Acknowledgments

This paper was prepared by Mirzet Sabirovic (Food Safety, Consultant) and Rufiz Chirag-zade (Senior Agribusiness Specialist). The paper was prepared under the guidance of Sarah Michael (Country Manager for Azerbaijan) and Frauke Jungbluth (Practice Manager for Agriculture and Food in the Sustainable Development Department in Europe and Central Asia). Review and contribution by Jan Joost Nijhoff (Senior Agriculture Economist) is gratefully acknowledged. Team members included also Rosalie Quong Trinidad (Program Assistant) and Sabina Majidova (Program Assistant). The World Bank would like to acknowledge the cooperation and assistance in the form of interviews, meetings, expert opinion, data, and knowledge of the experts at the Azerbaijan Food Safety Agency.
# Table of Contents

Executive Summary.................................................................................................................................................. 6

1. Overview of Azerbaijan’s Agricultural Sector................................................................................................... 8

2. Azerbaijan Food Safety System ............................................................................................................................. 8
   2.1. Current status and challenges................................................................................................................................... 8
   2.2. Priority directions for strengthening of the food safety system................................................................. 10
       2.2.1. Food Safety Capacity Building...................................................................................................................... 11
           2.2.1.1. Strengthening of the food safety system (Inputs and Resources)....................................................... 11
           2.2.1.2. Food Safety Control Functions ............................................................................................................... 15
       2.2.2. Modern IT Systems for Food Safety Enhancement ................................................................................. 16

3. Recommendations..................................................................................................................................................... 18

### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFSA</td>
<td>Azerbaijan Food Safety Agency</td>
</tr>
<tr>
<td>AFSI</td>
<td>Azerbaijan Food Safety Institute</td>
</tr>
<tr>
<td>AIRS</td>
<td>Animal Identification and Registration System</td>
</tr>
<tr>
<td>BIP</td>
<td>Border Inspection Post</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FAO</td>
<td>United Nations Food and Agriculture Organisation</td>
</tr>
<tr>
<td>FBO</td>
<td>Food Business Operator</td>
</tr>
<tr>
<td>GlobalGAP</td>
<td>GlobalGAP standard</td>
</tr>
<tr>
<td>HACCP</td>
<td>Hazard Analysis and Critical Control Point</td>
</tr>
<tr>
<td>ILCT</td>
<td>Inter-Laboratory Comparison Test</td>
</tr>
<tr>
<td>IPPC</td>
<td>International Plant Protection Convention</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organisation for Standardisation</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium size Enterprises</td>
</tr>
<tr>
<td>ToT</td>
<td>Training of Trainers</td>
</tr>
<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
<tr>
<td>OIE</td>
<td>World Organisation for Animal Health</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organisation</td>
</tr>
<tr>
<td>WTO SPS</td>
<td>World Trade Organisation Sanitary and Phytosanitary Agreement</td>
</tr>
</tbody>
</table>
Executive Summary

Azerbaijan’s agriculture is a key source of jobs and critical to maintain food security. Agriculture is the largest economic activity in rural areas, and critical to the non-oil economy, with significant potential for stimulating and diversifying future growth and increasing export revenues. Various challenges remain for the country in reaching its agricultural potential. Low productivity is linked to poor agronomic practices, fragmented value chain linkages, and predominance of small farms with limited access to markets, technology, and finance. The food safety system is critical for increasing productivity and competitiveness of the agri-food system and diversification of Azerbaijan’s agricultural markets and remains a critical bottleneck.

Establishing a risk-based food safety system along all links of the value chains is one of the Government’s strategic objectives in agriculture. Current measures to strengthen the provision of public goods for agriculture focus on institutional reform and strengthening of the Food Safety Agency. Azerbaijan is committed to establishing a modern food safety system and to harmonize the national regulations with international norms.

This report outlines the results of a review of the opportunities for strengthening of the food safety system in Azerbaijan. The report focuses on two aspects: (i) analysis of the current strategy and directions for further development of the food safety system; and (ii) identifying the key capacity and capability priority needs in the existing food safety system to strengthen the operations of the Azerbaijan Food Safety Agency (AFSA). The findings of this report would support the national priority of ‘sustainably growing a competitive economy’, which is one of the five priorities set out in the Azerbaijan 2030: National Priorities for Socio-Economic Development strategy document. Specifically, the strategy defines business-friendly public administration and access of local products to international markets as key factors of economic growth, and implementation of recommendations herein would contribute to these objectives.

The report identifies two key challenges in Azerbaijan’s food safety system. These key challenges are primarily related to (i) food safety and quality standards, including laboratories, which are not yet aligned with international requirements; and (ii) smallholder farmers’ and small and medium size enterprises’ (SMEs) inability to meet and comply with internationally recognized food quality certification to meet international food market requirements.

The report also identifies two key priority areas for improvements, which are the core elements for all modern food safety systems: (i) Food Safety Capacity Building; and (ii) Modern Information Technology (IT) Systems for Food Safety Enhancement. The report provides recommendations on the specific actions/improvements in the identified key priority areas to further strengthen Azerbaijan food safety system.

Food Safety Capacity Building requires (a) strengthening of the food safety system in terms of inputs and resources; and (b) improvements in food safety control functions. The report provides recommendations for improvements in the areas of (i) legislation and policy; (ii) risk analysis; (iii) laboratory networks; (iv) private sector engagement; (v) institutional capacity; (vi) establishment of animal disease and pest free zones; and (vii) training. In the area of Modern IT Systems and Food Safety Enhancements, the assessment resulted in identification of the key priority needs and recommendations for improvements of IT systems related to food safety, animal health, plant health, official inspections, and food traceability system, including development and upgrading the of IT software and hardware systems, and training. Improvements of IT systems for food safety would focus on software upgrades in registration, inspection and risk management. IT systems for Animal Health and Plant Health would require upgrades in the animal and plant traceability modules.
This report is prepared as follow up to the work done under the Agricultural Competitiveness Improvement Project (ACIP) jointly funded by the World Bank and the Government of Azerbaijan. ACIP was implemented between 2014-2021 and provided support to the Azerbaijan Food Safety Agency at the stage of its establishment and commencement of operations. ACIP support involved provision of technical assistance in animal health, food safety and plant health related to legislation, border inspection posts, state control functions, training, standard operating procedures, laboratory network organization and operationalization, monitoring and evaluation, and development of sector related IT systems to facilitate animal identification and food products traceability.
Azerbaijan - Strengthening of the Food Safety System

1. **Overview of Azerbaijan’s Agricultural Sector**

   1. **A strong agri-food sector is critical for Azerbaijan’s vision of a more diversified and private sector-led country.** Agriculture is a major contributor to the country’s non-oil economy with significant development opportunities and great potential for stimulating and diversifying future growth, job creation and food security. Overall, the sector has shown considerable resilience to economic turbulences since 2010, with an annual average growth higher than that of overall GDP and the non-oil economy GDP growth. Both exports and imports have grown steadily since 2016.

   2. **However, a number of challenges remain for the country to reach its agricultural potential.** The sector lags in productivity primarily due to poor agronomic practices. The value chain linkages are fragmented and there remains over-reliance on very few export markets for the main export commodities. The dominance of smallholder farms with low productivity and limited access to technology and finance exacerbates these challenges. Food safety compliance, which is fundamental for driving agricultural compliance through the high value agri-food chains and diversification of export markets, is one of the main challenges. The exposure to production risks, particularly weather variability, is also increasing.

   3. **Azerbaijan is a net-importing country of agricultural and food products, and exports are largely destined to Russia.** In terms of trade partners, the Russian Federation is the main export destination for Azerbaijani goods. The risk associated with Azerbaijan’s high dependence on Russian markets for its agricultural and food exports is widely recognized. Until the war in Ukraine, Russia was a readily accessible market generating good returns for exporters. Transport and logistics links are well established. Exporters are well connected with Russian wholesale markets and quality and safety requirements are easily satisfied. In contrast, access to export markets in Europe, Asia, and the Middle East is constrained by more complex transport and logistics arrangements and more stringent quality and safety regulations.

   4. **Diversification of export markets to include other markets will require increased competitiveness for agricultural products, which amplifies the importance of ongoing efforts by the government to enhance food safety compliance and productivity.** Smallholder farms and SMEs need to improve their practices to meet food safety and other quality standards to become competitive in other markets. Food safety compliance is becoming increasingly important as the sector grows and expands to non-traditional markets, especially the European Union (EU) and the Middle East.

2. **Azerbaijan Food Safety System**

   2.1. **Current status and challenges**

   5. **Azerbaijan has identified food safety as a priority area and has committed to align its food safety and sanitary and phytosanitary (SPS) rules with EU and WTO standards.** Azerbaijan has approved several laws and ratified international agreements to stimulate the establishment of a modern food safety system and to harmonize national regulations with international norms and requirements. The Azerbaijan Food Safety Agency (AFSA) was established in 2017 with the responsibility to spearhead these efforts and to implement the State Program of Food Safety 2019-2025 Action Plan. The Azerbaijan Food Safety Institute (AFSI) was established under the

---

1 Current food safety and certification adhere to national and CIS (Commonwealth of Independent States, e.g. GOST) standards that are not aligned with EU and WTO requirements.
2 Decree No. 1235, dated February 10, 2017. In accordance with this Decree, the regulations of the Agency No. 1681, dated November 13, 2017, “On ensuring activities of the Food Safety Agency of Azerbaijan was approved by the President.
Agency in 2018 to act as the risk assessment body in the risk-based food safety system that AFSA is setting up in compliance with international requirements. AFSI also acts as liaison office with the private sector and provides food safety related consulting and training services to entrepreneurs. A new Food Safety Law was adopted on May 5, 2022 and approved on June 27, 2022.

6. The AFSA is responsible for implementation of relevant national policies and management of officially approved sanitary and phytosanitary controls (i.e. animal health, food safety, plant health) at all stages of the food chain, including primary production, processing, packaging, storage, transportation, registration, inspections, certification (including import-export operations), as well as the protection of the consumer rights, environment and promoting climate-smart interventions in food production.

7. The AFSA's responsibilities include on-going analysis of the effectiveness and efficiency of the official sanitary and phytosanitary controls (Figure 1). These controls are across the agri-food value chain and cover border protection, quarantine, prevention, detection, surveillance and control measures for specified animal health, food safety and plant health risks/hazards, certification and exports, private sector and associated food business operators, nutrition, labelling, laboratories, science and research, consumer protection, compliance with international standards and requirements, adoption of best food safety practices, environmental protection and application of climate-smart interventions, implementation of civil rights and freedoms related to the areas of agri-food sector related activities, and ensuring inclusiveness, openness and transparency.

8. The need to ensure for food affordability and security is high and requires additional considerations for AFSA capacity building at different levels in food safety system. This may include (i) response and adaptation to major shocks (e.g. COVID-19 pandemic) to the food systems operating models, staffing and supply chains, (ii) climate change mitigation and adaptation interventions through innovations in food production (e.g. alternative sources) and ensuring

---

3 By the Presidential Decree No 1681, dated November 13, 2017, The Azerbaijan Food Safety Institute was established as public legal entity and based on the decision by the Cabinet of Ministers of No 220, May 16, 2018, the Charter of the Institute was approved.
sustainable and environmentally friendly food packaging, and (iii) accelerated change in food businesses operations related to point of sale and supply of food to consumers (e.g. online marketplaces, social media, home delivery).

9. **Overall, the food safety and quality standards in Azerbaijan are not yet aligned with international best practices.** Although some laboratories have passed international accreditation, they still need to send some samples abroad (mostly to Türkiye) to conduct tests which are required for trade with EU\(^4\) and out of current accreditation scope. New legislation envisions establishment of a national reference laboratory, and the process has started. Many smallholder farmers and Small and Medium Enterprises (SMEs) in Azerbaijan cannot afford GlobalGAP or other internationally recognized food quality certification standards, which are required by sophisticated markets like the EU. Domestic and cross-regional trade have lower requirements that can be met more easily but may trap participants in low profits. It is to be expected that food safety and reporting requirements in those markets will further increase with the introduction of strategies like the EU Green Deal and the EU Farm to Fork Strategy.

10. **The recently completed Agricultural Competitiveness Improvement Project (ACIP) has provided immediate support to the AFSA at the stage of its establishment and commencement of operations\(^5\).** ACIP support involved provision of technical assistance in animal health, food safety and plant health related to legislation, Border Inspection Posts (BIPs), inspection and state control functions, training, standard operating procedures, laboratory network organization and operationalisation, monitoring and evaluation, and development of sector related IT systems to facilitate animal identification and food products traceability. AFSA has also benefited from other technical assistance projects implemented, or being implemented, by other international organisations (e.g. FAO, EU).

2.2. **Priority directions for strengthening of the food safety system**

11. **Based on the review of the current status of the food safety system, the operations of the AFSA, and analysis of the current strategies, the following two areas are identified as priority directions for investments to further strengthen the food safety system in Azerbaijan:**

   a) **Food Safety Capacity Building, including:**
      - Food Safety Systems (Inputs and Resources)
      - Food Safety Control Functions

   b) **Modern IT Systems for Food Safety Enhancement, including:**
      - IT Systems for Food Safety, Animal Health and Plant Health
      - Development and upgrading of IT software and hardware systems for inspections
      - Food Traceability System
      - IT Training and international experience in use of IT

12. The above areas are considered standard and core elements for all modern food safety systems. They are elaborated in detail in the section below.

\(^4\) especially those related to pesticides

\(^5\) ACIP was financed by the World Bank and implemented through 2014-2021, focusing on facilitating the access of agricultural producers to markets by strengthening sanitary and phytosanitary services, enhancing selected value chains and providing financial services to agribusiness enterprises.
2.2.1. **Food Safety Capacity Building**

13. **Food Safety Capacity Building requires (a) strengthening of the food safety system in terms of inputs and resources; and (b) improvements in food safety control functions.** The activities related to food safety capacity building (input and resources) should be aimed at institutional capacity building and modernisation, harmonization, and improvements in food safety through assuring policy and implementation of national legislation in compliance with national and international standards and requirements. There is a need also for improvements in official food safety control functions. These aspects are elaborated in the sections 2.2.1.1. and 2.2.1.2. below. Further details, including plans, and actions regarding inputs and resources in the food safety system and control function are provided in Annex 1 (Table - Part A and Part B).

2.2.1.1. **Strengthening of the food safety system (Inputs and Resources)**

14. **Further strengthening of the Azerbaijan’s food safety system requires actions/improvements in the following policy and implementation areas (as outlined in Annex 1, Table - Part A.1):**

   - Policy and Legislation
   - Risk Analysis
   - Laboratory Networks
   - Food Business Operators
   - Qualified Resources
   - Establishing pest and animal disease free zones
   - Training

15. **Policy and Legislation. A new Food Safety Law was adopted in May 2022.** The Law was prepared with EU technical support. A new Veterinary Law has been drafted revising/amending the Veterinary Law of 2005 which, *inter alia*, regulates animal identification and registration, creates the legal basis for establishing the Veterinary Statutory Body, and introduces provisions for animal welfare, veterinary medicinal products, and veterinary diagnostic laboratories. The draft new Veterinary Law is at the stage of inter-service consultation. A number of secondary veterinary legislative acts have been drafted regulating in more detail above mentioned subjects, plus registration of private veterinarians engaged in non-state practices. According to the AFSA, the draft veterinary law and the stipulating secondary legislation are compliant with relevant OIE recommendations. Also, sixteen draft legislative acts in the field of food safety were prepared including procedures for issuing health certificates, for official control purposes, risk-based food safety state control, and rules on risk analysis including risk assessment.

16. Some additional secondary legislations are required along with specific references to relevant documentation (e.g. Manuals, Standard Operating Procedures, guidelines). Such policy and legislative specifications will support the AFSA to further facilitate and strengthen Azerbaijan’s regulatory system related to production and supply on the market of agricultural products that are safe for human consumption. All this requires a comprehensive and balanced approach, so that (i) the production is modern, highly efficient and profitable, and (ii) consumers have assured access to high quality food products. It would enhance consumer rights and strengthen national authorities in implementing official regulatory practices to tackle unfair trade practices effectively and efficiently. The specific policy and legislative specifications will also provide a framework for the Azerbaijan Food Safety Institute (AFSI) provision of independent scientific and research services and risk assessment to support AFSA’s on-going improvements in Azerbaijan food safety system.

17. The secondary legislation and accompanied relevant documentation will support the Azerbaijani institutions to strengthen policy, inspection and laboratory capacities in food safety, veterinary and phytosanitary areas in line with relevant international organization agreements and
standards. Namely, these are the World Trade Organisation Sanitary and Phytosanitary (WTO-SPS) Agreement, the World Health Organization and Food and Agriculture Organisation (WHO/FAO) Codex Alimentarius, the World Organization for Animal Health (OIE) Terrestrial Animals and Aquatic Codes, and the International Plant Protection Convention (IPPC) requirements. This will also support Azerbaijan with meeting internationally recognized food certification requirements, such as GlobalGAP (i.e. farm certification scheme - common standard for farm management practice) and HACCP (i.e. Hazard Analysis and Critical Control Points).

18. Significant enhancement of policy and secondary legislation related to food safety will greatly contribute to the entire process of harmonization of Azerbaijan’s standards with relevant national legislation, international standards and recommendations and trading partners requirements related to food safety, animal health and plant health. Consequently, failure in food safety can have significant impact on human life, confidence and credibility of responsible public institutions and private sector organisations, and wider economy. But the success in food safety measures will be reflected in a strengthened risk-based regulatory framework, flexibility, and efficiency in producing and marketing foods, decreasing and mitigating disease and hazards risks and increasing greater consumer confidence and more choice of safe foods.

19. **Risk Analysis.** Strengthening principles for risk analysis (i.e. risk/hazard identification, assessment, management and communication) to ensure that animals, humans, plants and environment are properly protected while facilitating market development and trade. As indicated above, rules on risk analysis including risk assessment have been prepared. Training on modern Pest Risk Analysis (PRA) methodologies was provided to phytosanitary specialists and Guidelines on PRA developed. Improved Risk Analysis process will provide for evidence-based input into risk-based policy and decision-making, official inspections, and controls, and protecting farmers, processors and traders from product quality complains of the key importers and consumers. The application of risk analysis process will improve food safety with regard to assessing, managing and communicating risks of animal diseases that can be transmitted to humans (i.e. zoonotic diseases), pathogen contamination of food products during production and processing and content of certain hazardous substances, such as residues of plant protection products, heavy metals, toxins and nitrates. Improved risk analysis process would also contribute to the image of Azerbaijan exported food produce granting it access to most attractive international markets and adoption and implementation of ISO 31000:2018 guidelines on how to manage organisational risks at both strategic and operational levels.

20. **Laboratory network.** International Organization for Standardization (ISO) accredited, competent, and well-equipped laboratories with ability to perform high quality testing for pathogens, pests, chemicals, and residues. The Azerbaijan national legislation, international standards and trading partners requirements outline key requirements for official laboratory capacity and capability, and technical requirements for laboratory testing for official control purposes. Overall, in food safety, animal health and plant health there is a need to improve processes for defining and approving adequate national reference laboratory(s) infrastructure at Azerbaijan’s level to maximise the use of the existing capacities and capabilities and to avoid potential for duplication. They will also need to be accredited to ISO Standard 17025:2017.

21. With support of ACIP, diagnostic analysis of the laboratory network of the Azerbaijan Food Safety Institute was carried out and a strategy of laboratory network optimization and modernization was prepared. The project organized also training on validation and verification methods for AFSI

---

laboratory staff and supported provision of sector-specific expertise for the international accreditation of priority methods and tests. With a view to support preparatory actions towards accreditation of laboratories, ACIP procured documentation (official methods of analysis as per relevant standards) and certified reference materials (CRM). Equipment was also procured.

22. The laboratories are required to keep the available accredited and officially approved analyses methods up to date and ensure efficient and effective collaboration with competent authorities. They also are required to take part in inter-laboratory comparison tests (ILCT) as requested, maintain a list of names of the approved methods for performing analyses, tests or diagnoses for official control purposes.

23. The Azerbaijani laboratory network is also required to ensure planning for unexpected events. The ISO 17025:2017 standard requires for a design and implementation of a laboratory contingency plan. This would ensure that essential laboratory services are available during emergency events or other circumstances when laboratory services may be limited or unavailable. This would also ensure for arrangements and development of emergency procedures in the event of a crisis (e.g. highly contagious animal diseases, diseases of food safety concern, pandemics such as COVID-19, natural disaster) to increase capacity. It will also require development of procedures for laboratory and test approvals to meet immediate analysis and testing needs.

24. The laboratories also need to ensure for the establishment of official cross-sectoral arrangements for sharing laboratory capacity and capability in food safety, animal health and plant health, for collection of isolates and pests/hazards and testing and molecular sequencing. This will also include administrative agreements and arrangements to support official policies and implementation of surveillance and disease/hazards control activities. These official arrangements will provide for (i) appropriate and approved laboratory networks use of standardised laboratory methods including harmonisation of laboratory algorithms between the sector-related laboratories as appropriate, (ii) a network for exchange and sharing of protocols, common standards for submission of samples, sharing of results, joint procurement of reagents and laboratory consumables and joint training, and (iii) ensure for structured monitoring and evaluation and continual assessment of cost-benefit and funding allocations as required. In this way, the laboratory networks are in the position to collaborate and make a major structured and consolidated support and contribution of evidence to policy and decision-makers risk management and risk communication by assisting the competent authorities during the ‘peace time’ for official routine control purposes and in emergencies (e.g. surge capacity, quarantine).

25. All activities related to strengthening laboratory networks would (i) contribute to the implementation of a “One Health” approach as advocated by the key sectoral international organizations - the OIE, WHO, FAO and UNEP (i.e. Tripartite+)8,9,10, and (ii) ensure that sectoral and multi-disciplinary sectoral and laboratory networks are working together through improving functional synergies and practical exchange and utilisation of available capacity and capability to support national policy and decision making and implementation.

---


26. **Food Business Operators (FBOs).** Value chain participants have difficulties in achieving minimum food safety standards, which is fundamental for driving agricultural competitiveness through the agrifood chains. In combination with insufficient food safety inspection this undermines the productivity and value of their holdings. There is a great need to support enterprisers with adhering to food safety standards and obtaining internationally recognized certifications. Registered FBOs are required to implement and comply with legislative requirements in relations to required documented procedures based on Hazard Analysis and Critical Control Points (HACCP) principles considering the nature and size of the business. All FBOs are legally responsible for ensuring that their produced food is safe to consumers (i.e. safe for health and nutritious and fit for human consumption) with regard to specified safety hazards associated with food production. The development of HACCP related procedures will enable FBO’s to establish a documented process for control of food hazards (i.e. biological, chemical, physical) based on prevention, elimination or reduction to acceptable levels rather than entirely relying on full end-product testing and allow for flexibility based on the nature of operations (i.e. handling, simple processing, food manufacturing) and size of business (i.e. small, medium, large). The HACCP procedures will relate to the nature of food hazards, predetermining Critical Control Points (CCPs) in the preparation, manufacturing and processing of food, monitoring and verification of CCPs, and evaluation and review. The development, adoption and implementation of HACCP based procedures by FBOs would also explore availability of supporting tools (e.g. educational, on-line) that may support small and medium sizes FBOs to develop their HACCP-based food management systems.

27. **Qualified Resources. Developing curricula and training materials on food safety for higher education institutions and access to international scientific resources.** These activities support further strengthening and defining the roles and responsibilities of AFSI related to scientific and applied research on food safety, risk assessment based on scientific principles, preparing, and contributing to draft technical normative legal acts on food safety, facilitating voluntary application of other international standards by food manufacturers, and providing research services on food safety criteria.

28. AFSA, in collaboration with food safety, animal health, public health and environment health academia, could provide for sustainable local capability development in food safety through defining curriculum for advanced education related to food safety competencies, competency-based training and training materials. This requires accreditation of the entire education and training curriculum. The sustainable capacity development will provide for link between the national authorities and the food industry by examining political and legislative, scientific, and managerial aspects that influence food safety and provide for multi-disciplinary relationship between food safety and public health. Access to international scientific resources such as libraries, peer-reviewed journals, articles will also need to be ensured.

29. **Establishing and declaring pest free zones and animal disease free zones in which a specific pest or animal disease do not occur based on enforcement and maintenance of official controls.** There is a need to develop process and procedures for establishment and declaration of pest and animal disease free zones to support a risk management strategy for achieving progressive control and eradication of specified animal diseases and plants pests and providing official guarantees for international trade as required by international standards and recommendations (i.e. WTO-SPS, OIE, IPPC). These processes and procedures will ensure for quality of competent authority services, considering epidemiological and environmental factors, application of surveillance, laboratory testing, inspection and control activities, appropriate and applicable biosecurity measures and public-private partnerships (i.e. cooperation between government and private sector).
30. **Training in food safety systems.** With support of ACIP, a training needs assessment has been conducted, a training system for the AFSA has been designed, and training material in the fields of food safety, veterinary/animal health, and phytosanitary have been prepared. A core focus of the training program will be on Training of Trainers (ToT), training of official staff, and training of identified stakeholders in food safety, animal health and plant health.

31. The key training topics for Training of Trainers will be teaching methods, evaluation, presentation skills, learning styles, and how to retain information among other topics. Training for official staff and inspectors, and stakeholders will, among other topics, cover topics such as:

- Food legislation and procedures, food microbiology, international standards, hazards/pests
- Risk-based food safety inspections
- Risk-based import control
- HACCP based procedures and requirements for traceability systems
- FBOs – HACCP and implementation, personal hygiene, food premises, cleaning, and disinfection
- Food and feed packaging requirements and controls, imported and exported food
- Procedures for registration of pesticides, agrochemical compounds, veterinary drugs and hazardous food, early warning and crisis management, liability for violations
- ISO 17025:2017 – laboratory and ISO 31000:2018 training for specialists to implement a science-based risk assessment and managing any type of risk faced by the AFSA
- Simulation exercises plan for officials, livestock owners and keepers and other stakeholders
- Study visits related to zoning (i.e. disease/pest free zones) in compliance with international standards.

2.2.1.2. **Food Safety Control Functions**

32. **Strengthening of the food safety control functions requires actions/improvements in the areas as outlined in the Annex 1 Table 1 (Part A.2):**

- Official inspections
- Animal Health primary production – Animal Identification & Registration System (AIRS)
- Training

33. **Official inspections.** AFSA is in the ongoing process of improving the inspection functions. As indicated above legislative acts on risk-based food safety state control have been drafted. Training modules on risk-based inspection\(^\text{11}\) and risk-based import control\(^\text{12}\) have also been developed. The way the current risk-based inspection is designed is that inspectors are using tables with an application that allows for selecting non-compliance from a drop-down menu. Mobile equipment (tablets, laptops) and inspection tools have been provided by ACIP to ensure inspections are carried out efficiently. Required actions to improve official inspections need to focus on national approach to risk-based planning and reporting process that maximises collaboration and performance measurements to ensure continuous improvements and minimise potential for duplication. These actions will clarify roles and responsibilities of official inspections and food business operators (FBOs) to ensure food safety planning and implementation. This will have to be formulated through a multi-year implementation plan developed in consultation with stakeholders (e.g. AFSA, FBOs, academia, research and science, consumers). It will require

\(^\text{11}\) including distribution of entrepreneurs by risk groups; organization of inspections; product research and sampling.

\(^\text{12}\) division of food into risk groups, taking into account physical, chemical and biological hazards; document, identity and physical control procedures; international warning systems; determination of sample turnover in import.
development of a Manual with guidance for risk-based inspections of FBOs in compliance with international standards. It will also cover food imports and exports, laboratory testing and methods.

34. **Animal health – primary production: Animal Identification & Registration System (AIRS).** A strategic plan for establishing the AIRS was developed in 2015 including conceptual design, business analysis and IT user requirements for the design and development of the system. In 2021 the AIRS system has been established with support of ACIP. Further actions on AIRS will build on previous achievements in strengthening inter-operability with other relevant animal health applications (e.g. animal disease notification, movement control, outbreak management, slaughter). These actions will specifically focus on a review of the key components of AIRS as related to a multipurpose animal recording system which covers identification and registration, traceability, health information and performance recording. In this context, these actions will define (i) improvements to AIRS with specific reference to obligations of livestock owners and keepers module and interaction with AIRS existing multiple modules, (ii) improvements to the existing AIRS Guidance for livestock owners & AIRS public awareness (communication) plan, (iii) functional linkages between AIRS application and Animal Disease Notification and Outbreak Management application, and (iv) AIRS contribution to harmonisation of national legislation with the new international requirements (e.g. EU), and relevant international standards with specific reference to obligations of livestock owners and keepers.

35. The priority will be to link larger livestock holdings to AIRS to enable them to independently manage the process of controlling the movement of domestic animals, subject to veterinary certification and trading partners requirements. In this way, any change in the animal health status can be recorded in the shortest period. This process is complex and requires engagement of livestock owners and communication with veterinary and food safety officials at all levels including adequate modifications to the existing multiple modules within the current animal health and functional connectivity with relevant food safety system applications.

36. **Training in food safety control functions.** This training will cover topics such as food legislation and international standards, hazards/pests, HACCP, risk-based inspections, implementation of Animal Identification and Registration System (AIRS).

### 2.2.2. Modern IT Systems for Food Safety Enhancement

37. **Strengthening of the Information Technology (IT) supporting systems and services of Azerbaijan’s food safety system requires actions/improvements in the following areas (as outlined in the Table 1 below) which are further elaborated in paragraphs below:**
   - IT Systems for Food Safety, Animal Health, Plant Health
   - Developments and upgrading of IT software and hardware systems for official inspections
   - Food Traceability System
   - IT associated training

38. **IT systems for Food Safety, Animal Health and Plant Health (key areas 1-4 in Table 1).** The existing animal health, food safety and plant health IT systems need to be modernised and strengthened through development of specific modules (i.e. Food Safety Information System, Animal Traceability System, Food Traceability system) that are critical for improving the Azerbaijan’s food safety standards. These modules will (i) achieve a high level of compliance with national legislation and international requirements related to food safety, animal health and plant health, (ii) facilitate effective and efficient traceability, monitoring, inspections, controls and reporting in agri-food chain, and (iii) ensure on-going protection of animal, plant and human
health and consumers' interests and facilitate the effective functioning of the national and international (EU and other trading partners) market.

Table 1: Modern IT Systems for Food Safety Enhancement

<table>
<thead>
<tr>
<th>Key Areas</th>
<th>Aspects for consideration</th>
<th>Needs and proposed further actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IT systems for Food Safety</td>
<td>Registration and inspection module</td>
<td>Upgrades AFSA registration, inspection, and risk management module (software). Systems upgrades (hardware &amp; software). Development of Food Safety Information System.</td>
</tr>
<tr>
<td>2. IT systems for Animal Health</td>
<td>AIRS</td>
<td>AIRS upgrades (software)</td>
</tr>
<tr>
<td>3. IT systems for Plant Health</td>
<td>Phytosanitary system</td>
<td>Upgrades (software)</td>
</tr>
<tr>
<td>4. Official inspections - Upgrades IT hardware systems (food, animal and plant included)</td>
<td>IT equipment</td>
<td>Servers, network equipment and mobile equipment - official sector and private sector (laptops, tablets, cameras).</td>
</tr>
<tr>
<td>5. Food traceability system</td>
<td>Development food traceability system</td>
<td>Development and implementation of Food Traceability system for AFSA</td>
</tr>
<tr>
<td>6. Training and international experience use of IT Systems</td>
<td>IT team, Officials &amp; Stakeholders</td>
<td>AFSA/Laboratories/official inspections/Food Business Operators, Livestock owners, farmers, and other stakeholders</td>
</tr>
</tbody>
</table>

39. **Developments and upgrading of IT software and hardware systems for official inspections.**

These are critical for real-time documentation of control activities in supporting the entire process of improving compliance with national and international food safety standards. The specific focus will be on the assessment, development and upgrade of the existing IT system software and hardware. The assessment should be conducted through a joint expert assessment and review (i.e. IT and sector-specific technical teams) to facilitate the establishment and implementation of agreed, reliable and credible IT systems. These activities will (i) follow Azerbaijan’s and trading partners requirements in food safety, animal health and plant health and provide for modern, structured and streamlined access to high quality and verified data and evidence to support policy and decision-making, and (ii) provide for connecting and consolidating systems for recording animal health and food safety inspections and findings at all administrative levels and connecting with other relevant crisis management systems (e.g. public health – such as COVID-19 pandemics, environment health and disaster risk management and climate change).

40. **At the national level, the IT systems upgrades will provide for development and implementation of an inspection IT module with a unified database and technical specification.** The inspection IT module will also provide for connecting and consolidating inspection systems for food safety, animal health and plant health inspections and findings at all administrative levels and connecting with other relevant crisis management IT systems. The module would further support the country’s readiness to access markets that require increased food safety management measures that are digitally accessible. This can also support more direct producer and consumer marketing linkages as digital agriculture marketing platforms are further elaborated and shorter value chain linkages may become increasingly in demand. The inspection IT module will comply with a modern
concept in food safety, animal health and plant health as a response to increasing requirements for more collaboration across sectors (i.e. “One Health”) in preventing and controlling animal health and public health (i.e. zoonoses) threats. Given the nature of various IT systems in place, interoperability is considered more convenient and safety for the existing systems. Interoperability requires synchronisation, rather than merging, of the existing systems. This also calls for application of modern technology innovations to strengthen data management systems through linkages and management of large amounts of heterogenous data to ensure relevance, efficiency, effectiveness, impact, and sustainability.

41. **At the import/export level, the IT systems upgrades will ensure for compatibility and interoperability of the IT systems with relevant trading partners systems.** The relevant trading partners systems may include the EU Animal Disease Notification System - ADNS, EU Trade Control and Expert System - TRACES, EU Rapid Alert System for Food and Feed - RASFF, and EUROPHYT (now all being integrated into EU IMSOC), FAO INFOSAN and e-Phyto. The IT system upgrades to ensure compatibility and inter-operability with trading partners systems will provide for more efficient data management, and information and documentation exchange on official agri-food chain controls and inspections in relation to risks and hazards to food safety, animal health and welfare, plant health and public health.

42. **Food traceability system strengthening will include provision of specified IT hardware and software for food traceability.** The software for food traceability will (i) allow for linking the food products and ingrediencies production, processing, storage, distribution, and sales chains, and (ii) provide for traceability of food products and ingrediencies to mitigate risks to consumers through rapid identification and withdrawal/recall of unsafe food as required. With ACIP support, food traceability study was carried out and guidance on food traceability system was developed.

43. **Training in modern IT systems for food safety enhancement will include determining training needs, developing training plan and timeline, training documentation, and training implementation.** The training related activities will involve IT training needs analysis and development of a training plan and timeline for implementation. It will focus on training in use of modernised IT systems and will cover Training of Trainers, training of official staff and training of identified stakeholders (FBOs) in relevant value chains (e.g. primary production, processing, storage, distribution and sale) in animal food safety, animal health and plant health.

3. **Recommendations**

44. Based on review of the current status of the food safety system in Azerbaijan and analysis of the current strategies and directions for further development of the food safety system, the following recommendations for improvements on identified key priority areas are proposed:
A. **Strengthening of the food safety system in terms of input and resources** requires actions/improvements in the areas of:

- Food safety policy and legislation to ensure compliance with the national and international standards through further development of secondary legislation
- Risk Analysis capability to ensure alignment with the food safety legislation to support risk-based policy and decision making
- Laboratory networks to improve infrastructure, modernize methods and equipment and achieve accreditation to relevant ISO standards
- Food Business Operators (FBOs) to ensure registration, HACCP implementation, traceability, and compliance with food standards by private sector
- Qualified resources to build institutional capacity in HACCP with access to international scientific resources to conduct scientific research to support private sector in HACCP implementation
- Establishing pest and animal disease free zones by gaining international insight of best practice and national implementation of zoning
- Training program to stakeholders in all relevant areas

B. **Strengthening of the food safety system controls functions** requires actions/improvements in the following areas:

- Sanitary and phytosanitary official inspections related to national requirements for risk-based import and national controls, reporting and compliance, modernisation of equipment and improvements of border inspection posts facilities
- Animal Identification & Registration System (AIRS) to define improvements and functional linkages and interactions with other relevant animal health and food safety systems to ensure compliance with international requirements
- Training and simulation exercises in all relevant areas

C. **Strengthening of the Information Technology (IT) supporting systems and services for official inspections** require actions/improvements in the areas of:

- IT Systems for Food Safety to ensure software upgrades in registration, and inspection and risk management module
- IT System for Animal Health (Animal Identification & Registration System – AIRS) to ensure software upgrades in the animal traceability system in line with the national legislation
- IT System for plant health to ensure software upgrades in plant traceability system in line with the national legislation
- Development and upgrading of IT hardware systems for official inspections through modernising IT equipment such as servers, and network equipment
- Development and implementation of a Food Traceability System for AFSA to ensure access to all relevant information about specified food products along the product’s value chain, both trace-forward and trace-backward
- IT associate training to ensure Training of Trainers (ToT) and required training for identified systems users in all relevant areas.

<table>
<thead>
<tr>
<th>A. Food Safety Capacity Building</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Areas for investment</strong></td>
</tr>
<tr>
<td>A.1. Food Safety Systems (Inputs &amp; Resources)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Key Areas for investment</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td><strong>A.1. Food Safety Systems (Inputs &amp; Resources)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
# A. Food Safety Capacity Building

<table>
<thead>
<tr>
<th>Key Areas for investment</th>
<th>Key aspects for consideration</th>
<th>Plans</th>
<th>Relevant Article in the Azerbaijan Food Safety Legislation</th>
<th>Specific topic to be covered</th>
<th>Specific topic required activities/actions</th>
</tr>
</thead>
</table>
| A.1. Food Safety Systems (Inputs & Resources) | A.1.2 Risk Analysis | Hazard identification (prioritisation and categorisation - i.e. pathogens, antimicrobial resistance, residues, contaminants), Risk Assessment, Risk Management and Risk Communication (i.e. data collection & validation, database, reports, integration, document management, security, communication platforms) to support food safety programmes | Aligned with the legislation to make decision in line with risk assessment; improve collaboration between risk assessment teams & functional risk assessment capacity and capability in food safety, animal health, plant health, public health, and environment health; Risk based inspection module & HACCP | Article 19. Requirements for safety of food and feed products during their storage and transportation | Food and feed products safety <ul><li>Implement trainings on HACCP procedures and product sampling.</li><li>Purchase of equipment for AFSI and AFSA, (inspection bags, tablets, and cameras).</li><li>Training needs assessment for officials, inspectors and food business operator.</li><li>Training of Trainers.</li><li>Development of a training plan and training implementation, university curriculum development & training materials.</li><li>Implement training for Risk Analysis and develop guidelines for risk assessment (food safety, animal health, plant health).</li><li>ISO 31000:2018 training for specialists to implement a science-based risk assessment that meets international requirements.</li></ul>
## A. Food Safety Capacity Building

<table>
<thead>
<tr>
<th>Key Areas for investment</th>
<th>Key aspects for consideration</th>
<th>Plans</th>
<th>Relevant Article in the Azerbaijan Food Safety Legislation</th>
<th>Specific topic to be covered</th>
<th>Specific topic required activities/actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1. Food Safety Systems (Inputs &amp; Resources)</td>
<td>A.1.3 Laboratories network</td>
<td>Laboratory - Infrastructure/ equipment/ methods upgrade/supplies &amp; Accreditation to ISO standards</td>
<td>Ensure ISO 17025:2017 accreditation for specified tests</td>
<td>Upgrading Official laboratory(s) &amp; Designating National Reference Laboratory(s)</td>
<td>Laboratories achieving ISO 17025:2017 accreditation for specified tests &amp; officially nominate national reference laboratory(s) for testing and molecular sequencing for specified food safety hazards (e.g. pathogens, residues, antimicrobials, etc), local proficiency testing capability, new methods, accreditation of tests. Upgrade laboratory facilities and equipment for specified tests in line with ISO 17025:2017 requirements. Define improvements for laboratory contingency planning in line with ISO 17025:2017 requirements. Define functional collaboration and coordination in sharing capacity and capability for testing and molecular sequencing and collection of isolates and hazards of significance to communicable diseases/zoonoses and other relevant sector related hazards. Training on sample collection/testing for laboratory officials, inspectors, livestock owners, food business operators and other stakeholders.</td>
</tr>
</tbody>
</table>
### A. Food Safety Capacity Building

<table>
<thead>
<tr>
<th>Key Areas for investment</th>
<th>Key aspects for consideration</th>
<th>Plans</th>
<th>Relevant Article in the Azerbaijan Food Safety Legislation</th>
<th>Specific topic to be covered</th>
<th>Specific topic required activities/actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1. Food Safety Systems (Inputs &amp; Resources)</td>
<td>A.1.4 Food business operators (FBOs)</td>
<td>Registration, food standards implementation &amp; Compliance</td>
<td>HACCP and implementation by private sector Food Business Operators (FBOs)</td>
<td>Article 16. Requirements for safety of primary products</td>
<td>FBOs – implementation of good sanitary, hygiene and manufacturing practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Article 17. Requirements for the safety of food and feed products during their production and processing</td>
<td>Development and implementation of HACCP-based procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Article 20. Requirements for the safety of food and feed products during their sale and consumption</td>
<td>Registration of food outlets &amp; Safety related to sale of food and feed products</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Article 23. Requirements for employees of food entities</td>
<td>Requirements for initial and periodic medical examinations; compliance with food safety requirements and rules of personal hygiene during their activities;</td>
</tr>
</tbody>
</table>
### A. Food Safety Capacity Building

<table>
<thead>
<tr>
<th>Key Areas for investment</th>
<th>Key aspects for consideration</th>
<th>Plans</th>
<th>Relevant Article in the Azerbaijan Food Safety Legislation</th>
<th>Specific topic to be covered</th>
<th>Specific topic required activities/actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1. Food Safety Systems (Inputs &amp; Resources)</td>
<td>A.1.5 Qualified resources</td>
<td>Developing curricula and training materials on food safety for higher education institutions establishing pest free zones animal health, food safety &amp; plant health risks/pests/hazards</td>
<td>Build an Institute capacity in HACCP to help private sectors in implementation of their internal control system</td>
<td></td>
<td>Help higher education institutions in development of curricula and training and guideline materials for HACCP.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Availability of internet resources</td>
<td>Providing access to a number of international scientific resources of AFSI Internet resources</td>
<td>Support for membership to internet resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.1.6 Establishing pest free zone</td>
<td>Studying international experience and establishing pest free zone in Azerbaijan</td>
<td>Establishing pest free zone in Azerbaijan</td>
<td></td>
<td>Organize and implement study tour to the relevant country which has the best practise in the field of establishing pest free zone and developing procedures.</td>
</tr>
<tr>
<td></td>
<td>A.1.7 Establishing animal disease-free zone</td>
<td>Studying international experience and establishing animal diseases-free zone in Azerbaijan</td>
<td>Establishing animal diseases-free zone in Azerbaijan</td>
<td></td>
<td>Organize and implement study tour to the country which has the best practise in the field of establishing animal diseases-free zone and developing the required procedures.</td>
</tr>
</tbody>
</table>
## A. Food Safety Capacity Building

<table>
<thead>
<tr>
<th>Key Areas for Investment</th>
<th>Key aspects for consideration</th>
<th>Plans</th>
<th>Relevant Article in the Azerbaijan Food Safety Legislation</th>
<th>Specific topic to be covered</th>
<th>Specific topic required activities/actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.2. Food Safety Control Functions</strong></td>
<td>National requirements &amp; Controls and inspections &amp; Implementation of risk-based food safety inspections and regular reporting</td>
<td>Define implementation of risk-based food safety, veterinary and plant health inspections, and regular reporting in compliance with national legislation</td>
<td></td>
<td></td>
<td>There is a draft of risk-based food safety inspections Rules. Implement Training for inspectors in risk-based inspections. Training needs assessment and training plan and timetable.</td>
</tr>
<tr>
<td></td>
<td>Import of food and food products &amp; Controls and inspections</td>
<td>Building/construction of Border Inspection Posts (BIPs)</td>
<td></td>
<td></td>
<td>Introduce Risk based import controls system &amp; building/construction of Border Inspection Posts. IT system, human capacity, develop SOPs for documentary, identity, and physical checks. Implement training for BIPs officials in controls and inspections based on training needs assessment and training plan.</td>
</tr>
<tr>
<td></td>
<td>Equipment &amp; toolkits requirements &amp; upgrades</td>
<td>Identification and provision of the required equipment and upgrades</td>
<td>Article 17. Requirements for the safety of food and feed products during their production and processing</td>
<td>Implementaion of HACCP-based procedures</td>
<td>Implement trainings on HACCP procedures and using equipment for product sampling - training needs assessment and training plan. Purchase of equipment for AFSI and AFSA, inspection bags, tablets, and cameras to support inspection services.</td>
</tr>
<tr>
<td></td>
<td>Improvements to Animal Identification &amp; Registration System (AIRS)</td>
<td>To improve Animal Identification &amp; Registration System</td>
<td></td>
<td></td>
<td>Define improvements to AIRS with specific reference to obligations of livestock owners and keepers module &amp; interaction with AIRS existing multiple modules; Define improvements to the existing AIRS Guidance for livestock owners &amp; AIRS Public awareness (communication) plan; Identify functional linkages between AIRS application and Animal Disease Notification and Outbreak Management application; Define AIRS contribution to harmonisation of National Legislation with the new international requirements (e.g. EU), and relevant international standards with specific reference to obligations of livestock owners and keepers. Animal Identification &amp; Registration System (AIRS) - Define training needs; Implement training and simulation exercises for officials, livestock owners and keepers and other stakeholders.</td>
</tr>
</tbody>
</table>