



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
FAO/WHO COORDINATING COMMITTEE FOR ASIA**

Twenty-second Session

Virtual

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KEYNOTE ADDRESS: EMERGING ISSUES IN FOOD SAFETY IN THE REGION

(Prepared by the FAO and WHO)

Introduction

The theme of the keynote address of this session of CCASIA is ‘emerging issues in food safety in the region’ which is to capture the current and pressing food safety issues in the region so that Members, even if they are with highly diverse food culture, could identify both similarities and differences to seek collaborative solutions together.

In the region, fast urbanization, rapid growth of population, new technologies in the production and changing environmental conditions have triggered the emergence of new food safety issues. Working together to achieve better food control systems is an important approach that the region has long recognized, and countries have made a significant effort to enhance active participation in Codex activities and adapting international standards as well as contributing to setting such standards.

CCASIA has the benefit of 24 countries in the region covering close to 60% of the global population. With the objectives of communication among the member countries, the role of keynote address is to stimulate active discussion and information sharing on the common issues of interest to the region relevant to food safety and Codex activities.

Speaker 1: Back to the basic challenge – food safety first

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Honourable Representatives of the FAO and WHO, Chair of the joint FAO/WHO Regional Coordinating Committee of ASIA, Codex Secretariate, Distinguished Delegates, Ladies and Gentlemen, a very Good Morning to you all.

Thank you for the opportunity to address this important and prestigious gathering. Coming from the academic institution, I would like to take this special opportunity to talk about the transformation of the emerging food system and emphasize the importance of having food safety as its foundation. Then, I will also try to identify some issues related to food safety that have emerged, along with the food system transformation initiative. However, the issues that I present are issues that are not traditionally recognized as immediate food safety issues.

As we know, performance of food system in delivering food security is currently in question, especially due to the 3Cs, namely Climate Change, Covid-19, and Conflict. The major challenges of food system, particularly in achieving target of the Sustainable Development Goals (SDGs) is clearly highlighted by the report entitled “The State of Food Security and Nutrition in the World 2022” jointly by FAO, IFAD, UNICEF, WFP and WHO (2022). The report shows that, in 2020 there is an increasingly visible trend of increasing prevalence of undernourishment, from 8.0 to 9.3% from 2019 to 2020, and reached 9.8 % in 2021. It was estimated that between 702 - 828 million people were affected by hunger in 2021.

The conditions highlighted in this report make various parties aware of the major challenges facing the food system, namely, how to meet the food needs of the world's growing population. This big challenge must be

overcome by realizing that there are various constraints that must be considered, including the lower availability (and quality) of arable land, limited water supply, competition for biomass for renewable energy, unsustainable lifestyles, and again, 3Cs, climate change, The COVID-19 pandemic, and conflict.

In responding to these challenges, globally there has been a major change in the approach of food production (agriculture, animal husbandry, fisheries), especially with the emergence of new food production technologies, exploring innovative approaches to produce more with less. Several innovations that have been identified as potential options for the future include vertical farming, precision farming, cell culture-based food production (meat, fish, dairy), plant-based protein alternatives, including 3-D printed foods. Online marketing technology, triggered by the COVID-19 Pandemic, has changed consumer food shopping behaviour which has also led to new technologies for logistics and food delivery.

In addition, there are also efforts to explore new food sources; both originating from the sea (such as edible seaweed and microalgae) and from land, including exploring various local plants that have not been utilized optimally; or even underutilized. Talking about the potential of plants as food sources, FAO states that currently about 250,000 species of higher plants have been identified, and of which about 30,000 species of plants are edible. However, only 30, which is 0.1 percent, of edible plant species, are used to feed the world today. This means that there is still a lot of potential that needs to be researched and developed. Furthermore, various local food wisdoms, such as the consumption of edible insects, need to be well studied as one of the potential foods for the future.

All these efforts are currently being carried out within the framework of the transformation of the food system. This should be designed in such a way that it aims not only to increase the availability (amount) of food, but also to provide safe, nutritious, and affordable food. This is in line with the objectives of the 2021 UN Food System Summit, which aims to transform the food system to achieve a more healthy, sustainable, and equitable food system.

Emerging Food Safety Issues

In conducting transformation toward a more healthy, sustainable, and equitable food system, we have to be mindful that food safety is a prerequisite of food. Meaning that when we are talking about food, first thing first, it must be safe. So, designing food security really needs to start by designing food safety as the foundation. Every initiative to increase food availability for the population must always be accompanied by efforts to ensure food safety, to ensure "that food will not cause adverse health effects to the consumer when it is prepared and/or eaten according to its intended use" (General Principles of Food Hygiene (CXC 1-1969).

The essentiality of food safety is illustrated by report from the World Health Organization (WHO). The report concluded that food safety problem, especially foodborne illnesses, cause almost one in 10 people to fall ill, resulted in about 420,000 deaths every year. Nevertheless, according to WHO, this figure may still be an underestimate. The WHO also suggested that the burden of foodborne diseases is substantial and need to be addressed systematically. It was stressed that foodborne diseases are preventable, and everyone, every actor in the food system, has a role to play, including every one of us here.

Triggered by the COVID-19 pandemic, the importance of food safety is very much recognized by the public. Mainly because of the increasing awareness of the important relationship between food and health, public concern about other possible health consequences of eating food is also increasing, and equate food safety, not only in terms of

(i) risks associated with chemical, microbiological and physical contaminants, but also (ii) risks associated with nutrition characteristics that may potentially "causing adverse health impacts". Actually this is also shown by the above report entitled "The State of Food Security and Nutrition in the World 2022", which stated that in addition to the problem of increasing the prevalence of undernourishment, the report also shows a shift in disease patterns from infectious diseases and malnutrition to diet-related non-communicable diseases (especially triggered by the increasing rates of overweight and obesity) including coronary heart disease, stroke, diabetes and some types of cancers. These concerns regarding the nutrition safety are becoming more and more important and should be addressed appropriately.

Furthermore, with respect to the desire to achieve more sustainable and equitable food system, people also demand other aspects of food that are not traditionally directly related to the definition of food safety. For example, people demand clearer and more accurate labelling, more complete information about source and type of ingredients and additives, level of processing, and other information on the sustainability aspects, such as the relationship between the product, processing and its environment, workers, and society. Responding to these emerging issues appropriately is paramount important to ensure the successful transformation toward sustainable food system.

Now I would like to share food safety issues from Indonesia, specifically related to the definition of food safety. Indonesian law (Law No 18, 2012) stated that "Food safety is a condition and effort needed to prevent food from being contaminated by biological, chemical, and other objects that may interfere, harm, and endanger

human health and not conflicting with religion, belief, and community culture so that it is safe for consumption". This law clearly suggests that there are two aspect of food safety, the first is about physiological safety (assurance that food may interfere, harm, and endanger human health) and the second is psychological safety (assurance that the food are not conflicting with religion, belief, and community culture). Both physiological and psychological safety are important and serve as prerequisite of food. Only if the food is physiologically and psychologically safe, then it is safe for consumption.

Double Challenges: SDGs Issues

Once again, I will use the case of Indonesia as an example to illustrate a complicated emerging issue, namely the phenomenon of double challenges in food safety. In general, Indonesia has double challenges of food safety to be addressed, domestic food safety challenges and international food safety challenges. Domestically, Indonesia must address the need to improve food safety system and infrastructures, and, internationally, Indonesia need to be able to comply with increasingly stringent international standard of food safety, especially for it export food products.

Domestically, food safety problem faced by most of Indonesian populations can be identified as due to unsanitary condition, leading to microbial contamination of foods. Food safety problem associated with the use of unsafe-chemicals or unsafe use of food additives are also identified. Further analysis showed that the roots cause of the food safety problem identified is associated with several factor, including –number one- poverty (meaning lack of foods) and –number two- the fact that food production system is dominated by medium, small (or even micro) food enterprises.

Most these micro-small-and medium enterprises have several weaknesses, such as (i) lack of basic food safety infrastructure (clean water, clean ice, cold chain system, etc.), (ii) lack of capacity of human resources (producers, consumers, government officials), and (iii) lack of funding. Consistent and concerted programs to address these weaknesses need to develop and implemented.

Challenge number two, is international challenge, associated with the need to comply with increasingly stringent international standard of food safety. As we know, international food safety standard is getting more and more stringent, and the allowable concentration of contaminants is getting smaller and smaller, chasing zero.

Even though export constitute a significant and growing share of GDP for Indonesia –and probably also for most developing economies, developing capacity to comply with international standard is obviously a big challenge. Implementation of more stringent food safety standards also involves costs which may be prohibitive for some producers and have negative food security implications. Stringent food safety standards may also raise food prices with negative consequences for poor consumers. They can thus have negative social implications and go against the central, transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), of leaving no one behind.

Challenges for Codex?

Finally, as an important part of the United Nations organization, the Codex has the responsibility to contribute to the achievement of the 2030 Agenda for Sustainable Development (SDGs), adopted by the United Nations in 2015. And, as a leading international standard-setting body, in developing international standards (including guidelines for and Codes of Practice), Codex must always consider and analyze the impact of the standards developed, on global sustainability. How will the standards developed affect food loss and food waste? How can the resulting standards improve human and planetary health? How the standards adopted can promote local foods, traditional foods, including edible insects for example. How will the standard set encourage the switch to a healthier diet?

With those questions in mind, I will end my short presentation. And thank you very much for your kind attention.

Speaker 2: Food Safety Issues and Countermeasures in Asia

Li Ning

Director-General of China National Center for Food Safety Risk Assessment

Honorable Chairperson of the Committee, FAO and WHO representatives, delegates from members, ladies and gentlemen, it is a great honor to be invited to this meeting and to share my views on food safety issues and countermeasures in Asia.

The China National Center for Food Safety Risk Assessment is a food safety risk assessment and risk management organization, which helps the government in food safety risk management, conducting public

science communication and supporting sustainable development of the food industry. I hope that our stories and experience may inspire our Asian colleagues.

Under effective regulation, China's food safety level improves year by year. In recent years, major systemic food safety failure has not ever occurred. As the largest developing country in the region, China is still facing the problem of uneven development. Although the overall food safety risks are generally manageable, China still be in a complex situation in which traditional risks and new risks overlap, profit-driven and unknown risks are intertwined, and perceived risks and actual risks are misaligned. Changes in lifestyle due to Covid-19 pandemic, development of the digital economy, industrial restructuring, evolving in social behavior, upgrades in consumption patterns, and development and application of new technologies, have become factors affecting food supply and quality and safety, bringing new challenges to food safety.

First of all, the "traditional risks" of food safety still need to be emphasized. Foodborne diseases caused by contamination with pathogenic microorganisms remains the primary food safety concern. As dietary habits and patterns change, the preference for fresh foods and foods that have not been thoroughly heated, and the prolonged time between food processing and consumption can also increase the risk of foodborne diseases. China's national foodborne disease surveillance platform reports over 1.5 million cases per year, with microbial contamination accounting for the majority of these cases. These reported cases are still anticipated to be the tip of the iceberg in terms of the total real number of cases. Salmonella and vibrio parahaemolyticus are the main pathogenic bacteria. Meat and aquatic products are comparatively of high risk. Food service entities and school canteens are key prevention and control sites, while incidents of homemade food causing food poisoning and even death may still occur.

Food safety issues due to chemical contamination still exist. Heavy metal contamination of food products, aquatic vegetables, shrimps and crabs and other aquatic products in some areas due to environmental contamination caused by industrial development is still a serious concern. There are also reported cases of food poisoning due to fungal toxin contamination such as food vomitoxin. Improper use of pesticides in some small varieties of crops should also be pay attention to. Good agricultural guidance should be provided to people working on the farms.

There is high rate food poisoning caused by wild poisonous mushrooms and poisonous plants. According to foodborne disease surveillance results in the past five years, there were nearly 8,000 food poisoning cases caused by accidental picking and consumption of poisonous mushrooms in China, resulting in more than 300 deaths. Paralytic shellfish toxin poisoning in aquatic products also occurs from time to time.

Second, "new risks" to food safety pose challenges. Climate change has brought about fluctuations in the spectrum of food contamination factors. Therefore, we need to pay more attention to climate-influenced contamination trends such as biotoxins, pathogenic microorganisms, etc. Microbial resistance has become a serious global threat, and certain microorganisms in the food industry have also showed their resistance, which should be of great concern. New emerging forms of food business through the Internet and online order call for the introduction of operational standards in food preservation, delivery, and supervision. Food allergies have been included in the category of foodborne diseases by the World Health Organization. However, the epidemiology of food allergies and allergen thresholds in the population are not clear, and there is a lack of scientific basis for the development of food labeling regulations and standards. New food resources and ingredients such as cell-cultivated meat, GM food, etc. continue to emerge. We need to study the appropriate safety assessment techniques and develop management measures based on characteristics of the food as soon as possible. In the context of the global economy where international free trade agreements have been signed, food safety risks in cross-border food trade should be given high priority to guarantee that food trade is conducted in a healthy and fairly manner.

Third, the risk of "Economically Motivated Adulteration" (EMA) in food safety still needs to be cautioned. For both developing countries and developed countries, market competition and profit-driven default in the use of pesticides and veterinary drugs, food additives, illegal added substances, and food adulteration and counterfeiting always require vigilance. While these issues become less and less as regulatory technology advances and industry self-regulation strengthens, EMA should always be addressed as an important social issue in the region.

Last but not the least, the "perceived risk" of food safety needs to be improved. Consumer are not completely satisfied with the current state of food safety. The misleading information due to asymmetric food safety information is a major influence factor, and food safety rumors spread quickly and widely through new media platforms. In the past week, China has witnessed a public debate regarding the use of food additives in the soy sauce manufacture. More efficient and effective consumer education and information disclosure are necessary to improve public awareness and confidence in food safety.

Dear colleagues, in order to address the above issues, China's experience can be summarized in four stages: "risk identification, risk assessment, risk management and risk communication".

To begin with, establishment of a nationwide network for food contaminants surveillance. More than 1,200 possible food contaminants are routinely under surveillance. Relevant data obtained each year objectively reflect the trends and changes in a variety of contaminants.

In addition, construction of a foodborne disease surveillance platform consisting of three core systems: foodborne disease surveillance and reporting system, foodborne disease outbreak surveillance system, and foodborne disease molecular traceability network (TraNet). The platform covers more than 70,000 medical institutions in counties and villages and reports more than 1.5 million cases and 6,000 outbreaks annually, which can effectively prevent the spread of unknown foodborne risks.

Moreover, ramping up risk assessment investment. The China National Center for Food Safety Risk Assessment was established to implement the principles of risk analysis advocated by FAO and WHO and to establish risk-based management measures. By conducting Total Diet (TDS) studies, we accurately assess the dietary exposure levels of various chemical substances and provide a basis for standards formulation. For GM foods, nano foods, and cell-cultivated foods, we are also working with other experts worldwide to establish appropriate risk assessment approaches. In addition to risk assessment of traditional contaminants and food additives, we also focus on risk assessment of many herbal medicines with Asian characteristics that also consumed as food, contributing to the development of the traditional food industry.

Furthermore, implementation of "social governance" concept of food safety. It is important for food manufactures and processors to acquire the knowledge of food safety and take the primary responsibility to guarantee food safety. Besides, we need to ensure consumers develop a scientific concept of food consumption and to improve the social consensus on various risks through risk communication.

Last but not the least, it is important to strengthen regional communication and cooperation. We have always believed that through technology sharing and exchange, we can draw on each other's strengths and make up for each other's weaknesses in a timely manner. Asian members should make full use of communication platform Such as Codex to strengthen exchanges and cooperation, whether in terms of detection tools for risk identification, assessment techniques to guarantee the innovative development of the industry, and food standards in each country. I also look forward to this CCASIA becoming one of the best platforms for Asian members to exchange experience in food safety control and knowledge of food science and technology. As the conference organizer, the China National Center for Food Safety Risk Assessment, sincerely hopes to consolidate in-depth exchanges and cooperation with all our CCAISA colleagues.

Thank you again, ladies and gentlemen!