



Third Global High-level Ministerial Conference on Antimicrobial Resistance (AMR) in Muscat, Oman

24-25 November 2022

*Paving the way for bold and specific political commitments at the 2024 United Nations
General Assembly High Level Meeting on AMR*

THE MUSCAT MINISTERIAL MANIFESTO ON AMR

Endorsing Countries: Algeria, Andorra, Argentina, Bahrain, Bangladesh, Barbados, Brunei, Cyprus, Egypt, France, India, Indonesia, Ireland, Italy, Jordan, KSA, Kuwait, Lebanon, Libya, Malaysia, Malta, Morocco, Mauritania, Netherlands, Nigeria, Oman, Palestine, Philippine, Portugal, Qatar, Russia, Somalia, Spain, South Africa, St. Vincent and the Grenadines, Sudan, Suriname, Syria, Sweden, Switzerland, Thailand, Tunisia, UAE, Uganda, United Kingdom, Yemen, Zimbabwe

We, participants of the **Third Global High-Level Ministerial Conference on Antimicrobial Resistance (AMR)**, gathered in Muscat, Sultanate of Oman, on 24–25 November 2022, under the theme of paving the way for bold and specific political commitments at the 2024 United Nations General Assembly High Level Meeting on AMR:

RECOGNIZING that AMR is an ongoing global challenge that is threatening recent gains in human and animal health and welfare, the environment, food and nutrition security and safety, economic growth, and development, and causes at least 1.3 million human deaths every year;

RECOGNIZING the importance of accelerating national, regional and global political commitments in the implementation of One Health action for controlling the spread of AMR and preventing its impact on human, animal, and environmental health, economic growth and development, and food and nutrition security and safety;

RECOGNIZING global progress since the approval of the Global Action Plan on AMR by the World Health Assembly in 2015 and the commitment of member states in the 2016 political declaration of the high-level meeting of the United Nations General Assembly on AMR calling upon the Quadripartite (Food and Agriculture Organization of the United Nations (FAO), United Nations Environment Programme (UNEP), World Health Organization (WHO) and World Organisation for Animal Health (WOAH)) to scale up support through a One Health approach;

RECOGNIZING that the environment plays a significant role in the development, spread and transmission of AMR, and welcoming and supporting UNEP's efforts to strengthen the environmental dimensions of the One Health response to AMR, and acknowledging actions by UNEP to tackle the pollution sources contributing to AMR in the environment, namely,



poor sanitation, sewage, and waste effluent, including from pharmaceutical manufacturing, healthcare and veterinary facilities, animal and crop production, and other contributing factors such as the climate crisis;

RECOGNIZING the fundamental importance of an urgent, sustainable, well-governed One Health approach to AMR at national, regional, and global levels that engages all relevant stakeholders, while also strengthening sector-specific responses to advance policies and guidelines for implementation and impact;

RECALLING the previous two High-level Ministerial Conferences held in the Netherlands in 2014 and 2019 to accelerate and catalyze political commitment and action in the global response to AMR, including development of the Global Action Plan of 2015, the United Nations political declaration in 2016, and the launch of the Multi Partner Trust Fund (MPTF) on AMR in 2019;

RECALLING that in 2019 the United Nations Secretary-General called upon Member States to deliver the urgent support and investment needed to scale up AMR responses at national, regional, and global levels;

RECALLING the Call to Action on Antimicrobial Resistance launched during the closing session of the High-Level Interactive Dialogue on Antimicrobial Resistance in 2021 and the decision of the United Nations General Assembly to conduct a High-Level Meeting on AMR in 2024;

ACKNOWLEDGING the important roles played by the Global Leaders Group on AMR, the Quadripartite Joint Secretariat of FAO, UNEP, WHO and WOA, and the AMR Multi-Partner Trust Fund in coordinating a global, multisectoral AMR response, promoting strong governance and leadership, and supporting the efforts of countries to develop and implement National Action Plans on AMR;

RECALLING the successful work of the ad hoc intergovernmental Task Force on AMR of the Codex Alimentarius Commission to revise its Code of Practice to minimize and contain foodborne AMR and develop new guidelines for the integrated surveillance of foodborne AMR, which support governments to coherently manage AMR along the food chain;

NOTING that the development of two AMR Sustainable Development Goal indicators is a key milestone in recognizing the importance of monitoring AMR in the human health sector as part of the Sustainable Development Goals at national and global levels;

RECOGNIZING that there are inadequate financial resources available for the sustainable implementation of national action plans on AMR and to support research and development of innovations including new antimicrobials (particularly antibiotics), vaccines, diagnostics, waste management tools and safe and effective alternatives to antimicrobials, as well as the urgent need to fill this gap including through the development of national investment cases on AMR;

RECOGNIZING the impacts of the COVID-19 pandemic on our efforts to respond to AMR, while also noting that the pandemic has demonstrated the critical links between humans, animals and the environmental ecosystem, underlining our shared responsibility to prevent, prepare for, and respond to emerging and re-emerging AMR threats through sustainable investments and actions that strengthen human and animal health systems;



REAFFIRMING our commitment to urgent One Health actions addressing the growing threats of AMR and to ensuring that political momentum is translated into concrete and coordinated actions at national, regional, and global levels, including integrated strategies on emergency preparedness, response and recovery, human and animal health systems strengthening, and effective delivery on the Sustainable Development Goals;

WELCOMING the establishment by the Quadripartite of the Multi-Stakeholder Partnership Platform on AMR and the need for increased cross-sectoral and inter-disciplinary coordination and collaboration by multiple stakeholders at the human, animal, plant, and environment interface, and at all levels (local, national, regional and global), to preserve antimicrobials as lifesaving medicines for humans, animals, and plants, as well as the need for a shared global vision and comprehensive action on AMR through a One Health approach;

WE HEREBY COMMIT to: ^{1*}

Reviewing, updating or revising our National Action Plans for AMR with all relevant stakeholders for implementation with financial resources, milestones and national targets, including the Sustainable Development Goal indicators on AMR in the human health sector, taking into consideration the One Health approach;

Strengthening national, regional, and global surveillance systems through improved data management, private sector engagement, implementation of data-driven practices, and the reporting of data to the WHO Global Antimicrobial Resistance Use Surveillance System (GLASS), the WOAHA Animal Antimicrobial Use system (ANIMUSE), and the Quadripartite Tracking AMR Country Self-Assessment Survey (TrACSS);

Reducing the total amount of antimicrobials used in the agri-food system by at least 30-50% from the current level by 2030;

Zero use of medically important antimicrobials for human medicine in animals for non-veterinary medical purposes or in crop production and agri-food systems for non-phytosanitary purposes;

Ensuring that ACCESS group antibiotics comprise at least 60% of overall antibiotic consumption in humans by 2030.

WE ALSO CALL UPON:

The Quadripartite organizations and their Joint Secretariat on AMR to provide the necessary sector-specific technical support and normative and policy guidance for the implementation of these targets and actions including through seeking relevant provisions from their governing bodies;

Stakeholders in human and animal health and related fields, as well as in the agri-food system and the environment, to coordinate the implementation of One Health National Action Plans on AMR at national levels through the engagement of civil society

^{1*} Refer to annex for more detailed information about the proposed targets.



organizations, the private sector, and public and private partnerships across the ONE Health spectrum.

All stakeholders to support and provide opportunities for collaboration and partnership between countries, regional economic communities, and international organizations to address AMR in the context of the Agenda 2030 on Sustainable Development and related targets.

All public and private financing institutions and mechanisms to dedicate, leverage and mobilize external financial resources for the implementation of National Action Plans on AMR and for the development of and effective, affordable and equitable access to innovations across all sectors including a sustainable pipeline for new antimicrobials (particularly antibiotics), vaccines, diagnostics, waste management tools, safe and effective alternatives to antimicrobials, and for the development and implementation of innovative and safe infection prevention and control practices, products, tools and processes, including environmental protection and decontamination.



ANNEX to MUSCAT MINISTERIAL MANIFESTO ON AMR

Explanation and rationale behind the targets included in the Muscat Manifesto

Target 1: Reduce the total amount of antimicrobials used in the agri-food system at least by 30-50%¹ by 2030 from the current level;

Target 2: Zero use of medically important antimicrobials for human medicine in animals for non-veterinary medical purposes or in crop production and agri-food systems for non-phytosanitary purposes;

Target 3: Ensure that ACCESS group antibiotics are at least $\geq 60\%$ of overall antibiotic consumption in humans by 2030

Growing recognition and global consensus to reduce the use of antimicrobials in the agri-food system

Preserving the effectiveness of antimicrobials is important for humans, animals and plants. There is a growing global consensus on the critical need to transform food systems to optimize animal and plant production as well as preserving the environment. This can be done through ensuring responsible and sustainable antimicrobial use and most importantly, reduce the need to use antimicrobials by reducing disease burden in animal populations, and promote innovation for evidence-based and sustainable alternatives². The Livestock Subcommittee of the FAO Committee on Agriculture has requested FAO to share successful experiences and good practices, including traditional knowledge, to support Members to reduce the need for antimicrobials". Furthermore, it placed emphasis on "reducing the need for antimicrobial use in the food and agriculture sectors, a key driver for the emergence of AMR, by building capacity in FAO Members to apply good production practices and management, disease prevention and control measures, antimicrobial stewardship, alternatives to antimicrobials and the implementation of their National Action Plans" in 2022. In line to this the FAO is launching a global action to reduce the need of antimicrobials in agri-food systems (RENOFARM Initiative). One of the key objectives of this initiative is to achieve a global reduction of antimicrobials used in agri-food systems by 30-50% in a 10-year period (FAO 2022, unpublished).

¹ Total population-weighted amounts of antimicrobials, in milligrams of antimicrobial per kilogram of animal biomass, according World Organisation for Animal Health Standards (Chapter 6.9 of Terrestrial Animal Health Code and Chapter 6.3 of the Aquatic Animal Health Code) which state that, when comparing antimicrobial use data over time, changes in the size and composition of animal populations should also be taken into account.

²Antimicrobial Use in Food Systems Statement of the Global Leaders Group on Antimicrobial Resistance August 2021. <https://www.amrleaders.org/resources/m/item/antimicrobial-use-in-food-systems>



Target 1: Reduce the total amount of antimicrobials used in the agri-food system at least by 30-50% by 2030 from the current level

1.1. The targets are aspirational in order to galvanize national and global efforts

The target of “30-50% reduction” is an aspirational target that aims to galvanize strong national and global political action and consolidation of efforts and commitment.

The range of the target (30-50%) will allow countries flexibility to adapt it to their context, priorities and resource availability not only on reducing the need for antimicrobials but also on strengthening animal health systems and welfare. For example, countries with limited resources could consider a phased approach starting with an initial more feasible reduction target and establish the foundation to go through a gradual more ambitious reduction level according to the resources available. Similarly, for those countries who have already achieved these targets, it could also help them transition to further improve their animal health and welfare systems with proper biosecurity and the use of evidence-based alternatives to antimicrobials.

There is no quantitative science-based correlation between antimicrobials usage reduction and antimicrobial resistance reduction; however, there is sound scientific evidence that the less that antimicrobials are used, the emergence of drug resistance is less likely.

The 30-50% measurement refers to a population-weighted amount of antimicrobials reduction, or in other words, milligrams of antimicrobials per kilogram of animal biomass.

1.2. The targets are proposed based successful countries which achieved similar targets

The proposed target is proposed based on some successful examples from both high-income and middle-income countries

- The Netherlands has successfully decreased its usage by 50% in five years (between 2008 and 2012)³
- Consumption of antibiotics by China’s agricultural sector had fallen by 57% between 2014 and 2018, to less than 30,000 tonnes⁴
- UK has successfully achieved a reduction of in total antibiotic use of 55% in food animals between 2014 and 2021⁵
- Thailand has reduced the consumption of antibiotics by animals by 49% between 2017 and 2019⁶ (Target was 30%)

1.3. There are already targets set to reduce antimicrobials.

³ <https://www.fao.org/3/cc0927en/cc0927en.pdf>

⁴ <https://www.who.int/about/accountability/results/who-results-report-2020-2021/outcome/2021/healthy-settings-and-health-in-all-policies-promoted>

⁵ <https://www.gov.uk/government/publications/veterinary-antimicrobial-resistance-and-sales-surveillance-2021>

⁶ <https://www.who.int/about/accountability/results/who-results-report-2020-2021/outcome/2021/healthy-settings-and-health-in-all-policies-promoted>



The EU Farm to Fork Strategy⁷, a new comprehensive approach to how Europeans value food sustainability has set a target to reduce overall sales of antimicrobials for farmed animals and in aquaculture by 50% by 2030.

1.4. There is encouraging trend of global reduction in antimicrobials use

In addition to the examples above, and according to data provided to the World Organization for Animal Health (WOAH, founded as OIE), the use of antimicrobials in animals levels decreased between 27%⁸ and 34%⁹ for the period 2015-2018. Similar progress has been found in the use of antibiotics for growth promotion. The use of antibiotics in healthy animals to boost growth is no longer a practice in nearly 70% of the reporting countries¹⁰.

1.5. We have established system to monitor the target

The ANImal antiMicrobial USE (ANIMUSE) Global database from WOAHA provides an ideal tool to monitor and standardize this indicator at the global and/or regional level. At the local level, countries will have access to their own confidential data, for more specific management of actions at the national level.

Target 2: Zero use of CIA

Critically important antimicrobials (CIA) are of the utmost priority to preserve

The misuse of Critically important antimicrobials would promote the emergence of resistant bacteria and AMR genes, making these life-saving drugs less effective. Responsible use is essential in all sectors to preserve modern medicine.

According to the Statement of the Global Leaders Group on Antimicrobial Resistance August 2021, all countries should:

- End the use of medically important antimicrobials for growth promotion, starting immediately with the Highest Priority Critically Important Antimicrobials, then continuing to other categories”;
- Limit antimicrobial prophylaxis and metaphylaxis in animals and plants to well-defined situations, with a goal of markedly reducing use and ensuring that all use is performed with regulatory oversight and under the direction of an authorized prescriber.

WOAH’s List of Antimicrobial Agents of Veterinary Importance already recommends to urgently prohibit the use of Highest Priority Critically Important Antimicrobials as growth promoters.¹¹

In addition, the CODEX general principles of foodborne AMR risk analysis require that priorities setting for risk assessment and/or risk management activities should give consideration to the WHO Critically Important Antimicrobial List. Limiting the use of CIAs in the food and agriculture sectors supports countries to implement CODEX standards.

⁷ https://food.ec.europa.eu/system/files/2020-05/f2f_action-plan_2020_strategy-info_en.pdf

⁸ Based on the [data reported by 72 countries to the World Organisation for Animal Health](#) for all years between 2016 to 2018.

⁹ Based on the [data reported by 69 countries to the World Organisation for Animal Health](#) for all years between 2015 to 2017.

¹⁰ Based on the [data reported by 157 countries to the World Organisation for Animal Health](#)

¹¹ <https://www.woah.org/app/uploads/2021/06/a-oie-list-antimicrobials-june2021.pdf>



Target 3: at least 60% of ACCESS antibiotics consumption

The WHO 13th General Programme of Work 2019-2023^{12,13} includes a country-level target of having at least 60% of total antibiotic consumption being Access group antibiotics.

This is aligned with the Sustainable Development Goal target of achieving universal health coverage, including access to safe, effective, quality and affordable essential medicines and vaccines for all.

Many countries do not have systems established to monitor this or measures put in place to ensure its achievement as yet. Renewing the commitment for the implementation of the target will be critical.

Monitoring antibiotic consumption and use patterns in humans, animals and plants complements antimicrobial resistance surveillance by providing an understanding of the types and quantities of antibiotics being used, which can then inform policies, regulations and interventions to optimize antibiotic use.

National estimates of antimicrobial consumption may be taken from existing data sources, such as sales, import records and manufacturing data. Establishing antibiotic consumption monitoring may also prompt review of regulations, procurement and supply chains of medicines as part of overall pharmaceutical systems strengthening.

¹² <https://apps.who.int/iris/bitstream/handle/10665/324775/WHO-PRP-18.1-eng.pdf>

¹³ Thirteen General Program of Work ,2019-2023. WHO Results framework
https://www.who.int/docs/default-source/documents/gpw/who-results-framework-draft-25october2019.pdf?sfvrsn=fcee6eb2_2