



Food and Agriculture
Organization of the
United Nations



STANDARDS *and* TRADE
DEVELOPMENT FACILITY

MULTILATERAL TRUST FUND

ENHANCING CAPACITY FOR FOOD SAFETY MANAGEMENT IN THE KYRGYZ FRUIT AND VEGETABLE INDUSTRY

STDF/PG/517 (MTF/IND/198/STF)

KYRGYZSTAN

PROJECT FINDINGS AND RECOMMENDATIONS

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
ROME, 2025**

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned. The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

Enhancing capacity for food safety management in the Kyrgyz fruit and vegetable industry

STDF/PG/569 (MTF/KYR/021/STF)

Terminal Report



(Credit: ©FAO).

The Food and Agriculture Organization of the United Nations expresses its great appreciation to all those who assisted in the implementation of the project by providing information, advice and facilities.

Project Information

STDF/PG/569
Title
Enhancing Capacity for Food Safety Management in the Kyrgyz Fruit and Vegetable Industry
Implementing agency
Food and Agriculture Organization of the United Nations (FAO)
Partners
Ministry of Water Resources, Agriculture and Processing Industry, Department of Chemicalization, Plant Protection and Plant Quarantine; Ministry of Health (MoH), Department of Disease Prevention and State Sanitary and Epidemiological Surveillance; Ministry of Economy and Commerce, Centre for Standardization and Metrology; Association of Fruit and Vegetable Enterprises (AFVE); Training and Extension System (TES) Centre.
Startdate
1 January 2020
End date
30 June 2024
Beneficiaries
Fruit and vegetable farmers and food processing businesses, private/public consulting agencies and service providers, national food safety consultants and experts, official control and competent state authorities on food inspection.
Budget
STDF contribution: USD 569 999

Table of Contents

1.	EXECUTIVE SUMMARY	6
2.	OVERVIEW OF THE PROJECT	7
3.	PROJECT IMPLEMENTATION.....	9
4.	ACHIEVEMENT OF RESULTS.....	9
5.	CROSS-CUTTING AREAS	15
6.	FINANCIAL OVERVIEW (PROVISIONAL)	17
7.	CHALLENGES, RISKS AND MITIGATION.....	17
8.	COMMUNICATION AND OUTREACH.....	18
9.	SUSTAINABILITY AND FOLLOW-UP.....	21
10.	LESSONS LEARNED.....	21
11.	RECOMMENDATIONS	22

List of abbreviations

AFVE	-	Association of Fruit and Vegetable Enterprises
CIS	-	Commonwealth of Independent States
Codex	-	Codex Alimentarius
EAEU	-	Eurasian Economic Union
FAO	-	Food and Agriculture Organization of the United Nations
FBOs	-	Food business operators
FSMS	-	Food Safety Management System
GAP	-	Good Agricultural Practice
GHP	-	Good Hygiene Practice
GIZ	-	Deutsche Gesellschaft für Internationale Zusammenarbeit
GMP	-	Good Manufacturing Practice
HACCP	-	Hazard Analysis in Critical Control Points
HRBA	-	Human Rights-based Approach
IYFV	-	International Year of Fruits and Vegetables
LoA	-	Letter of Agreement
MoA	-	Ministry of Water Resources, Agriculture and Processing Industry
MoE	-	Ministry of Economy and Commerce
MoH	-	Ministry of Health
PPG	-	Project preparation grant
PSC	-	Project Steering Committee
SPS	-	Sanitary and phytosanitary
STDF	-	Standards and Trade Development Facility
TES Centre	-	Training and Extension System Centre
UN	-	United Nations
UNDP	-	United Nations Development Programme
USAID	-	United States Agency for International Development
WFP	-	World Food Programme
WHO	-	World Health Organization
WTO	-	World Trade Organization

1. EXECUTIVE SUMMARY

Kyrgyzstan's accession to the Eurasian Economic Union (EAEU) in 2015 presented an opportunity to increase exports of Kyrgyz food products to EAEU member states. Recognizing the importance of this, the government prioritized the promotion of agricultural exports, focusing on strengthening value chains through improved logistics, border control, and marketing strategies, particularly in the fruit and vegetable sector. Despite these efforts, there are challenges in realizing the sector's full potential, including: (i) insufficient knowledge of food safety regulations and practices, and good agricultural practices (GAP) among food producers; (ii) limited technical capacity of public authorities to enforce regulations and carry out inspections; and (iii) the limited number of qualified experts in the country to provide advisory services on food safety.

This project, entitled "Enhancing capacity for food safety management of the Kyrgyz fruit and vegetable industry", funded by the Standards and Trade Development Facility (STDF), aimed to increase the competitiveness and sustainability of the Kyrgyz fruit and vegetable industry, support increased sales to high-value markets, and bring about a positive impact on the livelihoods of smallholder farmers and food processors. The project budget granted by the STDF was USD 569 999. The project was the outcome of an STDF project preparation grant (PPG) for Kyrgyzstan that was implemented during March-September 2017 ([STDF/PPG/569](#)).

The project started in January 2020 and ended in June 2024, after two no-cost extensions were requested and granted. Throughout the project's timeline, delays were encountered due to unexpected circumstances resulting from the COVID-19 pandemic, which changed the priorities of government authorities and businesses.

The main stakeholders of the project in the country included the Ministry of Water Resources, Agriculture and Processing Industry (MoA), Department of Chemicalization, Plant Protection and Plant Quarantine; Ministry of Health (MoH), Department of Disease Prevention and State Sanitary and Epidemiological Surveillance; Ministry of Economy and Commerce (MoE), Centre for Standardization and Metrology, Association of Fruit and Vegetable Enterprises (AFVE), and the Training and Extension System (TES) Centre.

Through the project:

- The capacity of the Kyrgyz fruit and vegetable industry to adopt Good Agricultural Practices (GAP), Good Manufacturing Practices (GMP), Good Hygiene Practices (GHP) and hazard analysis and critical control points (HACCP) was enhanced through theoretical and hands-on trainings to 1 560 farmers (704 women and 856 men) and 86 processor staff (43 women and 43 men) from 37 fruit and vegetable processing companies in five regions. Seven workshops were conducted to raise awareness on food safety in the fruit and vegetable sectors and to introduce HACCP and the importance of food safety practices. Practical training materials and guidance documents were also distributed to the food processors and farmers.
- The capacity of Kyrgyz service providers to provide advice and training on food safety, GAP, GHP and HACCP and relevant international standards increased. Forty-five national food safety experts (31 women and 14 men) were trained as Master or Assistant Trainers to deliver training on GAP and GMP for farmers and on GHP, GMP and HACCP for food processors on the basis of the EAEU Technical

Regulations and texts of the Codex Alimentarius (Codex). Customizable, standardized training materials were provided for their use in Kyrgyz and Russian languages.

- The capacity of competent authorities was enhanced to inspect and certify GAP and HACCP-based systems in the fruit and vegetable processing industries in line with the EAEU Technical Regulations and Codex texts. Two sets of trainings were provided to 24 inspectors in 2022 (eight men and 16 women), and 25 inspectors (21 women and four men) in 2024. A guideline on inspection of fruit and vegetable processing industries, in compliance with HACCP and sanitary and hygiene requirements, was drafted and submitted to MoH. The guideline provides practical advice on the inspection of food businesses on their compliance with FSMS/Food Hygiene/HACCP control based on technical regulations of the Customs Union (TR/021/2011) and the legislation of Kyrgyzstan and references to the Codex Alimentarius guidelines and practices. It includes examples on the inspection of general food safety compliance by fruit and vegetable processing industry. Legal support was provided on a draft food law, and on how to integrate HACCP inspections into the legislation.

Moving forward, to ensure the sustainability of the project results, project partners should work closely with the responsible ministries to ensure the transitional enforcement of the new food law and relevant secondary legislation. FAO aims to continue the support for the MoH on the draft food law, and its enforcement once it is approved. Fruit and vegetable food processors could be further supported with more hands-on training and consultations at their production premises. It is also recommended to conduct a deeper analysis of the market and pilot various solutions where farmer and processor collaborations are further enhanced, with governmental incentives and leadership in managing the collaboration amongst the actors.

Finding synergies and building on lessons learned from the STDF-funded project, FAO expanded the coverage of a pipeline TCP project that explores agribusiness centre development in rural areas and added food safety training and collaboration elements. The training materials developed under the STDF-funded project—customizable for different skill levels and product groups—along with the trained experts, are expected to be utilized in the upcoming pipeline project. Additionally, technical universities have expressed interest in integrating these materials into their curricula and involving the master trainers as guest lecturers for their students.

2. OVERVIEW OF THE PROJECT

The agricultural sector in Kyrgyzstan is experiencing strong growth, with a notable 16.9 percent contribution to the GDP in 2023, driven by the increasing demand for both fresh and processed fruit and vegetable products. This growth not only supports over 600 000 individuals engaged in agriculture across a rural population of 66 percent, but also fosters a diversified value chain and an export-oriented market, with destinations including the Russian Federation, Central Asia, the Middle East, Eastern Europe, and China. With a cultivated area spanning 1 247 million hectares, fruits and vegetables occupy 11.5 percent, alongside more than 40 fruit and vegetable processing industries and around 300 small-scale producers, presenting abundant opportunities for further expansion and development.

Kyrgyzstan's accession to the EAEU in 2015 presented an opportunity to increase exports of Kyrgyz food products to member states. For this reason, the government prioritized the promotion of agricultural exports, focusing on strengthening value chains through improved logistics, border control, and marketing strategies. Challenges exist in realizing the full potential of these exports, which include insufficient knowledge of food safety regulations and practices and GAP among food producers, limited technical capacity of public authorities to enforce the regulations and inspections, and a limited number of qualified experts in the country to provide advisory services on food safety.

One significant obstacle is the limited technical capacity of Kyrgyz food producers. This results in subpar product quality and low productivity, hindering competitiveness in the EAEU market. Non-compliance with phytosanitary measures has led to product returns, further impacting exports.

Limited access to information and advisory support for farmers and suppliers on GAP and proper fertilizer application exacerbate these issues. Small and medium-sized food enterprises struggle to comply with EAEU regulations on food safety, packaging materials, labelling, and traceability systems. The lack of necessary methodological and practical materials (particularly for fruit, vegetable, and berry producers), a shortage of competent technical experts in public and private consulting agencies on food safety management systems (HACCP and private standards including ISO 22000 and FSSC 22000) and a lack of up-to-date training programmes contribute to these challenges.

Government authorities also face limitations in supporting food business operators (FBOs) in adopting HACCP. The current inspection system, primarily focused on end products, requires reform to align with international standards. Food inspectors often lack the necessary technical education, knowledge, and experience to effectively evaluate HACCP systems.

Successful implementation of food safety management systems in accordance with international recommendations (e.g. HACCP, GHP, GMP, GAP) is essential for compliance with the EAEU and other international sanitary and phytosanitary (SPS) measures. Kyrgyz food producers need clear guidance and an enabling legislative environment to address these challenges and fully leverage the opportunities presented by EAEU membership.

The project "Enhancing capacity for food safety management of the Kyrgyz fruit and vegetable industry", funded by the STDF and implemented by FAO, addressed the recognized challenges by improving technical capacity, promoting sustainable agricultural practices, enhancing food safety measures, increasing the number of qualified experts, and contributing to the improvement of the regulatory framework. The project benefited from completed/ongoing projects and activities in the country led by FAO and other implementing partners, and it targeted a gender-sensitive approach to value chain development.

3. PROJECT IMPLEMENTATION

The project was operational from January 2020 and ended in June 2024. The main implementing agency of the project was FAO, with operational management by the FAO Kyrgyzstan Country Office, and technical management by the food safety team in FAO's Regional Office for Europe and Central Asia. The FAO core project team included a food safety and consumer protection officer, international food safety consultant, national project coordinator, national operations specialist, national procurement specialist, and several international and national technical experts on food safety management systems.

The inception of the project activities got off to a slower start than originally planned, due to the COVID-19 pandemic. During the first task force meeting on 24 March 2020, it was suggested to revise the workplan activities starting in March, adjust to teleworking and postpone ongoing in-person activities due to the state of emergency declaration and inability to travel. In-person missions were able to start only in early 2022, when the government removed the restrictions on international travel. The COVID-19 pandemic also affected the priorities of government authorities and businesses. Furthermore, institutional changes in the relevant governmental institutions in Kyrgyzstan took place to restructure the roles and responsibilities for food safety management.

To ensure the successful and full delivery of the planned activities, two no-cost extensions were requested from the STDF Secretariat, for a total of 18 months from the initial plan, with the project ending on 30 June 2024.

To ensure quality control, stakeholder engagement and expertise, and independent oversight of the delivery of activities, a Project Steering Committee (PSC) was established with the membership of the following key partner representatives:

- Ministry of Water Resources, Agriculture and Processing Industry, Department of Chemicalization, plant protection and plant quarantine;
- Ministry of Health, Department of disease prevention and state sanitary and epidemiological surveillance;
- Ministry of Economy and Commerce, Centre for Standardization and Metrology; and
- FAO technical officer and the core project team.

FAO contracted the following service providers to carry out tasks and activities:

- AFVE: Provision of technical support to collect baseline information and ensure collaboration with Kyrgyz fruit and vegetable producers for enhancing food safety management capacity.
- TES Centre: Delivery of trainings on food safety management for farmers and processors in the fruit and vegetable sector in the Kyrgyz Republic.

4. ACHIEVEMENT OF RESULTS

The project had three key Outputs:

Output 1: Capacity of Kyrgyz fruit and vegetable industry to adopt GAP, GHP & HACCP enhanced. The key activities under this Output were:

- 1) Assessment of the capacities of the producers and processors on food safety management systems (FSMS);
- 2) Development of supporting materials (manuals, guidelines, templates for record keeping); and
- 3) Food safety management trainings at farms and processing sites.

Output 2: Capacity of Kyrgyz service providers to provide advice, training and expert inputs on risk assessment, GAP, GHP & HACCP and relevant international standards increased. The key activities under this Output were:

- 1) A standardized training plan that meets international standards;
- 2) Trainings on: a) risk assessment; b) GAP, GHP, HACCP; and c) modern inspection/auditing techniques; and
- 3) Awareness-raising campaigns on food safety.

Output 3: Capacity of competent authorities to inspect and certify GAP & HACCP based systems in Kyrgyz fruit and vegetable processing industries as being compliant with the regulatory requirements of the EAEU enhanced. The key activities under this Output were:

- 1) Development of technical capacities of MoA, MoH and MoE on risk-based inspections;
- 2) Revision of inspection procedures & checklists; and
- 3) Review and update of FSMS relevant regulations.

4.1 Project goal and outcome-level results

The overall aim of the project was to increase the competitiveness and sustainability of the Kyrgyz fruit and vegetable industry resulting in increased sales to high-value markets to positively impact the livelihoods of smallholder farmers.

This project proposal was the outcome of an STDF project preparation grant (PPG) for Kyrgyzstan that was implemented during March–September 2017 (STDF/PPG/659). Considering the time gap between the project proposal and its operationalization, to ensure the indicators were set accurately, a revision and baseline study was conducted at the beginning of this project. The majority of the indicators were valid, except the ones that were relevant to the international trade data and inspection results due to the lack of uniform data on the statistics of the Kyrgyz supervisory authorities, and the presence of a moratorium on food inspections. Despite the limitations, in the overall achievements, the project facilitated partnership building with government agencies and food businesses, and support was provided to build capacities of the key government groups responsible for food safety through the Outputs and Activities outlined in the following section.

The project improved the technical capacities of producers, trainers and public institutions on food safety management systems on the fruit and vegetable value chain to provide safe and healthy food in the country and to comply with EAEU and other international sanitary and phytosanitary (SPS) requirements.

4.2 Output 1. Capacity of Kyrgyz fruit and vegetable industry to adopt GAP, GHP & HACCP enhanced

In order to establish a baseline condition, the project assessed the current situation of fruit and vegetable processing sector in Kyrgyzstan in collaboration with the AFVE via a Letter of Agreement (LoA). This included surveys and interviews with the representatives

of 43 member companies of AFVE and their suppliers across five regions (Chuy, Issyk-Kul, Osh, Jalal-Abad and Batken). The assessment analysed the status of food safety systems, identified gaps and risks, and determined the sector's needs in relation to Technical Regulation of the Customs Union on Safety of Food Products (TR/021/2011) and Codex Alimentarius texts, particularly on General Principles of Food Hygiene (CXC 1-1969).

Two reports were produced in relation to this Output: the first was an overview of the infrastructure and practices of food safety management by farmers and businesses in the fruit and vegetable industry in Kyrgyzstan, and the second was an analysis of the fruit and vegetable processing industry in Kyrgyzstan.

The reports provided a detailed review of food safety management systems in Kyrgyzstan, including information from the surveyed FBOs and their smallholder suppliers. This analysis included a description of the institutional framework, legislation, conformity assessment, and identified areas for improvement. Recommendations were developed based on the findings, addressing issues such as legal compliance, quality infrastructure gaps, knowledge deficiencies, and financial support.

The AFVE facilitated an agreement with its member food processor companies to agree to be beneficiaries of the project and attend trainings. Seventy percent of the companies (30 out of the 43) confirmed the need for training on technical regulations and food safety systems and agreed to take part in the project.

To support compliance with TR/021/2011 of the EAEU, the FAO project team provided guidance to the Ministry of Health (MoH) on amending two record-keeping templates and checklists for farms and processors. Additionally, a guideline for implementing HACCP systems in fruit and vegetable processing enterprises was developed, incorporating international guidelines and product-specific food safety information. This guideline will be used as a future trainers' manual and include international guidelines on fruit and vegetable processing and product-specific food safety information (e.g. can, juice, dry, etc.) and international resources on where to find these materials.

4.3 Output 2. Capacity of Kyrgyz service providers to provide advice, training and expert inputs on risk assessment, GAP, GHP & HACCP to international standards increased

The FAO project team reviewed the existing materials in the country on food safety management in food businesses and on public authority food control procedures that were developed as part of nine previous development projects and initiatives. Some of the guidance documents developed on FSMS by FAO, the European Union, World Bank, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), United States Agency for International Development (USAID), and the United Nations Development Programme (UNDP) were found useful and were indeed used during the course of this project. At public authority level, there were no adopted guidelines on inspecting food businesses, nor was there any guidance available for the food businesses to comply with the food safety requirements of the TR/021/2011 or the Codex General Principles of Food Hygiene (CXC 1-1969). The guidelines developed through the project were expected to be used by the MoH for official inspections as of 2025.

Under the LoA, the AFVE, in collaboration with FAO, developed a training needs assessment survey for the private sector and conducted it through in-person meetings and

calls in 2021. At the beginning of the project, 11 out of 43 surveyed enterprises had already set up a HACCP system and continued to implement, out of which ten also implemented the ISO 22000. Seventy percent stated their need for training on technical regulations and food safety systems.

In November 2022, the FAO project team convened a consultation meeting on the way forward for a standardized training plan for food safety management along the fruit and vegetable supply chain. A draft plan was presented, and bottlenecks and potential solutions were identified. Forty-one participants attended the meeting, consisting of representatives from the MoH, MoA, MoE, the AFVE, Agrarian University, and Kyrgyz Technical University.

At the time of the initial phase of project implementation, the existing laws did not mandate businesses to implement HACCP or GAP, while the new draft food law refers to HACCP. None of the ministries are legally able to establish and host an official certification system, but it may be possible if the new draft food law is approved by the parliament. Nevertheless, it was feasible to develop a standardized set of training materials that are customizable for different levels and audiences (future trainers, processors and farmers).

Based on the consultation outcomes, the FAO project team finalized a master training plan for the delivery of the training and the selection criteria for the trainers. A call for trainers was sent out to contacts in the country. The shortlisted candidates from the applicants were grouped into potential "Master Trainers" and "Assistant Trainers" in GAP and GMP for farmers, and GHP, GMP and HACCP trainers for food processors. In the shortlist there were 18 trainers for farmers (11 women, seven men) and 18 trainers for food processors, of whom all were women.

The potential trainers and other interested relevant government personnel, totalling 45 food safety experts from the MoH, MoE, MoA, Agrarian and Technical Universities, TES Centre and the AFVE, as well as freelance experts, received training from the FAO international experts in March 2023. Based on set criteria and availability, a final set of sixteen trainers (ten women, six men) was selected to deliver the training to farmers and processors in five oblasts (Chui, Osh, Issyk-Kul, Jalal-Abad, Batken).

Training materials for two groups were prepared, and both sets were made available in Kyrgyz and Russian. FAO international experts developed the training curricula and sets of training materials on FSMS for farmers (GAP, GMP) and food processors (GAP, GMP, GHP, HACCP) by reviewing and building on similar existing training materials. The master and assistant trainers worked together with FAO to customize them based on products and added information on: i) Technical regulations of the EAEU (TR 021, TR 022, TR 005, TR 029, focusing on fruit and vegetable products); ii) Codex texts (Code of Practices on Food Hygiene for fresh fruits and vegetables, Standards for fresh fruits and vegetables); and iii) published FAO/World Health Organization (WHO) materials. The developed materials are available at the following links:

- GAP training materials: <https://tinyurl.com/yf2rdzh9>.
- HACCP training materials: <https://tinyurl.com/3e4ts9jy>.

The materials are customizable to different levels and product groups, and updatable based on new requirements to come in the future. Ministries and service providers can use the materials to train new trainers. The technical universities consulted were also

interested in integrating the developed training materials into their educational curricula, and in involving the master trainers as guest lecturers to their students as well.

For the successful roll-out of food safety management system training for farms and processing sites, an LoA with the TES Centre was signed. Under the agreement, the TES Centre revalidated the needs and expectations of the fruit and vegetable processors through phone surveys and in-person visits. As some businesses were not in operation at the time of contact, in agreement with FAO, the TES Centre identified new beneficiary fruit and vegetable processors. Through interviews with food processors and agronomists in the regions, they identified farmers, particularly the suppliers of the identified processors.

Farmers were also surveyed on their knowledge of the technical topics, and their expectations from the training. The survey also provided important information on production capacity, crop type, and at which markets the farmers sell their products. Fruits and vegetables produced in the country are mostly small-scale and fragmented, and the type of produce varies from one year to the other. Farmers mainly focus on the production of goods that are most profitable and demanded from the market. Table 1 provides information on where, what, and how much is produced as well as the main distribution channels. Many farmer communities produce a wide variety of goods in order to achieve as much revenue from sales on the local market as possible. Rarer is the production of larger-scale specific varieties of products, aiming on export as well as large-scale local markets and food processing companies. Focus remains on export and wholesale production for food processors.

Table 1: Crop Cultivation and Sales Market Data

Region	Main cultivated crop (by district)	Cultivated area by crop (hectares per farmer)	Sales market
<i>Osh</i>	Arvan: pomegranate, potatoes, maize. Nookat: apples, cherry, carrots. Kara-Suu: sweet corn, tomatoes, carrots, onions.	Pomegranate: 0.2. Apple tree: 0.05-0.25. Sweet corn: 0.16.	Local market; Russian Federation, Kazakhstan, Uzbekistan
<i>Batken</i>	Kadamjai: Apricot, Apple, cherry. Min-Chynar (Kadamjay distr): rice.	Apple, cherry, and apricot: 0.15–0.35. Rice: 0.5.	Local market, Osh, Bishkek, Russian Federation, Kazakhstan
<i>Jalal-Abad</i>	Suzak, Bazar-Korgon: nut orchards, apples, and potatoes. Nookan: walnuts, pistachios. Askay: plum, raspberries, potatoes, vegetables.	Plum: 0.135. Nut orchards: 0.2. Nut groves: 0.86–0.9.	Local market, Bishkek, Russian Federation, Kazakhstan
<i>Issyk-Kul</i>	Ananyevo: apple, pear trees. Ak-Suu: potato, garlic, currants. Ton: apricot.	Apples, apricots: 0.16–0.35. Potatoes: 0.65–1.2. Garlic: 0.85.	Local market, Bishkek wholesale; Russian Federation, Kazakhstan
<i>Chui</i>	Alamedin: strawberries. Sokuluk: strawberries, raspberries, sweet pepper. Zhayyl and Moskovsky: tomato, tomato paste.	Strawberry: 0.7 (in average). Raspberries: 0.35. Sugar beet: 1.5. Tomatoes: 3.3 (in average). sweet pepper 1.	Local market, food processing companies, Bishkek wholesale; Russian Federation, Kazakhstan

The training programme was successfully implemented by the selected trainers and with the assistance of TES Centre from July to November 2023. In total, 75 training sessions

on GAP were provided to 1 560 farmers (704 women, 856 men), and five sessions on HACCP were provided to a total of 86 processor staff (43 women and 43 men) from 37 processing companies in Batken, Osh, Jalal-Abad, Issyk-Kul and Chuy regions. Direct advice and consultations on FSMS practices were provided to 22 personnel in ten fruit and vegetable processing enterprises in Batken, Osh, Jalal-Abad, Issyk-Kul, and Chuy.

The knowledge gain of the trainees was significant. Average correct answers from pre- to post-training surveys showed that the knowledge of farmers increased from 21.8 percent to 78.8 percent at the end of the training. Farmers mastered the training materials well and improved their knowledge in the field of food safety and GAP. The trained processor staff took an exam at the end of the training activities. In total, 87 percent of participants achieved above 80 points out of 100, 12 percent scored 70-80 points, and only one participant got lower than 50 points.

Throughout the training development process, FAO experts conducted several backstopping missions to Kyrgyzstan and its regions, including missions to accompany the trainers in the delivery of the first trainings. They mentored the teams of trainers; coordinated and monitored the organization of trainings; provided advice and technical support to the team; and visited processing companies to provide direct advice and consultations on FSMS practices.

During the course of the project, in addition to the workshops and trainings carried out directly under the project, FAO promoted the project and its progress, and raised awareness on food safety in fruit and vegetable sectors at several events on food safety.

Table 2: Events at which awareness was raised on the fruit and vegetable sector in Kyrgyzstan

Date	Title	Target audience	Number of participants
7 June 2021	World Food Safety Day, 7 June 2021 "Food Safety – everyone's business"	Government authorities, food producers, students, consumers	35 (14 men – 21 women)
31 May 2022	World Food Safety Day 7 June 2022, "Safer food – better health"	Government authorities, United Nations (UN) agencies, development partners, food producers, students, consumers	64 (16 men – 48 women)
31 October 2022	Technical workshop on food safety management and implementation of HACCP system	Government authorities, food producers, small-medium scale food businesses	48 (15 men – 33 women)
28 November 2022	Technical workshop on food safety management system	Government authorities, food catering enterprises including catering companies, cafés, restaurants and trading centres	34 (9 men – 25 women)
29 May 2023	World Food Safety Day, 7 June 2023, "Food standards save lives"	Government authorities, food producers, students, consumers	55 (6 men – 49 women)
30 May 2023	University lectures on World Food Safety Day, 7 June 2023, "Food standards save lives"	Students, lecturers, professors, food producers, government authorities	85 (40 men – 45 women)
1 December 2023	FAO/WFP/WHO joint event: the Second Workshop on Food Systems, Food Security	Deputies and employees of parliament	32 (20 men – 12 women)

Date	Title	Target audience	Number of participants
	and Nutrition for Deputies and Employees of the <i>Jogorku Kenesh</i> (parliament) of Kyrgyzstan		
7 June 2024	World Food Safety Day, 7 June 2024, "Food Safety: Prepare for the unexpected"	Government authorities, food producers, students, consumers	70 (38 men – 32 women)

4.4 Output 3. Capacity of competent authorities to inspect and certify GAP & HACCP based systems in Kyrgyz fruit and vegetable processing industries as being compliant with the regulatory requirements of the EAEU enhanced

The international and national experts on food safety management had several consultative meetings with the MoH, MoE and MoA to work on the specific needs on risk-based inspection procedures in Kyrgyzstan. The team agreed on the updated outline of the guidelines on inspection of fruit and vegetable processing industries in compliance with the principles of HACCP and sanitary and hygiene requirements. The guideline was submitted for final review of the MoH. The guideline provides practical advice on the inspection of food businesses on their compliance with FSMS/food hygiene/HACCP, based on technical regulations of the Customs Union (TR/021/2011), the legislation of Kyrgyzstan and references to the guidelines and texts of the Codex. It includes examples on the inspection of general food safety compliance by the fruit and vegetable processing industry, elaborating on HACCP plans and supervision of critical control points traceability of products, training of the staff on GHP, sanitation, and food safety.

In accordance with requests from the government and parliament in providing legal support to have necessary laws and regulations in place, FAO provided comments and inputs for the Draft Law on the Provision of the Safety of Food Products. As of the end of the project, the law was still with the Parliament for consideration. Two draft inspection checklists on fruit and vegetable products were developed based on the request of the MoH. A summary of a proposed approach for the improvement of HACCP requirements and compliance in Kyrgyzstan was submitted to the MoH for their further consideration.

To increase the capacity of food inspectors, FAO international experts delivered two sets of trainings in 2022 (24 participants: eight men–16 women) and 2024 (25 participants: four men–21 women) to relevant staff. Trainings were structured around: i) Regulatory requirements on the HACCP, GHP and GAP based on international standards (Codex Alimentarius, EAEU TR/021/2011); ii) Food inspections and guidance to food producers on HACCP and GHP; and iii) Training of trainers on food safety and HACCP inspection and audit skills development for 25 staff members of relevant state agencies/officials involved in the food control system.

5. CROSS-CUTTING AREAS

5.1 Gender

In Kyrgyzstan, rural women are heavily involved in informal and seasonal work in the agricultural and food production industries including fruit and vegetable picking and preservation, where food safety management practices are crucial and need to be applied properly. The project adopted a lens of gender awareness, meaning that gender concerns were continuously integrated into relevant aspects of the project's life cycle to ensure that

the participation of men and women were established and monitored, and that women and men equally benefited from the contributions of the project to the value chain, in line with the objectives of the FAO Policy on Gender Equality 2020–2030 and the STDF's Gender Action Plan.

FAO worked to ensure that its gender mainstreaming and Human Rights-based Approach (HRBA) were followed during the implementation period. The overall project monitoring and evaluation framework were made gender responsive, and indicators were proposed to measure progress.

In June 2022, on the celebration of the National Rural Women's Day, FAO, together with the MoA, held an open day dedicated to gender issues in agriculture. This initiative was carried out to raise the awareness of the population, national partners and donors about the implementation of gender policy in Kyrgyzstan and the implementation of joint projects of FAO, other UN agencies and the MoA in the field to strengthen the economic and social potential of rural women. During the event, the FAO project team presented on STDF project achievements and informed the audience on the analysis of the fruit and vegetable sector, including gender aspects.

In collaboration with other FAO projects on food control and food safety area and the Centre for Standardization and Metrology under the MoE, in October and November 2022 the following joint events were conducted, with the participation of women entrepreneurs:

- Technical workshop on food safety management and the implementation of the HACCP system for Kyrgyz food processing industries and business operators, and small and medium-sized food processing entities.
- Technical workshop on food safety management system for Kyrgyz food catering enterprises including catering companies, café and restaurants and trading centres.

During the farmer and processor training in July, August, September and October 2023, the training beneficiaries/participants totalled 898 men and 748 women.

Table 3: Gender balance of the trained fruit and vegetable farmers and processors in 2023

Region	Total number of farmers	Gender balance M F	
Osh	299	152 (50.8%)	147 (49.2%)
Batken	359	176 (49%)	183 (51%)
Jalal-Abad	378	239 (63.2%)	139 (36.8%)
Issyk-Kul	229	77 (34%)	152 (66%)
Chui	295	212 (72%)	83 (28%)

Region	Total number of processing company personnel	Gender balance M/F	
Osh	15	13 (86.6%)	2 (13.4%)
Batken	20	7 (35%)	13 (65%)
Jalal-Abad	19	9 (47.4%)	10 (63.6%)
Issyk-Kul	17	9 (52.9%)	8 (47.1%)
Chui	15	5 (33.3%)	10 (76.7%)

5.2 Environment, Biodiversity and Climate Change

During project implementation, the FAO project team followed all of the rules and regulations for mainstreaming environmental sustainability, biosecurity and climate change. Good agriculture, hygiene and manufacturing practices promoted in the trainings for farmers and processors help to protect the environment and biodiversity, reduce food losses along the production line and help to use resources responsibly and efficiently.

6. FINANCIAL OVERVIEW (PROVISIONAL)

	Contribution from STDF	In-kind contribution*	Total
Total project budget (USD)	569 999	176 210	746 210

*In-kind contribution refers to the estimated monetary value of contributions made by relevant public authorities.

7. CHALLENGES, RISKS AND MITIGATION

During the full project implementation period, the FAO project team faced limitations due to the COVID-19 pandemic from 2020–2022. Adjustments were made to the modality of implementation of the activities. Meetings with government authorities and the AFVE for regular communication and information collection were switched to online and phone calls. Interviews with the competent authorities were also conducted by online and phone. Some of the planned missions by the international FAO team were postponed until the middle of April or beginning of May 2022, when restrictions were removed.

From May 2022 until the end of the project, there were no significant challenges or risks to the project activities. There was a close working relationship with the TES Centre, the AFVE, ministerial counterparts, and the FAO international and national experts, who reviewed and provided comments and inputs, and met with state counterparts.

In terms of cooperation, to engage with the fruit and vegetable processors, FAO worked with the AFVE, which was a part of the PPG process. The AFVE provided a satisfactory level of analysis and maintained communication with the processors from 2020 to 2022. In 2023, when training was to be delivered for food processors and farmers, the AFVE and FAO agreed that the AFVE's logistical and technical capacities were not suitable to deliver training in five regions, and FAO called on service providers to submit offers. Among the offers, the TES Centre was selected as the service provider, which was also endorsed by the AFVE. The AFVE had provided a list of 32 member companies that were interested in the training in November 2022; however, when the TES Centre contacted 18 of the

companies to invite them to the training, 14 of them declined, due to factors including a lack of interest or availability, or to the fact that they were no longer operating as fruit and vegetable processors. In agreement with FAO, the TES Centre identified additional fruit and vegetable companies through their own contact database, yellow page directory, website of the relevant authorities (Chamber of Commerce and the Investment Promotion and Protection Agency of the Kyrgyz Republic, Department of Disease Prevention and Sanitary and Epidemiological Surveillance).

Although these companies were not AFVE members, they were relevant to the project as they processed fruit and vegetables, and either already exported, or planning to export to partner countries. In this way, the project managed to achieve its goal of improving capacities among the fruit and vegetable agroprocessing sector.

8. COMMUNICATION AND OUTREACH

Communication materials were developed to promote the project for use at country level. A promotional video and a good practice brief were drafted. FAO websites were updated accordingly.

A promotional video on the training and the success of the project was prepared: <https://youtu.be/XO3nIfzL3Sg>.

The FAO project team prepared a project description, and it was published on the STDF official page. In addition, news articles on the ongoing project activities were published on the webpages of FAO, the UN, and social networks, which are accessible at following links:

- <https://tinyurl.com/5y7tjudw>;
- <https://tinyurl.com/bjxc2vty>;
- <https://tinyurl.com/mr3ze7by>; and
- <https://tinyurl.com/fnpuz5w>.

The UN General Assembly designated 2021 the International Year of Fruits and Vegetables (IYFV), which was an important opportunity for the project to be promoted at national, regional and global level. FAO worked closely with national and regional communication teams to ensure the project's progress was a part of the IYFV activities in Kyrgyzstan.

Representatives from food businesses, as well as trade and health promoters were informed on the project activities on food safety management systems in the fruit and vegetable industry as part of the IYFV activities that took place during the Consultation Workshop on the Safety and Health of Food Products at World Food Safety Day, 7 June 2021. Topics included: (i) the importance and role of the application of a healthy diet to the population; (ii) relevant Codex texts; and (iii) the basic provisions of technical regulations of the EAEU in the field of food safety, including the right of consumers to obtain information on food products, as well as on measures to prevent food poisoning, including botulism. Relevant news articles are accessible at following links:

- Tazabek (Kyrgyz national online news agency): <https://tinyurl.com/2p9z4yjp>.
- Kabar (Kyrgyz national online news agency): <https://tinyurl.com/ynbyvwd8> and <https://tinyurl.com/ynbyvwd8>.
- UN Kyrgyzstan Facebook page: <https://tinyurl.com/yeypya2y>.
- FAO Codex Alimentarius web page: <https://tinyurl.com/52a78adb>

- MoH webpage: <https://tinyurl.com/2r84kfb3>.

A news article on the project activities and media on the Consultation Workshop entitled “Safer Food – Better Health”, which was held on 31 May 2022 on the occasion of World Food Safety Day, was published on the following web pages:

- UN Kyrgyzstan webpage: <https://tinyurl.com/a8yfmd9p> and <https://tinyurl.com/yrvhthtx>.
- UN Facebook page in Kyrgyzstan: <https://tinyurl.com/nhhubpb9>.
- MoH webpage: <https://tinyurl.com/mr2zr5pf> and <https://tinyurl.com/58tpeh89>.
- Kaktus Media: <https://tinyurl.com/3v25spjx>.

Information on conducting GHP/HACCP training held from 6 to 8 June 2022 was published:

- MoH webpage: <https://tinyurl.com/4n472uth>.
- MoH Instagram page: <https://tinyurl.com/65ens95s>.

During the reporting phase, a news article on the project activities and information on the “Consultation meeting on standardized training plan for food safety management along Fruit and vegetable supply chain”, which was held on 30 November 2022 was published on the following webpages:

- 24 KG: <https://tinyurl.com/dxmdmreh>.
- For KG news: <https://tinyurl.com/yedzvcvf>.
- Economist KG: <https://tinyurl.com/3dvsvjbu>.
- Akipress: <https://tinyurl.com/253yu376>.

Information on conducting training sessions on the topic: “Food Safety Management System Control, GHP/HACCP audit and good examples from internationally used practices and trade partners requirements” held on 12–15 July 2022 was published on the:

- MoH webpage: <https://tinyurl.com/4n472uth>.
- MoH Instagram page: <https://tinyurl.com/65ens95s>.

Information on the food safety management system for food processing industries and food catering entities that was conducted in October and November 2022 was published on:

- Akipress <https://akipress.org/goodfood/news:1813960/?from=kgnews&place=maincats>.
- UN Facebook page in Kyrgyzstan: <https://tinyurl.com/hxbmt73a>.
- Akipress: <http://www.tazabek.kg/news:1826370?from=tazabek&place=mainlast>.
- Vecherniy Bishkek: <https://tinyurl.com/57w5vkfj>.

A news article on the project activities and information on the four-day Training of Trainers programme on food safety management along the fruit and vegetable supply chain, which was held from 13 to 16 March 2023, was published on the following web pages.

- KNEWS: <https://tinyurl.com/2rk2cn4r>.
- Agro.kg: <https://tinyurl.com/yucd4y79>.

- AKCHABAR: <https://tinyurl.com/yv86s7ts>.
- FOR.KG: <https://tinyurl.com/23p6y45m>.
- Akipress: http://pressrelease.akipress.org/unews/un_post:29831/?from=portal&place=pressblock.

Information on the technical workshop entitled “Food standards save lives” on the occasion of World Food Safety Day 2023 and a workshop for students on the safety of food products were published on the:

- FAO homepage: <https://tinyurl.com/44mj885x>.
- Akipress: http://pressrelease.akipress.org/unews/un_post:34907/?from=rss.
- Kyrgyz Economic University webpage: <https://tinyurl.com/4s664xyb>.

During the farmer and processor trainings, FAO communications experts and TES Centre experts took high-quality photos and videos. At the time of writing, they were being uploaded to FAO’s media library.

A good practice publication on the outcomes of the training and the improvement of the FSMS practices in the fruit and vegetable chain in Kyrgyzstan was drafted and submitted to the MoH.

During the reporting phase, a news article on the project activities was published. In particular, the media on the training on the implementation of GAP and HACCP in five regions was published on the following webpages:

- AGRO KG: <https://tinyurl.com/2u8jjnjc>.
- FAO Homepage: <https://tinyurl.com/4fsjupvu>.

Information on the “Workshop on Food Systems, Food Security and Safety, Nutrition” for deputies and employees of the Kyrgyz parliament was published on the Office of Parliament web page.

Information on conducting the joint technical workshop entitled “Food safety: prepare for the unexpected” on the occasion of World Food Safety Day on 7 June 2024, was published on the following webpages:

- <https://tinyurl.com/29zn7hz5>.
- <https://tinyurl.com/5dab286f>.

Information on the organization of a seven-day multilevel HACCP inspection (audit) training and train-the-trainer programme was published:

- In English: <https://tinyurl.com/y5n4dvnk>.
- In Russian: <https://tinyurl.com/49nkejv7>.

The information on the organization of the final workshop on main achievements and outcomes of the project was published:

In English: <https://tinyurl.com/3amv3cjz>.
In Russian: <https://tinyurl.com/s5vybmx6>.

9. SUSTAINABILITY AND FOLLOW-UP

Building on the lessons learned and synergies from the STDF-funded project, FAO has expanded the coverage of a pipeline project with a tentative budget of USD 230 000, which looks into agribusiness centre development in rural areas, with added food safety training and collaboration elements. It is intended that the training material developed during this STDF-funded project and the experts trained will be utilized under the pipeline project.

During the project, legal support was provided on a draft food law, and on how to integrate HACCP inspections into the legislation. FAO aims to continue supporting the MoH on the draft food law, and its enforcement once it is approved. The introduction of the HACCP system in production should expand opportunities for producers from Kyrgyzstan to promote their products in foreign markets of the EAEU.

In addition, technical universities consulted during the project expressed interest in integrating the developed training materials into their educational curricula. They also indicated a willingness to involve the trained master trainers as guest lecturers, which would contribute to long-term sustainability by embedding food safety and GAP knowledge within academic institutions and future professional training.

10. LESSONS LEARNED

A range of lessons emerged from the baseline survey conducted among farmers and the training activities delivered to fruit and vegetable processors in five regions of Kyrgyzstan, which are outlined below.

Crop variability and supply fragmentation: farmers often cultivate different crops from year to year within the same districts owing to climatic conditions, local traditions, land distribution, and population density. Due to varying crop types and limited volumes, most farmers are unable to deliver produce in bulk. This limits their ability to engage directly with processing companies, which forces them to sell in local markets or to intermediaries which resell to processing companies or export to neighbouring countries.

Market and business knowledge gaps: many farmers lack access to market information and business development training. This leads to fragmented decisions about crop production and inhibits their ability to plan for consistent supply.

Processor challenges: processors reported difficulties in sourcing consistent, high-quality raw materials from numerous small-scale suppliers. The absence of formal contracting systems contributes to year-to-year supplier changes, which in turn leads to variability in product quality and a lack of standardization.

Knowledge disparities: while some processors had ISO 22000:2018 certification, others were new to HACCP concepts. This wide variation in baseline knowledge among participants posed a challenge for delivering training at a consistent level. In addition, frequent staff turnover, particularly in key technical roles, meant that even companies with more advanced systems faced knowledge gaps and needed refresher training.

Positive impact of hands-on support: processors appreciated the practical, on-site technical assistance provided at their facilities. This approach was seen as particularly effective, reinforcing the importance of context-specific, applied learning alongside formal training content.

11. RECOMMENDATIONS

Based on the findings and outcomes of this project, the following detailed recommendations are proposed to strengthen food safety systems, support value chain actors, and ensure lasting impact.

Conduct a comprehensive analysis of fruit and vegetable processors across all regions: it is believed that there are companies that are missing in different official records. A full mapping exercise is needed to identify and document all relevant processors across regions and create a single actual fully fledged database of processors that is integrated into national agricultural information systems.

Launch targeted information campaigns on food safety and certification: awareness-raising efforts should be directed at both farmers and consumers about the importance of product safety and certifications (e.g. GAP, HACCP). Public concern over the safety of food can serve as a major driver for the adoption of GAP. Future activities should include targeted outreach efforts to inform the population about food safety principles and the role of certification in verifying compliance.

Continue support for food safety legislation and regulatory development: the project supported the drafting of the new Law on Food Safety. Continued engagement is recommended to finalize, adopt and implement this law, including the development of associated by-laws and operational guidelines. Strong legal and regulatory frameworks are necessary to institutionalize food safety principles and provide a clear basis for inspections, certifications and enforcement.

Strengthen capacity of food safety inspectors, especially in the regions: to ensure effective implementation of the new law, it is necessary to further support the capacity development of food safety inspectors, particularly at the regional level. Inspectors should be equipped not only to carry out their inspection duties effectively but also to provide technical guidance and advice to food businesses. Targeted training and institutional support will be crucial to strengthening their role in enforcing food safety standards.

Provide regulatory support for pesticide and agrochemical management: government agencies should be supported in reviewing and updating legislation related to the import, circulation, and use of pesticides and agrochemicals. A more systematic and coordinated approach to regulation is needed to align with international standards and ensure the safe production of agricultural goods.

Strengthen capacity among farmers on SPS measures and regional trade requirements: farmers should be trained in SPS measures, including the requirements of the EAEU. Additional training should focus on reducing post-harvest losses, improving product quality, and adopting modern technologies in processing, packaging, labelling, storage, and transportation.

Expand advisory services and technical training on food safety systems: increasing access to qualified consultants and extension support is essential to improve the implementation of food safety management systems such as HACCP, ISO 22000, and FSSC 22000:2018. Strengthening this advisory infrastructure will help processors maintain compliance and build internal capacity beyond the lifespan of externally funded projects.

Annexes

During the period of project implementation, following results and products were produced and submitted to STDF in the respective reporting periods.

1. Minutes of the project inception meeting/PSC meeting held on 17 December 2020;
2. Analysis of the fruit and vegetable processing sector in Kyrgyzstan;
3. Analysis of the food safety situation at fruit and vegetable processing enterprises of Kyrgyzstan and the food safety requirements at different markets;
4. Analysis of the value chain of fresh fruits, vegetables and fruit and vegetable products of Kyrgyzstan;
5. The overview of current infrastructure and practices for the food safety management system for the selected FBOs and their smallholder suppliers;
6. Report on technical consultation meeting held on 9 June 2021;
7. Report on technical consultation workshop held on 27 April 2022;
8. Report on technical consultation meeting held on 17 February 2022;
9. FAO project team mission report to Kyrgyzstan on 29 May–4 June 2022 (Mary Kenny and Gokce Akbalik);
10. Consultation workshop report on safety and health of food products on the occasion of World Food Safety Day 2022, "Safer food - better health" held on 31 May 2022;
11. Draft report on the stages and elements of value chain and knowledge improvement needs, vision for trainings and training system (Jasurbek Rustamov), June 2022;
12. In-depth analysis of the regulatory framework on FSM and inspection in Kyrgyzstan (Almaz Davletov), February 2022;
13. Training report on the topic: "The role of food safety management system, good hygiene practices and HACCP principles of Codex Alimentarius" held from 6 to 8 June 2022 (Ganna Vasylenco, Galina Leasenco and Aitbek Ajibekov), June 2022;
14. Brief on FAO Open Gender Day event held on 17 June 2022;
15. Training needs assessment report (Galina Leasenco), February 2022;
16. AFVE – LoA final report;
17. Mission report of international expert on food safety training setup and curriculum development (Jasurbek Rustamov) to Kyrgyzstan from 1 to 5 August 2022;
18. FAO project team mission report to Kyrgyzstan from 28 November to 1 December 2022 (Mary Kenny and Gokce Akbalik);
19. Consultation meeting report on standardized training plan for food safety management along fruit and vegetable supply chain held on 30 November 2022;
20. Mission report of international expert on food safety management systems (Galina Leasenco) to Kyrgyzstan from 11 to 16 July 2022;
21. Training report on the topic: "Food Safety Management System Control, GHP/HACCP audit and good examples from internationally used practices and trade partners requirements" held from 12 to 15 July 2022 (Ganna Vasylenco, Galina Leasenco and Aitbek Ajibekov), July 2022. All training materials available at: <https://tinyurl.com/3dvmhaya>;
22. Mission report of international expert on food safety (Gokce Akbalik) to Kyrgyzstan from 12 to 17 March 2023;
23. Training report on Training of Trainers programme on food safety management along the fruit and vegetable supply chain, held from 13 to 16 March 2023 in Bishkek (Gokce Akbalik, Galina Leasenco, Jasurbek Rustamov and Aitbek Ajibekov), March 2023;
24. Report of the technical workshop held on 29 May 2023 in Bishkek, May 2023;
25. Comments to the Draft Law on Food Safety in Kyrgyzstan (Ganna Vasylenco), March 2023;
26. A summary approach to proposed improvement of HACCP infrastructure in Kyrgyzstan (Ganna Vasylenco), March 2023;
27. Set of training materials GAP/GMP/HACCP in fruit and vegetable farms and processing companies (Jasurbek Rustamov and Galina Leasenco), March–April 2023, available at: <https://tinyurl.com/bd7359pz>;
28. Master training plan (Gokce Akbalik) February 2023;

29. Master training plan for the delivery of the training that outlines the approach, format, content, place, potential timeframe, service providers, and name of trainers, TES Centre, July 2023;
30. Set of training materials on GAP/GMP/GHP/HACCP in fruit and vegetable farms and processing companies developed by FAO international experts and modified by master trainers into a local level, TES Centre, July–August 2023; GAP training materials at: <https://tinyurl.com/4szjnhfp> and HACCP materials at: <https://tinyurl.com/yf6jekns>;
31. Report on the collection of information on the level of knowledge, needs and expectation of the fruit and vegetable farmers, TES Centre, December 2023;
32. Report on the collection of information on the level of knowledge, needs and expectations of the staff from fruit and vegetable processing companies, TES Centre, July 2023;
33. Draft guidelines on the development and implementation of the HACCP plan (in Russian [Galina Leasenco and Bermet Dzhurupova]), November 2023;
34. Five reports (including list of participants and agenda) on delivering the series of trainings on the theme “HACCP – system for ensuring the safety of food products” in Osh, Jalal-Abad, Batken, Chuy and Issyk-Kul regions during July and August 2023 for fruit and vegetable processing company staff from business entities, TES Centre, August 2023, available at <https://tinyurl.com/yk7v9s5p>;
35. Reports on providing direct technical consultations and advice in ten selected companies from Batken, Osh, Jalal-Abad, Chuy and Issyk-Kul regions, TES Centre, August 2023, available at: <https://tinyurl.com/9a4mx57r>;
36. Report on delivering 75 trainings on the theme: “Good Agricultural Practices – system for ensuring the safety of food products in farm level” in Osh, Batken, Jalal-Abad, Chuy and Issyk-Kul regions for farmers, TES Centre, December 2023;
37. Final report on implementation of LoA for the provision of increasing the food safety management capacities of farmers and processors in fruit and vegetable sector in Kyrgyzstan, TES Centre, December 2023;
38. Draft guidelines on inspection by MoH of fruit and vegetable processing industries in compliance with the principles of HACCP and sanitary and hygiene requirements for the competent authorities (in Russian [Galina Leasenco and Bermet Dzhurupova]), November 2023;
39. Comments to the Draft Law on the Provision of the Safety of Food Products (Ganna Vasylenco), December 2023;
40. Training report on the seven-day multilevel HACCP inspection (audit) training and train-the-trainer programme in Kyrgyzstan, held from 5 to 14 June 2024; (Ganna Vasylenko, Bermet Dzhurupova and Aitbek Ajibekov), June 2024. All training materials from this training are available at the following link: <https://tinyurl.com/msn4r4vr>;
41. STDF final meeting report, June 2024; and
42. Financial report.

All reports are available at the following link: <https://tinyurl.com/263e6ppz>

Appendix 1

LOGFRAME MATRIX - ACHIEVEMENT OF INDICATORS

Results chain	Indicators				If not achieved, explain why	If applicable/ follow-up action to be taken
	Indicators	Baseline	End target (expected value at project completion)	Achieved		
Impact (Goal) Increased competitiveness and sustainability of Kyrgyz fruit and vegetable industry resulting in increased sales to high-value markets impacting positively on the livelihoods of 323,000 smallholder farmers.	10% increase in value of sales to domestic markets, 5% increase in sales to EAEU and 3% in sales to non-EAEU international markets (EU, CIS, China, Mongolia & Türkiye) within 3 years (measured against pre EAEU accession baseline data for 2014). Incomes of smallholder suppliers increase by 20% due to improved performance of F&V industry.			Uncertain.	The data was not available for sales.	
Outcome (Immediate objective [purpose]) Improvements to food safety & quality of Kyrgyz fruit and vegetable products enable increased volume and value of	Increased sales to domestic & export markets (see goal) 30% increase in fruit and vegetable companies certified as conforming to EAEU food safety requirements by competent	17% 9 out of 52 surveyed companies implement HACCP.	56%	Partially achieved.	The Government of Kyrgyzstan had introduced a moratorium on all regular food control and inspection procedures. The moratorium was still in place in 2024. Therefore, it was impossible to	

Results chain	Indicators				If not achieved, explain why	If applicable/ follow-up action to be taken
	Indicators	Baseline	End target (expected value at project completion)	Achieved		
sales to target markets.	<p>authorities by the end of the project.</p> <p>Ministry of Health and Agriculture surveillance data records at least a 25% decrease in food safety related non-conformances for fruit and vegetable products by the end of the project.</p>				determine the conformity of food businesses with food safety requirements.	
<p>Output 1 Capacity of Kyrgyz fruit and vegetable industry to adopt GAP, GHP & HACCP enhanced.</p>	<p>By the end of the project at least 30% of AFVE member companies & their smallholder suppliers are trained in and implement improved food safety management systems and demonstrate conformity with EAEU regulations.</p>	<p>0</p> <p>Limited technical capacity of the Kyrgyz food producers to implement improved food safety management systems and demonstrate conformity with EAEU regulations. Only 9 of the surveyed companies out of 52 declared that they follow HACCP implementation. All the identified farmers were receiving GAP</p>	30%	<p>Yes.</p> <p>The capacity of the Kyrgyz fruit and vegetable industry to adopt GAP, GHP and HACCP was enhanced through theoretical and hands-on training to 1 560 farmers and 86 processor staff in five regions. Seven workshops were conducted to raise awareness on food safety in the fruit and vegetable sector and to introduce HACCP and the importance of food safety practices. Practical training materials and guidance documents were</p>		

Results chain	Indicators				If not achieved, explain why	If applicable/ follow-up action to be taken
	Indicators	Baseline	End target (expected value at project completion)	Achieved		
		training for the first time.		distributed to food processors and farmers.		
Output 2 Capacity of Kyrgyz service providers to provide advice, training and expert inputs on risk assessment, GAP, GHP & HACCP and relevant international standards increased.	By the end of the project at least 10 national experts trained to instructor level in risk assessment, food safety management and peer group training techniques. Instructors roll-out training programmes for F&V industry and official control agencies	0. Limited number of competent technical experts in public and private consulting agencies on food safety management systems (HACCP, and private standards including ISO 22000, and FSSC 22000) and a lack of up-to-date training programs contribute to these challenges.	100%	Yes. The capacity of Kyrgyz service providers to give advice and training on food safety, GAP, GHP and HACCP and relevant international standards increased. Forty-five national food safety experts were trained as master or assistant trainers to deliver training on GAP and GMP for farmers, and GHP, GMP and HACCP for food processors by taking the basis of the EAEU Technical Regulations and Codex texts. Customizable, standardized training materials were provided for their use in Kyrgyz and Russian languages.		
Output 3 Capacity of competent authorities to inspect and certify GAP & HACCP based systems in Kyrgyz fruit and vegetable processing industries as being compliant with the	By the end of the project at least 45% of MoH state surveillance inspectors are trained in, and adopt modern approaches for assessment of	0 Limited necessary technical education, knowledge, and experience by competent inspectors to effectively evaluate	75%	Yes. The capacity of competent authorities were enhanced to inspect and certify GAP and HACCP-based systems in the fruit and vegetable processing industries in line with		Building on the achievements, further training for inspectors from the competent authorities will be delivered under project TCP/KYR/4003,

Results chain	Indicators				If not achieved, explain why	If applicable/ follow-up action to be taken
	Indicators	Baseline	End target (expected value at project completion)	Achieved		
regulatory requirements of the EAEU enhanced.	conformity of risk-based food safety management systems	and inspect over HACCP systems.		the EAEU Technical Regulations and Codex texts. Two training series were provided to 24 inspectors in 2022, and to another 25 inspectors in 2024. A guideline on the inspection of fruit and vegetable processing industries in compliance with the principles of HACCP and sanitary and hygiene requirements was drafted. Legal support was provided on the draft food law, and inspection checklists on fruit and vegetable products were also provided.		"Supporting the capacity development of official controls and food producers on food control and food safety management".

Appendix 2

DOCUMENTS PRODUCED DURING THE PROJECT

Akbalik, G. 2023. *Master Training Plan for deliver the trainings*. Bishkek, FAO.

Akbalik, G., Leasenco, G., Rustamov, J., and Ajibekov, A. 2023. *Training Report on Training of Trainers Program on Food Safety Management along the Fruit and Vegetable Supply Chain*. Bishkek, FAO.

Davletov, A. 2022. *In-depth analysis of the regulatory framework on food safety management and inspection in the Kyrgyz Republic*. Bishkek, FAO.

FAO. 2020. *Minutes of the project inception meeting*. Bishkek, FAO.

FAO. 2022. *Consultation meeting report on standardized training plan for food safety management along Fruit and vegetable supply chain*. Bishkek, FAO.

FAO. 2022. *Consultation Workshop Report on safety and health of food products in occasion to the WFSD-2022 "Safer food - better health"*. Bishkek, FAO.

FAO. 2023. *Report on the Technical Workshop in Occasion to the World Food Safety Day*. 2023. Bishkek, FAO.

FAO. 2024. *Report of the final meeting on the achieved outcomes of enhancing capacities for food safety management of Kyrgyz fruit and vegetable industry project*. Bishkek, FAO.

Kozlova, L. 2021. *Analysis of the value chain of fresh fruits, vegetables and fruit and vegetable products of the Kyrgyz Republic*. Bishkek, FAO.

Kozlova, L. 2021. *Overview of current infrastructure and practice for food safety management system for the selected FBOs and their smallholder suppliers*. Bishkek, FAO.

Leasenco, G. 2022. *Training needs assessment report*. Bishkek, FAO.

Leasenco, G. and Dzhurupova, B. 2023. *Draft Guidelines on inspection of fruit and vegetable processing industries in compliance with the principles of HACCP and sanitary and hygiene requirements for the competent authorities*. Bishkek, FAO.

Leasenco, G. and Dzhurupova, B. 2024. *Draft Guidelines on development and implementation of HACCP plan*. Bishkek, FAO.

Rustamov, J., and Leasenco, G. 2023. *Set of training materials GAP/GMP/HACCP in fruit and vegetable farms and processing companies*. Bishkek, FAO.

Ryazanov, E. 2021. *Analysis of the Food safety situation at fruit and vegetable processing enterprises of Kyrgyzstan and the food safety requirements at different markets*. Bishkek, FAO.

Ryazanov, E. 2021. *Analysis of the fruit and vegetable processing sector in the Kyrgyz Republic*. Bishkek, FAO.

TES Centre. 2023. *Final Report on implementation of LoA in provision of increasing the food safety management capacities of farmers and processors in fruit and vegetable sector in the Kyrgyz Republic*. Bishkek, FAO.

TES Centre. 2023. *Report on collection of information on the level of knowledge, needs and expectations of the fruit and vegetable farmers*. Bishkek, FAO.

TES Centre. 2023. *Report on collection of information on the level of knowledge, needs and expectation of the staff from FV processing companies.* Bishkek, FAO.

TES Centre. 2023. *Set of training materials on GAP/GMP/GHP/HACCP in fruit and vegetable farms and processing companies developed by FAO international experts and modified by master trainers into a local level.* Bishkek, FAO.

Vasylenko, G. 2023. *A summary approach to proposed improvement of HACCP infrastructure in Kyrgyzstan.* Bishkek, FAO.

Vasylenko, G. 2023. *Comments on the draft law on Food Safety in the Kyrgyz Republic.* Bishkek, FAO.

Vasylenko, G. 2024. *Second comments to the draft law on provision the safety of food products.* Bishkek, FAO.

Vasylenko, G., Leasenco G., and Ajibekov, A. 2022. *Training report on the role of food safety management system, good hygiene practices and HACCP principles of Codex Alimentarius.* Bishkek, FAO.

Vasylenko, G., Dzhurupova, B., and Ajibekov, A. 2024. *Training report on multi – level HACCP inspection training and train-the-trainer program in the Kyrgyz Republic.* Bishkek, FAO.

Vasylenko, G., Leasenco, G., and Ajibekov, A. 2022. *Training report on food safety management system control, GHP/HACCP audit and good examples from internationally used practices and trade partners requirements.* Bishkek, FAO.

Appendix 3

PROJECT STAFF

Function	Dates of Service	
	Starting Date	Concluding Date
International staff		
International expert on food safety management	25 August 2021	20 July 2022
	28 November 2022	30 December 2022
	20 February 2023	5 August 2023
International expert on food safety	1 March 2022	16 January 2023
	2 June 2023	26 April 2024
International expert on food safety and training setup	21 April 2022	16 March 2023
Expert on food safety	5 September 2022	30 June 2024
National staff		
National project coordinator	1 October 2020	26 August 2021
	30 September 2022	30 June 2022
	11 August 2022	31 December 2022
	20 January 2023	14 December 2023
	24 January 2024	30 June 2024
National expert on food systems	1 January 2022	31 March 2022
National expert on food safety management	25 August 2021	31 March 2022
National expert on food safety management	25 August 2021	31 March 2022
National expert on food safety	30 May 2023	4 June 2023
	10 July 2023	30 November 2023
	11 April 2024	30 June 2024
Operations/administration staff, translators (short-term, cost-shared basis)	1 January 2020	30 June 2024

Appendix 4

TRAINING AND STUDY TOURS

Number of Participants	Title of Study/Training Tour	Place	Date
35	World Food Safety Day 2021 "Food Safety – everyone's business"	Bishkek	7 June 2021
64	World Food Safety Day 2022, "Safer food – better health"	Bishkek	31 May 2022
24	The role of food safety management system, good hygiene practices and HACCP principles of Codex Alimentarius	Bishkek	6–8 June 2022
21	Food Safety Management System Control, GHP/HACCP audit and good examples from internationally used practices and trade partners requirements	Bishkek	12–15 July 2022
48	Technical workshop on food safety management and implementation of HACCP system	Bishkek	31 October 2022
34	Technical workshop on food safety management system in food caterings	Bishkek	28 November 2022
38	Consultation workshop on standardized training plan on food safety management along the fruit and vegetable supply chain	Bishkek	30 November 2022
45	Training of Trainers programme on food safety management along the fruit and vegetable supply chain	Bishkek	13–16 March 2023
55	World Food Safety Day 2023, "Food standards save lives"	Bishkek	29 May 2023
85 students	University lectures on the occasion of World Food Safety Day 2023, "Food standards save lives"	Bishkek	30 May 2023
86 staff	Series of trainings on the theme "HACCP – system for ensuring the safety of food products" for 37 food processing businesses in the regions	Osh, Jalal-Abad, Batken, Issyk-Kul and Chuy regions	24 July–8 August 2023
22 personnel	Direct technical consultations and advice at ten selected companies from Batken, Osh, Jalal-Abad, Chuy and Issyk-Kul regions	Osh, Jalal-Abad, Batken, Issyk-Kul and Chuy regions	July–September 2023
1 560 farmers	75 training sessions on "Good Agricultural Practices – system for ensuring the safety of food products in farm level"	Osh, Jalal-Abad, Batken, Issyk-Kul and Chuy regions	July–November 2023
32	FAO/WFP/WHO joint event: the Second Workshop on Food Systems, Food Security and Nutrition for Deputies and Employees of the Office of the <i>Jogorku Kenesh</i> (parliament) of Kyrgyzstan	Bishkek	1 December 2023
70	World Food Safety Day 2024, "Food Safety: Prepare for unexpected"	Bishkek	7 June 2024
25	Multilevel HACCP inspection (audit) training and train-the-trainer programme	Bishkek	5–14 June 2024