

**ARC Comments to Public Consultation on Draft WHO Global Strategy for Food Safety  
2022 to 2030**

**Personal Questions**

- 1. These comments represent input from a WHO Member State  
(Permanent Missions or Ministries)**  
No
  
- 2. These comments represent the views of an:**  
Organization
  
- 3. Contact details**
- 4. If your comments represent an organization, please indicate the  
organization type**  
NGOs and Civil societies

## Introduction

### **5. The strategy described food safety as a public health and socioeconomic priority, do you agree with the statement and content within this section? Would you suggest any modifications? (p2-3)**

- Agree X
- Partially agree
- Disagree

Please enter your comment here:

The Antibiotic Resistance Coalition (ARC) strongly supports the position that food safety is both a public health and socioeconomic priority, one that would be undermined if the WHO Global Strategy for Food Safety does not explicitly address the threat posed by antimicrobial resistance. The FAO has recognized that “food is likely to be quantitatively the most important potential transmission pathway [of AMR] from livestock to humans” (FAO. “Drivers, dynamics and epidemiology of antimicrobial resistance in animal production” 2016.). This undoubtedly traces, in part, to the significant quantity of antimicrobials used in global food animal production, and the ready transmission of antibiotic-resistant genes through foodborne illness to humans. Much of this use of antimicrobials in food animals is for production purposes (such as growth promotion or routine prophylaxis), not treatment of disease. This “misuse of antimicrobials in food production” acknowledged in the WHO Global Strategy for Food Safety is at odds with the finding that over a quarter of Member State respondents (42 out of 160) in the 2021 *OIE Annual Report on antimicrobial agents intended for use in animals* reported antimicrobial growth promoter use. For animals, antimicrobial consumption in 2030 is expected to increase by two thirds over the baseline in 2010, according to an OECD study. One-third of this increase is attributed to the shift to large-scale, intensive farming --- where antimicrobials are more commonly used to promote growth and prevent disease. Addressing this dimension may require stronger Tripartite Agency collaboration to reconcile this conflict in Member State policies on antimicrobial growth promotion as well as Tripartite support for the WHO’s Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals.

### **6. The strategy identified 7 drivers and current trends of Food Safety; Do you agree with the identified drivers and the brief explanation under each driver? Would you suggest any modifications? (p4-6)**

- Environmental challenges

The draft Food Safety Strategy recognizes environmental threats, from intensive agricultural production systems as a key contributor to global greenhouse gas emissions to plastic waste taking the form of microplastics and nanoplastics. This is certainly an important consideration for a Food Safety Strategy. The potential interplay and synergy among these factors with the use of antimicrobials in food animal production requires attention and further research. First of all, intensive agricultural production often uses -- whether for growth promotion, preventative or

group use --- antibiotics, at times offsetting non-hygienic, dense conditions for raising livestock. Much of the antimicrobials consumed by animals is excreted, entering manure that might fertilize croplands and making the soil microbiome a potential reservoir of antibiotic-resistant genes. Secondly, studies have raised concerns that microplastics may accelerate the exchange of genetic determinants of drug resistance (Liu Y, *et al.* "Microplastics are a hotspot for antibiotic resistance genes: Progress and perspective" *Sci. Total Environ.* 2021), that cattle treated with antibiotics may produce greater methane gas emissions (Hammer TJ, *et al.* "Treating cattle with antibiotics affects greenhouse gas emissions, and microbiota in dung and dung beetles" *Proc R Soc B* 2016), and that herbicides, such as glyphosate, may amplify the development of drug resistance in enteric pathogens (Kurenbach B, *et al.* "Herbicide ingredients change *Salmonella enterica* sv. Typhimurium and *Escherichia coli* antibiotic responses" *Microbiology* 2017; Kurenbach B, *et al.* "Agrichemicals and antibiotics in combination increase antibiotic resistance evolution" *PeerJ.* 2018). Recently it has been found that exposure to herbicides (glyphosate, glufosinate, and dicamba) increase the prevalence of resistance genes and mobile genetic elements in the environment (Liao H, *et al.* "Herbicide selection promotes antibiotic resistance in soil microbiomes" *Mol. Biol. Evol.* 2021). This is concerning as it could facilitate the transmission of resistance mechanisms. While it is helpful that the strategy recognizes the environmental reservoir of AMR and its connections to food safety, a growing body of literature suggests the need to explore the ways in which AMR and other environmental challenges interact and collectively threaten the safety of our food system. This must become a priority area for the WHO food agenda.

- Rise of new technologies and digital transformation

The introduction of new technologies, such as animal vaccines, could help improve food safety. Unlike for neglected diseases in human medicine, however, fewer product development partnerships exist for mobilizing the resources for developing such technologies for food production. Yet an effective vaccine targeting salmonid rickettsial septicemia (SRS) in salmon aquaculture could remove the need for a substantial fraction of the antimicrobials used in that industry. In Norway, vaccines for diseases like furunculosis effectively reduced the use of antibiotics in farmed salmon (WHO Bulletin. "Vaccinating salmon: How Norway avoids antibiotics in fish farming." October 2015). In Chile, where over 90% of the antimicrobials used in salmon aquaculture globally are applied, SRS remains a stubborn challenge, but one that might be addressed by an effective, new vaccine. Importantly, technologies have the potential of reducing the use of antimicrobials in food production and consequently, enhancing safety in the food system. Public sector financing can support the development of these technologies in ways that ensure their affordable use by food producers.

- Interests and demands for safe food

The interest and demands for safe food may be compromised by AMR. If AMR goes unchecked, the World Bank projects that under the high AMR-impact scenario, livestock production among low-income countries could fall as much as 11 percent by 2050 (World Bank. "Drug-Resistant Infections: A Threat to Our Economic Future" 2017). Such food system disruptions from AMR could not only jeopardize gains seen for food safety, but also food

security and agricultural livelihoods. In recognizing this, the WHO Food Safety Strategy needs to also complement efforts to tackle food security.

- Demographics changes
- Society: changing expectations and behaviour

The draft strategy importantly highlights how consumer demand and preferences are shifting. Consumer demand for food animal products raised without the routine antibiotic use has been reported in surveys of the public, such as in the United States (Consumer Reports, “Antibiotics are widely used by U.S. meat industry” 2012; John Zogby in Forbes “Antibiotic-Free Labels Are Important To Two-Thirds Of Americans When Buying Meat — And Data To Back-Up Claims Is Paramount, A New Poll Shows” 2021). Such findings may help explain the success of consumer campaigns to encourage leading restaurant franchises to procure from producers committing to supplying food animal products raised without the routine use of antibiotics. As demonstrated by the success of the Chain Reaction Report, food buyers with public-facing brands can exert important influence over food producers through their procurement practices. The WHO strategy might commit to work with consumer groups to use demand-side strategies to change supplier practices on antimicrobial use in food production.

- Global changes in the economics of the food supply

Following the discovery of plasmid-mediated resistance to the last-line antibiotic, colistin, in China, the genetic determinant of that resistance, *mcr-1*, spread rapidly around the globe (Wang, Ruobing, et al. "The global distribution and spread of the mobilized colistin resistance gene *mcr-1*." *Nature communications*. 2018). Furthermore, investigations of *Escherichia coli* have revealed how clinical *E. coli* infections can develop from foodborne illnesses (Liu, Cindy M., et al. "Escherichia coli ST131-H 22 as a Foodborne Uropathogen." *MBio*. 2018). Such findings are now not unexpected in such a globalized and interconnected food chain. However, the global trade in antimicrobials, including of medically important antimicrobials for non-human use, is non-transparent. The World Customs Organization's harmonized codes for antibiotics are broad (Penicillins, Tetracyclines, Streptomycin, and Others) --- nor are antibiotics separated by their sale for the human or animal sector. This practice enforces non-transparency in the global trade of antibiotics and makes it more challenging to trace potential AMR threats in the food system globally. The WHO Global Strategy for Food Safety needs to address this dimension of the global food value chain.

- Global food safety threats
- Any Additional drivers

**7. The vision of the strategy is: “Safe and healthy food for all; all countries are capable of promoting, supporting and protecting consumer’s health by applying food safety to reduce the burden of foodborne diseases.” Do you agree with the vision of the strategy? Would you suggest an alternative or additions?**

- Agree
- Disagree

Please enter your comment here:

**8. The aim of the strategy is: “*Guide and support Member States in their efforts to prioritize, plan, implement, monitor and regularly evaluate actions towards the reduction of the incidence of foodborne diseases by continuously strengthening food safety systems and promoting global cooperation.*” Do you agree with the aim of the strategy? Would you suggest an alternative or additions?**

- Agree
- Disagree

Please enter your comment here:

**9. Any additional comments regarding the Introduction part of the strategy?**

## **5 strategic priorities (SP) and respective strategic objectives (SO)**

### **10. The strategy identifies 5 strategic priorities as the scope, are these strategic priorities clear and comprehensive as a set? (p10-11, figure3)**

SP1: Strengthening national food controls

SP2: Identifying and responding to food safety challenges resulting from the transformation and global changes in food systems

SP3: Increasing the use of food chain information, scientific evidence and risk assessment in making risk management decisions

SP4: Strengthening stakeholder engagement and risk communication

SP5: Promoting food safety as an essential component in domestic and international trade

- Agree
- **Partially agree X**
- Disagree

Please enter your comment here:

### **11. Under SP1: there are in total 6 strategic objectives, are these Strategic Objectives (SO) clear and comprehensive? Would you suggest any modifications? (p11-15)**

SO1.1: Establish a modern, harmonized and risk-based framework of food legislation.

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SO1.2: Establish an institutional framework to coordinate the work of different competent authorities within a national food control system

●

SO1.3: Develop and implement fit-for-purpose standards and guidelines

●

SO1.4: Strengthen Compliance, Verification and Enforcement

●

SO1.5: Strengthen food monitoring and surveillance programmes

- It is excellent to see the Food Safety Strategy recognize integrated AMR surveillance as a key component for monitoring food safety. The emergence of strains like E. coli ST131 as an important extraintestinal pathogen, of which ST131-H22 has been identified as a key human uropathogen found in poultry populations (Liu, et al., Escherichia coli ST131-H22 as a Foodborne Uropathogen, *mBio*, August 28, 2018), underscores the need for integrated surveillance. However, the WHO Food Safety Strategy should also ensure greater transparency of these data, including among its partners, as a key element of surveillance. For instance, in the AMR sector, the WHO Global Antimicrobial Resistance

Surveillance System serves as an excellent model of data transparency for both antimicrobial consumption and antimicrobial resistance. Interested parties can see summaries of the national data that has been submitted. However, OIE's voluntary reporting system for capturing data for its Annual Report on Antimicrobial Agents Intended for Use in Animals does not provide country-level identification, even for reporting of use of antimicrobials for growth promotion. As WHO continues to work with international partners on integrated surveillance, it must continue to prioritize data transparency.

SO1.6: Establish food safety incident and emergency response systems

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**12. Under SP2: there are in total 2 strategic objectives, are these Strategic Objectives (SO) clear and comprehensive? Would you suggest any modifications? (p15-17)**

SO2.1: Identify and evaluate food safety impacts arising from global changes and transformations in food systems and movement of food

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SO2.2: Adapt risk management options to emerging foodborne risks brought about by transformation and changes in global food systems and movement of food

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**13. Under SP3: there are in total 4 strategic objectives, are these Strategic Objectives (SO) clear and comprehensive? Would you suggest any modifications? (p17-20)**

SO3.1: Promote the use of scientific evidence and risk assessment when establishing and reviewing food control measures

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SO3.2 Gather comprehensive information along and beyond food chain and utilise these data when making informed risk management decisions

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SO3.3 Source food safety information and risk analysis experiences from beyond national borders to strengthen risk management decisions and technical capacity

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SO3.4 Consistent and transparent risk management decisions when establishing food control measures

**14. Under SP4: there are in total 5 strategic objectives, are these Strategic Objectives (SO) clear and comprehensive? Would you suggest any modifications? (p20-22)**

SO4.1 Establish platforms for consultation on the national food safety agenda

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SO4.2 The use of non-regulatory schemes for enhancing food safety across the food chain

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SO4.3 Establish frameworks for sharing verification of compliance with food safety regulatory requirements

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SO4.4 Facilitate communication and engagement with food business operators and foster a food safety culture

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SO4.5 Facilitate communication, education, and engagement with consumers

•

**15. Under SP5: there are in total 4 strategic objectives, are these Strategic Objectives (SO) clear and comprehensive? Would you suggest any modifications? (p23-25):**

SO5.1 Strengthen food controls and capacity development in regulatory systems for the domestic market

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SO5.2 Strengthen interaction between national agencies responsible for food safety and those facilitating the food trade

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SO5.3 Ensure that national food safety systems facilitate and promote international trade

•

SO5.4 Strengthen engagements of national competent authorities with international agencies and networks that establish standards and guidelines for food in trade

•

**16. Any additional comments regarding all strategic priorities and respective strategic objectives of the strategy?**

**Consultation: General introduction on the Implementation of the strategy**

**17. The strategy identifies 4 fundamental steps for Member States to implement the strategy. Do you agree that these 4 steps and the specific contents within the strategy clearly outline a stepwise approach for Member States to implement the strategy? Would you suggest any modifications? (p25-26, figure4)**

1. Conduct a situation analysis
2. Develop a national strategy and action plan on food safety
3. Implement the strategy and national action plan



4. Conduct regular review of the implementation and adjust the plan and strategy as appropriate

- Agree
- Partially agree
- Disagree

Please enter your comment here:

**18. The strategy identifies WHO's role in supporting Member States in 4 areas. Do you agree that these 4 areas adequately summarize WHO's role in implementing the strategy? Would you suggest any modifications? (p26-27)**

1. Provide global leadership and foster policy dialogues
2. Synthesize evidence and generate normative guidance:
3. Enhance technical cooperation and build stronger capacity
4. Build partnership and foster global collaboration

- **Agree X**
- Partially agree
- Disagree

Please enter your comment here:

In 2017, the WHO advanced "guidelines on use of medically important antimicrobials in food-producing animals" which made four recommendations for: 1) overall reduction in use of all classes of medically important; 2) overall reduction in use of all classes of medically important antimicrobials in food-producing animals; 3) complete restriction of use of all classes of medically important antimicrobials in food-producing animals for growth promotion; and 4) complete restriction of use of all classes of medically important antimicrobials in food-producing animals for prevention of infectious diseases that have not yet been clinically diagnosed. While this document provides important guidance on stewarding antibiotics, FAO and OIE--partners in the Tripartite Joint Secretariat on AMR--have not embraced these recommendations. It is also conspicuously absent from the Tripartite AMR Country Self-Assessment Survey's Guidance note.

**19. The strategy highlights the importance of international cooperation in two broad areas. Do you agree with these two broad areas and if the respective contents illustrate well the importance of international cooperation in food safety? Would you suggest any modifications? (p28)**

1. Technical cooperation among countries, and
2. Participation by Member States in food safety programmes, initiatives, and networks coordinated by international organizations.

- Agree
- Partially agree
- Disagree

Please enter your comment here:

**20. Any additional comments regarding the implementation chapter of the strategy?**

**Consultation: General introduction on the Monitoring and Evaluation**

**21. Do you agree with the general approach of the Monitoring and Evaluation of the strategy? (p29-31)**

- Agree
- Partially agree
- Disagree

Please enter your comment here:

**22. Currently the draft identifies 3 high-level indicators for the strategy. Do you have specific comments on each indicator? Would you suggest any alternatives?**

1. Diarrheal diseases due to food consumption;
2. National foodborne disease surveillance in place for the detection and monitoring of foodborne disease and food contamination (currently monitored under the IHR reporting process);
  -
3. Multisectoral collaboration mechanism for food safety events (currently monitored under the IHR reporting process).
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#### 4. Alternatives

- According to the WHO's estimates of the foodborne burden of disease, *E. coli* causes more than a quarter of the foodborne diarrheal disease agent deaths (WHO. "WHO estimates of the global burden of foodborne diseases" 2015). Furthermore, enterotoxigenic *E. coli* is the most common cause of diarrhoea in the developing world (World Health Organization. "Future directions for research on enterotoxigenic Escherichia coli vaccines for developing countries." Weekly Epidemiological Record. 2006). As a result, it would be valuable to look at *E. coli* for food safety and to operationalize One Health integrated surveillance. The World Health Organization has already developed the Tricycle protocol, which can look at *E. coli* infections in humans, animals and the environment (World Health Organization. "WHO integrated global surveillance on ESBL-producing E. coli using a "One Health" approach: implementation and opportunities" 2021). It is an already developed methodology--with an explicit work package for the food chain--that could provide considerable insight into how a food safety threat (AMR) moves from poultry and the environment to humans. Furthermore, this indicator would complement the WHO's SDG Indicator 3.d.2., which tracks drug-resistant *E. coli* bloodstream infections in humans.

#### **23. Any additional comments regarding the Monitoring and Evaluation chapter of the strategy?**

#### **Additional comments and supplementary materials**

#### **24. Additional comments on the draft strategy:**

#### **25. If you would like to submit additional materials to support the Strategy, please do so here, please noted that maximum you can upload 5 files:**

**Signatories of the Antibiotic Resistance Coalition's  
Comments for the World  
Health Organizations' Public Consultation for the  
Draft WHO Global Strategy for Food Safety 2022-  
2030**

- Alliance to Save Our Antibiotics
- Consumers Association of Penang (CAP)
- Food Animal Concerns Trust
- Fundacion IFARMA
- Health Care Without Harm
- Initiative for Health & Equity in Society
- Institute for Agriculture and Trade Policy
- Pan-African Treatment Access  
Movement
- ReAct–Action on Antibiotic Resistance
- Sahabat Alam Malaysia (Friends of the  
Earth Malaysia)
- Third World Network

**Antibiotic Resistance  
Coalition**

[ignitetheidea.org/arc](https://www.ignitetheidea.org/arc)