

CL 153/3 Adjustments to the Programme of Work and Budget 2016-17

Information Note no. 4 – November 2015

FAO's work on Antimicrobial Resistance

I. Introduction

1. Antimicrobial resistance (AMR) is a natural phenomenon of adaptation of microorganisms in the presence of antimicrobial agents and is the consequence of any use of antimicrobial drugs, exacerbated by inappropriate use.
2. The availability and use of antimicrobial drugs in terrestrial and aquatic animals and in crop production are essential for their health and productivity so that their contributions to food security, food safety and animal welfare are enhanced. However, there is a growing global concern that AMR threatens to reverse these benefits. In humans, AMR also threatens to reverse decades of improvements in human healthcare. Resistance arising in one geographical location or species can easily spread to other geographical locations or spill-over into other species and thus impacting both developed and developing countries.
3. As AMR is intimately linked to health, medical care, safe food production systems and agro-ecological environments, a “One Health” approach is needed to address the complexities in curbing its occurrence. The multi-sectoral and multi-dimensional nature of AMR means that not a single organization or discipline can solely address this global threat. FAO has established an effective collaboration on AMR within the framework of the FAO/OIE/WHO tripartite inter-agency commitment and collaboration¹ and has valuable connections with other private and public sector organizations, including pharmaceutical companies and feed enterprises, as well as links with the FAO/WHO Codex Alimentarius Commission.

II. Policy context and process

4. In May 2014, the World Health Assembly Resolution 68/20 called for the development of a Global Action Plan (GAP)² on AMR and strengthened collaboration between FAO, the World Organisation for Animal Health (OIE) and WHO to combat AMR within the context of the “One Health” approach. FAO actively contributed to the development of the WHO GAP, adopted at the World Health Assembly in June 2015.³ The WHO GAP calls upon FAO to support the implementation of a number of AMR prevention and control measures in food and agriculture.
5. The 150th session of the FAO Council (December 2014) requested that a document outlining the role of FAO and its partners in relation to AMR be presented at its 151st session. The Council also requested that a draft resolution on AMR be submitted to the 39th session of the FAO Conference (June 2015) for discussion and decision. Accordingly, a Status Report, which provided the background on current and proposed activities for FAO and its partners in relation to AMR, and a Resolution on AMR was adopted at the 39th Conference⁴.

¹ <http://www.fao.org/docrep/012/ak736e/ak736e00.pdf>

² <http://www.who.int/drugresistance/en/> (WHA 67.25)

³ http://apps.who.int/gb/ebwha/pdf_files/WHA68/A68_20-en.pdf

⁴ <http://www.fao.org/3/a-mo153e.pdf>



III. FAO's Role in Addressing AMR

6. In recent years, although FAO had contributed to advances in the prevention and control of AMR, significant challenges still remain in translating internationally-accepted guidelines into appropriate policies and actions at national and regional levels. FAO is uniquely-placed to contribute to international efforts in addressing AMR based on the following:

- FAO hosts the Secretariat of the Codex Alimentarius Commission that has adopted internationally-recognized guidelines to provide a framework to minimize and contain AMR.⁵
- FAO promotes a holistic “food chain” approach by working closely with farmers, veterinarians, aquatic animal health specialists and food safety professionals to support best practices throughout the food chain which underpin the prudent use of antimicrobials.
- FAO brings multidisciplinary expertise (from animal health and production, food and feed safety, plant health and production, fisheries and aquaculture, legislative contexts, etc.) that is needed to address a cross- sectoral issue such as AMR.

7. To support the implementation of Conference Resolution 4/2015, an inter-departmental Working Group on AMR (AMR-WG) drafted an FAO 5-year Action Plan on AMR (Annex 1) through an inclusive cross-sectoral and multi-dimensional consultative process.

8. The FAO AMR-WG is chaired by the Chief Veterinary Officer under the guidance of the Director, Animal Production and Protection Division (AGA) and the Assistant Director-General, Agriculture and Consumer Protection Department (AG), and composed of selected officers from AGA, the Office of Food Safety, the Joint FAO/IAEA Division, the Plant Production and Protection Division, the Fisheries and Aquaculture Department (FI), and the Development Law Service. The regional offices and five subregional offices are each assigning an officer to participate in the AMR-WG.

IV. FAO Action Plan on antimicrobial resistance

9. The proposed FAO Action Plan on AMR addresses four major focus areas that are important for public health, livestock, crops and aquatic resources, with impact on food security, nutrition, the environments and sustainable development. The FAO Action Plan advocates for a programme cutting across the Organization involving headquarters, decentralized and country offices. Strategically, the FAO Action Plan on AMR is embedded in the Strategic Objective programmes on food systems (SO4) and resilience (SO5) with contributions from other SO programmes (Annex 1, Table 1). The FAO Action Plan will be fully integrated for monitoring and reporting in the 2016-2017 SO programme work plans with clear milestones and expected results at global and country levels commensurable to the availability of resources dedicated to the task.



FAO Action Plan – Focus Areas of work

1. Improve awareness and advocacy on AMR and related threats
2. Develop capacity for surveillance and monitoring of AMR and AMU in food and agriculture
3. Strengthen governance related to AMU in food and agriculture
4. Promote good practices in food and agricultural systems and the prudent use of antimicrobials

⁵ Codex texts on foodborne antimicrobial resistance

ftp://ftp.fao.org/codex/Publications/Booklets/Antimicrobial/Antimicrobial_2015Tri.pdf

V. Overview of implementation mechanisms

10. Within the SO programme work plans covering the four priority areas, FAO technical divisions and decentralized offices will take a lead in coordinating activities within their areas of competence in crop agriculture, food safety, terrestrial and aquatic animals, with due attention to regulatory aspects. Implementation at the regional and national levels will be the joint responsibility of FAO, relevant regional bodies and Member Governments and other interested regional and international organizations, subject to funding availability. The Action Plan is underpinned by a joint resource mobilization exercise, engaging the SO Programme Leaders, Assistant Directors-General of the TC, AG and FI departments, to ensure that funds are made available for achieving the targeted outputs.

11. The broad participation of regional, subregional and country offices will facilitate the flow of information and outputs between the FAO global action and work plan and the national and regional priorities in this area. Progress in the implementation will be subjected to monitoring and review.

VI. Cooperation with other agencies and the private sector

12. It is recognised that no one organization alone can address all aspects of AMR, but FAO is unique in its breadth of mandate and competence to curtail its occurrence through its extensive representation (professional disciplines, development sectors, and geographical outreach). As the sole international organization combining health and nutrition, agricultural aspects, food and feed safety, and environmental issues in aquatic and terrestrial settings, FAO links with WHO and OIE seamlessly and has the added value of its upstream normative work, policy dialog and in-country capacity development effort. FAO has established strong and effective collaboration on AMR within the framework of the Codex Alimentarius, FAO/OIE/WHO tripartite agreement and with other public and private sector organizations.

VII. Resource requirements

13. Currently, a number of FAO staff members led by the AG Department are overseeing the Organization's work on AMR, including by means of the AMR-WG mentioned in paragraph 8 above. From 2016, at least five full-time equivalents of FAO professional staff time will be dedicated to AMR-related work in the Working Group and under the Strategic Objective programmes, and this will be increased based on the level of voluntary contributions mobilized for the Action Plan.

14. The implementation of country and global oversight activities listed in the FAO Action Plan on AMR, including the required level of collaboration with international partners, will require voluntary contributions estimated at **USD 10 million, which translates to USD 2 million per year for five years.**

Annex I

FAO Action Plan on Antimicrobial Resistance

15. This draft FAO 5-year Action Plan on Antimicrobial Resistance reflects the request made at the 39th Session of the FAO Conference, and Resolution 4/2015,⁶ to support the implementation of the Global Action Plan on Antimicrobial Resistance (AMR) developed by the World Health Organization (WHO GAP) and approved by Committee A at the Sixty-Eighth World Health Assembly (WHA).

16. As part of the overall goal of preventing and addressing infectious diseases, including zoonotic diseases, FAO is striving to reinforce capacities and systems for the detection, monitoring, regulation and management of the use of the antimicrobials.

17. To achieve these, FAO's inter-departmental Working Group on AMR (AMR-WG) identified and prioritized four Focus Areas of work to be addressed during the next 5 years (2016-2021). These Focus Areas are related to each other (see Figure 1 and Table 1).

Figure 1. Focus Areas (FAs) identified by the FAO AMR-WG using a multi-sectoral approach

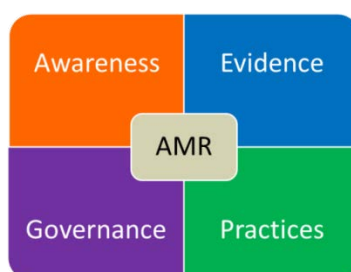


Table 1. The four Focus Areas of work of the FAO Action Plan on Antimicrobial Resistance and its relationship with FAO Strategic Objectives.

Focus Areas	Lead SOs	Other contributing SOs
1. Improve awareness and advocacy on AMR and related threats	5	1, 2, 4
2. Develop capacity for surveillance and monitoring of AMR and AMU in food and agriculture	5	4
3. Strengthen governance related to AMU in food and agriculture	4	1, 2
4. Promote good practices in food and agricultural systems and the prudent use of antimicrobials	4	2

⁶ <http://www.fao.org/3/a-mo153e.pdf>

Cross-cutting areas of work

One Health

18. “One Health’ recognizes that the health of humans, animals and ecosystems are interconnected. It involves applying a coordinated, collaborative, multidisciplinary and cross-sectoral approach. The concept of is receiving increased support as an integrated approach to address complex health issues and One Health requires the involvement of different sectors and stakeholders. This approach is also being used for reducing antimicrobial (AM) use and AMR through creating a better understanding of the factors driving antimicrobial resistance, as well as assessing its economic impact and finding viable solutions /interventions. Antimicrobial resistance (AMR) is gaining prominence on political and policy agendas and the scope of AMR is global, reaching beyond a single (health) sector.

Focus area 1 - Improve awareness and advocacy on AMR and related threats

19. We contribute to increase the knowledge of all stakeholders along the food chain on the risks of antimicrobial resistance to humans, food, animals and the environment.

20. Immediate action needs to be taken in order to raise awareness of AMR and promote behavioral change at all levels, by developing communication and advocacy products that target different sectors, helping countries to find the appropriate country-specific ways to disseminate such communication and to understand the risk related to AMR in those countries. AMR needs to become integral part of food and agriculture by promoting advocacy at global and national levels and organizing public events in cooperation with other organizations.

Output 1.1: Awareness on AMR improved among food and agriculture stakeholders

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 1.1.1 *Develop communication and advocacy products according to different target sectors and stakeholders reflecting FAOs position and approach*
- 1.1.2 *Support countries to adapt and disseminate communication and advocacy products taking into account the specific situation of the country/region and different audiences in the food and agriculture sector to improve awareness of AMR*
- 1.1.3 *Support countries to develop risk communication tools and strategies for increasing awareness on AMR in food and agriculture*

Output 1.2: AMR included as part of an integrated approach in food and agriculture and addressed in relevant fora

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 1.2.1 *Advocate for the inclusion of AMR in high level meetings (e.g. Committee on Food Security, UN General Assembly, FAO conferences or other) and organize (or participate in) awareness raising events within these events*
- 1.2.2 *Organize (or participate in) global, regional and national AMR public awareness events in partnership with other organizations (e.g. OIE, WHO, etc.)*
- 1.2.3 *Publish and disseminate reports indicating progress in the implementation of the FAO action plan on AMR*

Focus area 2 - Develop capacity for surveillance and monitoring of AMR and AMU in food and agriculture

21. We help to build integrated surveillance systems to monitor the use of antimicrobials in agriculture and the patterns of antimicrobial resistance along the food chain.

22. AMR should be a core component in all knowledge sharing tools to help the understanding among stakeholders of the food and agriculture sector, of the importance of AMR/AMU surveillance and monitoring systems.

Output 2.1: Knowledge on AMR and AMU in food and agriculture improved

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 2.1.1 *Develop training materials, including, e-learning modules, on AMU, AMR and related surveillance and monitoring*
- 2.1.2 *Promote and contribute to research or studies that aim to improve the existing knowledge on AMU/AMR in food and agriculture including transfer to/from humans and the environment*
- 2.1.3 *Support the inclusion of AMU and AMR as a core component of professional education, post-graduate training, certification, continuing education requirements and development for the food and agricultural sector*

Output 2.2: Laboratory capacity on AMR and antimicrobial residues improved

Timeline of activities: To be implemented in the biennium 2016-17

- 2.2.1 *Develop a laboratory mapping tool to assess existing capacities for monitoring AMR and detecting antimicrobial residues*
- 2.2.2 *Support the strengthening national laboratory capacities to monitor AMR and detecting antimicrobial residues in food products and the environment*
- 2.2.3 *Designate FAO reference laboratories on AMR and antimicrobial residues*

Output 2.3: Country-specific integrated surveillance/monitoring model systems for AMU / AMR developed

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 2.3.1 *Develop guidelines for integrated (food, agriculture and environment) AMR monitoring and surveillance programmes by adapting and applying international model systems (e.g. FAO, OIE, Clinical and Laboratory Standards Institute) for antimicrobial susceptibility testing and resistance surveillance*
- 2.3.2 *Assist Countries in preparing and implementing national plans to improve integrated surveillance and monitoring of AMU/AMR*
- 2.3.3 *Conduct assessment (upon Country request) of existing systems for surveillance and monitoring of AMU/AMR in food and agriculture to identify need and gaps*
- 2.3.4 *Support OIE in developing and maintaining a global database on the use of antimicrobials in animals*
- 2.3.5 *Assist Countries in collecting information on the use of antimicrobials in food and agriculture (excluding animals) to support the development of systems for monitoring antimicrobial use and link these findings to antimicrobial resistance*
- 2.3.6 *Assist countries in collection information on the occurrence of antimicrobials in the environment (water, soil etc.) and any linkage to AMR*
- 2.3.7 *Develop a repository of information of AMR and AMs residues and make available on public domain*

Focus area 3 - Strengthen governance related to AMU in food and agriculture

23. We facilitate political commitments and evidence-based policies to implement rules that can assist to reduce the risks of antimicrobial resistance.

Output 3.1: Information provided in support of improved policy and decision-making

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 3.1.1 *Produce case studies on the use of antimicrobials and economic impact of the reduction of antimicrobials as growth promoters using possible alternatives*
- 3.1.2 *Assist Countries in the development of policies to phase out the use of AMs as growth promoters*
- 3.1.3 *Develop studies on regulatory approaches to AMU in food and agriculture*
- 3.1.4 *Build up a knowledge platform and network to disseminate scientific and technical information on AMR and AMU in food and agriculture*
- 3.1.5 *Support the standards setting by Codex Alimentarius on AMR by providing the necessary scientific basis*

Output 3.2: Development and revision of regulatory frameworks supported, in line with internationally agreed principles and standards

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 3.2.1 *Support countries and regional organizations to revise and/or develop legislation that meets international guidelines/standards (e.g. Codex Alimentarius), and to strengthen national and regional regulatory capacity on AMR-related areas*
- 3.2.2 *Collect, review and analyse information on the implementation of existing codex standard/guidelines related to AMU/AMR to support timely revision of standards*

Output 3.3: Cooperation enhanced in implementing the “One Health” integrated approach and food chain approach in addressing AMR

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 3.3.1 *Develop a Progressive Management Pathway on AMR (PMP-AMR) in food and agriculture and support countries in its implementation*
- 3.3.2 *Facilitate inclusion of AMR and its relevance to food and agriculture in “One Health” platforms and fora*
- 3.3.3 *Organize, in collaboration with WHO and OIE, an international meeting to advice on integrated AMU policies to strengthen governance on AMR*
- 3.3.4 *Provide technical support to the consideration of AMR in high level policy making fora (e.g. CFS etc.)*

Focus area 4 - Promote good practices in food and agricultural systems and the prudent use of antimicrobials

24. We promote sustainable food and agricultural systems with improved biosecurity to reduce infections and to reduce the use of antimicrobials and the spread of antimicrobial resistance.

Output 4.1: Biosecurity/Biosafety and other measures at farm/production level improved

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 4.1.1 *Review and evaluate alternative options to the use of AMs in food and agriculture, including social and economic considerations*
- 4.1.2 *Develop guidance on the use of alternatives to AMs in food and agriculture and support countries and producers in their application*

- 4.1.3 *Develop recommendations (in collaboration with OIE) to improve animal health and welfare and thereby reduce the need for antimicrobials (this may include application of effective vaccines, ensuring good hygiene practices and good husbandry practices and compliance with good-farming practices)*
- 4.1.4 *Design training and education modules to improve biosecurity/biosafety and reduce AMU at farm level and support countries in their implementation*
- 4.1.5 *Assist countries to decrease the overall use of antibiotics in livestock production and aquaculture, and non-specific applications to treat sick animals*
- 4.1.6 *Support the Implementation of the FAO Code of Conduct for Responsible Fisheries (CCRF), the Code of Conduct on Pesticide Management (CCPM), good agriculture practices (including use of pesticides, veterinary drugs etc.)*
- 4.1.7 *Support the development of voluntary guidelines for sustainable agricultural production*

Output 4.2: Food chain and environmental safety improved

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 4.2.1 *Support country level capacities for the implementation of international standards and guidelines on AMR and AMU (e.g. Codex Alimentarius, international guidance on pesticide use etc.)*
- 4.2.2 *Develop and support capacities to apply good hygiene and biosecurity practices throughout the food chain (from production to consumption) in order to control microbial contamination of food and environment and minimize the spread of AMR*
- 4.2.3 *Assist countries to improve national capacity in applying risk based approaches to address AMR*

Output 4.3: Prudent use of antimicrobials

Timeline of activities: The below activities are planned to be implemented in the biennium 2016-2017

- 4.3.1 *Develop and support the utilization of education and training materials on responsible use of antimicrobials, the importance of preventing infections in animals and agricultural practices, and on measures to control spread of resistant organisms throughout the full food chain and the environment*
- 4.3.2 *Develop and disseminate guidelines for the responsible and prudent use of antimicrobials in food and agriculture and assist countries in tailoring and implementing the guidelines in the specific country situation*
- 4.3.3 *Monitor the use of Codex Alimentarius standards and guidelines related to the AMU and AMR*