The Role of the World Health Organization in Enhancing Global Food Safety: Reality and Challenges

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Abstract

Food safety faces increasing challenges in the context of globalization, environmental changes, and technological advancements. Factors such as climate change, the spread of zoonotic diseases, and the evolution of food production technologies significantly impact the safety and quality of food in circulation.

Therefore, it has become essential to adopt integrated strategies based on international cooperation and active participation among governments, international organizations, the private sector, and civil society to ensure the application of the highest food safety standards.

The World Health Organization (WHO) serves as the leading scientific authority, providing evidence-based guidance to unify global efforts and achieve policy and legislative integration related to food safety.

WHO undertakes comprehensive regulatory and advisory roles, including food risk assessment, the development of guiding standards, and the provision of technical support to member states in building effective control systems. Through its partnerships with organizations such as the Food and Agriculture Organization (FAO) and their joint body, the Codex Alimentarius Commission, WHO seeks to strengthen international coordination and knowledge sharing, contributing to the reduction of foodborne diseases and the improvement of consumer health worldwide.

From this standpoint, the present study calls for a critical review of WHO's regulatory and advisory functions in the field of food safety, aiming to assess their effectiveness and offer recommendations to enhance the organization's future performance.

Keywords: food , safty , World Health Organization

Introduction

Food safety constitutes a fundamental component of the right to health, as enshrined in international covenants and treaties, most notably the International Covenant on Economic, Social and Cultural Rights. With the growing complexity of food supply chains and the increasing volume of global food trade, the need arises for the intervention of international bodies with technical and regulatory mandates to ensure a minimum standard of food safety and to coordinate efforts among states.

In this context, the World Health Organization (WHO) plays a central role as a specialized agency of the United Nations responsible for public health at the global level. Its mandate includes the development of normative frameworks and technical guidelines related to food safety. This role also extends to the issuance of international standards in cooperation with the Codex Alimentarius Commission, providing technical support to Member States to strengthen food control systems, and disseminating information and raising awareness of foodborne contamination risks and foodborne diseases.

Accordingly, the WHO's contribution in this field forms part of its legal and ethical obligations toward the international community and contributes to the promotion of food security principles and the prevention of food-related health risks, in line with respect for national sovereignty and the advancement of international cooperation as stipulated in the Charter of the United Nations.

Despite the considerable efforts exerted by the WHO to ensure global food safety, foodborne diseases continue to pose a significant threat to public health, particularly in developing countries, where food control systems and preventive legislation remain weak. On this basis, the following research question can be raised:

To what extent does the World Health Organization contribute to ensuring global food safety and health, and what challenges hinder the implementation of its strategies in this field?

To address the elements of this research question, we adopted the analytical method to examine various legal texts addressing the WHO's role in food safety, the descriptive method to outline the different risks threatening food safety, and the comparative method to identify relevant comparative legal frameworks.

This research paper is structured into two main sections:

- **The first section** discusses food safety as a fundamental right in the face of increasing threats;
- **The second section** is devoted to the efforts of the World Health Organization in ensuring and enhancing food safety and quality.

The paper concludes with a summary of key findings and a set of practical and legal recommendations.

Chapter One: Food Safety as a Fundamental Right in the Face of Growing Threats

The right to access adequate and safe food is a fundamental human right closely linked to the right to life, as individuals cannot achieve proper physical and mental development without food that meets their nutritional needs. Based on this fact, countries around the world exert continuous efforts and allocate substantial financial resources to ensure that food provided to their citizens meets high standards of quality and safety.

Negligence in monitoring food safety can lead to serious health consequences for individuals and negatively impact societal development and national economies. This highlights the critical importance of ensuring food safety by verifying its compliance with approved technical and health standards, which guarantee its nutritional value, quality, and freedom from harmful contaminants.

Food that is not strictly monitored throughout its various stages — from production and storage to distribution and final consumption — may become a significant threat to public health. Accordingly, addressing this issue requires examining **the concept of food safety** (Section One), and then exploring **the risks that threaten this right** (Section Two).

Section One: The Concept of Food Safety

Exploring the concept of food safety requires addressing three key aspects: defining what is meant by food safety (**Subsection One**), identifying its components (**Subsection Two**), and outlining its objectives (**Subsection Three**).

Subsection One: Defining Food Safety

Food safety is the state of acceptable and tolerable risks of illness, disease, or injury from the consumption of foods. It is achieved through policies, regulations, standards, research, engineer-ing designs and technology, surveillance and monitoring, and other applicable measures to reduce the risks or control hazards in the food supply chain.

This includes all food and prefood materi-als, starting with agricultural production and continuing through harvesting, processing/manu-facturing, storage, distribution, handling, preparation, and any other activities up to the point of consumption, that is, the "farm-to-fork" continuum which. The level of acceptable and tolerable risks from the consumption of foods is determined through a process called risk analysis.[1]

The presence of risk factors affecting food safety is the main driver for ensuring food is safe. This is achieved by identifying and addressing the root causes of contamination and applying appropriate techniques to eliminate or reduce these risks. Any factor that interferes with food safety is considered a hazard.

Food safety hazards are generally classified into three categories:

- **Chemical hazards**
- **Physical hazards**
- **Biological hazards**

SubSection Two: Elements of Food Safety

Food safety elements are linked to two fundamental elements: quality and standardization, each of which is influenced by the other. Food safety cannot be considered safe unless it is subject to standard specifications, which are the primary determinant of quality. Therefore, it is noted that the relationship between food safety and the two elements of quality and standardization is complementary.

First – Quality:

The definitions of quality have varied due to different perspectives and the evolving nature of the concept itself. One common definition sees quality as a set of specifications and characteristics defined by the organization, which must be present in the product during the design and manufacturing processes.

Among these definitions, one states that:

‘ Quality is the conformity to specifications and standards set by the organization. A product is considered to be of high quality if it complies with this set of technical rules and specifications.’’[2]

Second – Standard Specifications:

Standard specifications play a crucial role in the life cycle of food products by ensuring they remain healthy, safe, and suitable for consumption. They govern the product throughout all stages of its preparation for the market and define the required levels of quality, safety, and reliability.

[1] - Paul Knechtges, Food Safety: Theory and Practice, Jones & Bartlett Learning,united states ,2012.page 36.
[2] - Jean Claude Tarondeau : MARKETING , STRATÉGIE INDUSTRIELLE , ED VUIBERT,PARIS, 1998, P236

Legislators enforce a set of regulations on the production of food items to meet these standards.

Generally, a standard specification outlines the technical characteristics of a product whether a good or a service including detailed descriptions needed during production, such as dimensions, weights, sizes, and units, It also specifies the properties of the materials used, including physical, chemical, sensory, biological, and engineering characteristics, in addition to production methods, measurement and calibration procedures for testing, types of equipment and reference testing methods, preparation and processing guidelines, packaging and labeling requirements, instructions for use, storage and handling conditions, and acceptable tolerance levels in the final products.[1]

SubSection Three: Food Safety Objectives

safe food products. These objectives include producing safe products at all times, demonstrating evidence of safe production and handling practices especially important during regulatory inspections or legal proceedings and fostering confidence in the safety of the product, which in turn builds trust with customers. Additionally, meeting customer demands for compliance with HACCP systems that align with international standards, as well as adhering to legal and regulatory requirements, are essential components.

An important extended objective is the active involvement of personnel from all departments and levels, making food safety a shared responsibility across the organization.

The structured and systematic nature of the HACCP (Hazard Analysis and Critical Control Points) system plays a central role in achieving these objectives by identifying potential hazards and implementing effective control measures throughout the food production process.[2]

Section Two: Risks That Threaten Food Safety

Food safety is one of the fundamental pillars upon which the health and stability of societies are built. It serves as the first line of defense against foodborne illnesses and directly contributes to food security and quality of life. With the increasing complexity and globalization of food production and distribution chains, it has become essential to strengthen the measures that ensure the safety of what we consume daily. For this reason, countries and health organizations are working to establish clear food safety objectives aimed at protecting consumers, maintaining food quality, and reducing both health and economic risks (**subSection One**).

However, these efforts may face various challenges and increasing risks that threaten food safety. These risks may arise from **biological factors**, such as bacteria, viruses, and parasites; **chemical factors**, such as pesticides, preservatives, and industrial

[1] -Radomir Lasztity ,food quality and Standards ,eolss publishers ,oxford ,p 64.
[2] - Sara mortimor , carol wallace, HACCP a pratical approach , aspen publishers ,Maryland,1998, p26.

contaminants; or **unsafe practices** during production, transportation, or storage (**subSection Two).** Addressing these risks requires a comprehensive response that includes effective monitoring systems, strict enforcement of standards, and increased awareness among all stakeholders in the food chain—from farmers and producers to consumers.

Subsection One: Risks That Threaten Food Safety

First: Definition of Risks That Threaten Food Safety

While the term *"safe food"* refers to food that is free from health hazards and does not pose any harm—whether to those who prepare it (workers) or those who consume it—the concept of *"risks"* refers to **biological**, **chemical**, and **physical factors** capable of causing negative health effects. These hazards may be present in a specific food item or across a range of food products.[1]

Second : Sources of Risks That Threaten Food Safety

The sources of risks that threaten food safety are diverse and can be summarized as follows:

1- Physical Hazards : in food refer to contamination by foreign objects like hair, stones, glass, or insects, which can cause serious health risks. These risks can be minimized through proper hygiene practices, such as wearing protective gear and avoiding jewelry during food preparation. Even natural components like fish bones or whole spices can be hazardous if not handled correctly. Using powdered spices or removing them after cooking helps reduce these risks effectively.[2]

2-Chemical hazards : refer to food contamination by chemicals such as pesticides, fertilizer residues, and hormones used in agriculture and animal husbandry. Contamination can come from external sources like raw materials or internal sources such as cleaning and disinfecting agents used within food facilities. To ensure food safety, it is important to verify that food materials are free from chemical residues and drugs. Cleaning chemicals must be used according to standards and manufacturer instructions. This helps reduce chemical risks and protect consumer health.[3]

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[1] - **Food and Agriculture Organization of the United Nations (FAO), and World Health Organization (WHO).** *Food Control System Assessment Tool*. FAO, 2020, p. 23. *FAO*, www.fao.org.

[2] - **Sayed Abdel Nabi Mohamed.** *The Modern Food Safety System*. Arab Press Agency, Egypt, 2019, p. 180.

[3] - Oluwatosin Ademola Ijabadeniyi, Omotola Folake Olagunju , Food Safety and Toxicology Present and Future Perspectives , Walter De Gruyter ,BERLIN ,2023 , p73.

3-Biological Hazards : encompass the contamination of food by microorganisms, including bacteria, viruses, fungi, parasites, and worms. Certain bacterial species are known to cause foodborne illnesses and spoilage, with such bacteria commonly found in raw materials, humans, insects, and rodents. Hepatitis A virus constitutes a notable viral agent transmissible through contaminated food, water, or direct contact with infected individuals. Fungi and yeasts may induce food spoilage and mycotoxin production, although they typically do not cause direct foodborne diseases. Various parasites may be transmitted to humans via consumption of contaminated food; however, proper cooking and adequate freezing effectively mitigate these biological risks. Accordingly, adherence to hygiene standards and the procurement of food from reliable sources are fundamental measures to ensure food safety.[1]

Chapter Two: The Efforts of the World Health Organization to Achieve Food Safety and Quality

Food safety and quality are top priorities for the World Health Organization due to their direct impact on human health.
The organization continues to make international efforts to support countries in developing effective food control systems and preventing foodborne diseases.
This section aims to highlight the WHO's key efforts in promoting food safety and quality at both national and international levels.

Section One: Strengthening National Food Control Systems

Food safety is a foundation for protecting public health and supporting food security and sustainable development.
With increasing challenges related to supply chains and environmental risks, the need for effective national food control systems becomes more urgent.
Strengthening these systems contributes to improving product quality, building trust, and enhancing the ability to respond to food-related crises.
This requires an integrated approach that includes legal frameworks, institutional coordination, and capacity building, with the involvement of all relevant stakeholders.

therefore, it is necessary to examine the concept of national food control (Subsection One), as well as to explore the importance of national control systems (Subsection Two)

Subsection One: Definition of National Food Control Systems

A. Definition by the Food and Agriculture Organization of the United Nations (FAO):
The national food control system is defined as *"the institutional and regulatory framework established by the State to ensure the safety and quality of food produced domestically or imported, through a set of policies, laws, and control procedures aimed at protecting consumer health, ensuring compliance with national and international standards, and fostering confidence in the food supply chain."*[2]

[1] -Maria schirone Pierina Visciano , Biological Hazards In Food, Frontiers Research topic ,suisse,2017 , p5.
[2] - https://www.fao.org/home/ar Accessed on 01/06/2025 at 4:00 PM.

B. Definition by the World Health Organization (WHO):
It is defined as *"the official framework used by the government to ensure that food made available to consumers is safe, produced using hygienic practices, and compliant with food standards. It encompasses regulation, implementation, monitoring, evaluation, and enforcement."*[1]

C. Definition by the Codex Alimentarius Commission:
According to Codex, the national food control system is *"the system that ensures the safety, wholesomeness, and compliance of food with established food standards. It includes legislation, inspection, control, analysis, education, and coordination among competent authorities."*[2]

Subsection Two: Mechanism of Operation of National Food Control Systems

First: Surveillance

Surveillance is a continuous and systematic process aimed at collecting and analyzing data related to food safety to identify trends, recurring, and potential risks in the food supply. This function includes monitoring the presence of biological contaminants (such as Salmonella and E. coli), chemical contaminants (such as pesticide residues, preservatives, and heavy metals), as well as physical contaminants (such as glass or metal fragments).

Surveillance programs are implemented through annual or periodic plans that specify the targeted types of food products, their sources, the number of samples, and analytical criteria. The results of surveillance are used to improve food policies, set inspection priorities, and guide awareness programs and self-monitoring initiatives in the private sector. Examples of surveillance programs include:

1. Monitoring antibiotic residues in meat and milk.
2. Monitoring aflatoxins in grains and nuts.
3. Monitoring Listeria bacteria in refrigerated foods.[3]

Second: Monitoring and Inspection

The monitoring function aims to verify that producers, manufacturers, and distributors comply with health and legislative requirements. It also includes field inspections of food establishments and follows up on production, storage, and transportation conditions. This function is carried out by specialized inspection teams that visit establishments periodically or unexpectedly, recording observations on general cleanliness, equipment safety, employee behavior, and adherence to quality procedures such as the implementation of the Hazard Analysis and Critical Control Points (HACCP) system.

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[1] -- https://www.who.int/ar/news/item/28-05-1442-who-urges-governments-to-promote-healthy-food-in-public-facilities Accessed on 01/06/2025 at 6:00 PM.
[2]- https://www.who.int/health-topics/codex-alimentarius , Accessed on 01/06/2025 at 8:00 PM.
[3] - FAO and WHO, Food control system assessment tool, Introduction and glossary,2019. Rome ,p5.

Tools used in monitoring include:

1. Inspection checklists.
2. Risk assessment cards.
3. Field measurement instruments (such as temperature measurement or pH testing).

The results of monitoring assist in issuing administrative decisions such as imposing fines, closing non-compliant establishments, issuing warnings, or recalling non-conforming products.[1]

Third: Response and Emergency Management :

The response function is activated when unsafe food is detected or cases of illness resulting from food consumption emerge. This function is a cornerstone in containing risks and limiting their spread.

Response includes a series of rapid actions implemented by regulatory bodies in coordination with laboratories, health authorities, and customs agencies:

-Steps of the response process include:

1. **Epidemiological investigation:** to identify the source of contamination.
2. **Traceability and recall:** to withdraw contaminated products from the market.
3. **Notification and communication:** to inform consumers and relevant entities.
4. **Legal measures:** such as holding the violating establishment accountable.

Examples include:

- A recall announcement for a product with high levels of aflatoxin.
- Closure of a facility following a mass food poisoning incident.
- Coordination with customs authorities to reject a contaminated food shipment.

An effective response requires pre-established emergency plans, trained inspection teams, and strong communication channels between government agencies and the public.

Integration of the Three Functions:

- **Surveillance** → provides proactive data.
- **Monitoring** → ensures continuous compliance.
- **Response** → addresses emergency situations.

This integration is essential to build a comprehensive control system capable of managing food-related risks in a proactive, responsive, and effective manner.[2]

[1] - FAO and WHO, Food control system assessment tool, Dimension B control functions,2019. Rome ,p69.

Section Two: The Role of the World Health Organization in Binding Member States to the Global Strategy for Food Safety

The World Health Organization (WHO) plays a fundamental role in supporting Member States in implementing the Global Strategy for Food Safety, which aims to reduce food-related risks and promote consumer health worldwide. The organization contributes to the development of strategic frameworks and international standards in collaboration with the Food and Agriculture Organization (FAO), particularly through the Codex Alimentarius Commission, which serves as a reference for countries in formulating national policies. WHO also provides comprehensive technical support to build national capacities, especially in low- and middle-income countries, through strengthening food control systems, upgrading laboratories, and training specialized personnel. Moreover, it plays an active role in risk monitoring and emergency response by operating the Global Early Warning System for Food and Feed (GLEWS) and offering risk assessment tools. In addition, WHO promotes international cooperation and coordination for information exchange and monitors countries' implementation of the strategy through periodic reports highlighting challenges and achievements. The organization also emphasizes raising awareness of food safety as a core component of public health and encourages its integration into national policies in line with the Sustainable Development Goals (SDGs).

Subsection One: Strengthening the Surveillance of Foodborne Diseases at the International and National Levels

The surveillance of foodborne diseases at both the international and national levels plays a vital role in achieving the objectives of the Global Strategy for Food Safety. This will be discussed as follows:

- **First: At the International Level**

In the context of accelerating globalization and the growing integration of food supply chains, strengthening the surveillance of foodborne diseases at the international level has become an urgent necessity to protect public health and ensure an effective response to emerging and recurring food-related risks.
Foodborne diseases are defined as a group of health conditions caused by the consumption of contaminated food or beverages, which may contain pathogenic agents such as bacteria, viruses, parasites, or chemical substances.
With the increasing volume of global trade and the rising demand for imported foods, geographical borders no longer pose a barrier to the spread of these diseases. This

[2]- Amir Khorram-Manesh, Handbook of Disaster and Emergency Management , Kompendie,Gothenburg Sweden , 2017 ,P127.

reality calls for effective international coordination to ensure early detection, rapid response, and the mitigation of their health and economic impacts.[1]

The World Health Organization (WHO) plays a leading role in this field by developing reference frameworks and strengthening surveillance infrastructure across Member States. One of its most prominent initiatives in this regard is the **Global Strategy for Food Safety 2022–2030**, which calls for the enhancement of surveillance and epidemiological reporting systems, and the provision of technical support to build countries' capacities in laboratory analysis, epidemiological investigation, and data management.[2]

WHO also works to standardize surveillance tools and methodologies across countries to ensure data comparability and facilitate the analysis of regional and global trends.

A key example of international cooperation in this area is the **International Food Safety Authorities Network (INFOSAN)**[3], jointly managed by WHO and the FAO. The network connects national food safety authorities in over 180 countries and plays a central role in sharing sensitive information related to food incidents—such as outbreaks of salmonella or listeria—and supporting countries in taking immediate action to prevent the spread of disease.
The system also enables the coordination of cross-border investigations and provides scientific evidence to support appropriate decision-making by national authorities.[4]

Despite the progress made, the surveillance of foodborne diseases still faces major challenges, including disparities in national capacities, insufficient electronic reporting systems, and weak integration between the health, agriculture, and environment sectors (the “One Health” approach). The international community also encounters difficulties in monitoring emerging factors such as antimicrobial resistance in food and the transmission of chemical contaminants through long and complex supply chains. Another significant challenge is the lack of standardized data and

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[1] - World Health Organization, Estimates of the global burden of foodborne diseases: Foodborne Disease Burden Epidemiology Reference Group 2007–2015. Geneva: World Health Organization, 2015, pp. 1–3.

An article published on a website : https://www.who.int/publications/i/item/9789241565165

[2] -World Health Organization**.** *Global Strategy for Food Safety 2022–2030*, WHO Publications. Available at: https://www.who.int/publications-detail-redirect/978924005768.

[3] - Food and Agriculture Organization of the United Nations**.** *International Food Safety Authorities Network (INFOSAN)*. FAO, 2025. Available at: https://www.fao.org/food-safety/emergencies/infosan/e.

[4] - **w**orld Health Organization**,** *Announcement of the Food Safety Alliance to Enhance Global Surveillance*, WHO, May 6, 2024. Available at: https://www.who.int/news/item/06-05-2024-global-cooperation-towards-enhanced-surveillance-of-foodborne-diseases.

limited transparency in outbreak reporting, which hinders the ability to draw an accurate picture of the global burden of foodborne diseases.[1]

To overcome these challenges, the World Health Organization recommends several actions, most notably: improving national surveillance infrastructure; enhancing the use of digital systems and artificial intelligence to trace outbreak sources; strengthening training and capacity-building programs; and investing in applied research on emerging pathogens. The organization also calls for expanding international cooperation and increasing participation in global networks such as **PulseNet International**, which monitors the genetic sequencing of pathogens, thereby contributing to highly accurate identification of transmission chains.[2]

Therefore, strengthening the surveillance of foodborne diseases at the international level is no longer optional but a strategic necessity to protect public health, support the stability of global trade, and achieve the Sustainable Development Goals related to health and food security. This joint effort requires long-term political commitment, investment in infrastructure and human resources, as well as effective mechanisms for information sharing and cross-border cooperation.

Second: At the National Level

Strengthening the surveillance of foodborne diseases is a vital component for ensuring public health safety. This national approach requires adopting an integrated system that encompasses diagnostic infrastructure, monitoring mechanisms, and reporting chains, while enhancing cooperation among relevant authorities.

First, it is essential to develop a **national integrated epidemiological surveillance system** that directly connects hospitals, laboratories, public health departments, and food regulatory agencies, utilizing advanced digital technologies that enable real-time data collection and analysis, and facilitate immediate reporting of any suspected cases. This system should include a **central unit for epidemiological data analysis** that links disease symptoms, food types, and supply chains, aiming to accurately identify contamination sources and accelerate response measures.

Moreover, diagnostic and reporting protocols should be **standardized at the national level**, and **national databases** should be established to include case records and pathogen strains (bacteria, viruses, parasites), while strengthening the linkage between reference laboratory results and epidemiological analysis centers.

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[1] - **World Health Organization,** *Towards* Stronger Food Safety Systems and Global Cooperation. WHO Publications, October 17, 2022. Accessed June 4, 2025, at 22:00. https://www.who.int/news/item/17-10-2022-towards-stronger-food-safety-systems-and-global-cooperatio.

[2] - **World Health Organization,** WHO Estimates of the Global Burden of Foodborne Diseases. Article available on the World Health Organization website. Accessed June 4, 2025, at 23:00. https://www.who.int/data/gho/data/themes/who-estimates-of-the-global-burden-of-foodborne-diseases.

At the laboratory level, it is essential to expand diagnostic capacities by establishing a national network of laboratories for food and public health that employs advanced technologies such as whole genome sequencing (WGS) to detect specific pathogen strains and analyze their spatial and temporal distribution patterns. Rigorous quality assurance and quality control (QA/QC) procedures should also be implemented, along with the harmonization of analytical methods in line with international standards set by the World Health Organization (WHO) and the Food and Agriculture Organization (FAO).[1]

It is essential to enhance coordination between the relevant ministries and bodies, particularly the Ministries of Health, Agriculture, Environment, and Trade, as well as food safety authorities. A **permanent national food safety committee** could be established to develop policies, coordinate responses, and manage outbreaks of foodborne diseases. Active participation in international networks concerned with food safety, such as the **International Food Safety Authorities Network (INFOSAN)**, is also recommended to facilitate the immediate exchange of information and warnings.[2]

Moreover, the tracking of food products throughout the supply chain constitutes an essential **instrument for strengthening monitoring and oversight,** This shall be achieved through the mandatory implementation of digital tracking systems — such as barcodes or blockchain technologies , that connect products to their sources, storage, and distribution stages, thereby expediting the withdrawal of contaminated products when necessary.

Food business operators shall be obliged to implement **the** Hazard Analysis and Critical Control Points **(HACCP)** system and to undergo intensified periodic and unannounced inspections to verify compliance with applicable food safety requirements.

on the other hand, the development of human capacities constitutes a fundamental component of the effectiveness of the surveillance system**.** This includes the training of physicians, technicians, health inspectors, and laboratory personnel in diagnostic, reporting, and epidemiological investigation techniques. Such competencies should preferably be integrated into formal education and continuous professional training programs.

Furthermore, national awareness programs shall be implemented and directed toward the general public and consumers, focusing on proper food-handling practices, prevention of contamination, and recognition of food poisoning symptoms, with the

[1] - WHO, Laboratory Capacity & WGS in Foodborne Disease Surveillance , An article published on the website: https://www.who.int/publications/i/item/9789240030907, Read it on 03/08/2025 at 23h.

[2] - World Health Organization. Global Strategy on Food Safety 2022/2030: Towards Strengthening Food Safety Systems and Global Cooperation. 2023. p. 10. Accessed October 01, 2025. https://www.who.int/publications/i/item/9789240057685.

active involvement of media outlets and social media platforms in periodic educational campaigns.[1]

Section Two: Coordination Between the World Health Organization and the Food and Agriculture Organization to Ensure the Health of Humans, Animals, and Plants

Coordination between the **World Health Organization (WHO)** and the **Food and Agriculture Organization of the United Nations (FAO)** constitutes a fundamental pillar in safeguarding the health and well-being of humans, animals, and plants. This coordination operates within a **multisectoral framework** known globally as the **"One Health"** approach, which recognizes the intrinsic interconnection between human health, animal health, and environmental integrity.

First: Launch of the Joint Plan of Action on the One Health Approach

On **21 September 2022**, four leading international organizations jointly launched the **Joint Plan of Action on the One Health Approach (2022–2026)**—a milestone initiative reflecting the international community's commitment to enhancing cross-sectoral cooperation. These organizations are:

- The **World Health Organization (WHO)**
- The **Food and Agriculture Organization of the United Nations (FAO)**
- The **United Nations Environment Programme (UNEP)**
- The **World Organisation for Animal Health (WOAH)**

This plan was developed in response to the **complex health challenges** revealed by the **COVID-19 pandemic** and other public health crises, which underscored the urgent need for coordinated action across sectors.
It provides a **comprehensive framework** for countries to develop **coherent national strategies** grounded in the principles of the One Health approach, thereby strengthening their capacities to **predict and respond effectively to epidemics**, while reducing **human casualties** and **economic losses** arising from health emergencies.[2]

Second : Objectives of the Joint Plan of Action

The Joint Plan of Action on the One Health Approach (2022–2026)**,** launched jointly by the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), and

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[1]- FAO/WHO, Training Manual on Foodborne Disease Surveillance, An article published on the website: https://www.who.int/publications-detail-redirect/9789241547220, Read it on 03/10/2025 at 23h.

[2] - World Health Organization, Food and Agriculture Organization of the United Nations, World Organisation for Animal Health, and United Nations Environment Programme. Joint Plan of Action on the One Health Approach (2022–2026): Working Together for the Health of Humans, Animals, Plants and the Environment, Rome: WHO, 2023. Accessed October 01, 2025. https://www.who.int/ar/publications/i/item/9789240059139.

the World Organisation for Animal Health (WOAH), aims to strengthen international coordination in addressing health challenges at the human–animal–environment interface. The Plan seeks to enhance national and global capacities in early detection and risk assessment, prevent zoonotic diseases, and ensure food safety and security. It further focuses on combating antimicrobial resistance (AMR), protecting the environment and biodiversity, and reinforcing international cooperation, information exchange, and joint research within the framework of the **One Health** approach.[1]

Section Three: Evaluation of the Joint Food Control System between the Food and Agriculture Organization (FAO) and the World Health Organization (WHO):

The joint food control system established between the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) represents one of the most prominent international models of institutional cooperation in the field of food safety. This system aims to enhance consumer protection and ensure food quality at both national and global levels through the harmonization of standards and coordination of efforts among relevant stakeholders. The evaluation of this system focuses on analyzing its operational mechanisms and assessing its effectiveness in achieving its objectives, in addition to identifying its key strengths and the challenges it faces amid the rapid global changes in food production and trade.

Subsection One: International Tools for the Evaluation of National Food Control Systems

Several international tools have been developed to assess national food control systems and strengthen their effectiveness:

- **The Joint External Evaluation (JEE)** under the *International Health Regulations (IHR)* measures countries' capacities in foodborne disease surveillance and emergency response management.
- **The Performance of Veterinary Services (PVS) Tool** by the *World Organisation for Animal Health (WOAH)* evaluates veterinary services across key areas such as resources, technical capacity, stakeholder engagement, and market access.
- **The Phytosanitary Capacity Evaluation (PCE)** of the *International Plant Protection Convention (IPPC)* helps countries assess and enhance their legislative and technical measures for plant health protection.
- **The Performance, Vision, and Strategy (PVS) Tool** developed by the *Inter-American Institute for Cooperation on Agriculture (IICA)* examines food

[1] - ONE HEALTH JOINT PLAN OF ACTION (2022-2026) WORKING TOGETHER FOR THE HEALTH OF HUMANS, ANIMALS, PLANTS AND THE ENVIRONMENT, published by food and agriculture organization of the united nations united nations organization for animal health ,Rome,2022,p 44.

safety services through indicators like technical capability, financial and human resources, cooperation with the private sector, and public health assurance.

Together, these tools provide a comprehensive framework for countries to evaluate, compare, and improve their national food safety systems in line with international standards.[1]

Subsection Two: Evaluation of the Effectiveness of the Joint Food Control System between FAO and WHO

First – Strengths:
The joint FAO/WHO food control system demonstrates several key strengths that contribute to its overall effectiveness, including:

1. **Harmonization of International Standards:** Through the Codex Alimentarius Commission, unified standards and principles have been established and adopted globally to ensure food safety and quality, facilitating international trade and enhancing consumer protection.
2. **Scientific Basis and Continuous Assessment:** The system relies on accurate scientific data and ongoing risk assessments, enabling the regular updating of standards and the adaptation to emerging food safety risks.
3. **International Cooperation:** The joint framework fosters collaboration among countries and organizations, promoting the exchange of information, experiences, and best practices in the field of food safety.
4. **Capacity Building Support:** Through training programs and technical assistance, the system helps member states strengthen their national food control systems and improve their regulatory capacities.[2]

Second – Challenges Affecting Effectiveness:
Despite its strengths, several challenges continue to influence the system's effectiveness, including:

1. **Variability in National Capacities:** Not all countries possess the same ability to implement international standards due to resource limitations or weak infrastructure.
2. **Complexity of Modern Supply Chains:** Globalization and the growing movement of food products make it increasingly difficult to monitor all stages of production accurately.[3]
3. **Internal Coordination Challenges:** In some countries, overlaps and gaps exist between governmental bodies responsible for food safety, weakening national coordination efforts.

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[1]- Yasmine Motarjemi, Gerald Moy, Ewen Todd, Encydopedia of Food Safety ENCYCLOPEDIA OF FOOD , First edition, Academic Press,USA,2014,P83.

[2]

[3]-FOA, Contribution of terrestrial animal source food to healthy diets for improved nutrition and health outcomes An evidence and policy overview on the state of knowledge and gaps, Published by Food and Agriculture Organization of the United Nations, Rome, 2023, P165.

4. **Emerging Risks:** The appearance of new contaminants or antimicrobial-resistant microorganisms requires rapid updates and responses within the system, posing a continuous challenge.

Nevertheless, the success of the joint food control system largely depends on the capacity of member states to adapt and implement its principles effectively, as well as on the continued modernization of the system to address evolving global challenges.[1]

Conclusion

Upon reviewing and analyzing the efforts of the World Health Organization (WHO), it becomes evident that food safety constitutes an integral component of the global public health framework. Human health cannot be safeguarded without ensuring the safety and quality of the food consumed. In an era marked by the increasing transboundary movement of goods and food products, and by the growing risks associated with food contamination, the role played by the WHO has become more crucial and pressing than ever before.

The findings of this study demonstrate that the WHO's functions extend well beyond emergency response; the Organization adopts a preventive and strategic long-term approach, aimed at developing effective policies, strengthening regulatory oversight, enhancing public awareness, and promoting cooperation with States and relevant institutions to achieve a common objective **"safe food for all, everywhere."** However, the implementation of these policies continues to face significant challenges, both **technical** and **politico-economic**, particularly in **low- and middle-income countries**.

Key Findings

1. The study confirms that the World Health Organization serves as a principal international legal and institutional reference in the domain of food safety, alongside the Food and Agriculture Organization (FAO) and the Codex Alimentarius Commission.
2. The Organization plays a substantive role in supporting developing countries through the provision of technical expertise, capacity-building, and modernization of national health and food control systems.
3. The WHO faces multiple challenges, most notably the disparity in national capacities to implement international standards, insufficient coordination between national and international entities, and limited financial resources allocated to certain programs.
4. The Organization's recommendations exert a significant normative influence on national food legislation in many States; however, the degree of compliance varies depending on political will and available resources.
5. There remains a notable deficiency in public awareness regarding the WHO's role in the field of food safety, which diminishes the overall effectiveness of its educational and awareness initiatives.

Recommendations

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1. Strengthen institutional coordination between the World Health Organization and the national competent authorities responsible for food safety within Member States.
2. Enhance financial and technical assistance to developing countries with a view to establishing modern and effective food control systems consistent with international standards.
3. Intensify public awareness and health communication programs concerning foodborne risks and the WHO's preventive and regulatory functions.
4. Encourage States to incorporate WHO recommendations into their national legal frameworks and food safety legislation.
5. Promote and support scientific research and legal studies relating to food safety, with a particular emphasis on the periodic evaluation of the impact of WHO interventions in this field.

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