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## Antimicrobial Resistance in the context of One Health: Role and current initiatives of FAO

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*Food and Agriculture Organization of the United Nations (FAO), Headquarters, Rome - Italy*





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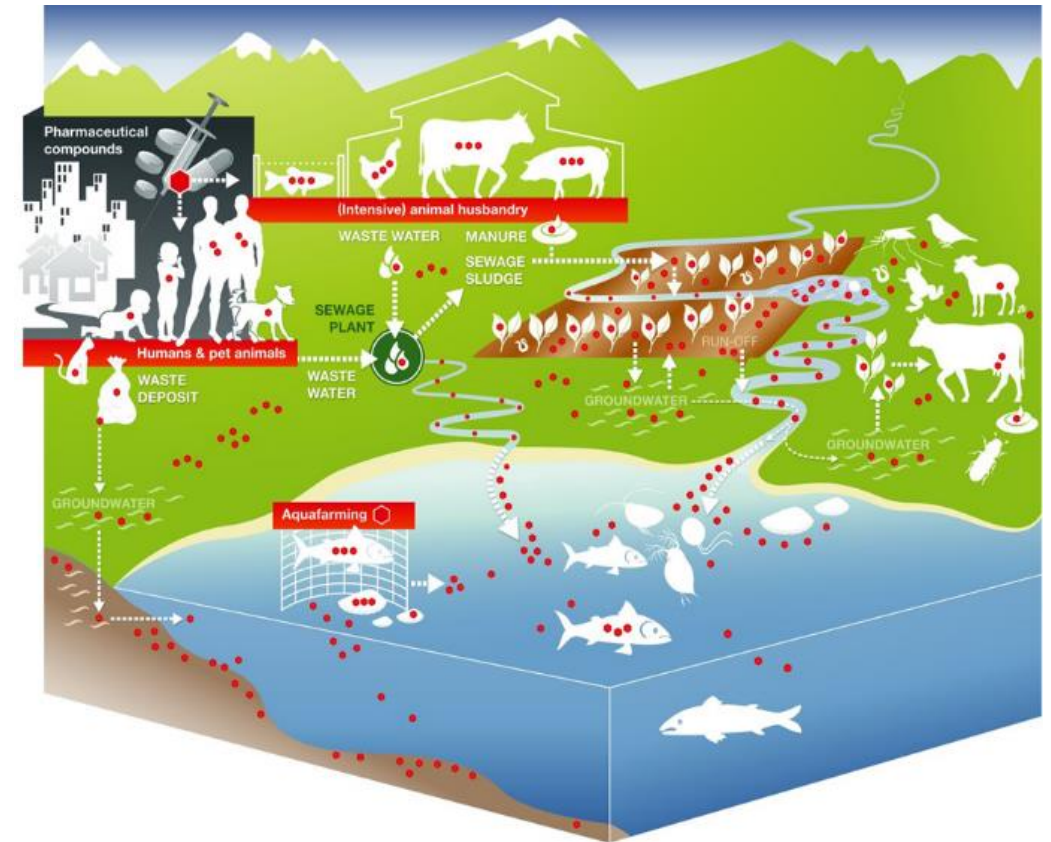
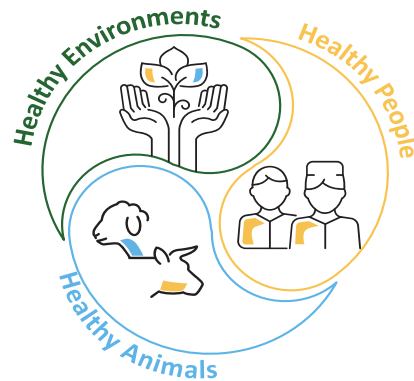
## The need for a One Health approach to tackle AMR





## Antimicrobial Resistance challenge needs One Health approach

- Emergence of antimicrobial resistance (AMR) can happen in each sector and spread to the others
- There is simply nowhere to hide from the impact of AMR
  - Humans
  - Animals
  - Plants
  - Environment



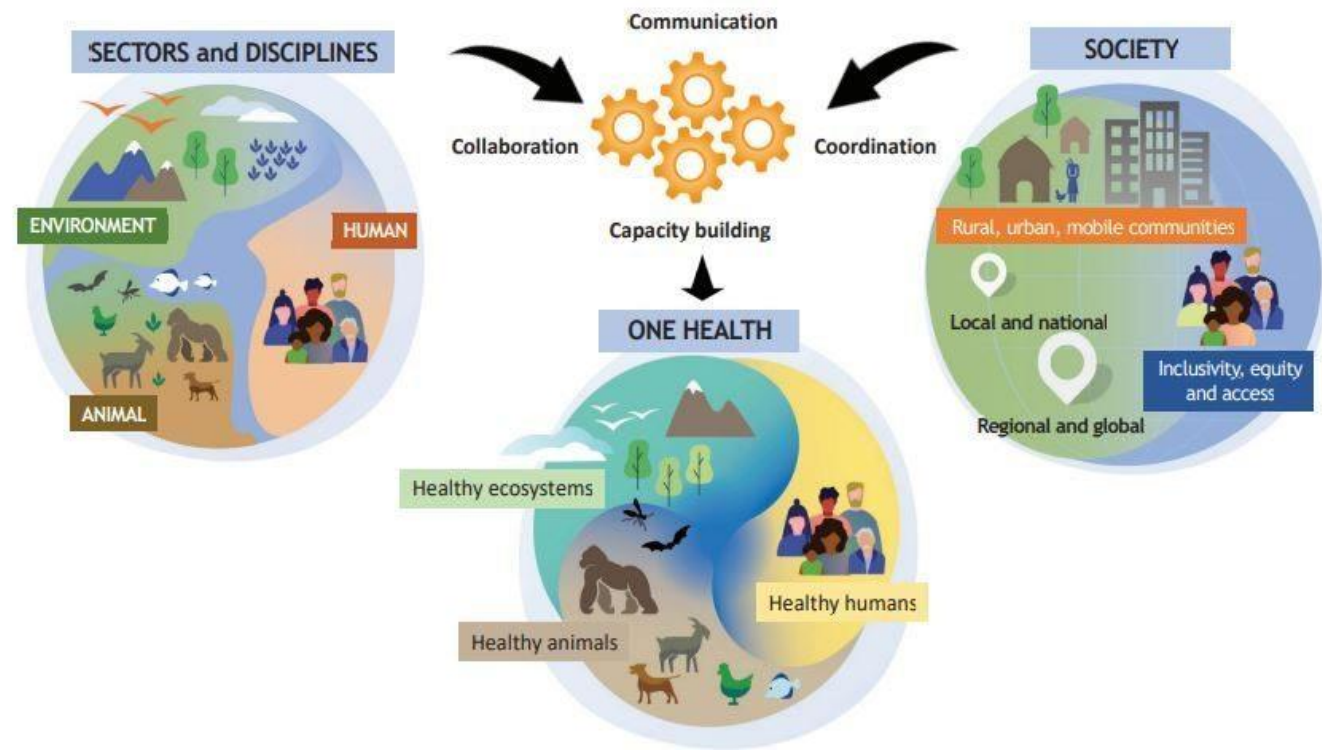
## Definition of the One Health approach

*“One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems.*

*It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent.*

*The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.”*

One Health High Level Expert Panel (OHHLEP), 2021







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A photograph showing a large-scale aquaculture operation. Numerous circular, dark-colored pens are arranged in long, parallel rows across a body of water. A small blue boat is visible in the lower-left quadrant, moving through the pens and leaving a white wake. The water is dark and reflects the sky. The overall scene depicts a well-organized and extensive fish farming operation.

Multisectoral collaboration on  
AMR is happening at all levels





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# The Tripartite formally becoming the Quadripartite



Food and Agriculture Organization  
of the United Nations



World Health  
Organization



WORLD ORGANISATION  
FOR ANIMAL HEALTH



# The Global Leaders Group (GLG) on AMR



## Members of the Global Leaders Group

### Co-chairs



H.E. Sheikh Hasina  
Prime Minister  
BANGLADESH



H.E. Mia Amor Mottley  
Prime Minister  
BARBADOS

### Ex Officio Members



Ms Inger Andersen  
ED-UNEP



Dr Qu Dongyu  
DG-FAO



Dr Monique Eloit  
DG-OIE



Dr Tedros Adhanom Ghebreyesus  
DG-WHO



Ms Tamara van Ark  
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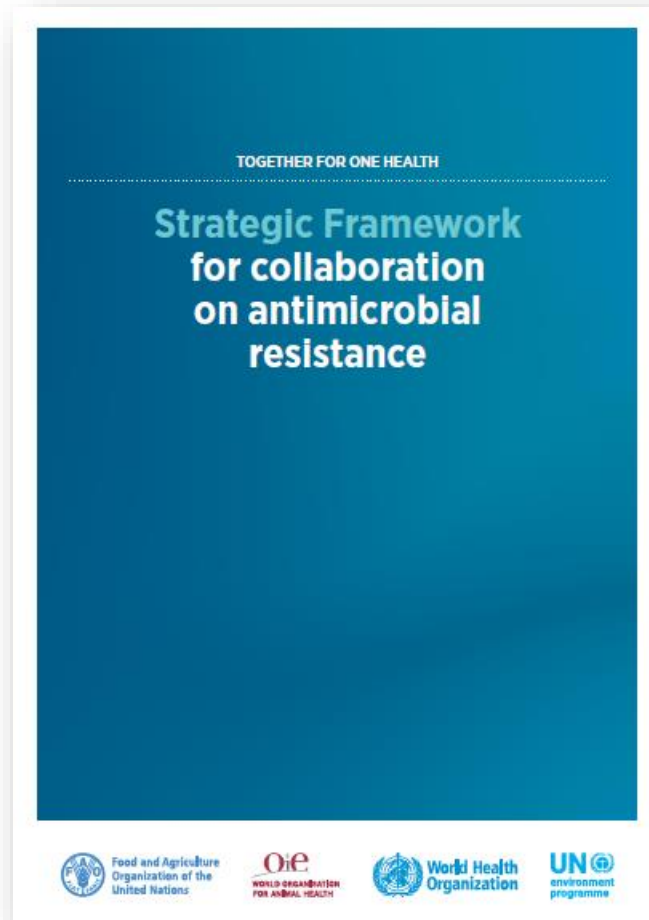


Dr Lothar Wieler  
GERMANY

- **Background:** established following IACG recommendations to strengthen global political action and leadership on AMR
- **Members:** Heads of State, serving or former ministers/ senior government officials, representatives of foundations, civil society and the private sector
- **Co-chairs:** Prime Ministers H.E. Sheikh Hasina of Bangladesh and H.E. Mia Amor Mottley of Barbados
- **Meetings:** Quarterly



## The Strategic Framework for collaboration on AMR



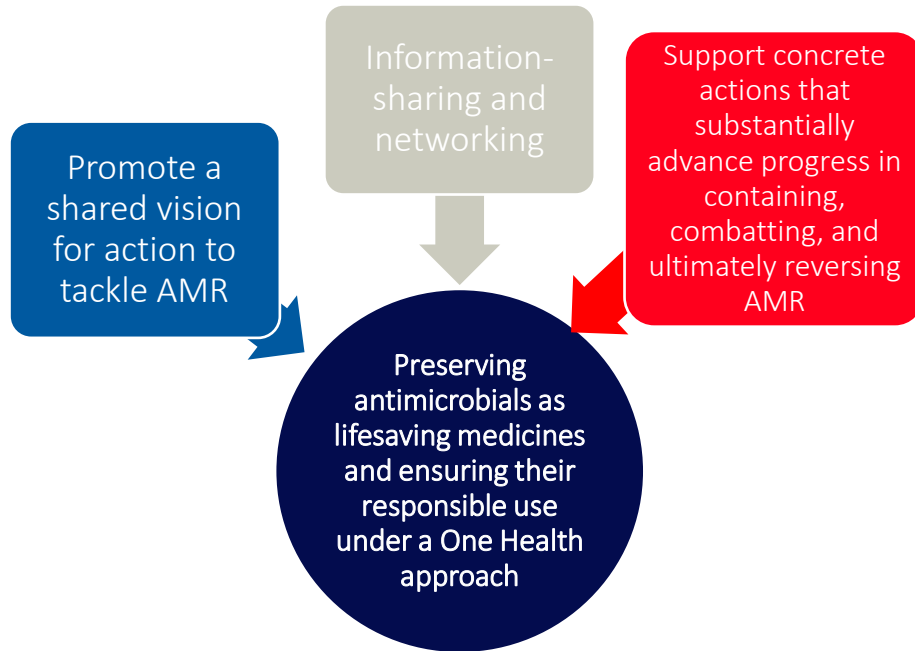
**The Strategic Framework was developed through a participatory process led by the Joint Secretariat involving staff engaged in AMR across all levels of the four organizations.**

The Strategic Framework:

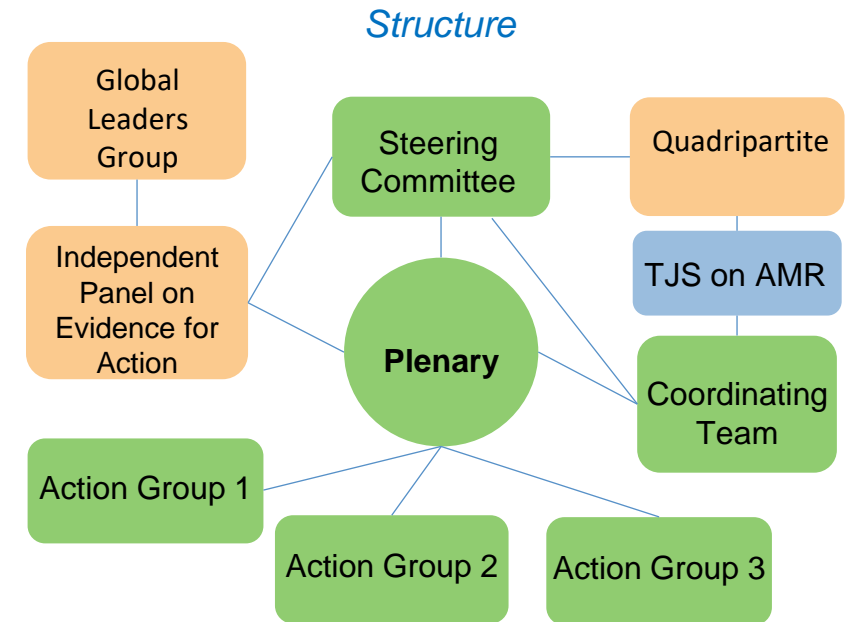
- Presents the **background and context for the collaboration** between FAO, OIE, WHO and UNEP on AMR;
- Describes the **comparative advantage and catalytic role** of the four organizations in the One Health response to AMR in support of efforts by their Members, civil society, the private sector and other stakeholders;
- Presents a **theory of change** including the goals, objectives, desired impact at country level, intermediate outcomes and related Tripartite and UNEP functions



## Quadripartite AMR Multi-stakeholder Partnership Platform



*Inclusive, international, and multi-stakeholder platform bringing together relevant stakeholders across the human, animal, plant, and environment interface*



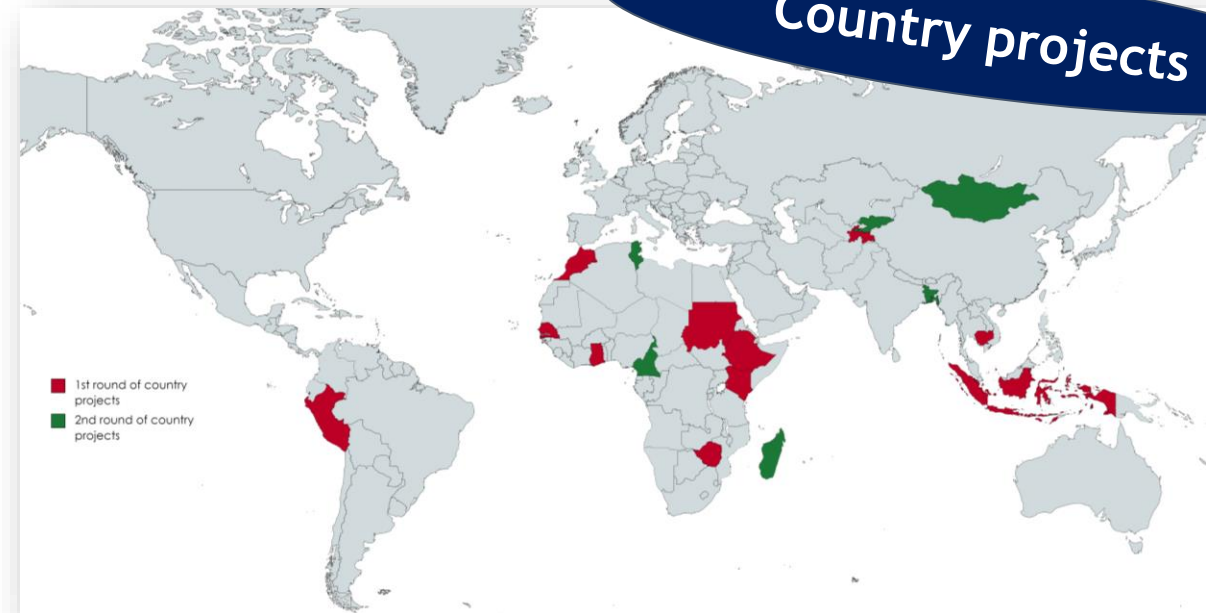
### Clusters

- Government representatives, UN entities and Specialized Agencies, international, intergovernmental and regional organizations
- International and regional financial institutions, and philanthropic donors
- Civil society organizations and networks
- Academic and research organizations
- Private sector entities

## AMR Multi-Partner Trust Fund

### 4 global projects

<b>TISSA proposal</b>	Global web-based repository on AMR & AMU data across humans, animals, food and agriculture sectors
<b>Monitoring &amp; Evaluation</b>	Global-level monitoring and aggregation of indicator data at sectoral level
<b>Legal frameworks</b>	Development of a Tripartite One Health assessment tool for AMR-relevant legislation
<b>Environment</b>	Strategic global-level governance advocacy initiatives on AMR



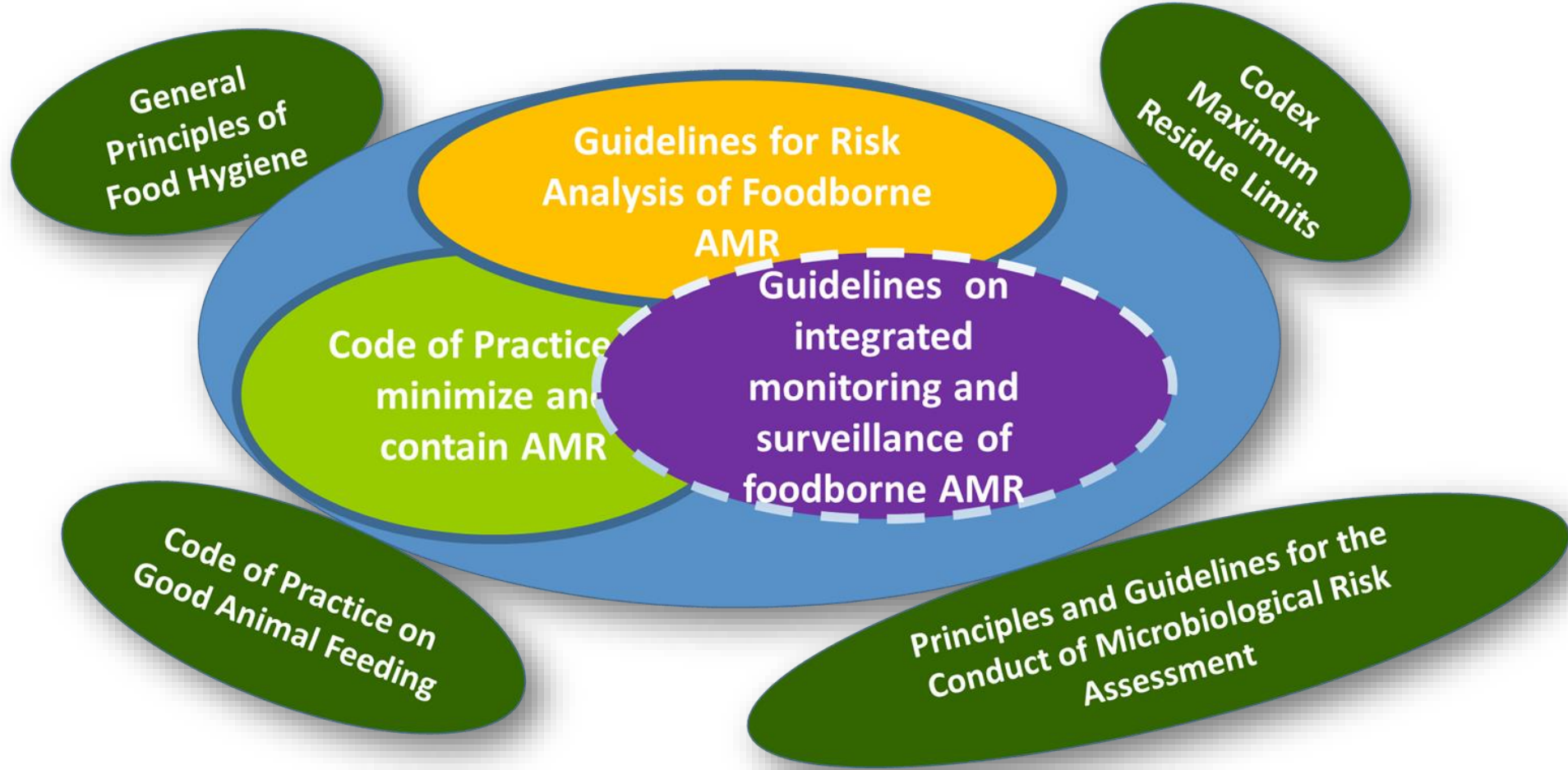
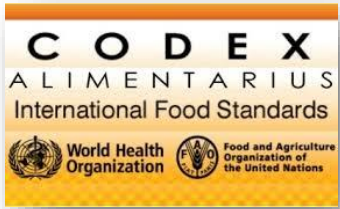
10 countries - **Morocco, Kenya, Zimbabwe, Senegal, Ghana, Cambodia, Indonesia, Ethiopia, Peru and Tajikistan** – had their proposals approved in 2020/21 and have started implementation.

4 countries – **Bangladesh, Mongolia, Tunisia, Madagascar** – had their concept notes approved at the last Steering Committee meeting and are preparing full proposals. 2 countries (Cameroon, Kyrgyzstan) are developing concept notes at the moment.





# The joint WHO-FAO work under Codex Alimentarius







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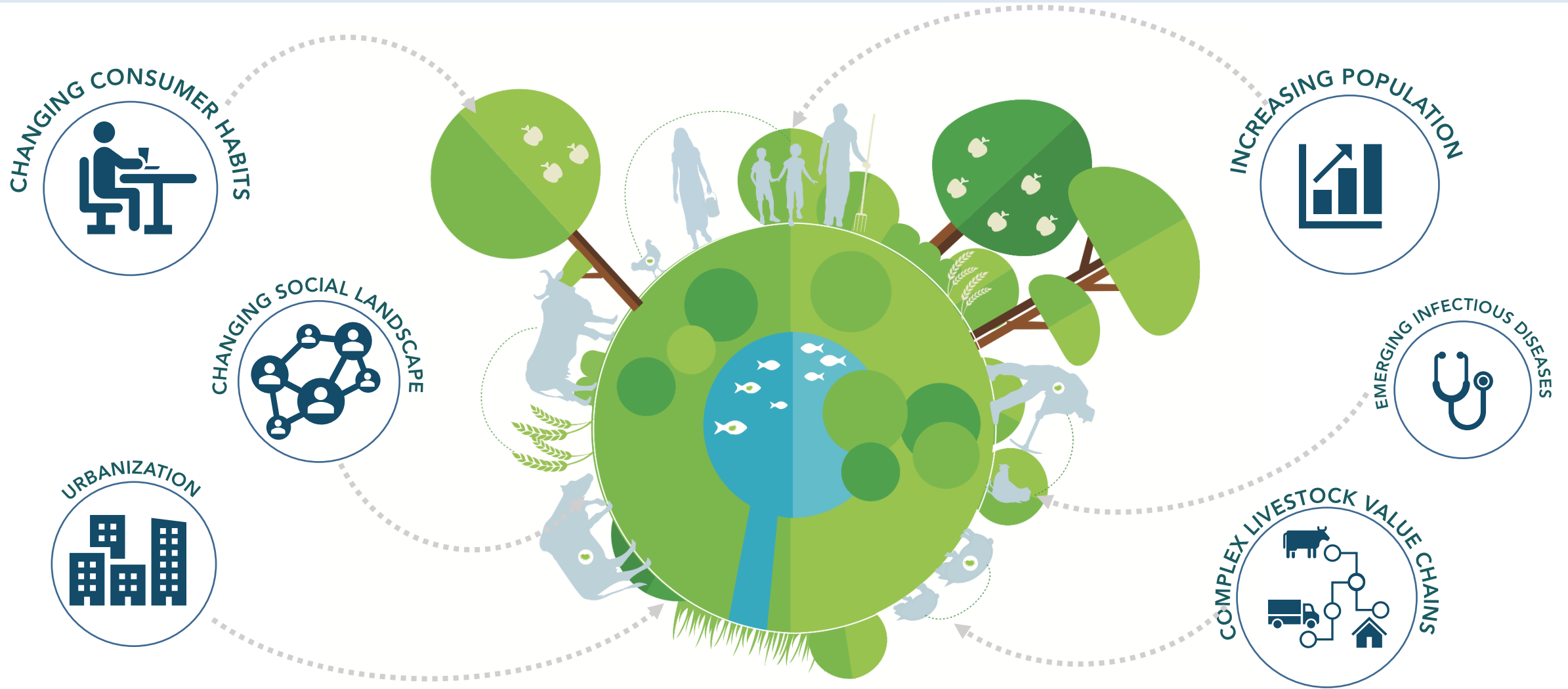
A close-up photograph of a person wearing a blue lab coat and a light blue surgical mask, examining a red chicken. The person's hands are visible, holding the chicken's head. The chicken has a prominent red comb and wattle. The background is slightly blurred, showing other people in similar attire.

The work of FAO to tackle AMR in  
food and agriculture sectors





# Antimicrobial resistance: a global challenge for food and agriculture





# FAO's work on AMR

Food and agriculture sectors, dependent livelihoods and economies are made resilient to the impacts of AMR

Strengthening **governance** and allocating **resources** to accelerate and sustain progress

Increasing stakeholder **awareness** and **engagement** to foster change

Promoting **responsible use** to keep antimicrobials working

Strengthening **surveillance** and **research** to support evidence-based decisions

Enabling **good practices** to prevent infections and control the spread of resistant microbes



FAO tools for capacity building



Field interventions



Access to resources and technical networks





















Data management and information systems





# FAO tools for capacity building on AMR



	 Increasing stakeholder awareness and engagement	 Strengthening surveillance and research	 Enabling good practices	 Promoting responsible use of antimicrobials	 Strengthening governance and allocating resource sustainably
<b>Progressive Management Pathway on AMR</b>					
<b>AMR behaviour change community of practice</b>					
<b>Assessment tool for laboratories and AMR surveillance systems (FAO-ATLASS)</b>					
<b>Tool for a Situation Analysis of AMR Risks in the food and agriculture sectors</b>					
<b>FAO's Farmer Field Schools</b>					
<b>Methodology to analyze AMR-relevant legislation in the food and agriculture sector</b>					



## Access to resources and technical networks

### FAO Reference Centers on AMR

- National Food Institute, Technical University of Denmark, Denmark
- Department of Veterinary Medicine, Freie Universität Berlin, Germany
- Department of Veterinary Public Health, Faculty of Veterinary Science, Chulalongkorn University, Thailand
- Veterinary Medicines Directorate, Centre for Environment Fisheries and Aquaculture Science, Animal and Plant Health Agency, United Kingdom
- Infectious Diseases Institute of the Ohio State University (OSU), United States
- French agency for Food, Environmental and Occupational Health and Safety (ANSES), France
- Integral Unit of Services, Diagnosis and Verification (UISDC), National Service for Agrifood Health, Safety and Quality (SENASICA), Secretariat of Agriculture and Rural development (SADER), Mexico
- Fondation Institut Pasteur de Dakar, Senegal



### Technical Advisory Groups (TAGs) for AMR/AMU and antimicrobial residues surveillance

- Southeast Asia
- South Asia
- East Africa



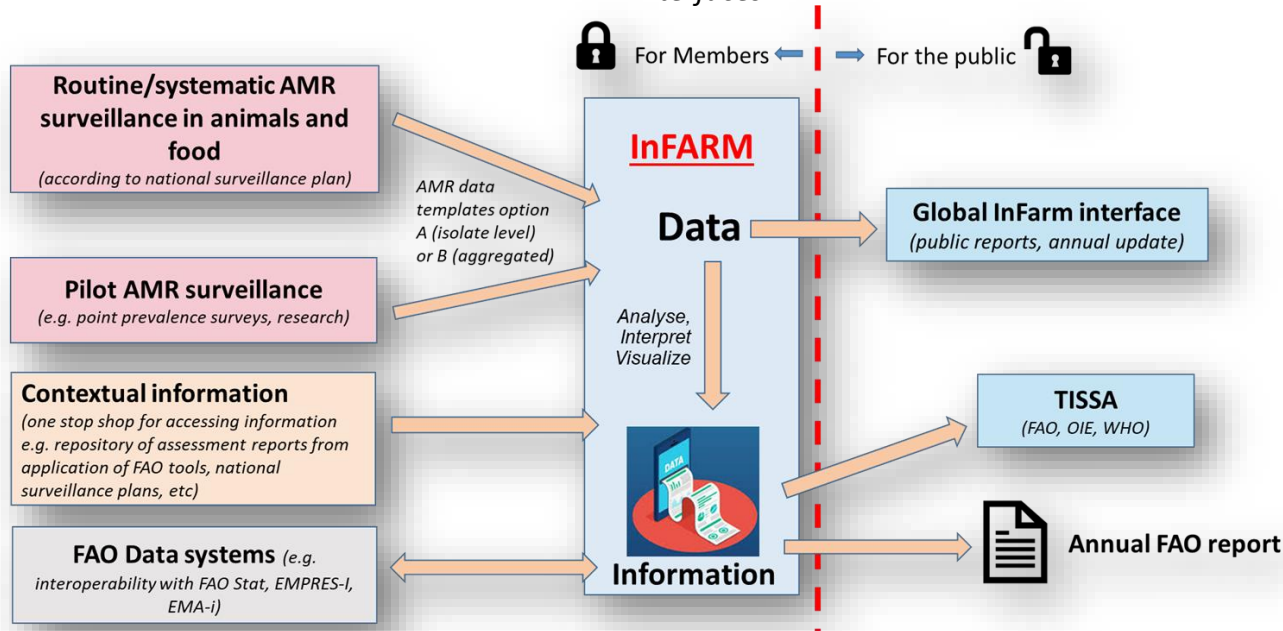


# FAO data management and information systems



***InFARM primarily envisioned to support Members for collecting, analyzing and reporting AMR data from animals and food at National level***

*Proposed flow of data and dissemination of information in private and public InFARM interfaces*



Main objectives:

- **To support countries in collecting, analyzing and using their AMR data from animals and food.** This includes support in gathering all relevant contextual information on AMR and AMU surveillance programmes and linked activities (e.g. national surveillance plans, reports of the application of FAO assessment tools) in the platform’s country private interface
- **To support countries willing to publicly share AMR data from food and agriculture sectors for global surveillance,** as a public good for international advocacy and action against AMR. This includes the support provided by FAO to aggregate the data for submission into the global Tripartite Integrated System for Surveillance of AMR/AMU (TISSA)



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# Thank you

[www.fao.org/antimicrobial-resistance](http://www.fao.org/antimicrobial-resistance)

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Follow us on Twitter [@FAOLivestock](https://twitter.com/FAOLivestock)