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United Nations



World Health
Organization



World Organisation
for Animal Health
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Antimicrobial Resistance (AMR) Multi-Stakeholder Partnership Platform

Call for actionable steps in response to the rising threat of antimicrobial resistance (AMR)

Key recommendations for action on antimicrobial resistance for consideration by UN Member States in the United Nations General Assembly High-Level Meeting on AMR
May 2024

The Antimicrobial Resistance (AMR) Multi-Stakeholder Partnership Platform Action Group on the High-Level Meeting urges the United Nations Members to seize the opportunity of the 2024 United Nations General Assembly High-Level Meeting on AMR to reinvigorate progress on addressing AMR using a One Health approach. It further calls on the High-Level Meeting to agree on actionable and measurable steps to ensure a healthier, more sustainable and resilient present and future in which antimicrobials are preserved as critical lifesaving medicines equally accessible to everyone everywhere. In this regard, the undersigned organizations advocate UN Member States to include the outcome of their discussion in the negotiations on the 2024 Declaration on AMR:

- 1 Enhance One Health collaboration on AMR through effective cross-sectoral, transparent, inclusive, multilateral, multidisciplinary, multi-stakeholder coordination, communication and follow-through.**
- 2 Accelerate the implementation of AMR National Action Plans (NAPs), building on country context, capacity and capabilities.**
- 3 Strengthen capacity for AMR efforts by mobilizing sustainable financing for research, infrastructure and AMR NAPs implementation.**
- 4 Strengthen health systems through comprehensive primary and secondary prevention strategies, such as infection prevention and control (IPC), stewardship programmes, water, sanitation and hygiene (WASH), vaccination, early diagnosis and prompt treatment and environmental management of air, water, soil, food and vectors for better human, animal and environmental health.**
- 5 Better leverage preventive measures such as vaccination by expanding the evidence base on their impact against AMR, developing mechanisms to increase access and utilization of existing vaccines, improving regulatory pathways, facilitating market authorization and distributing products across sectors and countries.**
- 6 Strengthen sector-specific AMR and antimicrobial use (AMU) surveillance, building towards integrated surveillance for evidence-based action to reduce the risk and impact of AMR.**
- 7 Transform agrifood systems to significantly reduce AMU while optimizing animal health and welfare.**
- 8 Ensure universal, equitable, affordable and sustainable access, including in rural areas, to quality essential medicines, vaccines and diagnostics for humans and animals.**
- 9 Encourage high-income countries and other stakeholders to commit to taking an end-to-end approach to sustainable antimicrobial research and development (R&D), including by increasing public investment in push and pull incentives to catalyse the global R&D efforts necessary to deliver new treatments and tools that target global priority pathogens.**
- 10 Prevent and address the drivers, sources and challenges of the environmental dimensions of AMR.**

Introduction

The World Health Organization (WHO) cites AMR as one of the top global public health and development threats,¹ with an estimated 4.95 million associated deaths in 2019, including 1.27 million deaths attributable to bacterial AMR.² Limiting the emergence and spread of resistant pathogens is critical to preserving the world's ability to treat human, animal and plant diseases, reduce food safety and security risks and maintain progress on the Sustainable Development Goals (SDGs). We must take more significant action now. Failing to do so risks rendering current antimicrobials ineffective, compromising our ability to prevent, control and treat infectious diseases and paving the way for a post-antimicrobial era in which modern medical procedures, including routine surgeries and treatments like cancer care, are too risky or impossible to perform. Inaction may further lead to 10 million deaths annually, the same number of deaths as from cancer and a cumulative global cost of USD 100 trillion by 2050, further exacerbating inequalities and pushing more people below the poverty line.³

What are the drivers of AMR?

Antimicrobials – including antibiotics, antivirals, antifungals and antiparasitics – are potent defences against pathogens. Antimicrobial resistance occurs when bacteria, viruses, fungi and parasites evolve, rendering antimicrobials ineffective against them. The misuse and overuse of antimicrobials in public health and agrifood systems further fuels AMR. Moreover, evidence is mounting that environmental drivers play a significant role in the development, transmission and spread of AMR and are linked to the triple planetary crises of climate change, biodiversity loss and pollution. Consequently, infections become harder to treat, heightening the likelihood of disease transmission, illness, mortality and morbidity. AMR is on the rise globally, disproportionately affecting low- and middle-income countries (LMICs), posing a great challenge to the effectiveness of current and new antimicrobials.

The importance of addressing AMR was highlighted at the 2016 United Nations General Assembly's High-Level Meeting on AMR, which emphasized the need for nations to commit to the 2015 Global Action Plan on AMR. Significant efforts have been made on curbing AMR over the last decade, including the development by many Member States of multi-sectoral National Action Plans on AMR (NAPs), notable reductions in the use of antimicrobials in certain sectors, increased scientific evidence and the establishment of global governance structures.

Despite these achievements, we cannot effectively prevent and manage AMR, compromising our collective pursuit of the 2030 Agenda and the SDGs. This challenge is exacerbated by other pressing global issues, such as climate crisis, environmental degradation, pandemics and conflicts. Now, more than ever, we need to glean insights from a decade of collective successes and lessons to accelerate our collective action on AMR. The 2024 United Nations High-Level Meeting on AMR is an opportunity to accomplish this.

Using a One Health approach, recognizing that the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent,⁴ we can effectively tackle AMR. This necessitates a unified voice, a strong political commitment and a whole-of-government and whole-of-society approach for a coordinated multisectoral response, guided by the foundational principle of global solidarity.

1 WHO. 2023. Antimicrobial resistance. In: WHO. Geneva, Switzerland. [Cited 6 April 2024]. <https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance>

2 Murray, C.J.L., Ikuta, K.S., Sharara, F., Schwetschinski, L. Aguilar, G.R., Gray, A. et al. 2022. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *The Lancet*, 399(10325): 629–655. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)02724-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02724-0/fulltext)

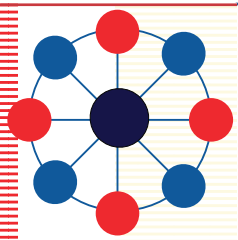
3 <https://www.unep.org/resources/superbugs/environmental-action>

4 Mettenleiter, T.C., Markotter, W., Charron, D.F., Adisasmito, W.B., Almuhairi, S., Behravesh, C.B. et al. 2023. The One Health High-Level Expert Panel (OHHLEP). *One Health Outlook*, 5(18). <https://onehealthoutlook.biomedcentral.com/articles/10.1186/s42522-023-00085-2#:~:text=One%20Health%20Definition&text=One%20Health%20is%20an%20integrated,are%20closely%20linked%20and%20interdependent.>

About the AMR Multi-Stakeholder Partnership Platform

The AMR Multi-Stakeholder Partnership Platform was established in November 2022 by the Quadripartite organizations – the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the World Health Organization (WHO) and the World Organisation for Animal Health (WOAH) – as one of the global governance structures on AMR recommended by the ad-hoc Inter-Agency Coordination Group on AMR.⁵ It brings together relevant stakeholders across the human, animal, plant and environment sectors to assist in preserving antimicrobials and ensuring their responsible use through a One Health approach. It promotes a shared global vision, helps build consensus and takes action to contribute to the implementation of the Global Action Plan on AMR (GAP). Since its inaugural meeting in November 2023, the platform has grown to more than 200 members (organizations, networks and federations).

The following detailed considerations are based on the discussions facilitated by the Action Group on the UN High-Level Meeting of the AMR Multi-Stakeholder Partnership Platform and represent the diverse opinions of stakeholders from all clusters of the platform, including civil society organizations, research institutions and academia, the private sector, financial institutions, resource partners, philanthropic organizations, governments, intergovernmental organizations and the United Nations agencies.



1 Enhance One Health collaboration on AMR through effective cross-sectoral, transparent, inclusive multilateral, multidisciplinary, multistakeholder coordination, communication and follow-through.

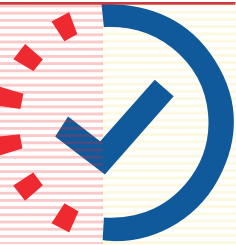
- a. Recognize and strengthen the role of the Quadripartite (FAO, UNEP, WHO and WOAH) in facilitating effective coordination of the global One Health response to AMR and supporting the functioning of the global governance structures (Global Leaders Group on AMR and the AMR Multi-Stakeholder Partnership Platform) through their Standing Quadripartite Joint Secretariat on AMR.
- b. Establish by September 2025 the Independent Panel on Evidence for Action against AMR, as recommended by the Interagency Coordination Group on AMR,⁶ to provide independent, robust and authoritative assessments of the science, data and evidence related to AMR across the One Health spectrum spanning animal, human and plant health, food and feed production and the environment, including rigorous evaluation of new findings, gaps, impacts and future risks based on available data and the recommendation of options for the generation of new evidence. Promote research, new knowledge and innovation and support the definition of country- and context-specific targets for AMR based on a One Health approach.
- c. Encourage greater coherence and integration of global commitments to tackle AMR without subsuming them into relevant international instruments and processes,⁷ including those related to pandemic preparedness and response,⁸ and adopt the principle of global solidarity in multilateral efforts to address AMR.
- d. Set up a working committee of selected Member States to create an operational monitoring and evaluation framework for transparency, benchmarking, peer review and support among countries for global One Health collaboration, supported by the Quadripartite Joint Secretariat on AMR. This committee shall report to the United Nations General Assembly every two years.
- e. Raise awareness to bring about behavioural change by strategically using information, communication, education and training to positively influence people's knowledge, attitudes and practices on turning the tide on AMR and promote the prudent use of antimicrobials, applying the One Health approach.
- f. Commit to the next United National General Assembly High-Level Meeting on AMR taking place in 2029 to maintain progress. Leverage and widely disseminate and apply lessons learned after the 2024 High-Level Meeting.

5 IACG (Interagency Coordination Group on Antimicrobial Resistance). 2019. No time to wait: Securing the future from drug-resistant infections. Geneva, Switzerland, WHO. <https://www.who.int/docs/default-source/documents/no-time-to-wait-securing-the-future-from-drug-resistant-infections-en.pdf>

6 IACG. 2019. No time to Wait: Securing the future from drug-resistant infections. Geneva, Switzerland, WHO. <https://www.who.int/publications/i/item/no-time-to-wait-securing-the-future-from-drug-resistant-infections>

7 For example, the Pandemic Accord, international health regulation amendments, the Global Framework on Chemicals and multi-lateral environmental agreements.

8 Médecins Sans Frontières. 2023. Addressing Antimicrobial Resistance Within Global Processes to Improve Pandemic Preparedness and Response. Geneva, Switzerland. https://www.msfaccess.org/sites/default/files/2023-11/MSF_AMR%20and%20Pandemic%20Preparedness_Issue%20Brief.pdf



2 Accelerate the implementation of AMR NAPs, building on country context, capacity and capabilities.

- a. Define, implement and review NAPs with sufficient knowledge of technical aspects of AMR and AMU in all sectors, including context-specific, measurable targets for AMR-sensitive areas, such as human and animal vaccine-related activities and waste and wastewater management interventions, as relevant to local context and needs.
- b. Establish effective cross-sectoral governance frameworks at the human–animal–plant–environment interface and ratify international laws, standards and guidelines related to AMR. Enact necessary national legislation to give domestic effect to these global instruments while balancing national needs and capabilities with internationally defined priorities.
- c. Increasingly involve civil society and engage communities in policy development and implementation of programmes and actions on AMR contributing to the enhanced accountability and trust-building across institutions and society, including the best practices from not-for-profit citizen-based policy organizations.
- d. Strengthen the Global Database for Tracking Antimicrobial Resistance (AMR) Country Self-Assessment Survey (TrACSS) as a robust and transparent mechanism for tracking, monitoring and evaluating progress on the implementation of NAPs, to inform the priority-setting process and foster action.
- e. Utilise south-south, triangular, or technical cooperation among countries to guarantee dedicated and sustained resources to implement the NAPs.



3 Strengthen capacity for AMR efforts by mobilizing sustainable financing for research, infrastructure and AMR NAPs implementation.

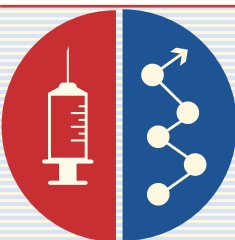
- a. Adopt a pragmatic approach that enables prioritization and a focus on financing key aspects of AMR NAPs.
- b. Leverage and diversify public and private investments to build AMR-related policies and interventions across human health, animal health, agrifood and environment systems, as well as strategic, longer-term national policies. Explore the potential to earmark a certain percentage of national health budgets for AMR.
- c. Amplify and coordinate funding streams at the global level between Member States, taking a One Health (human, animal, plant and environment) approach and between different funding and implementing mechanisms to reduce duplication and inefficiency and leverage complementarity in resource allocation.
- d. Recognize differences in the AMR situation in developing and developed countries. Facilitate access to existing resources through funding models that offer predictable, sustainable, equitable and accessible financing, as well as technical support for countries based on their needs.
- e. Increase investment in AMU and AMR research across the One Health spectrum, including from domestic sources, for basic science, epidemiological studies, innovation in diagnostics and therapeutics, vaccine development and environmental studies, as well as capacity building in scientific research. Align AMR research funding with the Quadripartite One Health Priority Research Agenda for AMR.⁹

⁹ WHO. 2023. A one health priority research agenda for antimicrobial resistance. Geneva, Switzerland. <https://www.who.int/publications/i/item/9789240075924>



4 Strengthen health systems through comprehensive primary and secondary prevention strategies, such as IPC, stewardship programmes, WASH, vaccination, early diagnostics and prompt treatment and environmental management of air, water, soil, food and vectors for better human, animal and environmental health.

- a. Build the capacity of the One Health workforce to improve knowledge, skills and competencies to use relevant, practical and responsible prevention and treatment methods and guidelines for humans, animals and crops to mitigate and control infections and ensure the safe disposal of expired and unused antimicrobials.
- b. Develop and accelerate the implementation of robust stewardship and IPC programmes at the national and facility level, including WASH and environmental health standards, strengthening biosecurity measures in agricultural settings and limiting the prescription of antibiotics prophylactically. This work should be based on integrated, context-specific regional and country approaches.¹⁰
- c. Promote and ensure the prudent use of antimicrobials, including through phasing out medically important over-the-counter sales of antimicrobials.
- d. Scale up long-term investments to support IPC, WASH, vaccines and other prevention programmes across sectors to optimize human and animal health, animal husbandry and welfare practices. Reduce dependence on antimicrobials and minimize discharges from human health-care and aquatic and terrestrial animal facilities.
- e. Implement measures to limit the overuse and misuse of antimicrobials by establishing AMU reduction targets in the human health sector.



5 Better leverage preventive measures such as vaccination through expanding the evidence base on their impact against AMR, mechanisms to increase access and utilization of existing vaccines, improving regulatory pathways, facilitating market authorization and distributing products across sectors and countries.

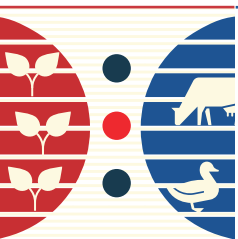
- a. Invest in the development of and access to vaccines and consider regulatory reform that expedites both access and development. Vaccinations can improve human and animal health by decreasing the need to prescribe antibiotics, however, a lack of funding and regulatory barriers slow development and access to these solutions.
- b. Implement new mechanisms that support development, appropriate regulatory pathways and policies to improve vaccine uptake and facilitate access, helping to limit the propagation of AMR, reduce overall infectious disease burden and reduce the need for antimicrobials, helping to preserve their effectiveness.
- c. Incorporate AMR-related aspects in national immunization strategies, improving how these vaccines are recommended, used and prioritized by health systems globally. Support further collection of evidence on vaccine impact against AMR.

10 Majumder, M.A.A., Rahman, S., Cohall, D., Bharatha, A., Singh, K., Haque, M. and Gittens-St. Hilaire, M. 2020. Antimicrobial Stewardship: Fighting Antimicrobial Resistance and Protecting Global Public Health. *Infection and Drug Resistance*, 13: 4713–4738. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC778387/#cit0060>



6 Strengthen sector-specific AMR and AMU surveillance, building towards integrated surveillance for evidence-based action to reduce the risk and impact of AMR.

- a. Recognize the importance of data informing evidence-based policies, decision-making and action at all levels. Use a stepwise approach to strengthen actionable surveillance of AMR and AMU across human, animal, agriculture and plant sectors. Monitor AMR and antibiotic residues in the environment and ensure the generation of harmonized data from each sector.
- b. Strengthen human-resources, laboratory and other infrastructural capacity and funding for implementing sector-specific harmonized national surveillance for AMR/AMU, including collaboration and information-sharing across sectors, by routinely utilizing and reporting to the Global Integrated Surveillance System on Antimicrobial Resistance and Use. Sectoral surveillance systems already established at national or international level – such as the Global Antimicrobial Resistance and Use Surveillance System (GLASS), ANIMUSE (ANIMAL and antimicrobial USE) and International FAO Antimicrobial Resistance Monitoring IT Platform (InFARM) – and surveillance in the environment should form the basis for developing integrated surveillance systems to support informed decision-making.
- c. Use Quadripartite guidance documents to establish harmonized and context-appropriate systems for generating high-quality, integrated surveillance data. Support to implement this guidance at the national level to align with the local context and needs will be critical.



7 Transform agrifood systems to significantly reduce AMU while optimizing animal health and welfare.

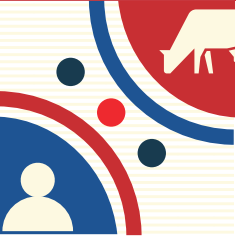
- a. Ensure responsible non-human AMU by addressing the drivers that lead to irresponsible AMU in animals and plants and by applying relevant WOH and Codex International Standards on the responsible and prudent use of antimicrobials. This must include a focus on significantly reducing non-veterinary and non-phytosanitary use of antimicrobials in the agrifood system, including animal production, aquaculture and crop production.
- b. Work to transform agrifood systems to reduce, in a manner compatible with country-specific circumstances, AMU in the agrifood system globally. This can be achieved by promoting animal welfare through proven best practices in animal management and nutrition, biosecurity, WASH, vaccination and improving animal health systems, including veterinary care access.
- c. Commit to phasing out all use of medically important antimicrobials for growth promotion and routine group prophylactic use in healthy animals in an ambitious, stepwise and country-specific approach in accordance with Codex principles 12 to 15,¹¹ relevant WOH guidance,¹² and

11 Principles on the use of antimicrobials in specific circumstances: Principle 12: *Responsible and prudent use of antimicrobial agents does not include the use for growth promotion of antimicrobial agents that are considered medically important. Antimicrobial agents that are not considered medically important should not be used for growth promotion unless potential risks to human health have been evaluated through procedures consistent with the Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance (CXG 77-2011).* Principle 13: *Medically important antimicrobial agents should only be used for veterinary medical use/phytosanitary use (treatment, control/metaphylaxis or prevention/prophylaxis of disease).* Principle 14: *Medically important antimicrobials should only be administered or applied for prevention/prophylaxis where professional oversight has identified well-defined and exceptional circumstances, appropriate dose and duration, based on clinical and epidemiological knowledge, consistent with the label and in line with national legislation. Countries could use additional risk management measures for medically important antimicrobials considered highest priority critically important as described in the WHO List of Critically Important Antimicrobials for Human Medicine, the OIE List of Antimicrobial Agents of Veterinary Importance, or national lists, where available, including restrictions proportionate to risk and supported by scientific evidence.* Principle 15: *When used for the control of disease/metaphylaxis, medically important antimicrobial agents should only be used on the basis of epidemiological and clinical knowledge and a diagnosis of a specific disease and follow appropriate professional oversight, dose and duration.* For more, see: FAO and WHO. 2021. Codex Alimentarius: Code of practice to minimize and contain foodborne antimicrobial resistance. Rome and Geneva, Switzerland. https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCXC%2B61-2005%252FCXC_061e.pdf

12 “WOH standards make a clear distinction between the veterinary medical use of antimicrobials – which is limited to the treatment, control and, where appropriate, prevention of infectious diseases – and non-veterinary medical use. The administration of antimicrobials for growth promotion in animals is a non-veterinary medical use and must not be assimilated to disease prevention use, which requires animals to be at proven risk of disease if the medicine is not administered”, [WOH called on all Member States to live up to their commitments regarding the use of antimicrobials as growth promoters](#), 2023

informed by the Independent Panel on Evidence for Action Against AMR in terms of timing and strategy.

- d. Commit to sharing information on antibiotic use in animals with WOAAH through the ANIMUSE system. Member States shall endeavour to share this information publicly, either through ANIMUSE and/or Member State publications.

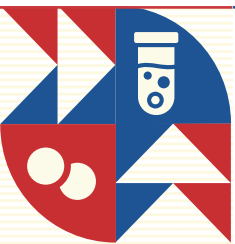


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Ensure universal, equitable, affordable and sustainable access, including in rural areas, to quality essential medicines, vaccines and diagnostics for humans and animals.

- a. Establish global and national lists of essential medicines using existing tools;¹³ diagnostics and vaccines for humans and animals and map the gaps in access and shortages. Take action to improve access to AMR-relevant vaccines, set targets for the availability and utilization of “access, watch and reserve” (AWaRe) antibiotics, consider creating a similar structure for antibiotics used in agrifood systems and resolve access barriers. These include a lack of timely registration; prices of antibiotics; shortages; and insufficient or no clinical evidence to guide use in LMICs or vulnerable populations, such as children and newborns. Promote access to antimicrobials for neglected tropical diseases and re-emerging diseases.
- b. Promote and support the voluntary (sub)regional harmonization of medicines registration, the capacity building of regulators and the reform of regulatory pathways to accelerate the authorization of safe and effective products of major interest. Improve access to these essential interventions while ensuring sustainable procurement and supply of quality-assured antibiotics.
- c. Promote and support context-based measures to improve adequate supply, affordability and availability in all countries; measures that bridge global access gaps in the poorest areas with the highest unmet need, such as through licensing of antibiotics to global health agencies, such as the Global Antibiotic Research and Development Partnership (GARDP), or to appropriate commercial partners and implementing new procurement models with built-in stewardship, including pooled procurement (including considering working with SECURE); and overall measures that support supply chain resilience and participation by multiple suppliers to meet global needs.
- d. Ensure access to diagnostics. Strengthening diagnostic testing, including antimicrobial susceptibility testing, is crucial to supporting the appropriate use of antimicrobials and enhancing disease control efforts. Laboratories should have the capacity to generate reliable data and improve the quality of diagnostics. In addition, practical, affordable and rapid diagnostic testing, including in remote locations with limited expertise and cold-chain facilities, is needed.
- e. Ensure antimicrobials are procured from reputable sources, marketed, labelled, prescribed and sold with the necessary warnings and instructions.
- f. Prevent the introduction of falsified and substandard veterinary medicinal products, monitor their quality and differentiate antimicrobials from other feed additives.

13 WHO Essential Medicines list, WOAAH List of Antimicrobials of Veterinary Importance.



9

Encourage high-income countries and other stakeholders to commit to taking an end-to-end approach to sustainable antimicrobial R&D, including by increasing public investment in push and pull incentives to catalyse the global R&D efforts necessary to deliver new treatments and tools that target global priority pathogens.

- a. Recognise that antimicrobial research and innovation must be needs-driven, evidence-based and guided by the core principles of affordability, accessibility, effectiveness, efficiency and equity across sectors by rapid deployment of recently approved tools, diagnostics, drugs, regimens and methodologies as they become available in countries with the greatest need.
- b. Mobilize sufficient, sustainable and predictable financing for push mechanisms.¹⁴ This should include not-for-profit partnerships (such as CARB-X and GARDP) that play a critical role in supporting the discovery, development, registration and introduction of new antimicrobials to all populations in need, while promoting equitable access, global stewardship and maximal return on public investment in scientific progress. Conduct internal assessments aimed at identifying countries' needs, innovation landscape and gaps through active engagement with relevant local stakeholders, trade associations, patient groups and so on.
- c. Implement adequate and predictable pull incentives.¹⁵ The objectives should be to strengthen the preclinical pipeline with innovative compounds targeting global priority pathogens, support sustained and robust R&D investment across all sectors and stages of development, enable equitable and affordable access to end products, support product market launches and promote sustainable supply over time. The G7 and G20 countries could support these initiatives by establishing a pull incentive coordination hub to help align individual pull incentives, harmonize requirements for product inclusion, sizing, tracking progress and assess effectiveness.¹⁶
- d. Pull incentive mechanisms should separate the value of investment in antimicrobial research and development from the price and volume of sales to create a research-enabling environment that revitalizes innovation and facilitates equitable access to the benefits and applications of antimicrobial research.
- e. Although implemented at the national or regional level, international collaboration and coordination on establishing novel incentives between Member States should be explored to ensure that R&D efforts are global health needs-driven and, where possible, supportive of the voluntary sharing of data, investment trends and technology. Formulate principles for reimbursement reform, with a specific emphasis on developing economies, to facilitate broader access to innovative antimicrobials across all regions.
- f. Encourage and support the use of mechanisms other than country income in determining equitable access to research funding, medicines and vaccines worldwide.
- g. Develop new procurement mechanisms and adapt existing regulatory pathways for technologies and policies that improve vaccine uptake and facilitate access, helping to limit the propagation of AMR, reduce the overall burden of infectious disease and reduce the need for antimicrobials.
- h. Consider push funding, including to not-for-profit partnerships, clinical trial networks and commercial entities that can play a critical role in accelerating the development of new antimicrobials and combinations on behalf of children and adapting existing antibiotics for use in children and newborns, as they are at the centre of the AMR crisis. One in every five deaths due to AMR (more than 250,000 children in 2019) are in children under the age of five.

¹⁴ Incentives that help to de-risk early-stage R&D and reduce costs for developers.

¹⁵ Incentives rewarding successful innovation that meets public health needs at a level that attracts further R&D investment.

¹⁶ This coordination hub could be facilitated by the Global AMR R&D Hub, which led a landscape analysis of pull incentives for AMR.



10 Prevent and address the drivers, sources and challenges of the environmental dimensions of AMR.

- a. Prevent, mitigate and control key pollution sources (poor sanitation, sewage, community and municipal waste, healthcare delivery, pharmaceutical manufacturing and industrial production processes, as well as intensive crop and terrestrial and aquatic animal production sectors), identifying and targeting priority AMR-relevant pollutants with a prevention angle.
- b. Support reaching an agreement on international standards for effluent discharge, promote adequate national regulations and further industry and private-sector engagement and encourage the adoption of public- and private-sector initiatives.¹⁷
- c. Enhance environmental planning and governance, including the strengthening of environmental actions in AMR NAPs and showing linkages with climate change.
- d. Improve reporting, surveillance and monitoring in the environment and establish international standards for good microbiological indicators of AMR from environmental samples. These can be used to guide risk-reduction decisions and create effective incentives to follow such guidance.
- e. Connect efforts to mitigate the environmental dissemination of AMR with AMR and AMU surveillance to characterize routes of spread, drivers of dissemination and the magnitude of each driver most efficiently. Harness insights gained from these efforts to inform the development of a refined and multifaceted risk assessment framework.
- f. Prioritize financing, innovation and capacity development to implement comprehensive and coordinated strengthening of environmental action to reduce the burden of AMR and tackle the triple planetary crisis of climate change, biodiversity loss and pollution and waste.
- g. Control waste potentially contaminated with antimicrobials and manufacturing pollution being disposed of in aquatic and terrestrial environments, including reviewing and updating predicted no-effect concentrations (PNECs).
- h. Control antimicrobial residues in food, feed and water and resistant genes in the soil and promote agricultural practices that limit the spread of AMR.

The following members of the AMR Multi-Stakeholder Partnership Platform endorse the Call for actionable steps in response to the rising threat of Antimicrobial Resistance (AMR):

Action for Animal Health

Alliance for Reducing Microbial Resistance (ARMor)

American Society for Microbiology

American University of Beirut Medical Center

AMR Action Fund

AMR Africa Patient Alliance

AMR Alliance Japan

AMR Industry Alliance

AMR Patient Alliance

AMR Policy Accelerator, Global Strategy Lab

AMR Vet Collective

Animals Australia

Association for Rural Area Social Modification, Improvement and Nestling (ARASMIN)

Asia-Europe Foundation (ASEF)

Axfoundation

Bangladesh NGOs Network for Radio and Communication

¹⁷ That is, the expected WHO Guidance on waste and wastewater management in pharmaceutical manufacturing and the [Antibiotic Manufacturing Standard](#).

Brooke Action for Working Horses and Donkeys

CARB-X

Caribbean Agricultural Health and Food Safety Agency (CAHFSA)

Center for Health and Disease Studies, Nepal

Center for Infectious Disease Research and Policy (CIDRAP), University of Minnesota

Centre for Climate Change and Environmental Studies

Centre for Public Health and Zoonoses, University of Guelph

Centre to Impact AMR, Monash University

Common Market for Eastern and Southern Africa (COMESA)

Community And Family Aid Foundation-Ghana

Compassion in World Farming

Council for Environment Khartoum State

Daksh Foundation

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Ecumenical Pharmaceutical Network

Eastern Mediterranean Public Health Network (EMPHNET)

European Association of Hospital Pharmacists (EAHP)

Federal University, Gashua

Federation of Asian Veterinary Associations

Federation of Veterinarians of Europe

FISA MOROCCO

Forestry Research Institute of Nigeria

German Center for Infection Research (DZIF)

Global AMR R&D Hub

Global Antibiotic Research & Development Partnership (GARPD)

Government of Barbados

Government of Saint Lucia

Government of Uganda

Government of Sudan

Government of Switzerland

Government of the United Kingdom

Great Lakes Peace Centre Organization

Green REV Institute

Health and Global Policy Institute (HGPI)

Health for Animals

Infection Control Academy of India (IFCAI)

International Centre for Antimicrobial Resistance Solutions (ICARS)

International Livestock Research Institute (ILRI)

International Meat Secretariat (IMS)

International Poultry Council

International Society of Antimicrobial Chemotherapy (ISAC)

International Vaccine Institute (IVI)

Istituto di Ricerca sulle Acque, Consiglio Nazionale delle Ricerche

Khartoum Higher Council for Environment

Kibaha Education Centre

Lebanese Society of Infectious Diseases and Clinical Microbiology (LSIDCM)

Mercy For Animals

Mouvement Universel pour la survie de l'Humanité (MUSUHUM)
Noguchi Memorial Institute for Medical Research
North Carolina State University
One Health Alliance Jordan
One Health Commission
One Health Trust
Pak One Health Alliance
Patient and Community Welfare Foundation of Malawi (PAWEM)
Public Health Initiative
ReAct
Roll Back Antimicrobial resistance Initiative (RBA Initiative)
Seafood Business for Ocean Stewardship (SeaBOS)
Southeast Asia One Health University Network (SEAOHUN)
Swedish University of Agricultural Sciences (SLU)
Swedish Waterhouse
Stockholm International Water Institute
Technical University of Denmark, National Food Institute
The International Federation of Pharmaceutical Manufacturers and Associations (IFPMA)
The Technical University of Denmark, National Food Institute
The University of the West Indies
Treatment Action Group
Turkish Veterinary Medical Association
Union for International Cancer Control
Université Catholique du Graben de Butembo (UCG)
Université de Lubumbashi
University of KwaZulu-Natal
University of Nottingham
Usmanu Danfodiyo University Young Antimicrobial Resistance Stewards (UDUYARS)
Vétérinaires Sans Frontières International
WaterAid
World Federation for Animals
World Medical Association
World Small Animal Veterinary Association
World Veterinary Association (WVA)



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