

Summary report on the
**Meeting to develop a
regional roadmap to
implement the WHO
global strategy for
food safety**

Cairo, Egypt
11–13 December 2023



**World Health
Organization**

Eastern Mediterranean Region

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1. Introduction

Foodborne diseases pose a public health risk and have a considerable socioeconomic impact in the World Health Organization (WHO) Eastern Mediterranean Region; over 100 million people are estimated to fall ill annually in the Region due to foodborne diseases, of which 37 000 die.¹ In 2022, the [WHO global strategy for food safety 2022–2030](#) was launched to guide and support Member States in their efforts to prioritize, plan, implement, monitor and evaluate actions toward reducing the burden of foodborne diseases.

In this context, the WHO Regional Office for the Eastern Mediterranean held a regional meeting in Cairo, Egypt, on 11–13 December 2023 to develop a regional roadmap to implement the WHO global strategy for food safety by supporting Member States in the Region to tackle current and emerging food safety issues, enhance cooperation across the food and feed chain, improve the surveillance and monitoring of foodborne diseases, and eventually reduce their burden of foodborne diseases.

The objectives of the meeting were to:

- update national food control system capacities in the Region using the FAO/WHO food control assessment tool's self-assessment electronic questionnaire;
- introduce the WHO global strategy for food safety 2022–2030;
- outline the draft regional roadmap to implement the global strategy;
- share experiences and success stories in food safety; and
- enhance intraregional collaboration and coordination on food safety.

¹ Estimates of the global burden of foodborne diseases - Eastern Mediterranean Region [website]. Geneva: world Health Organization; 2019 (<https://www.who.int/multi-media/details/estimates-of-the-global-burden-of-foodborne-diseases-eastern-mediterranean-region>).

The meeting was attended in-person by representatives from 15 countries of the Eastern Mediterranean Region, including Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates and Yemen attended, with four countries/territories (Libya, the occupied Palestinian territory, Sudan and the Syrian Arab Republic) joining virtually. Participants from the Codex Committee for the Near East, Global Food Regulatory Science Society and WHO Collaborating Centres in the Region also attended.

Over the three days, the programme included technical presentations delivered by technical staff and scientists from WHO headquarters and the Regional Office that addressed major issues in food safety of relevance to the Region and emerging global challenges.

Dr Maha El Adawy, Director of the Healthier Populations Department at the WHO Regional Office for the Eastern Mediterranean, delivered an opening message from Dr Ahmed Al-Mandhari, WHO Regional Director for the Eastern Mediterranean, calling attention to the serious threat to public health and significant constraint on socioeconomic development posed by the morbidity and mortality caused by contaminated food in many countries of the Region. Dr Al-Mandhari emphasized that only with access to safe and nutritious food, can we ensure healthy lives and promote well-being for all. He reaffirmed WHO's commitment to working with its Member States to develop a regional roadmap, aligned with global strategic objectives and priorities, with concrete actions, timelines and targets. The roadmap, he concluded, would inspire action, improve the prevention, detection and management of foodborne risks, and contribute to food security, human health, economic prosperity, agricultural production, market access, tourism and sustainable development.

Eng. Mazen Malkawi, Regional Adviser for Climate Change at the WHO Regional Office for the Eastern Mediterranean, in his opening remarks, urged participants to foster intraregional and global collaboration and take the opportunity to share experiences and success stories, engage in discussion, understand the challenges and identify solutions. He highlighted the need to evaluate and address food safety risks using a multisectoral One Health approach that engages experts in human health, veterinary medicine, environment, agriculture, wildlife, plant health, microbiology and epidemiology, among others. He encouraged countries to use the roadmap to build food safety systems that were forward-looking, evidence-based, people-centred and cost-effective, with coordinated governance and adequate infrastructure.

2. Summary of discussions

WHO global strategy for food safety 2022–2030

The WHO global strategy for food safety 2022–2030 stemmed from a request from Member States to WHO to develop a new global food safety strategy to address current and emerging challenges, incorporate new technologies and include innovative approaches for strengthening national food safety systems. The global strategy focuses on five strategic priorities that revolve around the fundamental components of a food safety system. The aim is to guide Member States in strengthening food safety systems and promoting global cooperation.

One Health

The concept of One Health has evolved over the past few years from a narrow focus on zoonotic diseases to a broader focus that includes neglected tropical diseases, antimicrobial resistance, endemic zoonotic diseases, food safety and security, water safety and environmental risks. To advance implementation of the One Health approach in the Eastern

Mediterranean Region, a regional framework for One Health 2022–2027 was developed. The five strategic objectives of the framework align with the directions of the One Health Joint Plan of Action (2022–2026). A One Health executive board and technical group have been established to coordinate the work and facilitate support to countries.

FAO/WHO Food Control Assessment Tool

The Food and Agriculture Organization of the United Nations (FAO)/WHO [food control system assessment tool](#) was developed by FAO and WHO to support governments in evaluating the adequacy and relevance of their food safety control and surveillance systems, and the interactions with stakeholders and systems. The assessment tool covers four main dimensions of a food control system, namely (1) inputs and resources, (2) control functions, (3) interaction with stakeholders, and (4) science knowledge base and continuous improvement, with nine subdimensions and 162 assessment criteria based on the [Codex Alimentarius principles and guidelines for national food control systems CXG 82-2013](#) and incorporating International Health Regulations 2005 (IHR) requirements and other relevant regulations, such as World Trade Organization [sanitary and phytosanitary measures/technical barriers to trade](#).

Updating country food safety profiles

In October 2023, country food safety profiles were updated using an [electronic version of the FAO/WHO food control system assessment tool](#), which was disseminated to national food safety focal points who were requested to conduct the assessment in close collaboration with national stakeholders to capture the different capacity levels across the farm-to-fork continuum. The tool was used to assess the competencies of national food control systems, benchmarked against the strategic

priorities outlined in the WHO global strategy for food safety 2022–2030. Each core component of a food control system was assessed to identify country capacities, stages of development and priorities across the Region. Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Jordan, Lebanon, Libya, Morocco, the occupied Palestinian territory, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia and Yemen assessed their national food control systems and presented the results at the meeting.

At the national level, the baseline assessments allow food safety authorities and stakeholders to define priorities for improvement using a stepwise approach and reach a common understanding of the issues. At the regional level, the assessments will help in building a regional vision and identifying regional priorities for strategic improvement and support by WHO. The country profiles will be further developed to include the results of IHR Joint External Evaluation (JEE) assessments of the surveillance of foodborne diseases and contamination, and [States Parties Self-Assessment Annual Reporting \(SPAR\) tool](#) assessments of multisectoral collaboration mechanisms for food safety events.

Improving food safety using behavioural science

Behavioural insights offer an evidence-based understanding of human behaviour, making use of several disciplines, such as design thinking, psychology and behavioural economics, to inform the development of processes, policies and programmes that “work for real people” in “real life” contexts. In food safety, behavioural insights can be used in a wide range of areas to mitigate risky behaviours associated with food safety, while promoting practices conducive to food safety across diverse levels of the food system. This includes interventions at the stages of food legislation, production, processing, distribution and consumption.

Environmental challenges in the Eastern Mediterranean Region: climate change implications for food safety and security

Around 1 million deaths are reported in the Region annually due to avoidable environmental causes, and 4% of these are due to unsafe food. Climate change poses additional challenges and is viewed as a driver of food safety risks. The impact of climate change on health is not limited to illness and death from increasingly frequent extreme weather events, such as heatwaves, storms and floods, but extends to disrupting food systems, impacting food security, increasing zoonotic and food-, water- and vector-borne diseases, and mental health issues.

Food systems transformation in the Eastern Mediterranean Region

The food systems approach is key to tackling the **double burden of malnutrition** through building food systems that are more sustainable, efficient and resilient, for better production, better nutrition, a better environment and a better life. The conceptual framework of the food system for diet and nutrition encompasses five drivers of change, which not only support progress on Sustainable Development Goal (SDG) 2 but across all SDGs.

Water safety, sanitation and hygiene and food safety

Water is a main input in food production from its early stages to consumption, and safe food production and preparation closely depend upon sanitation, hygiene and adequate access to clean water, essential for preventing and containing foodborne and waterborne diseases. The percentage of the Region's population with access to safely managed drinking water is 67%, compared to 73% globally. A large proportion of the population lacked access to basic drinking water services in 2022 in at least five countries in the Region, amounting to 78 million people.

Antimicrobial resistance (AMR) in the food chain

The contamination of food with resistant bacteria is a global problem that cannot be ignored. The resulting infections are not only difficult but often impossible to treat and can be fatal. Non-typhoidal Salmonella infections alone cause over 5000 deaths annually worldwide due to AMR. To address AMR effectively and efficiently in the food chain, several guidance documents have been developed by the [Codex Alimentarius](#) to support collective efforts to limit the risk posed by AMR transmitted through food: [Guidelines for risk analysis of foodborne AMR](#), [Guidelines on integrated monitoring and surveillance of foodborne AMR](#), and the [Code of practice to minimize and contain foodborne AMR](#).

Framework to evaluate global emerging topics related to food safety

The proposed WHO conceptual framework to evaluate global emerging topics related to food safety involves five steps in a stepwise progression: detecting and assessing potential emerging topics, threats, consequences and their implications for food safety; assessing vulnerability and risks; conducting mitigation analysis; and finally, formalizing and implementing action plans. The proposed conceptual framework aligns with the WHO global strategy for food safety and further assists countries in implementing an adaptable, stepwise process that evaluates global emerging topics, which can result in multisectoral mitigation efforts, improved stakeholder communication and strengthened food safety on a global scale.

The International Food Safety Authority Network (INFOSAN)

[INFOSAN](#) promotes the rapid exchange of food safety information during food safety incidents, shares information and resources on

important food safety-related issues of global interest, promotes partnership and collaboration between countries, agencies and other networks, and helps countries to strengthen their capacities to manage food safety emergencies. It has been jointly managed by FAO and WHO since its launch in 2004. The progress target of the WHO global strategy for food safety for multisectoral collaboration mechanisms for food safety events is to achieve 100% of countries with at least 80% capacity, as assessed through the SPAR tool.

Evidence- and risk-based approaches to using information along the food chain

An evidence-based approach to food safety involves using science and data collected across the farm-to-fork continuum to inform practices and policies. Key global tools to support this approach include the [Foodborne Disease Burden Epidemiology Reference Group \(FERG\)](#), which provides estimates on the global burden of foodborne diseases, and the [Global Environmental Monitoring System \(GEMS\)](#), a WHO database on the occurrence of chemicals in food, both available for use by countries of the Region. The data submitted by countries is used by Codex Alimentarius committees in the standard-setting process and other scientific work. The risk analysis process consists of risk assessment, management and communication and is directly related to the Codex Alimentarius work on standard-setting and related issues.

Exposure monitoring and total diet studies

Dietary exposure assessment combines food consumption data with data on the concentration of chemicals in food. The results are then compared to health-based guidance values for chemicals of concern. Total diet studies are the best available approach for dietary exposure

estimates, complementing regular monitoring and surveillance. WHO, through a network of experts, provides support to countries on this.

Collective efforts to collect data on food occurrence and food consumption

The [Global Food Regulatory Science Society](#) presented the [Arab Food Occurrence Database](#) initiative as an example of an online data repository that collects food occurrence data in Lebanon through systematic scanning and data mining of published articles. The initiative aims to address data availability and accessibility challenges in the Arab region and enhance contributions to the WHO GEMS/Food database and other international requests for data to support international food standard setting.

FAO/WHO Codex Coordinating Committee for the Near East

The Codex Coordinating Committee for the Near East comprises 17 Member States, of which 16 are Member States of the WHO Eastern Mediterranean Region. The Committee is coordinated by Saudi Arabia and its role is to develop standards and promote Codex texts and capacity-building.

Experiences from the Eastern Mediterranean Region

The successful management of food safety during the FIFA World Cup Qatar 2022 was attributable to effective pre-event preparation through border inspections, local inspections and having the required food laboratory capacities, as well as a training and food handlers permit programme. During the event, it depended on monitoring activities, inspections and sampling, as well as the effective implementation of Qatar's Food Safety Department functions. Coordination mechanisms

with partners, reporting on inspections and sampling operations were monitored through a dashboard, with identified key performance indicators, used by the Ministry and stakeholders. A food safety communication framework was also used, including templates for information updates or alerts issued in conjunction with a food safety incident management team.

The successful management of food safety in the high risk-setting of the Children's Cancer Hospital Egypt 57357, in Cairo, involves protocols for washing hands and surfaces, separating raw foods, cooking to the right temperature and refrigerating foods promptly, as well as daily inspections, an internal audit every three months and continuous education for all employees.

The Saudi Food and Drug Authority has successfully used GEMS for a national monitoring programme to enhance the protection of health and safety of the individual and society, allowing evidence-informed decision-making and the development of legislation to ensure the safety of food products in Saudi Arabia.

Global estimates of the burden of foodborne diseases

The Seventy-third World Health Assembly, in resolution [WHA73.5](#), requested the Director-General to monitor regularly, and report to Member States on, the global burden of foodborne and zoonotic diseases at national, regional and international levels, and in particular to prepare, by 2025, a new report on the global burden of foodborne diseases with up-to-date estimates of mortality, as well as incidence, and burden in terms of disability-adjusted life years.

In the Eastern Mediterranean Region, WHO estimated in 2015 that each year more than 100 million people fall ill due to foodborne hazards,

while 37 000 die from foodborne diseases. For the next estimates, an impartial and inclusive process for consulting with Member States will be undertaken using country portals and nominated national focal points. Ten countries in the Region have nominated national focal points for the country consultation process expected to be initiated in 2024, including Bahrain, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Morocco, Oman, Qatar and Saudi Arabia.

Codex Trust Fund updates from the Eastern Mediterranean Region

The Codex Trust Fund supports countries to build strong, solid and sustainable national capacity to engage in the work on the Codex Alimentarius, which is directly related to the WHO global strategy for food safety 2022–2030 through strategic objective 5.3 (Ensure that national food safety systems are aligned with the standards of the Codex Alimentarius to protect public health and facilitate trade) and strategic objective 5.4 (Strengthen engagements of national competent authorities with international agencies and networks that establish standards and guidelines for food). Further, robust Codex programmes are vital components of a national food control system.

The Codex Trust Fund financially supports countries to implement projects to build robust and sustainable national capacity to engage in Codex Alimentarius work. In the Eastern Mediterranean Region, Pakistan has been approved for funding for a project to strengthen the national Codex programme and the Syrian Arab Republic has been granted funds to implement a project to strengthen the capacities of the national Codex committee. Djibouti, Iraq, Morocco, Somalia, Sudan and Yemen are eligible to apply for the upcoming round starting in 2024 (round 9).

WHO Collaborating Centre in Oman

The Central Public Health Laboratory in Oman was designated on 16 February 2022 as a WHO Collaborating Centre for emerging and re-emerging infectious diseases. It plays a vital role in the rapid detection, risk assessment and monitoring of outbreaks. Priority foodborne diseases include cholera, acute viral hepatitis A and E, typhoid fever, epidemic diarrhoeal diseases, *Escherichia coli* and *Shigella*. The Laboratory supports foodborne disease outbreak investigations, surveillance, genomic surveillance and coordination of the PulseNet quality assurance programme.

The PulseNet Middle East Network was established in December 2006, as a molecular surveillance network for foodborne infections. Its mission is to reduce the health, economic and social burden of foodborne diseases using genotyping/subtyping molecular techniques integrated into surveillance systems at country and regional levels. It serves as a rapid alert system for possible foodborne outbreaks through effective communication between public health laboratories in the Middle East and shares information on any widespread outbreak with PulseNet International.

Group work discussions

During five group discussion sessions, participants identified and prioritized actions for achieving the global targets of the WHO global strategy for food safety by 2030 for the two capacity indicators:

- Multisectoral collaboration mechanism for food safety events: 100% of countries with at least 80% capacity (reported through the IHR SPAR tool).
- Surveillance of foodborne diseases and contamination: global average capacity score of 3.5 (reported through the IHR JEE).

The draft roadmap outlines a set of actions to be carried out by countries and areas for WHO to support. It proposes a sequence for implementation according to the different levels of development of national food control systems. For example, under the strategic priority “strengthening national food control systems”, countries with developing national food control systems will focus on establishing legal and institutional frameworks and strengthening foodborne disease surveillance, while countries with highly-developed national food control systems will focus on establishing a systematic process for reviewing and updating legislation to address new developments in food safety, such as artificial intelligence and cell-based food. WHO will provide support to countries for the development of national implementation plans/roadmaps tailored to their specific contexts and priorities. The list of priority actions for implementation during 2023–2030 has been summarized in the [Table of prioritized activities and WHO areas of support for the implementation of the global strategy for food safety 2022–2030.pdf](#).

3. Recommendations

To Member States

1. Review the self-assessment results with food safety stakeholders to identify and prioritize key actions regarding the farm-to-fork continuum.
2. Participate in the review process of the draft roadmap to implement the WHO global strategy for food safety 2024–2030.
3. Develop an implementation plan or national roadmap, with the full engagement of stakeholders, that has clear objectives, defined roles and responsibilities and is properly financed. WHO will provide a tool to guide the development of the national plan/roadmap.
4. Implement the national plan in a stepwise approach to facilitate the establishment of a sound foundation for effective food safety systems and the prioritization of interventions that strengthen the minimum

legal and operational requirements for food safety risk management and responding to food safety incidents and emergencies.

5. Review and monitor the implementation plan and adjust when necessary.

To WHO


6. Compile a list of the priority food safety activities discussed during the meeting, taking into account the diversity of the Region and different levels of maturity of national food control systems.
7. Draft food safety country profiles, based on the self-assessment results using the FAO/WHO food control system assessment tool, SPAR tool assessments of multisectoral collaboration mechanisms for food safety events, and JEE tool assessments of surveillance of foodborne diseases and contamination.
8. Prepare a template to facilitate the development of a national action plan for food safety, with a focus on improving national capacities that relate to achieving the high-level global targets by 2030.
9. Provide technical support to Member States for implementation of the regional roadmap and achieving the global target by 2030.
10. Convene regional and subregional workshops in critical areas identified as in need for support.

4. Conclusion

As food safety systems in the Region are at various stages of development, the identification of priorities should be tailored to each country's context and take a stepwise approach. To achieve the strategic objectives identified in the WHO global strategy for food safety, each core component of the food safety system should be assessed and benchmarked against strategic priorities, followed by the integration of interventions into the national food safety plan, implementation and regular monitoring. Through working closely with countries, WHO is

committed to facilitating and expediting action, strengthening technical cooperation and fostering capacity-building.

Future improvements in food safety and public health will largely depend on how well multiple sectors collaborate, coordinate and share information to institute a change and development paradigm that considers the different components of the food system and supports the creation of enabling conditions for a shift to a sustainable food system, thereby contributing to better health outcomes and achieving the WHO food safety targets and the SDGs.



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