Food and Agriculture Organization of the United Nations

UN environment programme

World Health Organization

World Organisation for Animal Health
Founded as OIE

Tracking AMR Country Self Assessment Survey (TrACSS) 2022 Country Report

Argentina

WORLD BANK INCOME CLASSIFICATION:
Upper middle income

POPULATION:
45 808 747

Antimicrobial resistance (AMR) occurs when pathogens become resistant to the drugs that were used against them, making infections harder and more expensive to treat. It is one of the top global threats currently facing the world, endangering the achievement of the Sustainable Development Goals linked to health, poverty, food security and the environment, among others. Recent evidence shows that global deaths associated with AMR reached nearly 5 million in 2019, of which 1.27 million deaths were directly caused by AMR.

In response to this growing challenge, countries adopted the Global Action Plan on AMR (GAP-AMR) through resolutions in the World Health Assembly in 2015, the FAO Governing Conference, and the WOAH (formerly OIE) World Assembly, with further endorsement in the United Nations General Assembly in 2016. By adopting GAP-AMR, countries pledged to develop and implement AMR national action plans (NAP). The Tracking AMR Country Self-Assessment Survey (TrACSS) monitors the implementation of these AMR national action plans and is administered annually. TrACSS was renamed in 2022 from "Tripartite AMR Country Self-Assessment Survey" to "Tracking AMR Country Self-Assessment survey" to reflect the inclusion of the UN Environment Programme to the Quadripartite. TrACSS is currently in its sixth iteration, which saw the highest response rate yet with 166 of 194 (86%) countries participating in the survey.

Globally, the data from TrACSS indicates that progress has been uneven and very slow in a number of critical areas. Urgent action is needed to strengthen political commitment and investment in all relevant sectors, build technical capacity, prioritize, implement and monitor key interventions, enhance targeted awareness and training, and strengthen multisectoral coordination and accountability. This report focuses on the results of the 2022 TrACSS country submission, provides a 5-year overview of country TrACSS responses, and benchmarks country responses against global levels on key AMR indicators by sector. There are also key messages on actions countries can take in human health, animal health (terrestrial and aquatic), food and agriculture, and environment sectors to prevent the rise and spread of AMR.

AMR National Action Plan Governance

SUMMARY OF MULTISECTOR INDICATORS IN 2022

Country has formalized multisector coordination mechanism on AMR	✓
Country has developed NAP AMR	✓
Country is implementing NAP AMR	✓
Country in the process of revising the NAP AMR or developing a new one	✓
Country has a monitoring and evaluation plan for the NAP AMR	✓
Country has government supported nationwide AMR awareness campaigns	✓
Country has established or starting the implementation of an Integrated Surveillance System for AMR	✓

SECTORS INVOLVED IN AMR MULTISECTOR COORDINATION

Human Health	✓
Terrestrial Animal Health	✓
Aquatic Animal Health	✗
Plant Health	✗
Food Production	✓
Food Safety	✓
Environment	✗

Human Health

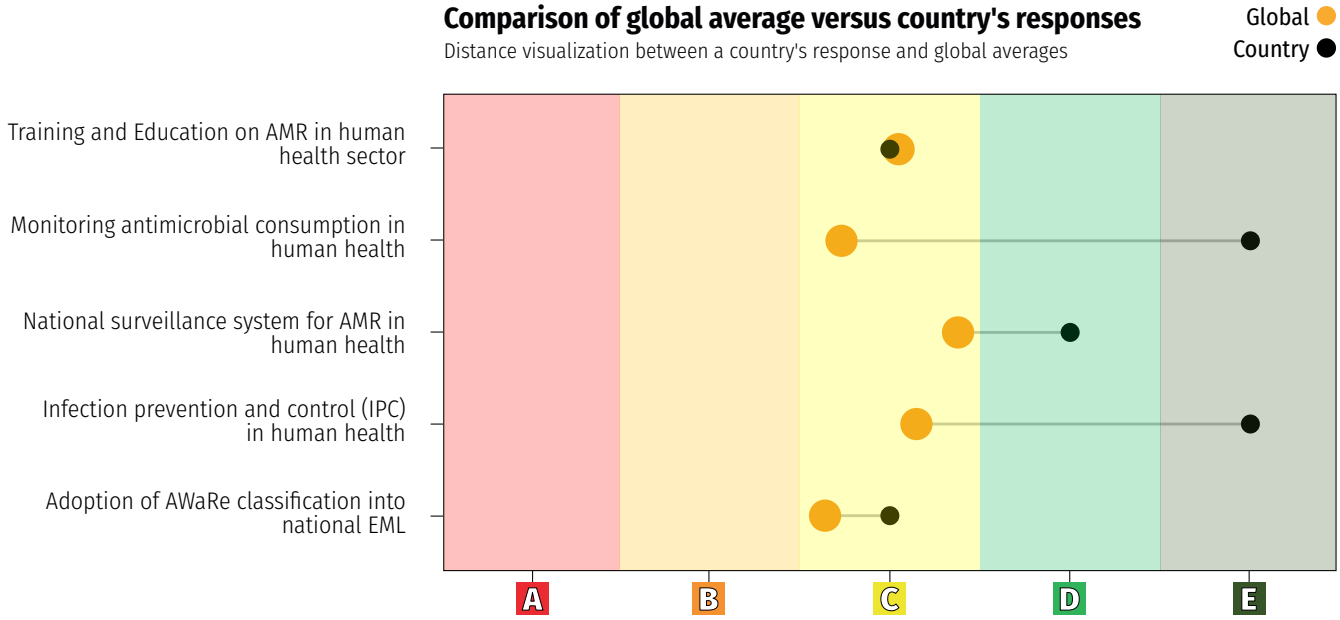
TrACSS asks for a rating of national capacity and progress on a five-point scale (A to E), with the levels A-B representing limited capacity, and levels C-E representing nationwide implementation for most indicators. Countries should be aiming to reach levels C-E on all indicators.

capacity

none	A
limited	B
developed	C
demonstrated	D
sustained	E

Comparison of global average versus country's responses

Distance visualization between a country's response and global averages



TrACSS 2022, global data are averages, countries without data removed

The country dot is the answer provided by the country to the questionnaire. The global average is computed using numerical values assigned to the categories (A = 1, B = 2, ...), summed, and simply divided by the number of countries that participated in the 2022 TrACSS.

Human health key messages

When developing, implementing, and monitoring their AMR NAPs, countries should ensure no one is left behind and consider gender, equity, disability and needs of vulnerable populations in their national plans. While a multisectoral approach is needed to ensure effective implementation of AMR NAPs, targeted sector-specific efforts are also required to address critical gaps in the following areas.

Training on AMR – systematically incorporating AMR into training curricula (both pre-service and in-service) of healthcare workers is an important intervention towards increasing AMR awareness and antimicrobial stewardship in this key stakeholder group.

Monitoring system for antimicrobial consumption – little progress has been seen globally on this indicator for the past few years. Establishing a robust national monitoring system for antimicrobial use/consumption in humans is essential for monitoring data on prescription, sales and use of antimicrobials and enforcement of legislation.

IPC – an IPC programme that is implemented nationwide is necessary to strengthen country capacity for preventing infections. Improved water, sanitation and hygiene (WASH) in healthcare facilities and in the community and strengthened routine immunization efforts are also integral in addressing AMR.

Optimizing use of antimicrobials in human health – developing and implementing national guidelines for antimicrobial use and stewardship, as well as adopting AWaRE classification of antimicrobials into National Essential Medicines List, are necessary steps towards ensuring optimal use and access of antimicrobials.

Lab and diagnostics - strengthen lab and diagnostic capacity, including quality assurance and uninterrupted supply of consumables, which is essential for the collection of AMR surveillance data. This data can be used to revise treatment guidelines, strengthen IPC measures in healthcare facilities, and strengthen antimicrobial stewardship efforts.

Animal Health

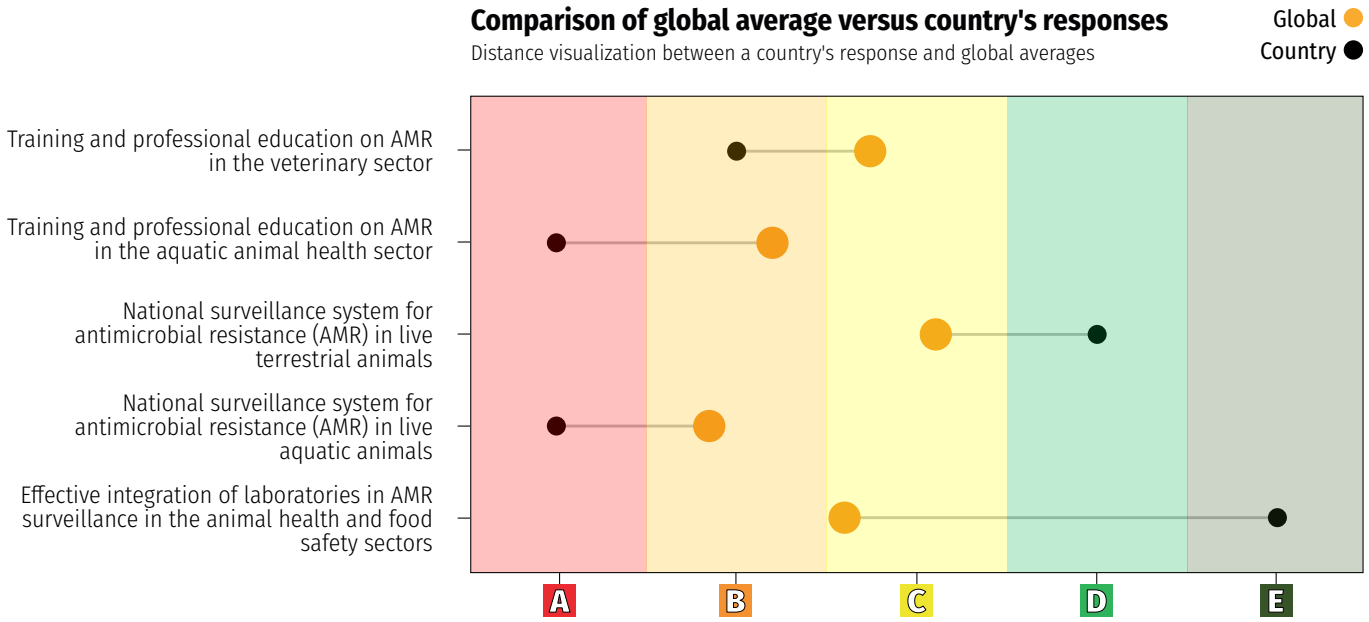
TrACSS asks for a rating of national capacity and progress on a five-point scale (A to E), with the levels A-B representing limited capacity, and levels C-E representing nationwide implementation for most indicators. Countries should be aiming to reach levels C-E on all indicators.

capacity

none	A
limited	B
developed	C
demonstrated	D
sustained	E

Comparison of global average versus country's responses

Distance visualization between a country's response and global averages



TrACSS 2022, global data are averages, countries without data removed

The country dot is the answer provided by the country to the questionnaire. The global average is computed using numerical values assigned to the categories (A = 1, B = 2, ...), summed, and simply divided by the number of countries that participated in the 2022 TrACSS.

Animal health key messages

Global efforts in the veterinary and aquatic animal health sectors are important in respect of training and education, national surveillance systems, and integration of laboratories that perform antimicrobial susceptibility testing (AST).

Training and professional education on AMR

For educational institutions in most countries, AMR and prudent use of antimicrobial agents is covered in the core curricula for graduating veterinarians and for veterinary paraprofessionals. For aquatic animal health professionals, in most countries continuing professional training on AMR and antimicrobial use is available nationwide. In the veterinary sector, efforts should be oriented to have these subjects covered in their core curricula as a formal requirement. While for aquatic animal health professionals, having this training systematically and formally incorporated in the curricula is desirable.

National surveillance system for AMR

In most countries, some AMR data is collected at the local level, but a nationally standardized approach is not used in either the veterinary or the aquatic animal health sector. There is a need to identify at least one suitable pathogenic/commensal bacterial species from both terrestrial and aquatic animals for AMR surveillance at a national level, involving laboratories that follow quality management processes.

Effective integration of laboratories in AMR surveillance

In most countries, only some laboratories that perform AST to bacteria isolated from animals and food are integrated into a national AMR surveillance system. There is a need for full laboratory participation coordinated by a National Reference Laboratory.

Food and agriculture

TrACSS asks for a rating of national capacity and progress on a five-point scale (A to E), with the levels A-B representing limited capacity, and levels C-E representing nationwide implementation for most indicators. Countries should be aiming to reach levels C-E on all indicators.

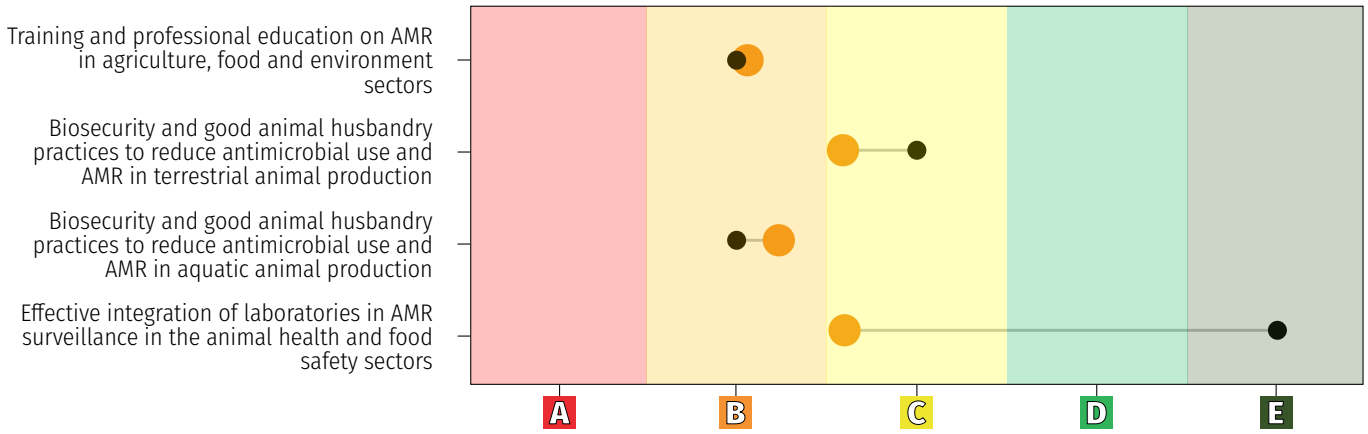
capacity

none	A
limited	B
developed	C
demonstrated	D
sustained	E

Comparison of global average versus country's responses

Distance visualization between a country's response and global averages

Global ●
Country ●



TrACSS 2022, global data are averages, countries without data removed

The country dot is the answer provided by the country to the questionnaire. The global average is computed using numerical values assigned to the categories (A = 1, B = 2, ...), summed, and simply divided by the number of countries that participated in the 2022 TrACSS.

Food and agriculture key messages

Awareness raising and professional training - More effort and investment are required on AMR training and education in the sectors of food production (plants and animals), food safety and their environmental aspects for better AMR action.

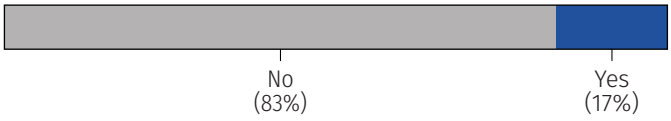
Data on AMR and AMU surveillance in Agri-food systems - The need is crucial for generating and analyzing reliable and comparable AMR data at regular base in food and agriculture and antimicrobial use data in plants and crops, to monitor the status and guiding the interventions to control and minimize the development and the circulation of AMR. FAO currently is piloting the International FAO AMR Monitoring (InFARM) platform, and countries are encouraged to use this platform as a repository to collect and analyze their own data for better planning and monitoring of AMR.

Enabling good practices and prudent use of antimicrobials - Ensuring legal support and access for biosecurity and preventive measures and techniques that aim to reduce antimicrobial use along the food production system starting at farm level, is key in mitigating AMR risk and ensuring a One Health approach to AMR management. Currently FAO is developing the Reduce the Need for Antimicrobials on Farms (RENOFARM) initiative. The initiative engage the entire production chain in a collective effort to strengthen capacities at primary production level, with an extensive use of science and innovative technologies and strengthened public-private partnerships and collaboration with the FAO Hand-in-Hand Initiative. In collaboration with the quadripartite, FAO is also working on a One Health Legislative Assessment tool on AMR which will support countries undertaking a deep assessment of their legal preparedness to support AMR management.

Environment

6.1 Country has in place a national assessment of risks for residues of antimicrobial compounds and antimicrobial resistant pathogens in the environment

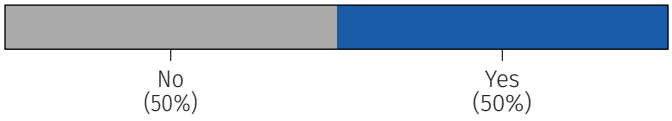
Country's response: N



Global distribution (n = 156)

6.2 Country has legislation and/or regulation to prevent contamination of the environment with antimicrobials – antimicrobial compounds and their metabolites discharged to the environment

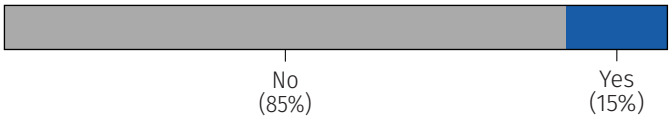
Country's response: Y



Global distribution (n = 154)

6.3 Country has a system for regular monitoring of antimicrobial compounds and their metabolites (or residues) and resistant bacteria or antimicrobial resistance genes (ARGs) in water quality

Country's response: N



Global distribution (n = 151)

Environment key messages

One Health Response

For a One Health response to AMR, environmental concerns are to be included in National Action Plans on Antimicrobial Resistance. Pollution of the environment with antimicrobials and resistant microorganisms can impact the health of humans, animals, plants, and ecosystems. Therefore, assessing pollution impact, for example through risk assessments, to prevent selection for and further spread of resistance in the environment can help inform legislation and policy.

Risk assessments and legislation

Key pollution sources are included in environmental questions – section 6. Places where risk assessments to better inform policy and legislation may want to be considered include: treatment of human sewage; wastewater discharges from health facilities; management of solid and clinical waste from health facilities; landfill management; disposal of antimicrobial agents used in human and animal medicine; discharges intensive terrestrial and aquatic animal production; discharges from antimicrobial manufacturing sites; disposal of food, plant or animal products contaminated with antimicrobial residues; runoff and solid waste from slaughterhouses traditional markets and food processing plants; liquid and solid waste from intensive terrestrial and aquatic animal production, or human solid wastes prior to use in agriculture; overspray drift and leaching following pesticide and fertilizer applications; transnational and intercontinental transport and movement of food, goods, live animals and people; as well as storm runoff, wastewater treatment plant overflow failures in the case of severe weather and flooding events.

Water quality

Water bodies and their sediments that receive pollution are more likely to harbour resistant microorganisms and can be a source of AMR within the environment. Improvements to water quality may want to further include surveillance systems that carefully monitor antimicrobial residues, as well as detection of resistant genes (ARGs).

2022 TrACSS Country Report — Argentina

Overview of country responses to 2018 - 2022 TrACSS Questionnaire

capacity

none	A
limited	B
developed	C
demonstrated	D
sustained	E

observations

Y	yes
N	no
?	don't know
Ø	no data
●	question not asked this year

		2018	2019	2020	2021	**2022**
One Health						
2.1	Multisector and One Health collaboration/coordination	B	B	B	B	D
2.3	Country progress with development of a national action plan on AMR	D	D	C	C	C
2.9	Raising awarness and understanding of AMR risks and response	B	B	C	C	D
2.10	Youth education and AMR - do school-going children and youth receive education on AMR	●	●	●	●	N
Human Health						
3.1	Training and professional education on AMR in the human health sector	B	B	C	C	C
3.2	National monitoring system for consumption and rational use of antimicrobials in human health	A	A	A	B	E
3.3	National surveillance system for antimicrobial resistance (AMR) in humans	C	D	D	D	D
3.5	Infection Prevention and Control (IPC) in human health care	C	C	C	C	E
3.6	Optimizing antimicrobial use in human health	A	A	A	C	C
3.7	Adoption of "AWaRe" classification of antibiotics in the National Essential Medicines List	●	●	B	C	C

Labs and diagnostics

3.4.2 Capacity to perform antibiotic susceptibility testing (AST) for critically important bacteria
Yes, the country has one or more reference lab/s performing susceptibility testing for ALL the 11 bacteria listed

3.4.5 Continuity of services for clinical bacteriology labs - mechanism to report stockouts
No, each bacteriology laboratory manages stockout without compulsory reporting

3.4.6 Standardized AST guidelines used by National Reference Laboratory (NRBL) and clinical labs in public health system
Only the NBRL uses standardized AST guidelines

3.4.7 Does the country have an external quality assurance EQA programme and to what extent it is implemented?
EQA is compulsory and/or implemented only in the in the National Bacteriology Reference Laboratory

Overview of country responses to 2018 - 2022 TrACSS Questionnaire

capacity

none	A
limited	B
developed	C
demonstrated	D
sustained	E

observations

Y	yes
N	no
?	don't know
Ø	no data
●	question not asked this year

Animal Health

		2018	2019	2020	2021	**2022**
4.1	Training and professional education on AMR in the veterinary sector	B	B	B	B	B
4.2	Training and professional education on AMR in the aquatic animal health sector	●	●	●	●	A
4.3	Progress with strengthening veterinary services	●	D	D	B	B
4.4	Progress with strengthening aquatic animal health services	●	●	●	●	A
4.5 a	Country has national plan/system in place for monitoring sales/use of antimicrobials in animals.	No				
4.7	National surveillance system for antimicrobial resistance (AMR) in live terrestrial animals	●	●	●	●	D
4.8	National surveillance system for antimicrobial resistance (AMR) in live aquatic animals	●	●	●	●	A
4.9	Biosecurity and good animal husbandry practices to reduce the use of antimicrobials and minimize development and transmission of AMR in terrestrial animal production	●	●	●	●	C
4.10	Biosecurity and good animal husbandry practices to reduce the use of antimicrobials and minimize development and transmission of AMR in aquatic animal production	●	●	●	●	B
4.11	Optimizing antimicrobial use in terrestrial animal health	●	●	●	●	B
4.12	Optimizing antimicrobial use in aquatic animal health	●	●	●	●	C

Overview of country responses to 2018 - 2022 TrACSS Questionnaire

capacity

none	A
limited	B
developed	C
demonstrated	D
sustained	E

observations

Y	yes
N	no
?	don't know
Ø	no data
●	question not asked this year

		2018	2019	2020	2021	**2022**
Food and Agriculture						
5.1	Training and professional education on AMR provided to the agriculture (animal and plant), food production, food safety and the environment sectors	B	B	C	C	B
5.3	National surveillance system for (AMR) in food (terrestrial and aquatic animal and plant origin)	●	●	Ø	B	D
5.4.a	Effective integration of laboratories in AMR surveillance in the animal health and food safety sectors	●	●	●	●	E
5.4.b	Level of the standardization and harmonization of procedures among laboratories included in the AMR surveillance system in the animal health and food safety sectors	●	●	●	●	E
5.4.c	Relevance of diagnostic (bacteriology) techniques used by laboratories included in the AMR surveillance system in the animal health and food safety sectors	●	●	●	●	C
5.4.d	Technical level of data management of the laboratory network in the AMR surveillance system in the animal health and food safety sectors	●	●	●	●	C
5.5	Good manufacturing and hygiene practices to reduce the development and transmission of AMR in food processing	●	B	C	C	C
5.6	Optimizing antimicrobial pesticide such as bactericides and fungicides use in plant production	●	●	A	C	C
Environment						
6.1	Country has in place a national assessment of risks for residues of antimicrobial compounds and antimicrobial resistant pathogens in the environment	●	●	●	N	N
6.2	Country has legislation and/or regulation to prevent contamination of the environment with antimicrobials – antimicrobial compounds and their metabolites discharged to the environment	●	●	●	N	Y
6.3	Country has a system for regular monitoring of antimicrobial compounds and their metabolites (or residues) and resistant bacteria or antimicrobial resistance genes (ARGs) in water quality	●	●	●	●	N

Overview of country responses to 2018 - 2022 TrACSS Questionnaire

capacity

none	A
limited	B
developed	C
demonstrated	D
sustained	E

observations

Y	yes
N	no
?	don't know
Ø	no data
●	question not asked this year

Legislation and Data Use (Y/N)

		2018	2019	2020	2021	**2022**
2.8.1	Country has laws or regulations on prescription and sale of antimicrobials, for human use	●	Y	Y	Y	Y
2.8.2	Country has laws or regulations on prescription and sale of antimicrobials for terrestrial animal use	●	●	●	●	Y
2.8.3	Country has laws or regulations on prescription and sale of antimicrobials for aquatic animal use	●	●	●	●	N
2.8.4	Country has laws or regulations on prescription and sale of medicated feed	●	●	●	●	N
2.8.5	Country has laws or regulations that prohibits the use of antibiotics for growth promotion in terrestrial animals in the absence of risk analysis	●	●	●	●	Y
2.8.6	Country has legislation on the registration and use of applicable pesticides with antimicrobial effects, such as bactericides and fungicides used in plant production	●	●	●	●	N
2.11	Country is using relevant antimicrobial consumption/use data to inform operational decision making and amend policies	●	●	●	●	Y
2.12	Country is using relevant antimicrobial resistance surveillance data to inform operational decision making and amend policies	●	●	●	●	Y
2.13	Country has established or is starting the implementation of an Integrated Surveillance System for Antimicrobial Resistance	●	●	●	●	Y

Conclusion

Countries report facing limited financial and human resources, technical capacity and inconsistent political commitment as key challenges with implementation of their AMR NAPs. Global analysis of TrACSS indicators also shows there is a lack of a programmatic approach to NAP implementation with a focus on ad-hoc interventions, showcased by certain indicators having more progress over the years, while others have seen little to no progress.

NAP AMR - countries have made commendable strides in developing their AMR national action plans, but need to ensure that AMR NAPs have been prioritized, costed, and have an operational plan with monitoring in place, for successful implementation. Furthermore, to ensure its sustainability, AMR national planning should also be integrated into existing national strategies and budgets, including those of One Health strategy, WASH, health systems strengthening, health security, development plans, food safety, agriculture, climate change etc.

Multisectoral coordination – countries need to build leadership capacity to ensure the effective functioning of AMR multisectoral coordination structures. These structures are accountable for AMR NAP prioritization, implementation, and monitoring, through periodic review of data, including from TrACSS; only 54% of countries report using TrACSS to monitor their progress on AMR NAP implementation. A formalized AMR multisectoral coordination mechanism with dedicated leadership, clear terms of reference, technical working groups, and adequate funding will create a solid foundation for AMR NAP implementation and AMR advocacy in the country.

AMR awareness - AMR is everyone's business. Nationwide AMR awareness campaigns for the general public and for targeted stakeholders are needed to ensure everyone understands the burden and threat of AMR and the importance of appropriate antimicrobial use. Utilizing personal narratives might resonate more with the public rather than simply focusing on 'drugs and bugs' messaging. Youth education on AMR is also good intervention that can lead to increased awareness of AMR in the general public – less than 20% (n=32) countries report having this intervention in place.

Enhance data quality/use – when available, countries should use relevant national/local data on antimicrobial resistance (AMR) and antimicrobial consumption/use (AMC/ AMU) to inform operational decision making and inform policies. Around 60% (n=99) of countries report using AMC/AMR data, and 65% (n=108) report using AMR data to inform decision making.

Increasing the monitoring and enforcement of legislation involving antimicrobials: there is a discrepancy between countries reporting having legislation on prescription and sale of antimicrobials and those with ability to monitor prescription/sale. The ability to monitor antimicrobial sale/use and utilize this data to enforce legislation on antimicrobial sale/use will be a key intervention for antimicrobial stewardship. These systems are also essential for guiding antimicrobial stewardship in all relevant sectors.

Human health	**WHO AMR resource pack** https://www.who.int/activities/supporting-countries-with-national-action-plan-implementation	**WHO implementation handbook for NAPs on AMR** https://www.who.int/teams/surveillance-prevention-control-AMR/nap-amr-implementation-handbook	
TrACSS	**TrACSS Database** https://amrcountryprogress.org **Email** tracss@who.int		
Animal health	**Sixth Annual Report on Antimicrobial Agents Intended for Use in Animals** https://www.woah.org/en/document/annual-report-on-antimicrobial-agents-intended-for-use-in-animals/	**List of Antimicrobial Agents of Veterinary Importance - WOAH - World Organisation for Animal Health** https://www.woah.org/en/document/list-of-antimicrobial-agents-of-veterinary-importance/	**Terrestrial and Aquatic Codes: Specially, Chapter 6.10 terrestrial and 6.2 aquatic about prudent and responsible AMU** https://www.woah.org/en/what-we-do/standards/codes-and-manuals/#ui-id-3
Food and agriculture	**FAO Progressive Management Pathway for Antimicrobial Resistance (FAO-PMP-AMR)** https://www.fao.org/antimicrobial-resistance/resources/tools/fao-pmp-amr/en/	**FAO Assessment Tool for Laboratories and AMR Surveillance Systems (FAO-ATLASS)** https://www.fao.org/antimicrobial-resistance/resources/tools/fao-atlass/en/	**FAO AMRLEX; laws, regulations and policies relevant to combat antimicrobial resistance** https://amr-lex.fao.org/main/profile/en
Environment	**Summary for Policymakers - Environmental Dimensions of Antimicrobial Resistance - UNEP - UN Environment Programme** https://www.unep.org/resources/report/summary-policymakers-environmental-dimensions-antimicrobial-resistance	**Antimicrobial Resistance in the Environment - Webinar Series - UNEP - UN Environment Programme** https://www.unep.org/events/webinar/antimicrobial-resistance-environment-webinar-series	