation #10: With the development of standards and food safety guidance documents, for example a meat hygiene manual, to be applied in food / meat production establishments, it is recommended to support the uptake of these preventive approaches through education campaigns and incentive-driven compliance (verification) policies directed to the meat production sector. Several of these efforts could be directed to Butcher Shops as a key part of the supply chain. The compliance policy should promote the incremental VADE approach:*

Voluntary Compliance, Assisted Compliance, Directed Compliance, Enforced Compliance.

5.4. Food Incident Management

As stated earlier in this report, the KP Authority is fully empowered – through the Act – to deal with food safety incidents, including situations emerging from infractions. The survey results identified that 90% of enforcement actions were decided upon by field staff. There was no indication that such decisions were supported by risk assessment or based on any other scientific or evidence-based considerations. Similarly, there was no indication as to the level of documentation accompanying these decisions nor how the review of previous incidents could assist in addressing similar emerging issues.

Beyond the challenges of consistency, or the lack thereof, the concentration of incident decision-making under the oversight of individuals – subjected to limited challenge – may lead to situations where personal appreciation of the situation (i.e. subjective considerations) become the pivotal factor of decision-making. This in turn may weaken the food regulatory oversight.

Other limitations were also observed with the incident management system of the Authority, in particular in relation to the absence of an established and codified recall protocol. Seizure of products and closure of establishments are clearly supported by legislative (provisions in the Act) and (specific) regulatory provisions or texts. The same applies to the formal appeal mechanism, which represents an opportunity for a food production establishment to contest decisions of product seizures, in particular within 15 days of the promulgation of the decision.

Another point worth noting is that the current scientific capacity of the Authority does not allow it to handle and analyze food samples, including meat samples, in laboratory settings. This is despite existing authorities in the Act that enables it (the Authority) to accredit food laboratory analysis for regulatory purposes (which represents an opportunity for future investments). As a result, it is not possible at this point to have data related to the occurrence of hazards in food and in meat, in particular, to be used in the assessment of risks and the development of decisions to protect consumers and / or the fair commerce of food products.

Although based on a strong foundation of scientific personnel exercising food / meat regulatory functions, it is important to strengthen the incident management capacity of the Authority, in a manner that reduces personal bias, creates more consistency, anchors decisions in scientific and risk-based considerations and offers an open and transparent environment for food / meat

operators, such that they can understand the rationale of food regulatory decisions and challenge them, when and where relevant.

It is also important to mention that data gathered, as a result of food safety incidents, be used to support learnings, prioritization of resources and even support the prediction of potentially emerging challenges.

Should priorities be clearly set-up for the compliance (verification) programs that need to be developed by the Authority, it would be important that the data collected as a result of incident management be geared towards the possible identification and assessment of indicators of performance of the program and of the overall food control system.

As is currently reported on the Authority Facebook page and website, used for incident reporting purposes (amongst other functions), several of the incidents seem to be stemming from fraud related activities (with possible food safety repercussions). It is not sure whether this focus, is the result of a prioritization exercise or as a result of random prevalence of such incidents as part of the site visits carried out by inspectors and FSOs.

In consideration of the analysis above, the following recommendations are proposed:

- *Recommendation #11: It is recommended that food / meat safety incident management, including interventions associated with meat production / sale establishments, be structured with the creation of an Incident Management Unit entrusted with analyzing the information related to a given incident and issuing a recommendation of action to field staff. This approach would reduce the concentration of information collection and decisions (currently held by one single individual). It would separate information collection as well as execution / implementation (devolved to field staff) from analysis and decisions (devolved to the Incident Management Unit).*
- *Recommendation #12: It is recommended to train members of a newly created food Incident Management Unit within the Authority to conduct rapid risk assessments and situational analysis, to provide recommendations of action to field staff in a timely manner.*
- *Recommendation #13: It is recommended to enable data collection and analysis of food / meat safety incidents to support prioritization of food safety interventions and effectiveness of measures to address food risks. This data collection should also help assess the performance of the compliance verification programs, contributing to priority setting and to the assessment of the overall food control system.*

5.5. Foodborne Illness Tracking and Management

The examination of information available from both the Authority and the Department did not permit the identification of mechanisms nor structured efforts to collect foodborne illness data from the KP Province associated with food regulatory functions. Both regulators do not seem to collect, nor report such information at this time.

There are however several reports in the scientific literature that associate illness with food sources (Munir et al., 2019⁵, Khan et al., 2019⁶) which have also reported various incidences of foodborne illnesses in Pakistan and in KPK in particular, with associations to food and specifically fresh produce. Studies measuring pathogens in food products available for sale in Pakistan have also identified prevalence of Salmonella in Beef (Aftab et al., 2012⁷), with higher levels found in products on display at the butcher shop. Other pathogens were also found through monitoring of raw meat samples and surface swabs from meat processing equipment.

Also, these studies have permitted to identify instances of antibiotic resistance in various strains of the pathogens identified on the incriminated food, particularly those of animal origin, suggesting possible use of such substances in conjunction with food production.

Although data available do not enable to qualify the magnitude of foodborne illness – specifically attributed to meat and other animal derived food – it is highly advised that a capacity for both foodborne illness tracking, as well as for the detection and determination of pathogens, including other food hazards and chemical residues, be developed and deployed by both regulators – the Authority and the Department – in support of their public health and animal health mandates, in addition to their food regulatory functions.

- ***Recommendation #14: It is recommended that a capacity for foodborne illness tracking be developed through collaborative efforts in KP Province, along with a capacity to monitor food sources – in particular meat – for the relevant food hazards. This capacity should be considered incrementally, in collaboration with other partners from the academic and clinical community.***

5.6. Risk Communication

The Authority is quite visible on social media through a strong presence on Facebook⁸, used as a key instrument by the Authority to communicate its food regulatory interventions, particularly its field interventions and to publicize some key enforcement actions.

The Authority also hosts a YouTube channel and seems to have solidly embraced a social media communication approach.

It was not clear, however, to what extent communications from the Authority are planned, versus sporadic postings, following the schedule and the findings of FSOs and AFOSs in the field.

The examination of the information available to date did not allow to identify various pro-active communication, in particular related to other facets of the Authority's food regulatory mandate, such as consultations on standards and guidance documents.

⁵ Sahar Munir, Syeda Hafsa Ali, Syeda Ayesha Ali. A systematic review on shifting trends of foodborne diseases in Pakistan. AJ Life Sci, 2019, 2(2), 66:81

⁶ Khan et al., Microbiological Safety and Antibigram Analysis of Selected Food Products Obtained in the Marketplace of Peshawar and Mardan, KPK, Pakistan. Pol. J. Environ. Stud. Vol. 28, No26 (2019), 4239 – 4245

⁷ Aftab et al., Level of Salmonella in Beef of Slaughtered Cattle at Peshawar, J. Anim. & Plant Sci., 22(2 suppl.):2012, 24 – 27

⁸ <https://www.facebook.com/KPFoodAuthority/> accessed in May 2020.

It was also not evident from the information available to what extent these risk communication interventions are planned and are part of an overall education and engagement strategy.

It is important that the KP Authority leverages its presence (already strong) in the media scene, to establish its voice and position as the Science/Risk Based authority, communicating regularly and following high standards of engagement and consultation in the exercise of all mandated food regulatory functions.

This leads to the following recommendation:

- ***Recommendation #15: It is recommended that the KP Authority leverages its existing presence in Social Media and strengthen its pro-active communication, particularly in relation with other facets of the Authority's Food regulatory mandate. As such, it would be important for the Authority to rely upon a Food Risk Communication Strategy with the associated implementation plan, which would support the Authority's food regulatory mandate and its strategic direction to engage with stakeholders and partners.***

5.7. Horizontal Operational Aspects and Management

Horizontal and operational aspects of the Authority's management encompass the Human resources make-up, the physical and environmental infrastructure, including the scientific infrastructure, the governance structure and the decision-making process.

The Survey conducted with key informants of the Authority, for the purposes of this study, confirmed that the Authority has been equipped with a physical infrastructure that was supportive of its operations, since the establishment of the Authority as the primary food regulator for the KP province.

5.8. Conformity Assessment Enablers: Laboratory Infrastructure and Certification

Neither the Authority, nor the Department seem to be equipped with a laboratory infrastructure that is supportive of their regulatory mandate. However, the legal context, in particular the KPFSHA Act enables the Authority to accredit laboratories to support its food regulatory functions. It is therefore possible that the lack of food testing capacity be overcome with limited investments, through collaborations with other partners, including academic organisations in Peshawar and elsewhere.

Information received from the Department indicated the availability of an upcoming investment in a laboratory facility that could cover meat testing, with an estimated investment of 15 Million PKR (about \$90,000 USD). The examination of the projected equipment for purchase identified instrumentation that would enable rapid testing for Pathogens using the PCR technology.

Similarly, and while the Authority is responsible for standard setting related to quality schemes, such as the Halal products, these approaches would benefit from the development of certification organizations with the relevant accreditation and scope, and that could be established in collaboration with the private sector.

- ***Recommendation #16: It is recommended to establish adequate conformity assessment services, including product certification and testing, and where needed, encourage the private sector as a potential investor and operator of these services.***

- *Recommendation #17: It is recommended that investments in food laboratory testing be considered through a collaborative approach between the Department and the Authority, such that resources could be shared for the benefit of the mandates of both organizations. Such collaboration could also be envisaged with the support of other academic organizations operating in the region and with a track record in the area of food /meat safety.*

5.9. Governance Structure and Decision-making Process

Information collected through this study enabled to identify key governance structure mechanisms that support the operations of the Authority in its food regulatory mandate.

A Management Committee is reported to be a regular forum chaired by the Authority's Director General, meeting monthly to support planning and review of operations. It is not clear, however, whether this management structure or another tasked with planning – including strategic planning – is entrusted with performance evaluation, along with the set-up of performance indicators associated with the food control program and its implementation.

Expert Committees, are enabled as per the Act and the regulations previously described in this report. It is not clear, however, whether these expert committees were formed and / or have been mobilized for the purposes of the organization's food regulatory mandate.

Working Group on Meat and Meat Products: This working group was triggered through the current project and gathers representatives from the stakeholder community – including farmers, meat processors and meat exporters. This represents an opportunity to engage with the stakeholder community broadly and could be further leveraged to help identify priorities, to consult on proposed actions and to receive feed-back, but also to help disseminate the information and support compliance promotion.

The examination of the governance structure did not identify mechanisms that would support the decision-making process for food regulatory decisions. It seems that food regulatory decisions, associated with field operations, are taken individually by the FSOs. Similarly, it was not possible to identify how key food regulatory measures, such as a new regulation, a new standard or compliance policy would be developed, vetted and adopted.

- *Recommendation #18: It is recommended that the Authority examine its governance structure and decision-making processes for food regulatory functions with the intent of strengthening them. For example, it is recommended that:*
 - a. *The Authority enable the operationalization of the expert committees for the technical and scientific advisory capacity, where needed.*
 - b. *The Authority consider the creation of an internal food regulatory committee to support internal dialogue and discussions and to support advice on key food regulatory decisions*
 - c. *The Authority consider developing a performance evaluation framework and set the mechanisms to assess the performance of its food control / regulatory functions*

- d. The Authority consider enhancing its stakeholder engagement processes through mechanisms similar to the Working Group on Meat and Meat Products, and that the latter mechanism be further leveraged and enhanced to support a more robust engagement with the food stakeholder community.*

Overall and given the inter-related mandates of the Authority and the Directorate, it will be important that food regulatory functions be envisaged as part of value chain continuum. Actions associated with the prevention of animal diseases and the enhancement of animal health are interconnected with food safety outcomes. Similarly, various interventions related to the reduction of food safety hazards – e.g. reduction of salmonella and other pathogens, acceptable residue levels cannot be achieved unless there are associated interventions as part of good husbandry practices.

- *Recommendation #19: It is recommended that the collaborative approach between the Directorate and the Authority be further strengthened towards a continuum of interventions along the meat value chain (from the feed and its inputs, to the animal and up to meat and its by-products)*

6. Conclusion

The review of the set-up and operations of the Authority as a key food regulator in KP province has identified that the Authority's food regulatory functions are anchored in a modern legislation that offers a broad mandate and powers to exercise food regulatory control towards the protection of consumers and ensuring a fair environment for food production. Regulation-making authorities were already used to develop a set of regulations, enabling the set-up of the operations of the Authority, as well as some initial food regulatory provisions, such as registration of food establishments. The Authority has the opportunity to leverage its early successes and continue its efforts towards the building of a robust and value-chain driven food regulatory program in collaboration with partners (the Directorate) and stakeholders (e.g. industry).

The Authority workforce was developed with an emphasis on scientific and technical competencies. These investments need to be further complemented with a set of planned training programs, targeting the enhancement of food safety regulatory competencies of the workforce.

Key food regulatory functions, such as meat standard setting, incident management and compliance verification and enforcement (including inspection) need to be further reviewed and enhanced. In particular, it is important to anchor the latter functions more in science and in risk considerations. A stronger emphasis must be made to ensure that a more collaborative approach is adopted with regulated parties (producers) with a stronger compliance promotion approach as opposed to a strict punitive enforcement.

Overall, the collaborative spirit initiated through the creation of the Working Group on meat and meat products can be further extended to promote enhanced information exchange and interaction between regulators (the Authority and the Department) and between regulators and the regulated parties.

In conclusion, the enabling environment created by the KP Authority and its counterparts can be further enhanced to support the promotion of the meat production value chain.



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