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

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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
Multisectoral collaboration on AMR is happening at all levels.
The Tripartite formally becoming the Quadripartite
The Global Leaders Group (GLG) on AMR

- **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

**Members of the Global Leaders Group**

- Co-chairs:
  - H.E. Sheikh Hasina, Prime Minister of Bangladesh
  - H.E. Mia Amor Mottley, Prime Minister of Barbados

- Ex Officio Members:
  - Ms Shaohui Chen, DG, FAO
  - Dr. Tedros Adhanom, DG/WHO
  - Ms Inger Andersen, DG/UNDP
  - Dr. Liu Gengyu, DG/FAO

- Prof Dame Sally Davies, UN Special Envoy for Antimicrobial Resistance
- Prof. C.O. Onyiobi (Chairman, AMR Global Reference Group)
- Prof. Dr. Shekhar Saxena, WHO Regional Director for South East Asia
- Prof. Antonia Correia de Campos, Vice-Chair, European Commission
- Prof. Dr. Paul Farmer, Co-Chair, World Health Assembly on AMR
- Prof. Dr. Halvor Iversen, Co-Chair, European Commission
- Dr. Christiana Figueres, Co-Chair, UNFCCC
- Dr. Crystal Ban, Co-Chair, Asian Development Bank
- Dr. Matthew Zeller, Co-Chair, Bill & Melinda Gates Foundation
- Dr. Yoichi Tani, Co-Chair, Japan International Cooperation Agency
- Dr. Frans van der Goot, Co-Chair, Global Fund for Infectious Disease
- Dr. Xavier Vives, Co-Chair, Global Fund for Infectious Disease

**Members:**

- Ms. Tamara van Ark, Netherlands
- Dr. Antonio Correia de Campos, Portugal
- Prof. C.O. Onyiobi, Nigeria
- Dr. Olivier Gachon, Barbados
- Dr. Magda de Block, Belgium
- Prof. Sir Jeremy Farrar, United Kingdom
- Dr. Christopher Garvey, Malta
- Mr. Jean-Claude Ratin, United States
- Ms. Graceлу, Singapore
- Dr. Julie Gerberding, United States
- VICE-CHAIR: Ms Lena Hallengren, Sweden
- Ms. Sussan Ley, Australia
- Ms. Sunita Narain, India
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- Dr. Anna Y. Pogosova, Russia
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- Mrs. Dechen Wangmo, Bhutan
- Dr. L. Scott Weisz, Canada
- Dr. Lothar Wieler, Germany

**FAO e-learning academy webinar | 27 April 2022**
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

Preserving antimicrobials as lifesaving medicines and ensuring their responsible use under a One Health approach

Support concrete actions that substantially advance progress in containing, combatting, and ultimately reversing AMR

Promote a shared vision for action to tackle AMR

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

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

Information-sharing and networking

Support concrete actions that substantially advance progress in containing, combatting, and ultimately reversing AMR
AMR Multi-Partner Trust Fund

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

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

- General Principles of Food Hygiene
- Guidelines for Risk Analysis of Foodborne AMR
- Guidelines on integrated monitoring and surveillance of foodborne AMR
- Code of Practice to minimize and contain AMR
- Code of Practice on Good Animal Feeding
- Principles and Guidelines for the Conduct of Microbiological Risk Assessment
- Codex Maximum Residue Limits
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
- Promoting responsible use to keep antimicrobials working
- Enabling good practices to prevent infections and control the spread of resistant microbes
- Increasing stakeholder awareness and engagement to foster change
- Strengthening surveillance and research to support evidence-based decisions

FAO tools for capacity building

Access to resources and technical networks

Field interventions

Data management and information systems
FAO tools for capacity building on AMR

- Progressive Management Pathway on AMR
- AMR behaviour change community of practice
- Assessment tool for laboratories and AMR surveillance systems (FAO-ATLASS)
- Tool for a Situation Analysis of AMR Risks in the food and agriculture sectors
- FAO’s Farmer Field Schools
- Methodology to analyze AMR-relevant legislation in the food and agriculture sector
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
**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).
Thank you

www.fao.org/antimicrobial-resistance

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