Executive Summary

Following the request of the 150th Session of Council (December 2014), a draft resolution on antimicrobial resistance was presented at the 151st Session of Council and subsequently endorsed by the 39th Session of the FAO Conference in June 2015 (Resolution 4/2015). Accordingly, a Status Report provided the background on current and proposed activities for FAO and its partners in relation to AMR. The 118th Session of the Programme Committee (November 2015), in stressing the importance of FAO’s work in AMR, requested the Secretariat to provide an update on ongoing and planned activities for the 2016/17 biennium, as well as estimated resource requirements and availability in line with the approved Programme of Work and Budget. At the PC-119 (May 2016), the Secretariat presented the FAO Action Plan on AMR and contributions from the regular programme human resources at central and decentralised level. The membership congratulated the Secretariat on the soundness of the FAO Action Plan and invited countries to support the Secretariat with the required extra budgetary resources to assist countries and regions and develop the necessary mechanisms and tools to contribute to the implementation of the FAO Action Plan. FAO is committed to working in the Tripartite with its global partners (WHO and OIE), and advancing assistance in developing National Action Plans, and the global and local tools required to decrease the threat of AMR.

Suggested action by the Committee

In line with Conference Resolution 4/2015, the Committee is invited to take note of the “update on FAO’s work on Antimicrobial Resistance”.

Queries on substantive content of the document may be addressed to:

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I. BACKGROUND ON ANTIMICROBIAL RESISTANCE

1. Following the request of the 150th Session of Council (December 2014), a document outlining the role of FAO and its partners in relation to AMR was presented at its 151st Session along with a draft resolution on AMR to be submitted to the 39th Session of the FAO Conference (June 2015) for discussion and decision. Accordingly, both documents were submitted to Conference, which adopted Resolution on AMR (4/2015)1 at the 39th Conference. The 39th Conference also adopted the Rome Declaration on Nutrition (http://www.fao.org/3/a-ml542e.pdf) and its companion Framework for Action (http://www.fao.org/3/a-mm215e.pdf). World leaders thereby renewed their commitment to establish and implement policies aimed at ensuring the safety of food systems in the prevention of infectious diseases, including zoonotic diseases and tackling antimicrobial resistance. In addition, the Second International Conference on Nutrition, Rome November 2014 (http://www.fao.org/3/a-ml542e.pdf) reflects the importance of food systems, including all components of production, processing and distribution should be sustainable, resilient and efficient in providing more diverse foods in an equitable manner, with due attention to assessing environmental and health impacts, including AMR.

2. Recognizing the potential impact of the pervasive threat of antimicrobial resistance to food security and nutrition and the advances made in medicine in the 20th century, the adopted Framework for action included recommended actions on antimicrobial resistance.

3. The 118th Session of the Programme Committee (November 2015), in stressing the importance of FAO's work in AMR, requested the Secretariat to provide an update at its next session on ongoing and planned activities for the 2016/17 biennium, as well as estimated resource requirements and availability in line with the approved Programme of Work and Budget.

4. The 153rd Session of Council (December 2015) took note of the five-year FAO Action Plan on AMR2 and its four components and complementary efforts with its relevant global partners, World Health Organization (WHO) and World Organisation for Animal Health (OIE). During the 119th Session of the Programme Committee (May 2016), the Secretariat provided additional information on the human resources dedicated to tackling the multiple threats of AMR and the efforts made to mobilize additional resources from the membership to assist countries in developing their National Action Plans. The estimated budget of USD 10 million (USD 2 million/year for the five years) would be required for baseline work to develop the required tools and capacities to function at global, regional, national and local level, and interface with WHO and OIE.

5. While our knowledge on the risks and challenges posed by AMR continue to grow, gaps remain in terms of antimicrobial use and the impact of AMR in the food and agriculture sectors, particularly in low and middle income countries. While such gaps should not delay action they do need to be addressed in order to improve engagement with the food and agriculture sectors on AMR and support efforts to manage AMR within the sector in an appropriate and balanced manner.

II. RELEVANCE OF ANTIMICROBIAL RESISTANCE TO THE COMMITTEE ON AGRICULTURE

6. FAO is uniquely-placed to contribute to international efforts in addressing AMR based on the following:

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1 Attached in Annex 1
2 Action plan will be available at http://www.fao.org/3/a-i5996e.pdf
a) FAO hosts the Secretariat of the Codex Alimentarius Commission that has adopted internationally-recognized guidelines to provide a framework to minimize and contain AMR.3
b) 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.

c) FAO brings multidisciplinary expertise (from animal health and production, food and feed safety, plant health and production, fisheries and aquaculture, water and land use, legislative and regulatory 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 the FAO five-year Action Plan on AMR through an inclusive cross-sectoral and multi-dimensional consultative process.

8. The FAO AMR Working Group is chaired by the Chief Veterinary Officer (AGAH) and composed of selected officers from AGA, the Office of Food Safety (AGFF), the Secretariat of the Codex Alimentarius Commission (ADGC), the Joint FAO/IAEA Division (AGE), the Land and Water Division (AGL), the Plant Production and Protection Division (AGP), the Fisheries and Aquaculture Department (FI), the Development Law Service (LEGN), and the Office of Corporate communications (OCC). The FAO regional offices and five sub-regional offices have each assigned an officer to participate in the AMR Working Group.

9. The FAO AMR WG represents permanent staff (D1, P5’s, P4’s, and P3’s) from 12 Services (7 Divisions from 4 Departments), including focal points in decentralized offices (RAP, RAF, REU, RLC, and RNE). The tally of time dedicated to AMR is five full-time professionals. Extra-budgetary resources have been obtained and others mobilised to assist countries and for FAO to meet partner expectations (cooperation with WHO and OIE, especially). FAO has received part-time in-kind support from the United States and the Netherlands.

10. The FAO five-year Action Plan on AMR foresees four major focus areas, important for food safety, livestock, crops and aquatic resources and with impact on food security, nutrition, the environments and sustainable development. In particular, the FAO Action Plan on AMR is broadly grouped into four areas of work as follows:

   a) Improve awareness and advocacy on antimicrobial resistance and related threats.
   b) Develop capacity for surveillance and monitoring of antimicrobial resistance and antimicrobial use in food and agriculture.
   c) Strengthen governance related to antimicrobial use in food and agriculture.
   d) Promote good practices in food and agricultural systems and the prudent use of antimicrobials.

11. The FAO Action Plan on AMR advocates for a programme cutting across the Organization involving headquarters, decentralized and country offices. Strategically, it has been fully embedded into the 2016-2017 work plans of FAO's Strategic Programmes with clear milestones and expected results at global and country levels commensurate to the available resources. Of particular relevance are the Strategic Programmes (SP) 2 (International agreement/conventions), Strategic Programme 4 (Animal and plant health and food safety regulations and their implementation) and Strategic Programme 5 (Prevention and addressing threats).

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III. COOPERATION WITH OTHER AGENCIES AND ACTIVITIES UNDERTAKEN

12. It is recognized 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.

13. FAO has engaged in a tripartite partnership with WHO and OIE, establishing strong and effective collaboration on AMR and facilitating effective linkage of the relevant ongoing work of the Codex Alimentarius and the WHO’s International Health Regulations and OIE’s efforts at strengthening and monitoring the performance of veterinary services, including database development and collation of information on antimicrobial production, export/import, and destined use.

14. Within the framework of a Tripartite agreement on AMR, FAO hosted the 22nd FAO/OIE/WHO Tripartite Annual Executive Coordination Meeting (February 2016), which agreed upon concrete steps for moving, including bringing AMR to global attention. In this regard, the three agencies are supporting the preparation of a UNGA Declaration or Resolution on AMR for adoption in September by the United Nations General Assembly. A preparatory tripartite meeting was held in New York on 11 March and 18 April to inform permanent representatives in New York on the importance and need for engagement prior to any General Assembly Resolution. As in November 2015, a tripartite AMR Awareness week is planned for November 2016.

15. FAO continues to engage strongly with the private (pharmaceutical, animal commercial/production, and animal feed) sector and the issue of AMR has been part of the discussions for the past two years with an focus on awareness raising with regard to AMR.

16. In terms of directly supporting countries, FAO and OIE contributed to a Manual produced by WHO on the development of National Action Plans. The Manual is currently being pilot tested and a revised version will be issued in 2017. Regional and country level workshops and related technical assistance activities will be organized throughout 2016 and 2017 in the framework of the tripartite collaboration and a One Health approach to addressing AMR.

17. The 39th Session of the Codex Alimentarius Commission (CAC39), held in Rome, Italy from 27 June to 1 July 2016, established an Ad Hoc Intergovernmental Task Force on Antimicrobial Resistance (TFAMR) to ensure that Codex members have the necessary science-based guidance to enable coherent management of antimicrobial resistance along the food chain. In particular, the TFAMR has been tasked to revise the Code of Practice to Minimise and Contain Antimicrobial Resistance (CAC/RCP 61-2005) to address the entire food chain and to consider the development of Guidance on Integrated Surveillance of Antimicrobial Resistance.

18. The TFAMR, which will be hosted by the Republic of Korea, will take full account of the WHO Global Action Plan on Antimicrobial Resistance, the work and standards of relevant international organizations, such as FAO, WHO and OIE, and the One-Health approach. Scientific advice provided FAO and WHO in collaboration with OIE will support the TFAMR in undertaking its work.

19. CAC39 also requested FAO and WHO to develop a capacity building programme to respond to the needs identified by members.

20. FAO is an active member and permanent advisor in the Global Health Security Agenda (GHSA), a country-lead initiative with some 60 countries dedicated to address infectious disease.
threats. The Agenda has developed Action Packages on prevention, detection and response, including an Action Package exclusively dedicated to Antimicrobial Resistance.

21. FAO also participates in WHO’s Advisory Group on Integrated Surveillance of AMR (AGISAR) and has worked together with WHO to implement projects at national level to support AMR related surveillance and data collection.

22. Building on its existing activities on animal, plant health and food safety legislation, FAO has started working to identify the legal elements relevant for AMR and AMU and making recommendations on mainstreaming the related obligations and responsibilities into the relevant legislation.

23. FAO is supporting strengthening of capacities in this area of data collection and surveillance and monitoring in the food chain. For example, work is ongoing to expand on existing laboratory mapping tools that are used in the animal health sector to assess capacity in relation to resistance determination and in a manner that is consistent and complementary to other relevant assessment tools. Strengthening laboratory capacity for residue monitoring is an ongoing activity which has a particular importance in monitoring implementation of regulations with regard to use of veterinary drugs, including antimicrobials. In terms of new technologies FAO is working to increase awareness of countries on the use of whole genome sequencing in food safety management including antimicrobial resistance and a technical meeting on whole genome sequencing was convened in FAO on 23-25 May.

24. Initial country work that FAO has recently engaged in, highlights the many capacity development needs which need to be addressed ranging from basic awareness and knowledge amongst the food and agriculture sector to strengthening monitoring and surveillance capacity, and implementing good practices. In this context FAO is supporting better use of existing materials and tools to enhance good practices.

25. FAO is working on the development of tools and instruments to support regulation and use of antimicrobial chemicals (e.g. pesticides and veterinary drugs) in the agriculture sector. For example, specific technical guidelines for registration and setting specifications for pesticides are under development as well as a toolkit to assist developing countries in assessment and registration of pesticides including those which are antimicrobials.

26. FAO is developing a Progressive Management Pathway to support countries in the process of their auto-assessments, development, implementation and evolution of national action plans on AMR, with emphasis on the factors addressing antimicrobial use and resistance in food and agriculture. This is based on successful experiences with the development, implementation and use of such pathways and stepwise approaches particularly in the animal health area.

IV. CREATE AN ENABLING ENVIRONMENT FOR EFFECTIVE ACTION

27. Awareness of the issue of AMR and its relevance to food and agriculture is a prerequisite to effective action at national level. This is the starting point of FAO's country and regional level activities and locally adapted communication materials are being developed to facilitate this.

28. To enhance good practices in food and agriculture and monitor the occurrence and spread of antimicrobial resistance, FAO is increasing its technical assistance to countries and is strengthening capacity development efforts in creating awareness and assisting countries develop their multi sectoral One Health orientated National Action Plans as required by the

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WHO-endorsed resolution of June 2015, whereby all countries should have a National Action Plan by mid-2017.

29. FAO is actively engaged in, and will continue to support, governance and coordination mechanisms to address the growing threat of antimicrobial resistance.

30. FAO is extending its partnership with WHO and OIE to enhance coherence of the efforts of the three organizations to address AMR within their respective domains. As well as at country level, this will include partnership on global level initiatives related to areas such as surveillance of resistance (Global AMR Surveillance System [GLASS]) and antimicrobial use (complementing the OIE animal use data base with other agriculture use data).

31. FAO offers support to countries in reviewing, revising and adopting policy instruments, legislation and programmes geared toward making food and agriculture systems safe against disease threats or drug residues. Measures designed to make sectoral and cross-sectoral policy frameworks to be consistent with “One Health” approaches will be promoted at global, regional, and national level.

32. Within the One Health approach, FAO in collaboration with WHO and OIE, continues to raise awareness on AMR among relevant stakeholders, while supporting countries and regions to implement multi-sectorial measures to prevent or minimize AMR (e.g., regulatory frameworks, surveillance and diagnostic tools, information databases, alternatives to the use of antimicrobials as growth promoters, promotion of good production practices, including biosecurity).

V. RESOURCE MOBILIZATION EFFORTS AND PIPELINE

33. As of May 2016, FAO secured extra-budgetary resources for a total of USD 2.9 million, including funding from the United States Agency for International Development (USAID) to support work in AMR as part of USAID multi-year programme Emerging Pandemic Threats in Asia (2 million) and funding from the United Kingdom of Great Britain and Northern Ireland (Fleming Fund) to support FAO’s work on AMR in Cambodia, Ghana, Kenya, and Zimbabwe (USD 900,000). In addition, FAO is poised to receive around £ 5 million from the United Kingdom’s Department of Health Fleming Fund to support a three-year programme of work, in collaboration with WHO and OIE, as Tripartite partner aimed at assisting countries to develop and begin implementation of their multi-sectoral National Action Plans as well as relevant global tools to advance the Global Action Plan as endorsed by the World Health Assembly in June 2015. FAO is also providing support to Thailand through a technical cooperation programme (TCP) project to enhance National Capacities for Antimicrobial Resistance Risk Management in Animal Food Production.

34. The Kingdom of the Netherlands has seconded a senior officer to the FAO Animal Health Service, and discussions are being pursued with France, the United Kingdom, and Italy for in-kind support to the Secretariat. In addition, discussions have been initiated with other potential donor countries (Russian Federation and France) who have expressed interest in further supporting FAO.

VI. IMPLEMENTATION MECHANISMS

35. AMR related activities span across the FAO Strategic Framework, with specific deliverables under SP2, SP4 and SP5. FAO’s technical divisions and decentralized offices are taking the lead in coordinating activities within their areas of competence in crop agriculture, food and feed safety, and terrestrial and aquatic animal production and health, with due attention to the cross-ministerial regulatory aspects and legislation. Implementation at the regional and
national levels are jointly undertaken by FAO, relevant regional bodies, member governments, and are subject to funding availability.

36. The Action Plan is underpinned by a strong resource mobilization exercise, engaging the Strategic Programme Leaders, Assistant Directors-General of the Technical Cooperation and Programme Management Department (TC), Agriculture and Consumer Protection Department (AG) and Fisheries and Aquaculture Department (FI), the Legal Development Service (LEGN), and Office for Corporate Communications (OCC). The active participation of regional, sub-regional and country offices facilitates the flow of information and output delivery between the FAO global action and work plan and the national and regional initiatives/priorities in this area. Progress in the implementation will be subjected to monitoring and review.
Annex 1

Resolution 4/2015

Antimicrobial Resistance

THE CONFERENCE,

Having considered the Secretariat’s Status Report on Antimicrobial Resistance\(^5\) in food, agriculture\(^6\) and the environment;

Recalling the Rome Declaration on Nutrition 2014 and accompanying Framework for Action and also recalling the request by the Council at its Hundred and Fiftieth Session to the Secretariat;

Recognizing the role of FAO as the lead intergovernmental agency with the mandate to improve agriculture, forestry, fisheries and management of natural resources and to achieve global food security and nutrition;

Noting also the relevant and globally agreed FAO/WHO Codex Alimentarius Commission\(^7\) guidance and Codes, as well as the relevant agreed OIE standards, to address antimicrobial resistance;

Aware that access to effective antimicrobial agents constitutes a prerequisite for productive and sustainable agriculture, particularly animal husbandry and aquaculture and safe food, on which countless livelihoods depend throughout the world, but that hard-won gains in animal and human health and development are at risk due to increasing resistance to antimicrobials;

Aware that the health and economic consequences of antimicrobial resistance constitute a heavy and growing burden on high-, middle- and low-income countries, requiring urgent action at national, regional and global levels, particularly in view of the limited development of new antimicrobial agents;

Recognizing that there is need for a coherent, comprehensive, integrated and balanced approach at global, regional and national levels in a ‘One Health’ approach and beyond, involving different actors and sectors such as human and veterinary medicine, agriculture, food safety, environment and consumers;

Recognizing that antimicrobial resistance involves a wide range of microorganisms, including bacteria, viruses, fungi and parasites, but that the development of resistance to antibiotics is of particular urgency and most in need of immediate attention;

Emphasizing the importance of policy recommendations being based on sound scientific evidence and risk analysis principles;

Noting the evidence of the transmission and spread of antimicrobial resistance between animals, humans, in the food chain and the environment;

Welcoming the tripartite collaboration on antimicrobial resistance among FAO, the World Health Organization (WHO), including Codex Alimentarius, and the World Organisation for Animal Health (OIE), as well as other international collaboration;

\(^5\) C 2015/28 Rev.1
\(^6\) Includes the growing of crops and the rearing of terrestrial and aquatic animals.
\(^7\) Codex Guidelines on Risk Analysis of Foodborne Antimicrobial Resistance - CAC/GL 77- 2011 and Code of Practice to Minimize and Contain Antimicrobial Resistance - CAC/RCP 61-2005
Noting the adoption by the Sixty-seventh World Health Assembly of a resolution on antimicrobial resistance,\(^8\) including its request to the WHO Director-General to strengthen the tripartite collaboration among FAO, OIE and WHO for combating antimicrobial resistance in the spirit of the ‘One Health’ approach;

Welcoming the adoption by the Sixty-eighth World Health Assembly of the Global Action Plan on Antimicrobial Resistance\(^9\), into which FAO provided input, and noting the reports and guidance to and by the Executive Board of WHO at its Hundred and Thirty-sixth Session;

Aware that the Global Action Plan reinforces the need for collaboration on antimicrobial resistance among FAO, OIE and WHO and other intergovernmental organizations, partners and stakeholders and calls upon FAO to support the implementation of antimicrobial resistance prevention and control measures in food and agriculture;

Noting the Secretariat’s report to the Council at its Hundred and Fifty-first Session, set out in document C 2015/28 Rev.1 and the deliberations of the Council;

Strongly supporting the ongoing work by the Secretariat, in collaboration with Members and others, to assess the evidence of antimicrobial resistance in food and agriculture systems, identify knowledge gaps, and provide recommendations to Members for effectively combatting antimicrobial resistance;

1) Urges Members to:
   a) increase political awareness, engagement and leadership to ensure continued access to antimicrobial drugs through the prudent and responsible use of antimicrobials in agriculture, as expressed in the Codex Code of Practice to Minimize and Contain Antimicrobial Resistance\(^10\), in particular those on the OIE and WHO lists of Critically Important Antimicrobials\(^11\) of veterinary and human health importance;
   b) strengthen national monitoring of antimicrobial resistance and the use of antimicrobials in agriculture, regulation of their prescription and use and compliance with those regulations in cooperation with OIE, WHO and FAO in accordance with OIE and Codex standards;
   c) facilitate efforts to strengthen analysis and sharing of international scientific evidence for development, transmission and control of antimicrobial resistance in food, agriculture and the environment, including technology transfer;
   d) take actions to continue the development of sustainable food production systems taking into consideration their social, economic and environmental dimensions, in order to reduce the risk of diseases, prevent the unnecessary use of antimicrobials, including the phasing out of antimicrobials as growth promoters (veterinary antimicrobial drugs which belong to or are able to cause cross resistance to classes of antimicrobial agents used - or submitted for approval - in humans and animals in the absence of a risk analysis) and promote good animal husbandry management, biosecurity and biosafety;
   e) take urgent action at regional, national and local levels to mitigate risks posed by inappropriate antimicrobial usage and antimicrobial resistance in food, agriculture and the environment;
   f) develop or strengthen national plans, strategies and international collaboration for the surveillance, monitoring and containment of antimicrobial resistance in food, agriculture and the environment, in close coordination with related plans for human health;

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\(^8\) WHA67.25, 24 May 2014
\(^9\) A68/20; A68/20 Corr.1, 21 May 2015
\(^10\) WHO - Critically important antimicrobials for human medicine (3rd Revision)
http://www.who.int/foodsafety/publications/antimicrobials-third/en/
\(^11\) OIE List of Antimicrobials of Veterinary Importance
http://www.oie.int/doc/ged/D9840.PDF
g) **mobilize** human and financial resources, at national, regional and international level, in order to implement plans and strategies to strengthen surveillance and to minimize development and transmission of antimicrobial resistance in food, agriculture and the environment;

h) **improve** among all relevant stakeholders awareness of: i) the risks posed by antimicrobial resistance to public health, as well as the potential negative impacts on food and agriculture; ii) the need for responsible use of antimicrobial drugs in agriculture; and iii) good animal husbandry, plant production, health, biosecurity and biosafety, management and hygiene practices;

i) **support** developing countries to develop programmes and systems for detection, surveillance and monitoring of antimicrobial use and antimicrobial resistance and to follow-up on their related policies established to achieve progressive management of antimicrobial resistance risks in food, agriculture and the environment;

j) **encourage and support** research and development to combat antimicrobial resistance and development of new classes of antimicrobial agents and alternative therapies and diagnostics and promote responsible use of antimicrobials in agriculture;

k) **recognize** the importance of the development of antimicrobial usage and resistance surveillance; and

l) **improve** information sharing and awareness raising amongst all stakeholders.

2) **Requests** the Organization to:

a) **actively support and provide capacity building as appropriate**, in collaboration with other relevant partners, sustainable production systems taking into account the social, economic and environmental dimensions that prevent diseases through good animal (aquatic and terrestrial) husbandry management and practices, as well as good plant production management and practices, as an important means to combat antimicrobial resistance;

b) **ensure** that all relevant parts of the Organization, at headquarters, regional and country levels, are actively engaged and coordinated in promoting work on combating antimicrobial resistance, within the parameters of the FAO Strategic Objectives;

c) **help strengthen** the tripartite collaboration between FAO, OIE and WHO for combatting antimicrobial resistance in the spirit of the ‘One Health’ approach and to maximize synergies with OIE in animal health;

d) **support** efforts to explore with the United Nations Secretary-General options for a high-level initiative, including a high-level meeting, to increase political awareness, engagement and leadership on antimicrobial resistance;

e) **support** implementation of the Global Action Plan on Antimicrobial Resistance, which seeks to address the need to ensure that all countries, especially low- and middle-income countries, have the capacity to combat antimicrobial resistance and which takes into account existing action plans and all available evidence and best practices; and

f) **keep Members regularly apprised** of the Secretariat’s work in this area, through reports to the Committee on Agriculture.

(Adopted on 13 June 2015)