The Ad hoc Interagency Coordination Group (IACG) on Antimicrobial Resistance was convened by the Secretary-General of the United Nations after the UN High-Level Meeting on Antimicrobial Resistance in 2016. The IACG brought together partners across the UN, international organizations and individuals with expertise across human, animal and plant health, as well as the food, animal feed, trade, development and environment sectors, to formulate a blueprint for the fight against antimicrobial resistance. The Secretariat for the IACG was provided by the World Health Organization (WHO), with contributions from the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (OIE). The IACG report and recommendations were delivered to the Secretary-General in April 2019.
SUMMARY OF IACG RECOMMENDATIONS

A. ACCELERATE PROGRESS IN COUNTRIES

A1: The IACG calls on all Member States to ensure equitable and affordable access to existing and new quality-assured antimicrobials as well as alternatives, vaccines and diagnostics, and their responsible and prudent use by competent, licensed professionals across human, animal and plant health.

A2: The IACG calls on all Member States to accelerate the development and implementation of One Health National Antimicrobial Resistance Action Plans within the context of the SDGs.

A3: The IACG calls on all Member States to phase out the use of antimicrobials for growth promotion, consistent with guidance from the Tripartite agencies (FAO, OIE and WHO) and Codex Alimentarius, starting with an immediate end to the use of antibiotics categorised as the Highest Priority Critically Important Antimicrobial Agents on the WHO List of Critically Important Antimicrobials for Human Medicine.

B. INNOVATE TO SECURE THE FUTURE

B1: The IACG calls on public, private and philanthropic donors and other funders to increase investment and innovation in quality-assured, new antimicrobials (particularly antibiotics), novel compounds, diagnostics, vaccines, waste management tools, and safe and effective alternatives to antimicrobials for human, terrestrial and aquatic animal and plant health, as well as implementation and operational research.

B2: The IACG recommends that existing and future global access initiatives should promote and support equitable and affordable access to existing and new, quality-assured antimicrobials, diagnostics, vaccines, waste management tools and safe and effective alternatives to antibiotics for human, terrestrial and aquatic animal and plant health.

B3: The IACG calls on public, private and philanthropic research funders and other stakeholders to build upon current research and development efforts for new antimicrobials, diagnostics, vaccines, waste management tools, and safe and effective alternatives to antimicrobials; and to strengthen implementation and operational research and research coordination and collaboration in a One Health context.

One Health, IACG recommendations and the Sustainable Development Goals

Antimicrobial resistance is a global crisis. There is no time to wait. A sustained One Health response with a shared vision and goals is essential to tackle antimicrobial resistance and achieve the Sustainable Development Goals.
C. COLLABORATE FOR MORE EFFECTIVE ACTION

C1: The IACG calls for the systematic and meaningful engagement of civil society groups and organizations as key stakeholders in the One Health response to antimicrobial resistance at global, regional, national and local levels.

C2: The IACG calls for the systematic and meaningful engagement of and enhanced action by the private sector as key stakeholders in the One Health response to antimicrobial resistance at global, regional, national and local levels.

D. INVEST FOR A SUSTAINABLE RESPONSE

D1: The IACG calls on governments; global, regional, national, bilateral and multilateral financing and development institutions and banks; and private investors to systematically apply standards to assess risks and impacts related to antimicrobial resistance (an antimicrobial resistance and One Health “lens”) when making investments.

D2: The IACG emphasizes the need for increased investments in the response to antimicrobial resistance, including from domestic financing in all countries; urges existing and future financing mechanisms in human, animal and plant health, food and feed production and the environment to give greater priority to antimicrobial resistance in their resource allocations; calls on public, private and philanthropic donors to contribute additional funding, including to support implementation of National Antimicrobial Resistance Action Plans.

E. STRENGTHEN ACCOUNTABILITY AND GLOBAL GOVERNANCE

E1: The IACG requests the Tripartite agencies (FAO, OIE and WHO) together with UN Environment, other UN agencies and the World Bank, in the context of UN reform, to further strengthen joint One Health action, based on target-setting, country priorities and needs, by enhancing their organizational capacity and providing adequate and sustainable core funding for antimicrobial resistance-related activities.

E2: The IACG recommends the urgent establishment of a One Health Global Leadership Group on Antimicrobial Resistance, supported by a Joint Secretariat managed by the Tripartite agencies (FAO, OIE and WHO).

E3: The IACG requests the Secretary-General, in close collaboration with the Tripartite agencies (FAO, OIE and WHO), UN Environment and other international organizations, to convene an Independent Panel on Evidence for Action against Antimicrobial Resistance in a One Health context to monitor and provide Member States with regular reports on the science and evidence related to antimicrobial resistance, its impacts and future risks, and recommend options for adaptation and mitigation.

E4: The IACG recognizes the ongoing process led by Member States to develop the Global Development and Stewardship Framework to Combat Antimicrobial Resistance and urges the Tripartite agencies (FAO, OIE and WHO) and UN Environment to expedite its development in line with the scope described in the 2015 World Health Assembly resolution on antimicrobial resistance (WHA68.7). As Member States finalize this process, they should also consider the need for new international instruments.

A One Health response to address the drivers and impact of antimicrobial resistance

Drivers of Antimicrobial Resistance

- Misuse and overuse of antimicrobials; poor access to quality, affordable medicines, vaccines and diagnostics; lack of awareness and knowledge; population movement
- Lack of access to clean water, sanitation and hygiene; poor infection and disease prevention and control in health care facilities and farms
- Discharge of waste from health care facilities, pharmaceutical manufacturing and farms
- Economic damage, loss of productivity and increased health care expenditures
- Increased morbidity and mortality in humans and animals
- Interaction with climate change
- Poor infection and disease prevention and control; transmission of resistant pathogens in food production, storage, distribution and preparation
- Poor infection and disease prevention and control; lack of awareness and knowledge; movement of animals

Drivers of Antimicrobial Resistance

Humans

Terrestrial & Aquatic Animals

Food & Feed

Plants & Crops

Environment

Water, Sanitation & Hygiene

IMPACT OF ANTIMICROBIAL RESISTANCE

- Increased morbidity and mortality in humans and animals
- Economic damage, loss of productivity and increased health care expenditures
- Transmission of resistant pathogens in food production, storage, distribution and preparation
- Poor infection and disease prevention and control
- Misuse and overuse of antimicrobials; poor access to quality, affordable medicines, vaccines and diagnostics; lack of awareness and knowledge; movement of animals
KEY MESSAGES IN THE REPORT

Antimicrobial resistance is a global crisis that threatens a century of progress in health and achievement of the Sustainable Development Goals.

- Antimicrobial (including antibiotic, antiviral, antifungal and antiprotozoal) agents are critical tools for fighting diseases in humans, terrestrial and aquatic animals and plants, but they are becoming ineffective.
- Alarming levels of resistance have been reported in countries of all income levels, with the result that common diseases are becoming untreated, and lifesaving medical procedures riskier to perform.
- Antimicrobial resistance poses a formidable challenge to achieving Universal Health Coverage and threatens progress against many of the Sustainable Development Goals, including in health, food security, clean water and sanitation, responsible consumption and production, and poverty and inequality.
- Misuse and overuse of existing antimicrobials in humans, animals and plants are accelerating the development and spread of antimicrobial resistance.
- Inadequate access to clean water, sanitation and hygiene in health care facilities, farms, schools, households and community settings; poor infection and disease prevention; lack of equitable access to affordable and quality-assured antimicrobials, vaccines and diagnostics; and weak health, food and feed production, food safety and waste management systems are increasing the burden of infectious disease in animals and humans and contributing to the emergence and spread of drug-resistant pathogens.

There is no time to wait. Unless the world acts urgently, antimicrobial resistance will have disastrous impact within a generation.

- Drug-resistant diseases already cause at least 700,000 deaths globally a year, including 230,000 deaths from multidrug-resistant tuberculosis, a figure that could increase to 10 million deaths globally per year by 2050 under the most alarming scenario if no action is taken. Around 2.4 million people could die in high-income countries between 2015 and 2050 without a sustained effort to contain antimicrobial resistance.
- The economic damage of uncontrolled antimicrobial resistance could be comparable to the shocks experienced during the 2008-2009 global financial crisis as a result of dramatically increased health care expenditures; impact on food and feed production, trade and livelihoods; and increased poverty and inequality.
- In higher-income countries, a package of simple interventions to address antimicrobial resistance could pay for itself due to costs averted. In lower-income countries, additional but still relatively modest investments are urgently needed.
- If investments and action are further delayed, the world will have to pay far more in the future to cope with the disastrous impact of uncontrolled antimicrobial resistance.

Because the drivers of antimicrobial resistance lie in humans, animals, plants, food and the environment, a sustained One Health response is essential to engage and unite all stakeholders around a shared vision and goals.

- National Antimicrobial Resistance Action Plans are at the heart of a multisectoral One Health response, but financing and capacity constraints in many countries need to be urgently addressed to accelerate implementation.
- Strengthening infection prevention and control in health care facilities and farms using available tools and ensuring access to clean water, sanitation and hygiene in health facilities, farms, schools, household and community settings are central to minimizing disease transmission and the emergence and transmission of antimicrobial resistance in humans, animals, plants, food and the environment.
- Strengthening surveillance, regulatory frameworks, professional education and oversight of antimicrobial prescription and use, and increasing awareness among all stakeholders are also significant challenges that need to be urgently addressed to ensure the responsible use of antimicrobials and to minimize resistance in humans, animals, plants, food and the environment.
- Immediately stopping the use of the antimicrobials on the WHO List of Highest Priority Critically Important Antimicrobial Agents for Human Medicine as growth promoters is an essential first step towards completely phasing out the use of antimicrobials for growth promotion.
- Additional effort, investments and incentives are needed to spur innovation in antimicrobial medicines, diagnostics, vaccines, waste management tools, safe and effective alternatives to antimicrobials and alternative practices, as well as operational and implementation research, in human, animal and plant health.
- Many people around the world still do not have access to antimicrobials. Ensuring equitable and affordable access to quality antimicrobial agents and their responsible and sustainable use is an essential component of the global response to antimicrobial resistance.
- Stronger political leadership, advocacy, coordination and accountability are needed at all levels to enable a sustained One Health response to antimicrobial resistance. All stakeholder groups – including governments, civil society and the private sector – need to be engaged and to collaborate in an unprecedented effort across the human, animal, plant, food and feed production and environmental sectors, based on a shared vision and goals.
- The challenges of antimicrobial resistance are complex and multifaceted, but they are not insurmountable. Implementation of the recommendations in this report will help to save millions of lives, maintain economic and other development gains, and secure the future from drug-resistant diseases.