



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

**Twenty-first Session**

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**EMERGING ISSUES IN FOOD SAFETY AND QUALITY IN COUNTRIES OF THE REGION**

(Prepared by FAO and WHO)

## 1. INTRODUCTION AND BACKGROUND

1.1 The globalization of the food chain, patterns of food consumption and advances in technology across the farm-to-fork continuum, food safety priorities and needs are changing continuously. In this context, this document summarizes the responses to a survey on emerging issues in food safety and quality that was circulated to all member countries in Asia. Each country was requested to follow a consultative process and identify the three most important emerging issues that are expected to have an impact on food safety in the next 5 -10 years. These could be known issues that are present or are occurring or even recurring. They can also be completely new, unexpected or ones that can cause change in the *status quo*. Identification of emerging issues will help to provide proactive guidance and support to countries in addressing prospective issues that could be of regulatory significance.

## 2. OVERVIEW OF RESPONSES BY MEMBERS OF THE REGION

2.1 In the Asian region, 42% of member countries (10 out of 24) responded to the questionnaire. They identified 10 major issues as emerging priorities which are classified hereunder with the number of countries that listed each them included in parentheses:

1. General subjects covered by Codex (5)
  - i. Pesticide residues
  - ii. Veterinary drug residues and anti-microbial resistance (AMR)
  - iii. Risk-based control of imported food
2. Technical capacities required for food control (2)
  - i. National food safety regulatory authorities
  - ii. Food standards bodies
3. Current contextual challenges (3)
  - i. Climate change
  - ii. Food fraud and authenticity
  - iii. Food safety reporting in the media
  - iv. Online sale of food
  - v. Novel foods

## 3. KEY ISSUES IDENTIFIED BY MEMBERS OF THE REGION

3.1 Concerns about chemical residues in food are abundant. The effects of long term exposure to them, such as non-communicable diseases, become known only after years and decades. However, the presence

of pesticide residues above MRLs is a legitimate concern as farming has become more intensive and industrialized as a consequence of factors such as urbanization leading to loss of land and the globalization of food chains. Moreover, with trans-boundary pest and disease incursions occurring more frequently and climate change leading to alteration in cropping patterns and pesticide use, the entry points for their residues have changed and multiplied. This is further compounded by the continued use of persistent organic pollutants (POPs), highly hazardous pesticides (HHPs) and new and emerging chemical molecules.

3.2. The ever-increasing global emergence of resistance to antimicrobial substances in microorganisms has immediate and long-term consequences on the treatment of simple and complex microbial infections in humans or animals. It is an important focus area for action both at global, regional and national levels. The emergence of AMR is largely attributed to the over use, misuse and abuse of antimicrobial substances in humans, animals and plants. The use of antimicrobial substances for growth promotion is becoming an easy tool for the livestock sector to meet the increasing demand for animal-source protein in Asia. This irrational and non-prudent use results in occurrence of residues in livestock products (such as milk, meat, eggs, honey) and exposure of consumers to residues as well as to AMR strains of micro-organisms. The latter in turn limits the possibility of successful treatment of infections with current antibiotics and may lead to increased mortality, more severe illness, prolonged hospitalization and reduced livelihoods and food security. Also, the costs for treatment and health care increases drastically due to longer duration of illness and use of more expensive drugs. Common infections and diseases, which were earlier treatable, are now becoming difficult to treat. Globally, it is expected to lead to a 3.8 per cent loss in GDP and 10 million deaths annually by 2050<sup>1</sup>.

3.3. Strengthening of technical capacities in pesticide and veterinary drug registration, regulations and good practices governing their use and accurate quantitation through laboratory methods are important aspects. Countries recognize the need for preventive actions to prevent harmful effects in the long term and of adopting an inclusive One Health approach to safeguard plant, environment and animal health as well as food safety.

3.4. In this context, the strengthening of legal and regulatory frameworks for food control including imports continues to be an important priority for countries. Enacting strong legislation, formulating up-to-date regulations and enforcing them through risk-based inspection backed up by surveillance and analytical services that provide science-based evidence of food safety risks to public health and trade remains a strong need. Risk-based inspection of imported foods has acquired enhanced significance due to the massive growth in global food trade. The diversity of countries of the Asian region in terms of their organization of national food control systems is causing profound differences in the way food safety is managed and controlled. This is reflected in the behavior of food business operators and consumers within a country and the perception of that country by others. Behavior change communication and the creation of a food safety culture are issues that need to be high on the national food safety agenda. Another complex area is that of food standards and countries require technical advice and assistance to improve their understanding of mandatory and voluntary standards and their implementation. Partnerships with the private sector to enhance the adoption of the latter whilst strengthening enforcement of the former are important to ensure that risk management and food safety is a shared responsibility. Coordination between different Ministries/ Agencies performing these roles needs to be on countries' agenda.

3.5. Countries also shared their concerns on the rapid changes occurring due to two key drivers – climate and technology. The Asia-Pacific region already houses the highest numbers of malnourished people in the world (486 million)<sup>2</sup>. It is also vulnerable to climate related disasters such as flash flooding, droughts and cyclones, which reportedly cost economic losses of over \$89 billion in 2018<sup>3</sup>. Temperature and rainfall changes can force the alteration of cropping and land use patterns affecting food production, safety and security. Changes in crop rotations are also altering the pattern of pest and disease infestations and outbreaks which in turn is modifying schedules of agronomic inputs including fertilizers, manures, pesticides and veterinary drugs for livestock and fisheries. Downstream actions along the supply and value chains could be affected with entry points for risks such as mycotoxins being created. There are also possibilities that animal health and veterinary issues could also be affected, pathogens that hitherto did not affect food safety directly or were non-zoonotic could become more dangerous. This indeed became the case with avian flu and African swine fever.

3.6. Technology is changing the way food is being produced, processed and sold to consumers. There is not much clarity on how e-commerce platforms and food delivery services, driven by the increasing prevalence

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<sup>1</sup> World Bank. 2017. "Drug-Resistant Infections: A Threat to Our Economic Future". Washington, DC: World Bank. [accessible at <http://www.worldbank.org/en/topic/health/publication/drug-resistant-infections-a-threat-to-our-economic-future>]

<sup>2</sup> FAO. 2018. Asia Pacific Regional Overview of Food Security and Nutrition [accessible at <http://www.fao.org/3/CA0950EN/CA0950EN.pdf>]

<sup>3</sup> AON. 2018. Weather, climate and catastrophe insight [accessible at <https://www.aon.com/global-weather-catastrophe-natural-disasters-costs-climate-change-annual-report/index.html>]

of smartphones, are overseeing food safety of their suppliers including labelling. Factors such as the quality of ingredients, temperature, the exposure and training of the actors involved to good practices, type of transportation and food contact materials can influence safety. In Asia, this sector is set to grow at a tremendous pace and food safety in online retail is an area that needs to start getting addressed very quickly. A key subject that impacts food safety is food losses and waste. In rapidly urbanizing Asia, sustainability of agri-food chains and the safety of leftover or surplus food is a growing concern. Global and regional strategies for food losses and waste are available which need piloting and validation including the incorporation of relevant food safety measures such as labelling with 'best before' rather than expiry dates.

3.7. The Internet is now the primary source of information in most parts of Asia where mobile data is cheaper than any other region in the world. The growth of information technology is also partly reflected in reporting on food safety issues where real or fake news spreads fast on social and electronic media. The speed of news transmission through social media sometimes comes at the cost of accuracy and leads to scares which in turn lead to unwanted actions such as destruction of food based on hearsay rather than on science. This is aggravated by limited expertise in the countries on risk communication that can ensure that the correct information is made available at the right time to avoid unnecessary fear among the consumers. The appetite and the constant stream of news on food safety is also fed by the growing concerns on food fraud and authenticity. Food fraud is the deliberate substitution, addition, tampering, or misrepresentation of food, food ingredients, or food packaging for economic gain. These can include counterfeiting, adulteration, mislabeling or dilution and can cause serious public health incidents as well as business losses due to recalls. Countries need support in conducting vulnerability assessments of food chains, many of which now span continents and knowledge of fit for purpose methods for authenticity testing.

3.8. Lastly, respondent countries voiced concerns on novel food, which are newly developed and innovative in content, composition or use new technologies and production processes. These should be safe for the consumer and identified as such through clear labeling.

#### **4. KEY TAKEAWAYS FROM THE SURVEY**

- The One Health approach to food safety needs to be emphasized across the region, i.e. farm to fork.
- Technical and regulatory capacities in food control need to be continuously improved on all aspects of the risk analysis framework.
- The implications of climate and technological change on food safety and risk management needs to be systematically monitored and analyzed using science-based instruments.
- Networking among Ministries/ Agencies in countries as well as between countries needs to be strengthened for information as well as solutions to issues.
- Relevant Codex texts and FAO-WHO tools and publications need to be developed, disseminated and updated to keep up with emerging issues and the pace of change.