



ANTIMICROBIAL-RESISTANCE THREATENS SUCCESSFUL ACHIEVEMENT OF THE SDG TARGETS...

1. POVERTY

People **living in poverty** face the heaviest burdens of infectious disease and are most vulnerable to the economic impacts of infections that are resistant to treatments which often last longer and are more expensive to treat. Because of poverty-driven factors, individuals may receive sub-standard drugs or have disrupted treatments that contribute to the development of drug-resistant organisms.



2. ZERO HUNGER

Effective antimicrobial agents for agricultural use are essential for food security, preservation of animal health and welfare, and agriculture sustainability. Infections or diseases in livestock that become more difficult or impossible to treat **threaten food production** through loss of stock, decreased yield, and/or diminished economic viability.



3. HEALTH AND WELL-BEING

The emergence and spread of AMR **threatens medical advances** made over the past century, including progress made in promoting maternal and child health, and combating infectious diseases such as HIV, malaria, and TB.



5. GENDER EQUALITY

AMR can exacerbate **gender inequality**, as women and girls may face more demands to serve as primary caregivers for family members suffering from prolonged illness related to antimicrobial resistant infections. AMR can also occur in infections that disproportionately affect women and girls.



8. WORK AND ECONOMIC GROWTH

The continued rise in AMR is projected to result in a reduction of 2% to 3.5% in GDP and put at risk a cumulative \$100 trillion of **economic output** by 2050. In addition, AMR contributes to **financial and social inequality** when families are burdened by time away from work, unpaid caregiving, and loss of income as a result of prolonged illness related to antimicrobial resistant infections.



14. LIFE BELOW WATER

AMR is a rising concern for the health of **fresh water and marine ecosystems**. Aquatic environments are a major reservoir for antibiotic residues, antibiotic-resistant bacteria, and antibiotic resistance genes. These can enter the waterways through sewage, agricultural runoff, and wastewater discharges.





... PROGRESS ON THE SDG TARGETS HELPS COMBAT THE EMERGENCE AND SPREAD OF ANTIMICROBIAL RESISTANCE

6. CLEAN WATER AND SANITATION

Access to **safe drinking water and effective sanitation** is essential for **infection prevention** and control in healthcare facilities and in households. Steps like **hand washing** and practicing **good hygiene** can be taken at all levels of society to reduce the impact and limit the spread of resistance.



7. AFFORDABLE AND CLEAN ENERGY

Energy is integrally linked to **infection prevention** and control and consequently critical for limiting the emergence and spread of AMR. For example, the energy required to extract and pump water is critical for sanitation and hygiene; and the energy needed to support refrigeration is often essential for **storage of therapeutics** (vaccines, medicines, etc.).



9. INFRASTRUCTURE

Sustained investment in infrastructure and innovation underpins much needed **research and development** of new vaccines, diagnostics, and therapies. Additionally, infrastructure improvements in **transportation, energy, water, information, and communication** technology help nations to prevent, detect, and respond effectively and limit the spread of AMR.



3. HEALTH AND WELL-BEING

Progress toward **SDG 3** targets helps preserve the efficacy of antimicrobials. For example, improving access to quality essential **health-care services** can combat the emergence and spread of AMR by reducing the need for antimicrobials through infection prevention practices, and by enabling the uninterrupted completion of full course of antimicrobial treatments.



12. RESPONSIBLE CONSUMPTION

Antimicrobial agents are **produced and consumed** similar to other chemical products. Cooperation among diverse stakeholders to promote **effective management** of antimicrobial agents and associated wastes will help reduce the emergence of AMR.



17. PARTNERSHIPS

Combating the emergence and spread of AMR requires all members of society to take action. Bringing together multiple sectors and forming **cross-sectoral public-private partnerships** in support of SDG-17 is crucial in advancing this effort.

