

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

AD HOC CODEX INTERGOVERNMENTAL TASK FORCE ON ANTIMICROBIAL RESISTANCE

Seventh Session

Pyeongchang, Republic of Korea, 9-13 December 2019

MATTERS ARISING FROM FAO, WHO AND OIE

Introduction

1. This paper aims to provide an update on the Food and Agriculture Organization of the United Nations (FAO), World Health Organization (WHO), and World Organization for Animal Health (OIE) as well as the FAO/WHO/OIE Tripartite activities on the prevention and management of antimicrobial resistance (AMR) since the sixth session of the *Ad Hoc* Codex Intergovernmental Task Force on Antimicrobial Resistance (TFAMR06).

Part 1: FAO/WHO (in collaboration with OIE) Scientific Advice to Codex

2. Responding to a request from the Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF) to provide scientific advice and risk management options to mitigate the unintended and unavoidable presence of residues of approved veterinary drugs in food of animal origin resulting from carryover of veterinary drugs in feed, FAO and WHO held a Stakeholder Consultation on 7 January 2019 and an Expert Meeting from 8 to 10 January 2019 at FAO Headquarters in Rome, Italy. The report of the meeting will be available online and distributed through FAO, Who and Codex communication channels by December 2019.

Part 2: FAO/OIE/WHO Tripartite activities on foodborne AMR

3. The Tripartite organizations, following their renewal of a Memorandum of Understanding¹ in May 2018, developed a two-year work plan², including collaborative AMR activities.

A multi-partner trust fund (MPTF)³ to secure consistent and coordinated financing for a five-year has been established by the Tripartite Organizations and administered by the MPTF Office. Resources will be prioritized to support national action plans (NAPs) and implement the workplan.

United Nations Interagency Coordination Group on AMR (IACG)

4. The IACG on AMR was convened by the Secretary-General of the United Nations after the UN High-Level Meeting on AMR. 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 AMR. The Secretariat for the IACG was provided by WHO, with contributions from FAO and OIE. The IACG completed its mandate on 29 April 2019 upon the handover of its report⁴ to the UN Secretary-General. Specific recommendations were made for the Tripartite.

Establishment of the Tripartite Joint Secretariat on AMR

5. The FAO/OIE/WHO Tripartite organizations are establishing a standing Tripartite Joint Secretariat (TJS) to lead and coordinate the global response to AMR in close collaboration across and beyond the UN organizations. The TJS consolidates cooperation between FAO, OIE, and WHO drawing on their respective core mandates and comparative advantages to address needs of the global response across the One Health spectrum. Hosted by WHO, the specific functions of the TJS include:

¹ <http://www.fao.org/news/story/en/item/1136645/icode/>

² https://www.oie.int/amr2018/wp-content/uploads/2018/11/OIE_Stone_Tripartite-AMR-Work-Programme_OIE-Global-Conf_Oct-2018.pdf

³ <http://www.fao.org/news/story/en/item/1198306/icode/>

⁴ <https://www.who.int/antimicrobial-resistance/interagency-coordination-group/final-report/en/>

- Global promotion, advocacy and political engagement
- Support to global governance structures on AMR
- Coordination of interagency engagement and partnership
- Coordination and monitoring of Tripartite workplans on AMR
- Mapping gaps and opportunities
- Supporting the functioning of the AMR-MPTF

AMR Multi-Partner Trust Fund (AMR-MPTF)⁵

6. Given the transnational and multisectoral nature of AMR and the support requested from countries and other stakeholders, the Tripartite organizations are scaling up existing efforts to support countries to urgently counter this immediate threat through a One Health Approach and has launched the AMR-MPTF.
7. The AMR-MPTF is a strategic, inter-sectoral, multi-stakeholder initiative inviting partnership and financing to leverage the Tripartite convening and coordinating power as well as mandates and technical expertise to mitigate the risk of AMR and contribute to the achievement of the Sustainable Development Goals (SDGs) by catalyzing the implementation of One Health NAPs on AMR.

Technical activities

World Antibiotic Awareness Week 2019 (WAAW)

8. The WAAW is planned on 18-24 November 2019 to increase global awareness of antibiotic resistance and to encourage best practices among the general public, policy makers and other relevant stakeholders across all sectors.⁶

Tripartite Integrated Surveillance System on AMR/AMU (TISSA)

9. After consensus on the vision of the TISSA has been reached at all levels by the Tripartite organizations and approved by Tripartite Executive meetings in 2017 and 2018, a feasibility study has been developed with technical details discussed and agreed by the Tripartite staff from the 3 organizations working on AMR surveillance-related issues on 30 April 2019. The TISSA platform represents an initial step towards an integrated system for surveillance on AMR and Antimicrobial Use (AMU), but there is flexibility in the current proposed IT structure to be broader and host other types of data, links and documents. The TISSA platform represents an opportunity to showcase the success of Tripartite collaboration. It can be achieved in a short time and will likely have great impact globally but also at country level by stimulating efforts to build up national databases on AMR/AMU.

Monitoring of the Global Action Plan on AMR

10. Further to a two-year consultation, the Tripartite has developed a monitoring and evaluation framework⁷ for the Global Action Plan (GAP) with a harmonized list of indicators for monitoring at the national and global levels. The Tripartite is currently developing guidance to countries on developing national monitoring frameworks for NAPs through in country and country desk assessments.
11. Based on tools developed by the Tripartite, Member States have begun implementing their NAPs. To measure progress on NAP implementation, the Tripartite administers an annual country self-assessment survey on AMR (TrACSS) since 2016. Responses from the surveys are published in an open-access database⁸. The survey recorded an increase in countries' participation in the development of NAPs – especially in low-income countries – and reflects progress in the establishment of national multisectoral working groups. 117 countries of 159 surveyed had developed NAPs, an increase from 79 countries in 2016/17. Recent data collected by WHO Regional Offices indicate that there has been more progress, and 132 countries have now established multisectoral NAPs.
12. Summary data from the third round of TrACSS, including the list of responding countries, were also published in the UN Secretary-General's report⁹ on AMR to the UN General Assembly in June 2019.

⁵ For more information on the AMR-MPTF: <http://mptf.undp.org/factsheet/fund/AMR00>

⁶ <http://apps.who.int/world-antibiotic-awareness-week/activities/>

⁷ <https://www.who.int/antimicrobial-resistance/global-action-plan/monitoring-evaluation/tripartite-framework/en>

⁸ <https://amrcountryprogress.org>

⁹ <https://undocs.org/en/A/73/869>

13. The results show that while progress has been made, urgent action is needed to scale up resourcing, implementing and monitoring of NAPs, and take necessary global measures to address AMR. Along with the human-health sector, full engagement of the animal, plant and environment sectors through a One Health Approach, and a functional multisectoral coordination mechanism are urgently needed in each country; NAPs should be reviewed to reflect a comprehensive One Health approach.
14. The fourth round of TrACSS will be launched in November 2019.
Global Development and Stewardship Framework to Combat AMR
15. The Tripartite organizations are collaborating on a stepwise approach to finalize the Global Development and Stewardship Framework, in line with the IACG recommendations. The agreed next steps include developing a compendium of existing guidelines, standards and codes from each organization relating to AMR to both facilitate their implementation and serve as a stepping stone for further discussion on the development of international instruments, including AMR-specific targets. Further consultation with Member States and relevant partners on the proposed process will take place in late 2019.

Part 3: Other related matters arising from FAO, OIE, and WHO

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

16. All FAO publications, documents and news are available online¹⁰. To receive timely information on FAO activities, services and products, please subscribe to the FAO AMR mailing list (information on the FAO AMR webpage). FAO is also disseminating information on AMR through a number of sector-specific channels, for instance the FAO Livestock Technical Network Newsletter.
17. FAO is strengthening multi-stakeholder engagement (in the fields of aquaculture, plants and animals) in the development of NAPs in more than 40 lower-middle-income countries⁸ by expanding technical capabilities on awareness, surveillance, disease prevention and control and regulatory frameworks. In order to address the national need for prioritization and resource efficiency in the design and implementation of NAPs using the “One Health” Approach, FAO is working with local communities of farmers, sellers of medical products and health workers to identify risks and prioritize interventions for improving food production and farmers’ livelihoods. Specific activities include work in South East Asia and Sub-Saharan Africa supported by the Fleming Fund¹¹, Latin America¹² supported by the Norwegian Agency for Development Cooperation (NORAD), in Asia¹³ supported by the United States Agency for International Development (USAID), and in Eastern Europe¹⁴ with support from the Russian Federation.
18. FAO is currently directly working with the food and agriculture sector in countries in Africa, Asia, Latin America and Eastern Europe and Central Asia to address AMR.

Awareness raising and development of NAPs

19. Raising awareness and understanding among all stakeholders in the food and agriculture sector remains critical to a fully coordinated and effective One Health Approach to addressing the threat of AMR. It is essential to raise awareness among these stakeholders to increase the understanding of the relevance of AMR to them and the potential role that they can play in remedying the situation. In order to do so, a range of stakeholder events at the national and regional levels are being implemented, supported by the development of informational products tailored to the local situation.
20. A library of informational products (videos, infographics, posters etc.) have been developed to support awareness raising on AMR and is available on the FAO webpage¹⁵¹⁶ and YouTube¹⁷. This is being complimented by communication strategies on AMR at global and regional level to ensure that pertinent information is reaching the relevant stakeholders.

¹⁰ <http://www.fao.org/antimicrobial-resistance/en/>

¹¹ <http://www.fao.org/antimicrobial-resistance/projects/ongoing/project-2/en/>

¹² <http://www.fao.org/antimicrobial-resistance/projects/ongoing/project-6/en/>

¹³ <http://www.fao.org/antimicrobial-resistance/projects/ongoing/project-3/en/>

¹⁴ <http://www.fao.org/antimicrobial-resistance/projects/ongoing/project-5/en/>

¹⁵ The FAO webpage on AMR is available at <http://www.fao.org/antimicrobial-resistance/en/>

¹⁶ E-bulletins raising awareness on AMR (Spanish)

<http://www.fao.org/antimicrobial-resistance/projects/en-curso/project-4/es/>

¹⁷ Examples of FAO videos on AMR are available at [AMR YouTube playlist](#)

21. For example, a region-wide communication and advocacy strategy for AMR in Asia has been developed. In Latin America Guidelines for the design of awareness and advocacy strategies for AMR¹⁸ have been developed that provide a conceptual and methodological framework for the design and implementation of advocacy strategies aimed at visibility, awareness and positioning of the risks of AMR and the need for its containment among decision-makers, policy-makers and civil society. A pioneering regional plan aimed at fostering interaction and synergy between the Ministries of Agriculture and the mass media has also been developed in the region.
22. A particular focus of in-country work is the development of NAPs on AMR, a starting point for which is the development of a national situation analysis. FAO, with input from WHO and OIE has developed short guidance to support inclusion of the relevant food and agriculture aspects in any situation analysis related to AMR and is currently developing a self-assessment tool to help countries to determine where to concentrate their activity to strengthen their response to minimizing development and transmission of AMR in food and agriculture sectors.
23. Considering the limited data available on AMR and AMU in food and agriculture sectors in less developed regions, it is essential to create the necessary enabling environment to foster sustainable changes in the implementation of NAPs. In the Latin America and Caribbean region, FAO has developed a methodology based on risk analysis for intersectoral analysis of AMR on animal, fish and agricultural production. The methodology was piloted in several Latin America countries and identified critical gaps in food production sectors regarding AMR risks and mitigation strategies. It has been further revised and is planned for testing in several countries in Africa. The aim is to enable countries to prioritize higher risk areas and production sectors when implementing their NAPs, developing their national strategy and policy guidance.

Evidence and surveillance

24. To support the food and agriculture sectors in understanding their capacities in relation to AMR susceptibility testing and surveillance, FAO has developed a tool for the assessment of AMR laboratory capacity and surveillance (ATLASS) in food and agriculture. This tool has been successfully applied in twenty-six countries across Asia and Africa. The outcomes are used as the basis for national level discussions on the establishment of AMR surveillance programs in the food and agriculture sector, with the objective of building on existing capacities to the extent possible to facilitate sustainability.
25. FAO has identified 10 Reference Centers around the world to specifically support the implementation of its work with the food and agriculture sectors in member countries related to AMR. Work plans are currently being developed for each Reference Centre to enable them to become operational in the course of 2018.

Governance

26. To establish efficient and effective governance mechanisms, access to up-to-date national legislation relevant for AMU and AMR plays a key role. FAO is supporting legislative review processes and development or revision of existing legislation at country-level to ensure that the relevant legal instruments are in place to facilitate actions. Lessons learned from these reviews are being documented and will form the basis of a guidance document being developed in collaboration with OIE on the legislative aspects of addressing AMR in the food and agriculture sectors.
27. FAO hosts FAOLEX, the largest collection of agriculture relevant legislative instruments and is undertaking a process of identifying existing records in FAOLEX that are relevant for AMU/AMR and tagging them appropriately for easy identification and retrieval. To date this encompasses legislation governing veterinary medicines, feed, and maximum residue limits (MRLs) for veterinary medicines. Records will also include, among others, selected instruments in the areas of food safety, animal health, animal production, fisheries/aquaculture, feed, waste/hazardous waste/hazardous substances, environmental protection and water quality. The work is also facilitating comparative legal analyses for a study on AMR legislation to support guidance in this area.

Good Practices

28. FAO is piloting the progressive management pathway (PMP), which enables countries and sectors to identify where and how to make step-by-step improvements for the optimal use of antimicrobials. The PMP has been piloted in several countries.

¹⁸ <http://www.fao.org/3/i9234es/i9234ES.pdf>

29. Recognizing that progress on combating AMR will not be achieved without changing practices, this is a key focus for FAO activities on AMR. While globally driven, the need to adapt practices to the local context is viewed as critical for success. Following an open call for data submission, over 300 different guidelines were received relating to good practices in food and agriculture; these are currently undergoing a quality review process with the aim of populating a repository.
30. At country level, this work begins with studies to review of existing knowledge, attitude, and practices (KAP). Such studies have already been undertaken or initiated in a number of countries in Asia, where an enhanced KAP+ framework has been developed, which also takes account of potential interventions. A series of harmonized KAP studies have also been initiated in a number of countries in Africa, which will be followed by locally led interventions to address selected practices. Interventions include training and capacity building on targeted areas such as biosecurity, husbandry and antimicrobial prescribing; Bangladesh has initiated a collaboration of prescribers (the Bangladesh AMR Alliance) and FAO has supported BARA to develop species-specific, locally relevant, prescribing guidance for humans and animals available via a single smartphone app. These country level approaches are also supported by more centralized initiatives to review existing practices, examples of which follow below.
31. In many regions, access to veterinary care and oversight is not always readily available. Regionally appropriate AMU guidelines have been developed for common diseases of poultry (Bangladesh) and for swine (Eastern Europe).
32. In partnership with the International Dairy Federation (IDF), FAO is producing a Guide to Prudent Use of Antimicrobials in Dairy Production
Animal Feeding Practices
33. FAO is engaged with a variety of stakeholders from the public and private sector involved in animal and feed production to contribute to decreasing AMR. FAO works on the provision of scientific advice and capacity development to secure the safety of feed and therefore decrease the need for antimicrobial treatments of animal diseases. A specific section on AMR was held at the Sixth Global Feed and Food Congress organized by the International Feed Industry Federation (IFIF) with FAO technical support on 11-13 March 2019, in Bangkok, Thailand.
34. AMR has been on the agenda of the annual joint meeting of FAO and IFIF for the past four years. As a result of the progressive engagement with the animal feed sector to address AMR, this issue is now a regular discussion item during the annual International Feed Regulators Meetings¹⁹. FAO has produced a video to highlight how the feed sector can contribute to decrease the use of antimicrobials “Voices from the feed sector on containing AMR²⁰”.
35. Animal nutrition and feeding practices can play a significant role in reducing the need for antimicrobials in animal production; for this reason, FAO has produced a publication providing specific information and practical guidance on “Animal nutrition strategies and options to reduce the use of antibiotics in animal production (swine, poultry and ruminants)”. The information is being disseminated through a series of workshops and technical meetings organized in collaboration with the feed industry and other stakeholders, to support changing animal feeding practices and reduce the use of antimicrobials. A side event on this topic is planned during next meeting of TFAMR.
36. FAO is preparing a publication on “Probiotics and prebiotics in animal nutrition” that provides additional information on feed ingredients and additives that can be used to ensure adequate growth of the animal and contribute to avoid the use of antibiotics as growth promoters. In addition, FAO is preparing a technical paper on “Animal Welfare Strategies to Reduce Use of Antimicrobials in Animal Production,” and a stakeholder meeting on the same topic will take place at FAO HQ in November 2020.

Fisheries and aquaculture Practices

- FAO is in the process of finalizing the following documents regarding AMU and AMR in the aquaculture sector for publication: The Performance of Antimicrobial Susceptibility Testing Programs Relevant to Aquaculture and Aquaculture Products
- Recommendations for prudent and responsible use of veterinary medicines in aquaculture

¹⁹ A video description of the International Feed Regulators Meeting is available at <https://www.youtube.com/watch?v=QfcLEHIWZA>

²⁰ Voices from the feed sector on containing antimicrobials resistance is available at: <https://www.youtube.com/watch?v=8HIJiGzSTc>

Crop production

37. Given that some antimicrobials used in veterinary and human medicine are also used in horticulture production, FAO is in the process of reviewing literature and collecting preliminary data related to antimicrobial use in this sector.

Food production and agriculture environment

38. In August 2019, the Joint FAO / International Atomic Energy Agency, Division of Nuclear Techniques in Food and Agriculture published a methodological paper on alternative screening methods for the detection of antibiotic resistance genes and antibiotic-resistant bacteria in environmental samples, and surveillance approaches for planning screening efforts. The paper concludes with knowledge gaps on AMR that warrant investigation.²¹

WORLD HEALTH ORGANIZATION

39. The 72nd World Health Assembly (WHA) adopted a resolution on AMR in May 2019.²² WHO has created a new dedicated AMR Division led by Assistant Director-General Dr Hanan Balkhy. Its mission is to define, advance, promote and monitor comprehensive policies and strategies that prevent, reduce, and mitigate drug-resistant infections and the overall impact of AMR globally based on the global action plan on AMR, the 13th WHO General Program of Work and the SDGs. This Division is also responsible for coordinating the implementation of the IACG recommendations at the request of the UN Secretary-General.

Support to National Action Plans

40. To date, 132 countries have multisectoral plans and further 51 are being developed. Regional lesson learning workshops have been held in the WHO South East Asia and Africa regions to support the process of NAP implementation.
41. Seventy-five countries claim that they have functional multisectoral coordination mechanisms with clear terms of reference, regular meetings and funding for working groups. Guidance on multisectoral coordination, and on integrating AMR action within existing plans and budgets has been developed²³ to support countries. A project to develop a tool for costing and budgeting national activities that address AMR will commence imminently. This work is intended to help countries, particularly those at the early stages of implementing NAPs to tackle AMR, and to facilitate scale up of activities.
42. The community of practice²⁴ continues to grow, with currently, 879 members in 114 countries and territories. This provides relevant resources on AMR from the Tripartite and other stakeholders, disseminates updates and news, provides a platform for discussion on critical issues, promotes peer-to-peer exchange of views, and helps transfer information and lessons learned across countries.

Strengthening the evidence base through surveillance

43. The WHO Advisory Group on Integrated Surveillance of AMR (AGISAR) is developing a global protocol on surveillance of extended spectrum beta-lactamase (ESBL) producing *Escherichia coli* using a One Health Approach ("Tricycle ESBL *E. coli* surveillance project"). Tricycle ESBL *E. coli* surveillance project is intended to monitor the prevalence of one single AMR indicator, ESBL *E. coli* in humans, the food chain and the environment. Six countries have been trained to pilot the protocol during a period of one year starting from April 2018, including Ghana, Madagascar, Senegal, Pakistan, Indonesia and Malaysia. The Tricycle ESBL *E. coli* surveillance project also includes the protocol development for measuring certain antimicrobial residues in sewage and also would be link with the consumption and use of antimicrobial data in the human and animal sector that WHO and OIE are collecting, respectively.
44. Recognizing the need to foster the establishment of national AMR surveillance systems, WHO has developed the Global Antimicrobial Resistance Surveillance System (GLASS).²⁵ GLASS focuses on AMR and antimicrobial consumption and use (AMC/AMU) surveillance that is relevant for human health and will foster links to AMR and AMC/AMU surveillance conducted in other sectors as relevant to human health.

21 <http://www.fao.org/3/ca5386en/CA5386EN.pdf>

22 http://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_R5-en.pdf

23 <https://www.who.int/antimicrobial-resistance/publications/workingpaper1multisectoralcoordinationAMR/en/>
<https://www.who.int/antimicrobial-resistance/publications/Turningplansintoactionforantimicrobialresistance/en/>

24 <https://ezcollab.who.int/amr-nap/>

25 <https://www.who.int/glass/en/>

45. The early implementation phase of WHO GLASS focuses on the assessment and reporting of resistance of selected priority human bacterial pathogens to selected priority antimicrobials. It is planned that WHO GLASS will include data on AMC in humans and data from the integrated surveillance across the human-animal ecosystems interface (a scaled Tricycle project).
46. As of October 9, 2019, 85 countries are enrolled in WHO GLASS and four others are going through the enrolment procedures. The first GLASS reports have been published in January 2018 and in January 2019 with information about the development process and data received from participating countries.²⁶ It is planned that the WHO GLASS will expand the scope of data in future to include other pathogens and sites of infection.
47. In 2016 WHO developed a methodology for monitoring national AMC. Since then, WHO supported the implementation of a national monitoring system in 51 countries with the majority of them being low and middle-income countries (LMICs) through regional or national workshops. Sixty-five countries have submitted AMC data to WHO. These data were published in 2018.²⁷ WHO will continue to conduct trainings on the WHO methodology and support countries in implementing national surveillance system to monitor AMC.
48. Standardized methodologies to survey AMU in hospitals and in community settings will complement the surveillance of AMC. WHO has been giving priority to methodologies, as well as web tools for data collection tailored to hospital settings, but in a second round, will also develop methodologies for community settings. WHO has coordinated regional trainings on the methodologies and facilitate data collection following the trainings.

Infection Prevention and Control in Human Sector

49. Preventing harm to patients, health care workers and visitors due to infection in health care facilities is fundamental for achieving quality care, patient safety, health security and the reduction of health care-associated infections (HAIs) and AMR. Moreover, preventing HAIs ensures basic quality of universal healthcare (ensuring, for example, safe surgery and maternal and child health), protects healthcare workers from harm due to infectious diseases and controls the spread of tuberculosis, Ebola (and other viral hemorrhagic fevers), influenza in healthcare settings.
50. Clean, safe care is a patient right and should also be the duty and the pride of all those working for and in the health care sector. WHO supported by many stakeholders in the field of Infection Prevention and Control (IPC) issued recommendations and specifications for effective IPC programs. These are included in the evidence-based WHO Guidelines on core components of IPC programs²⁸ and the approach for their implementation is presented in associated manuals for the national and facility level²⁹.
51. The implementation manual to prevent and control the spread of carbapenem-resistant organisms at the national and health care facility level has been published.³⁰ This manual presents a compelling case for action on carbapenem-resistant organisms (CROs) and describes the linkages between the prevention and control of CROs and the Global Action Plan on AMR. It describes how the eight recommendations contained within the WHO guidelines for the prevention and control of carbapenem-resistant Enterobacteriaceae, *Acinetobacter baumannii* and *Pseudomonas aeruginosa* in health care facilities relate to general measures (that is, the core components of infection prevention and control [IPC] programs) that need to be in place in all countries and health care facilities to prevent and control health care-associated infections (HAIs). The use of a stepwise approach is proposed to support implementation and improvement, based on the evidence and experience of what has worked in several health care settings worldwide. The focus is on adoptable and adaptable information.
52. By the end of 2019, WHO will publish the Minimum Requirements for IPC programs. Implementation of all WHO core components recommendations are required to build functioning programs leading to effective reduction of HAIs and AMR. However, fulfilment of all IPC core components takes time and for some countries, it might be a demanding journey that should be faced in a realistic, step-wise approach. Especially for countries where IPC is limited or does not exist, it is critical to start by ensuring that at least minimum requirements for IPC are in place as soon as possible both at the national and facility level, and then, to gradually progress to the full achievement of all requirements of the IPC core components, according to local priority plans.

26 <https://www.who.int/glass/reports/en/>

27 https://www.who.int/medicines/areas/rational_use/oms-amr-amc-report-2016-2018/en/

28 <http://www.who.int/infection-prevention/publications/corecomponents/en/>

29 <https://www.who.int/infection-prevention/tools/core-components/en/>

30 <https://apps.who.int/iris/handle/10665/312226>

53. Patients and health-care workers need to be safe and protected at all times, no matter where and the context. The eight core components of IPC are the wheels to the cart that will ensure patients a safe journey while in a health care facility.

WHO List of Critically Important Antimicrobials for Human Medicine

54. The WHO CIA list groups all antimicrobials currently used for human medicine into three categories based on their importance to human medicine. The list is limited to antibacterial drugs (antibiotics) and antimicrobials are listed by class or subclass, which are groupings of antimicrobials by chemical structure and mechanisms of resistance.
55. WHO CIA list was initially developed in 2005, recommendations of expert meetings jointly organized by FAO, OIE and WHO in 2003 and 2004. The list is periodically updated every two years, and the latest revision was published in May 2019.³¹
56. The most important change made in this sixth revision was moving the narrow spectrum penicillins group to “Highly Important” from “Critically Important” because there are now alternative therapies available for certain infections treated with this group. It was also emphasized that the WHO CIA list continues to base decisions on whether classes should be split for categorization primarily on resistance mechanisms and not on the chemical structure.
57. In May 2019 at the 72nd WHA, a new resolution on AMR was adopted (Agenda Item 11.8).³² This resolution requests WHO Member States to further enhance the prudent use of all antimicrobials and consider developing and implementing clinical guidelines and criteria according to which critically important antimicrobials should be used, in accordance with national priorities and contexts, in order to slow the emergence of drug resistance and sustain the effectiveness of existing drugs.
58. The same resolution also mandates, for first-time, WHO to maintain and systematically update the WHO CIA list.

Optimal Use in Human Sector

59. WHO has recently initiated work on diagnostic and antimicrobial stewardship to optimize the use of antimicrobials. The initial phase of this work has focused on the hospital settings in LMICs. WHO has developed a toolkit for antimicrobial stewardship programs in hospitals in LMICs and are developing relevant training materials. The Essential Medicines List³³ and classification of antibiotics into Access, Watch and Reserve³⁴ is been one of the tools for stewardship activities.

WHO Work on AMR in the Environment with Links to Food Production

60. WHO continues to promote the 2006 WHO Guidelines for the Safe Use of Wastewater, Excreta and Greywater in Agriculture and Aquaculture³⁵ and Sanitation Safety Planning manual (2015)³⁶ for stepwise implementation of risk assessment and management along the sanitation chain – toilet, containment-conveyance, treatment and end-use disposal. WHO has SSP training hubs in 4 regions and SSP activities are underway in 47 countries The guidelines and SSP do not explicitly detail AMR however they are also valid for decreasing the risk for transmission of viable resistant microbes via food.
61. In 2018, WHO published comprehensive Guidelines on Sanitation and Health based on exhaustive systematic review of evidence and expert and end user consultation.³⁷ The guidelines include specific sections on AMR with chapter 6 on excreta related pathogens.
62. In 2014, a briefing note on the links between AMR and water, sanitation and hygiene (WASH) was developed.³⁸ A policy brief is under development, in which the links will be further elaborated, and policy options suggested to inform environment components within AMR NAPs. The policy brief will be co-branded with FAO and OIE.

31 <https://www.who.int/foodsafety/publications/antimicrobials-sixth/en/>

32 http://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_R5-en.pdf

33 <https://www.who.int/medicines/publications/essentialmedicines/en/>

34 <https://adoptaware.org/>

35 https://www.who.int/water_sanitation_health/sanitation-waste/wastewater/wastewater-guidelines/en/

36 https://www.who.int/water_sanitation_health/publications/ssp-manual/en/

37 https://www.who.int/water_sanitation_health/publications/guidelines-on-sanitation-and-health/en/

38 https://www.who.int/water_sanitation_health/publications/antimicrobial-resistance/en/

63. In 2019, a new WHA resolution on WASH in health care facilities (WASH in HCF) was passed strengthening a global campaign, tools and country support to improve the shocking number of health facilities lack access to even basic water supply and sanitation³⁹. The work support efforts on infection prevention and control and prevention of resistant infections in hospital settings. Issues of AMR are mainstreamed throughout WASH in HCF work.
64. Other environment focused projects underway are:
- Environmental surveillance of ESBL *E. coli* as part of the Tricycle project. An additional element on analysis of antimicrobial residues is included.
 - Scoping to define wastewater effluent guideline values for pharmaceutical manufacturing interfacing with GMP and industry led voluntary initiatives.
 - Methods to assess the proportion of AMR disease or exposures that can be attributed to inadequate access to WASH.

WHO Priority Pathogen List (PPL)

65. WHO has published the PPL and the review of the R&D pipeline for antibiotics.⁴⁰ WHO has identified a PPL for R&D with the highest priority to be given to carbapenem resistant Enterobacteriaceae, *Acinetobacter* and *Pseudomonas*. WHO has undertaken the 2018 update of the R&D pipeline and will continue to review how the pipeline responds to the WHO priority pathogens list on an annual basis and is finalizing target product profiles (TPPs) to fill the gaps identified. WHO has also undertaken a landscape of diagnostics against antibiotic resistance, identified gaps and developing priority TPPs. WHO also continues to support the Global Antibiotic Research and Development Partnership (GARDP).

WORLD ORGANIZATION FOR ANIMAL HEALTH

66. Following up on the OIE Global Conference on AMR (Morocco 2019), the OIE has worked towards supporting its Membership fulfil the recommendations targeting the national level. The World Assembly of National Delegates to the OIE endorsed these recommendations and including that the OIE continue to strengthen the central role of the Tripartite, to rapidly implement the IACG and UN Secretary General recommendations in accordance with the GAP and the OIE Strategy on addressing AMR. The Assembly also endorsed the establishment of a permanent Working Group on AMR. The following revisions to OIE standards were also adopted: inclusion of a table about “Phenotypic susceptibility testing methods available and their features” in the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*, Chapter 2.1.1 “Laboratory methodologies for bacterial antimicrobial susceptibility testing”.
67. The OIE has worked in partnership with the WHO and FAO to draft the UN Secretary General report for the UN General Assembly AMR Global Action Plan reporting. The report⁴¹ was published by the UN SG Office on 3 June 2019 and summarises global progress in delivering the GAP on AMR.
68. The OIE continued its active role as a member of the IACG on AMR, as well as the secretariat supporting the group. In November 2018, the IACG partnered with the Call to Action event in Ghana to share its progress and collect feedback. The last face-to-face meeting of the IACG took place in Rome (Italy) on 18-19 December 2018. The IACG draft recommendations were available for public consultation in February 2019. Stakeholder discussions with Member Countries, Private Sector, and civil Society took place in Bangkok, Geneva, New York, London, Rome and Paris. The OIE participated in the preparation, implementation and follow-up of the events, as well as providing technical inputs to the preparation of working documents and material.
69. The OIE has worked actively with its Tripartite partners to establish a Multi Partner Trust Fund to support the implementation of the Tripartite Plus Work Plan. This will be coupled with active Tripartite fundraising campaigns in 2019. The Fund was officially launched at the Ministerial Conference in Noordwijk in June 2019. A copy of the press release⁴² is available online.
70. In April 2019, the OIE has started the OIE AMR Network, an internal platform to exchange information and promote situational awareness within the OIE on AMR related issues. The Network is coordinated by the AMR and VP Department, with participants from OIE departments and units as well as staff from regional representations.

³⁹ <http://www.washinhcf.org>

⁴⁰ https://www.who.int/medicines/areas/rational_use/prioritization-of-pathogens/en/

⁴¹ <https://undocs.org/en/A/73/869>

⁴² <https://www.oie.int/en/for-the-media/press-releases/detail/article/new-multi-partner-trust-fund-launched-to-combat-antimicrobial-resistance-globally/>

71. The restructured AMR and Veterinary Products Department have recruited an Aquaculture AMR Expert funded under the Norwegian Agency for Development Corporation's voluntary contribution to the OIE.
72. The AMR & VP Department continues to contribute to the development of the OIE's Seventh Strategic Plan with a focus on the quality of medicines and harnessing technology (OIE AMU Database) to be adopted by the membership in May 2020.
73. Increased participation in the third phase of data collection for the OIE Global Database on antimicrobial agents intended for use in animals (OIE Global Database) took place with 153 (85%) OIE Members and two non-OIE Members completing questionnaires, with ten new countries providing data for the first time. 118 countries (76%) reported quantities of antimicrobial agents intended for use in animals. For this third OIE report, the animal biomass was calculated for 91 countries that provided data for 2015 in the first, second and third phase of data collection. The third report⁴³ was published on the OIE website in February 2019 alongside a coordinated media event.
74. The fourth round of the OIE Global Database ended in May 2019 with the participation of 146 (80%) Member Countries and one non-OIE Member Country. 118 countries (81%) reported quantities of antimicrobial agents intended for use in animals. Increased data quality was observed for the 4th round of the OIE Global Database, and the fourth report will be published in the first quarter of 2020. The fifth round of the OIE Global Database will be initiated in September 2019.
75. The OIE *ad hoc* Group on AMR gathered from 16-18 January 2019 at the OIE Headquarters in Paris (France). The main topics covered during this meeting were: 1) OIE 2nd Global Conference on AMR (Morocco, 2019); 2) OIE Global Database; 3) OIE AMU Database, future design and presentation of the third OIE report; 4) Overview of the preliminary results of the 4th round of OIE Global Database collection; 5) Further development of the OIE List of antimicrobial agents of veterinary importance (ex. division by animals species, potential inclusion of anti-parasitic drugs)
76. Following the adoption of Resolution No. 14 "OIE's engagement in the One Health Global Effort to control AMR" by the World Assembly of OIE Delegates in May 2019, a Working Group on AMR was established (replacing the *ad hoc* Group on AMR which had its first meeting in March 2000) to support the implementation of the OIE Global Strategy on AMR and the Prudent Use of Antimicrobials and the organization's capacity to respond to global challenges according to our mandate.
77. OIE participated in WAAW 2018 from the 12-18 November. The Social Media objective being to raise awareness on the prudent and responsible use of antimicrobials among key stakeholders involved in animal health and welfare during this week. The social media investment created over 2 million impressions through Facebook, LinkedIn and Twitter. Additional communications included 833 email recipients and over 2,500 visitors to the WE NEED YOU⁴⁴ campaign website. Dissemination of Tripartite resources were also included in the communication strategy.
78. The OIE's first Behaviour Change Experts Meeting was held on the 23-24 April 2019 and welcomed experts from around the world to participate in an engaging agenda and handbook development. Building on the input from participants, the handbook will provide a training resource for training Veterinary Services and partners.
79. Under the Veterinary Legislation Support Program (VLPS), the OIE and the FAO have collaborated on development of the *Guidance Document for National Legal Consultants on legislation relevant to AMR and AMU in the food and agriculture sector* (OIE contributing in legislative areas related to the veterinary domain). To explore further the FAO-OIE collaboration on this topic, the OIE is organising the first pilot VLSP Veterinary Legislation Identification mission with a specific focus on a review of legislation relating to AMU and AMR, in collaboration with FAO: the OIE team will be accompanied by an AMR legal expert from the FAO Development Law Service, and the FAO AMR Report will be presented by the national consultant on Day 1 of the mission. For this purpose, the OIE is developing a 'VLSP AMR Questionnaire' to be filled with the support of the national Veterinary Services.
80. This Questionnaire is based on the recommendations of the OIE *Terrestrial Animal Health Code* and on the FAO *Guidance document for National Consultants*. The aims of this Questionnaire are: (i) to obtain the Veterinary Services' perspective of the AMU/AMR legislative situation and to cross this with the results of the FAO AMR Report drafted by the FAO national consultant and, (ii) to provide the country with an analysis and guidance based on precise references to each OIE *Terrestrial Animal Health Code* articles related to AMR, with a direct hyperlink to corresponding OIE *Terrestrial Animal Health Code* Chapters.

⁴³ https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/AMR/A_Third_Annual_Report_AMR.pdf
⁴⁴ <http://oie-antimicrobial.com/>

81. The above will enable the Veterinary Services to refer to them when they work on and advocate for further compliance. It is important to highlight that the process at this stage is still exploratory and the VLSP separate Questionnaire may represent a step to develop and further refine synergy between FAO, OIE, as well as WHO methodologies in the future. Besides this specific focus on AMU and AMR, a full VLSP veterinary legislation identification mission will also take place concurrently.