

Antimicrobial Resistance (AMR)



Antibiotics
Antivirals
Antifungals
Antiparasitics

Antimicrobial Use and Resistance is an emerging public health concern for the food chain. Chemical residues are detected on our crops and vegetables, drug and chemical contaminants in milk, meat and eggs and the antimicrobials were using and not being effective to treat infestations or infections. This is due to misuse or overuse of our antimicrobials at the farm level. Action is needed at the farm level to reduce or eliminate antimicrobial resistant pathogens along the food chain.

What are Antimicrobials?

Antimicrobials are chemicals or medicines used to treat pathogenic (disease causing) microorganism (such as bacteria, virus, fungus, parasites) to prevent and treat infections in plants, animals and humans. These antimicrobials include antibiotics (treat bacteria), antifungals (treat fungus), antivirals (treat virus) and antiparasitics (treat parasites).

What is Antimicrobial Resistance?

Antimicrobial Resistance occurs when pathogenic microorganism changing and adapting over time to the antimicrobials. These pathogenic microorganisms no longer respond to the chemicals or medicines used to treat them. As a result, the infections that these pathogenic microorganisms cause become harder to treat and may result to treatment failure leading to increasing risk of disease, severe illness and death.

Antimicrobial Resistance is a Global Public Health Concern

According to World Health Organization “Antimicrobial resistant organisms are found in people, animals, food, plants and the environment (in water, soil and air). They can spread from person to person or between people and animals, **including from food of animal origin**. The main drivers of antimicrobial resistance include the misuse and overuse of antimicrobials; lack of access to clean water, sanitation and hygiene (WASH) for both humans and animals; poor infection and disease prevention and control in health-care facilities and farms; poor access to quality, affordable medicines, vaccines and diagnostics; lack of awareness and knowledge; and lack of enforcement of legislation. Especially alarming is the rapid global spread of multi- and pan-resistant bacteria (also known as “superbugs”) that cause infections that are not treatable with existing antimicrobial medicines such as antibiotics. In 2019 WHO identified 32 antibiotics in clinical development that address the WHO list of priority pathogens, of which only six were classified as innovative. Antibiotics are becoming increasingly ineffective as drug-resistance spreads globally leading to more difficult to treat infections and death. The cost of AMR to national economies and their health systems is significant as it affects productivity of patients or their caretakers through prolonged hospital stays and the need for more expensive and intensive care.

Tripartite Approach (FAO, WHO, WOA) Global Action Plan call all countries to develop National Action Plan using One Health Approach(Plant, Animal Human, Food Safety and Environment Sectors)

The Global Action Plan on Antimicrobial Resistance (AMR) was adopted in 2015 by all countries through decisions in the World Health Assembly, the Food and Agriculture Organization of the United Nations (FAO) Governing Conference and the World Assembly of World Organization for Animal Health (WOAH) Delegates. Countries agreed to have a national action plan on AMR that is consistent with the Global Action Plan, and to implement relevant policies and plans to prevent, control and monitor AMR. To monitor country progress in the implementation of the national actions plans, an annual Tripartite AMR country self-assessment survey (TrACSS) has been jointly

administered by FAO, WOA and WHO since 2016. All responses can be accessed in the [Global Database for Tracking Antimicrobial Resistance \(AMR\) Country Self- Assessment Survey \(TrACSS\) \(amrcountryprogress.org\)](https://amrcountryprogress.org/). Links to the surveys used in former reporting years are provided below. [tripartite-amr-country-self-assessment-survey-2019-20-guidance-note-english.pdf \(who.int\)](https://www.who.int/publications-detail/tripartite-amr-country-self-assessment-survey-2019-20-guidance-note-english)

Caribbean Regional Approach since 2017

All Caribbean countries have been working together breaking human and animal sectors together with Pan-American Health Organization, Food and Agriculture Organization and World Animal Health Organization to work on their national work programmes in the development of their national action plans

Caribbean Subregional Roadmap for Completion of National Action Plans

Activity	Timeframe	Responsible agency
AMR presentation at COTED Agriculture	October 2017	MoA Jamaica & CAHFSA
PAHO sends letters to Permanent Secretaries in MoH's and MoA's to remind of commitment to prepare NAP's by May 2017.	October 2017	PAHO
Virtual follow up meetings of national AMR focal points coordinated by PAHO	November, January, March	Moderated by PAHO
Establish online community of practise for the Caribbean	October 2017	Moderated by PAHO
Plan and implement antibiotic awareness week activities	November 14 to 20, 2017	Ministries of Health and Agriculture
Include AMR activities in national budgets	Country budget cycles	AMR focal points
To complete WHO survey about progress on national action plans	January 15, 2017	Ministries of Health
Countries need to have available National Action Plans by World Health Assembly 2017	May 2017	Ministries of Health

Parallel activities to facilitate implementation of NAP's

AMR to be included in Caribbean One Health strategic plan	October 2017	
Prepare regional protocols for the Caribbean on veterinary drug registration and regulation	Pending	CAHFSA

Caribbean subregional lab strengthening activities	Pending	PAHO/CARPHA
Caribbean subregional surveys on antibiotic consumption	Ongoing	Animals – OIE Humans - PAHO
PAHO/ Canada pilot project to strengthen integrated surveillance on AMR (Belize, Barbados & Jamaica)	Pending	PAHO Public Health Agency of Canada
AMR presentations at CARICOM Meeting of CMO's, CARICOM Meeting of CVO's, COHSOD and COTED Agriculture	Pending	PAHO (CMO & COHSOD) CAHFSa (CVO & COTED)

Link to AMR Information:

- Video - [World Antimicrobial Awareness Week 2022 \(who.int\)](#)
- Video - [What is Antimicrobial Resistance? - Bing video](#)
- Video - FAO office from Asia and Pacific region as well..... Don't let AMR take control
- [Don't let antimicrobial resistance \(AMR\) take control! Asia and Pacific Region \(FAO, OIE, WHO, UNEP\) - YouTube](#)
- FAO Barbados video - [Antimicrobial Resistance. What is it? - Bing video](#)
- FAO Tackling Antimicrobial Use and resistance in food-producing animals [Tackling antimicrobial use and resistance in food-producing animals \(fao.org\)](#)
- Codex tests on Foodborne [Codex texts on foodborne antimicrobial resistance/Textes du Codex concernant la résistance aux antimicrobiens d'origine alimentaire/Textos del Codex sobre la resistencia a los antimicrobianos transmitida por los alimentos \(fao.org\)](#)
- FAO/WOAH/WHO poster - What the Agriculture Sector can do [Antibiotic resistance poster \(fao.org\)](#)
- FAO Poster Antibiotics in Livestock [ANTIBIOTICS IN LIVESTOCK \(fao.org\)](#)