



Food and Agriculture  
Organization of the  
United Nations

# How can **Codex standards** help tackle foodborne antimicrobial resistance **(AMR)**?

Action to support  
implementation of  
**Codex AMR Texts**  
(ACT)

# Codex and its role in AMR

## Keeping the global food supply safe

International food standards provide a reference point for countries to establish their own food control programmes to protect consumer health. With so many different opinions and perspectives, how is it possible to arrive at a consensus of science-based standards, making sure all voices are heard? The answer is the Codex Alimentarius Commission (CAC).

## What is the Codex Alimentarius Commission?

The CAC, established jointly by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) in 1963, provides a global forum to discuss food safety and quality issues. Its membership is composed of 188 Member Countries; One Member Organization (the European Union) and 240 Observers, which represent other United Nations entities, standard-setting organizations (e.g. the World Organisation for Animal Health), food industries, civil society organizations and academia. The role of the CAC is to collaboratively, inclusively and transparently develop standards, guidelines and codes of practice for food safety and quality. These texts are collectively known as the Codex Alimentarius (Latin for “food code”).

## Why are Codex texts important?

The Codex Alimentarius comprises over 200 standards, 140 guidelines and 60 codes of practice and over 10 000 numerical limits for chemicals (food additives, pesticides and veterinary drug residues, contaminants) in food. Collectively, these resources inform policymakers and food business operators on how to produce and harvest food safely and keep food safe until eaten. Methods for surveillance and testing to enhance food safety are covered. Codex texts also serve as the basis for harmonization of food regulations among countries and the key principles for many of the sanitary and technical measures that are essential for fair trade as outlined by the World Trade Organization in the Sanitary and Phytosanitary Measures and Technical Barriers to Trade agreements.

## Codex texts on antimicrobial resistance (AMR)

Pathogens in food and the food production environment have become increasingly resistant to antimicrobials, resulting in infections that can be difficult or impossible to treat. To address this concern, Codex texts provide risk-based management options to help countries develop and implement effective strategies and policies to minimize and contain AMR-related risks along the food chain.

## For more information about Codex

Publication: [Understanding Codex](#)

Learning: [Codex e-learning course](#)

Stay up to date: [Codex Alimentarius website](#)

 [@FAOWHOCodex](#)

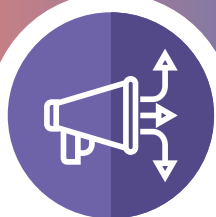
# Codex texts contribute to minimize and contain foodborne AMR



Laws and regulations



Awareness raising



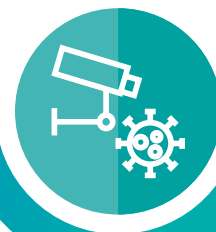
Good practices



Oversight and inspection systems



Monitoring and surveillance



# Codex AMR-related standards

Codex has developed three core texts on foodborne AMR to provide a framework for addressing AMR along the food chain and has conveniently compiled them in the compendium.



# Guidelines for risk analysis of foodborne antimicrobial resistance



**Figure 1.** Framework for foodborne AMR risk analysis

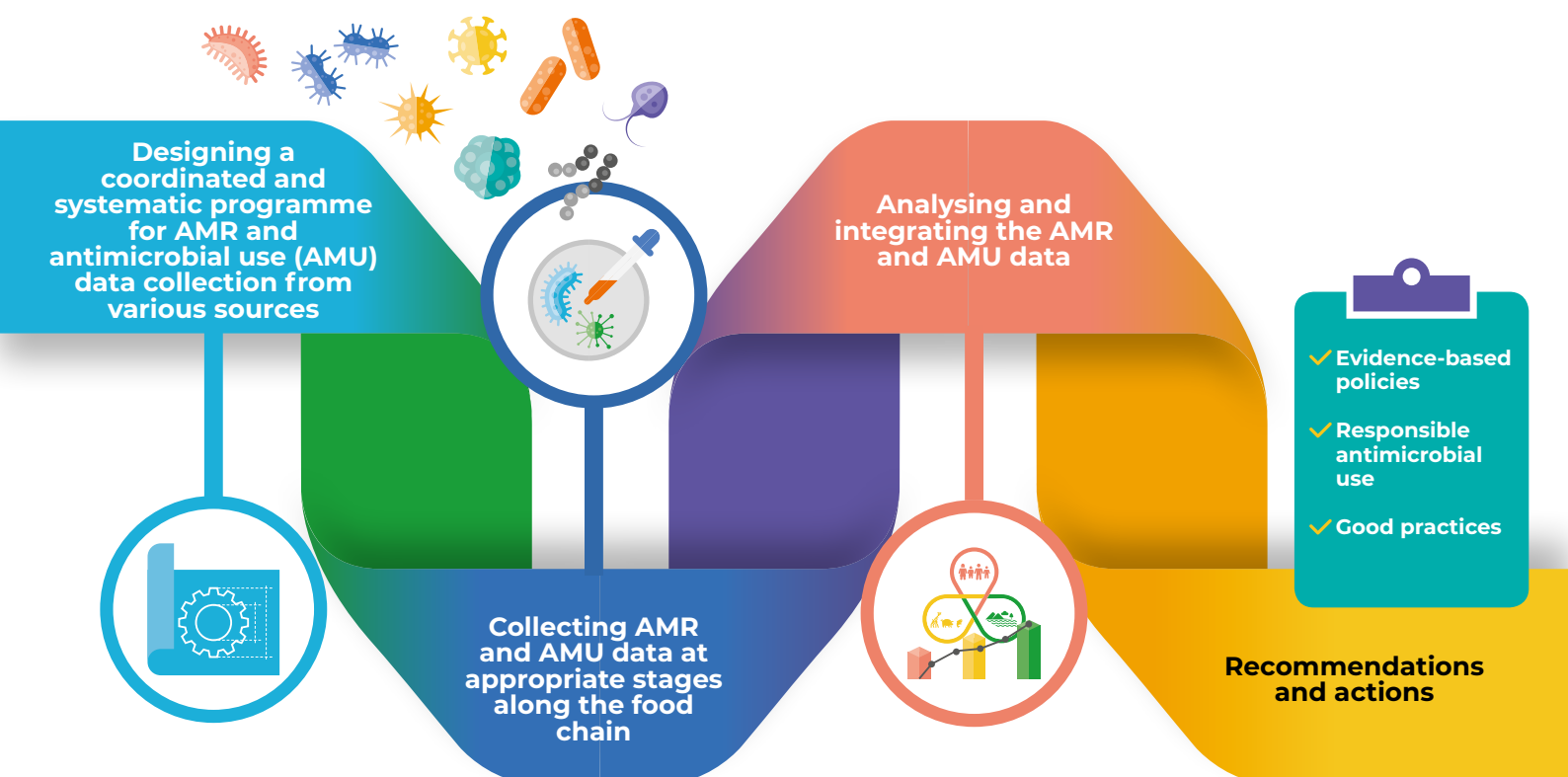
These guidelines provide risk managers with a systematic risk-based framework to tackle foodborne AMR effectively. They enable countries to identify issues specific to their own contexts, establish priorities and implement targeted interventions.

The guidelines:

- provides guidance on how to define the scope and extent of the food safety concern;
- shares an approach to assess the foodborne AMR risks to human health;
- advises on appropriate risk mitigation options, complete with examples of what can be applied at different parts of the food chain; and
- emphasizes the importance of communication throughout the process.



# Guidelines on integrated monitoring and surveillance of foodborne antimicrobial resistance



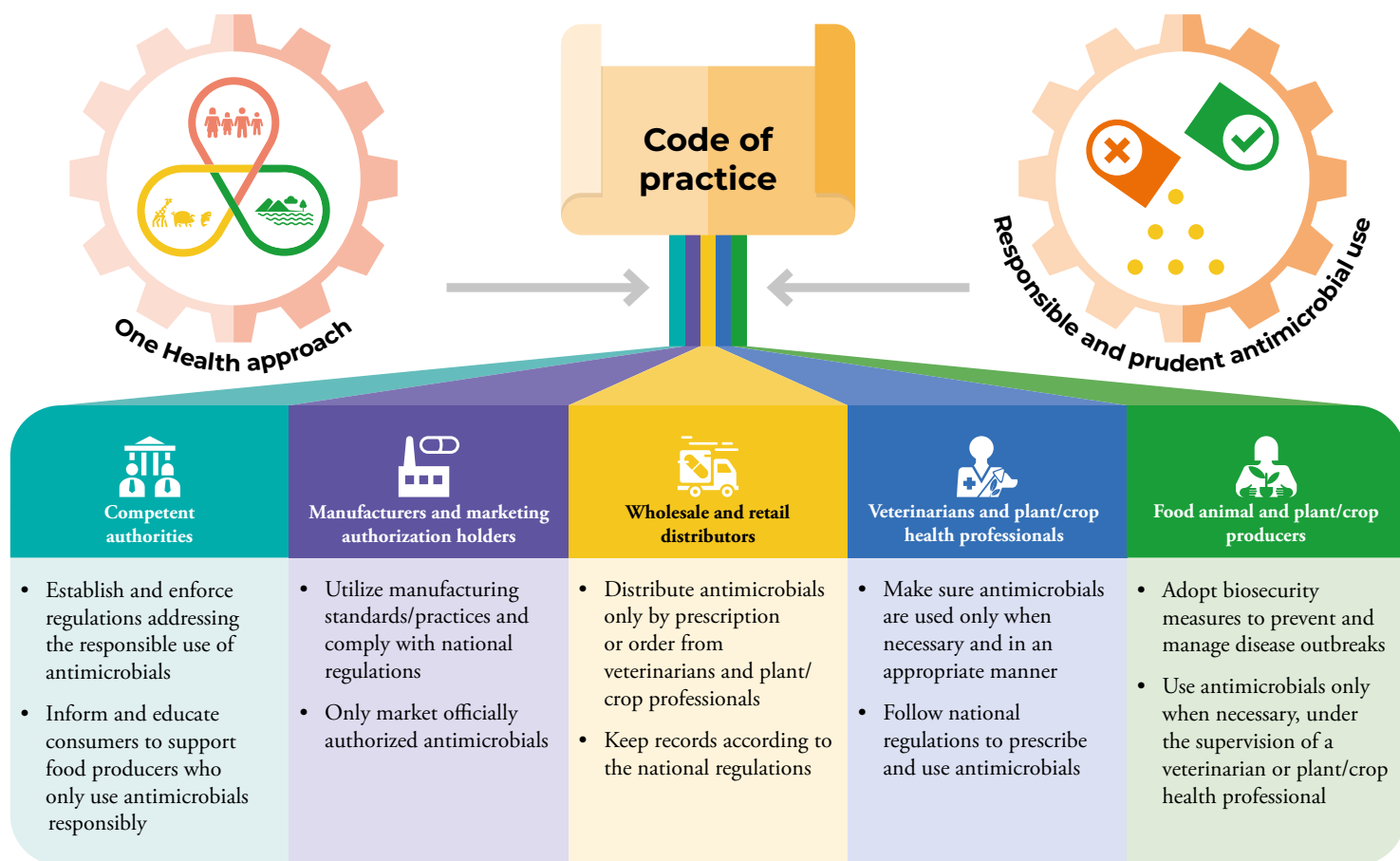
**Figure 2.** Key components of integrated foodborne AMR monitoring and surveillance programme development

These guidelines aim to assist governments in the establishment of integrated monitoring and surveillance programme(s). They outline key components and considerations to offer flexible options in:

- designing a coordinated and systematic programme for AMR and antimicrobial use (AMU) data collection from various sources;
- collecting AMR and AMU data at appropriate stages along the food chain; and
- analysing and integrating AMR and AMU data from different sectors such as human health, animal production and health, plant/crop production and health, and the environment.



# Code of practice to minimize and contain foodborne antimicrobial resistance



**Figure 3.** Guiding principles and actions of stakeholders to address foodborne AMR

The code of practice addresses the underlying principles to be applied and effective strategies for responsible and prudent antimicrobial use, preventing infections and reducing the need for antimicrobials.

This document provides:

- general principles to minimize and contain foodborne AMR, emphasizing a One Health approach;
- information on the roles of the many players who can make a difference, with specific focus on competent authorities, manufacturers and marketing authorization holders, wholesale and retail distributors, veterinarians and plant/crop health professionals and food animal and plant/crop producers.



## Summary

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The Codex Alimentarius, international food standards, guidelines and codes of practices contribute to food safety and fair trade. Codex has developed several texts for Codex Members and Observers to address foodborne AMR, including the Codex compendium on foodborne AMR. This brochure highlights key elements of the Codex compendium on foodborne AMR.

## Contacts

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[codexalimentarius.org](http://codexalimentarius.org)

[twitter.com/FAOWHOCodex](https://twitter.com/FAOWHOCodex)

[youtube.com/@UNFAO](https://youtube.com/@UNFAO)

[Action to support implementation of Codex AMR Texts \(ACT\) project](#)

[ACT now](#)

## Other Codex texts relevant to AMR

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Other relevant Codex texts that contribute to minimize and contain foodborne AMR:

- [Principles and guidelines for national food control systems \(CXG 82-2013\)](#)
- [Working principles for risk analysis for food safety for application by governments \(CXG 62-2007\)](#)
- [Principles and guidelines for the conduct of microbiological risk assessment \(CXG 30-1999\)](#)
- [Principles and guidelines for the conduct of microbiological risks management \(MRM\) \(CXG 63-2007\)](#)
- [Guidelines for the design and implementation of national regulatory food safety assurance Programmes associated with the use of veterinary drugs in food producing animals \(CXG 71-2009\)](#)
- [Principles and guidelines for the establishment and application of microbiological criteria related to foods \(CXG 21-1997\)](#)
- [General guidelines on sampling \(CXG 50-2004\)](#)
- [Maximum residue limits \(MRLs\) and risk management recommendations \(RMRs\) for residues of veterinary drugs in foods \(CX/MRL 2-2021\)](#)
- [General principles of food hygiene \(CXC 1-1969\)](#)
- [Code of hygienic practice for meat \(CXC 58-2005\)](#)
- [Code of hygienic practice for milk and milk products \(CXC 57-2004\)](#)
- [Code of hygienic practice for eggs and egg products \(CXC 15-1976\)](#)
- [Code of hygienic practice for fresh fruits and vegetables \(CXC 53-2003\)](#)
- [Code of practice on good animal feeding \(CXC 54-2004\)](#)



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