



Food and Agriculture
Organization of the
United Nations

COFI/SCA 9 SIDE EVENT ON ANTIMICROBIAL RESISTANCE

PRESENTED BY SINGAPORE DELEGATE DURING AGENDA ITEM 12 ANY OTHER BUSINESS OF COFI/SCA 9TH SESSION, 26 OCTOBER 2017

HIGHLIGHTS AND CONCLUSIONS

The Secretariat, in opening the Side Event on Antimicrobial Resistance (AMR), held on 25 October from 12:15-13:15, stated the purpose which was to exchange and disseminate perspectives on AMR from FAO members including information about ongoing initiatives. The importance of AMR was already raised by Members in previous session and the need to fight against AMR can be achieved through effective biosecurity and within the One Health approach. Members were encouraged to present ongoing initiatives and provide recommendations or action plans on AMR that can be tabled at the next SCA.

Malaysia has developed a National Action Plan (NAP) for AMR in Aquaculture. The activities included in the NAP are Extension programs for AMR for all relevant stakeholders and personnel in Aquaculture to increase knowledge and awareness, antimicrobial usage (AMU) data collection, AMR Surveillance, AMR governance in developing and implementing AMR policy/legislation and promotion for best practices for the use of antimicrobials in Aquaculture. Malaysia's good aquaculture practices (MyGAP) is widely promoted. The presentation was concluded by noting that all stakeholders must work together and cooperated to manage AMR under One Health.

Singapore recognises that combatting the threat against AMR involves a One Health approach, and requires a coordinated effort across animal, human, food, and environment sectors. National strategies to combat AMR cover the areas of Capacity Building, Awareness and Communication, and Surveillance and Regulations. Singapore recognises the threat of AMR to the aquaculture sector and its impact to ASEAN economies, and the need to coordinate ASEAN AMR efforts between livestock and aquaculture sectors. As ASEAN lead country for AMR in both livestock and aquaculture, Singapore hopes to foster greater collaborations between the sectors. In this endeavour, Singapore hopes to collaborate with countries, regions and international organisations to combat AMR in the region.

Active for more than 15 years, the overall EU approach to address AMR has been recently enshrined in the new One Health Action Plan against AMR. The plan foresees more than 75 actions and will support the EU and its Member States in delivering innovative, effective and sustainable responses to AMR; strategically reinforce the research agenda on AMR and enable the EU to actively promote global action and play a leading role in the fight against AMR.

The presentations of FAO officers on various topics are presented below:

- Antimicrobial (AM) usage in humans, animals – terrestrial and aquatic- and their growing use in crop agriculture, results in the dispersion of AM residues and into aquatic and terrestrial environments requires a One Health approach to tackle the increased threat of AMR. Integrated surveillance is an important requirement captured in the Global Action Plan, but in food and agriculture this is a challenging proposition due to the vast number of sectors (over 50 – including molluscs, crustaceans, finfish, poultry, dairy, bees, fruits, feed industry, smallholder to commercial enterprises, pharmaceutical company effluents) that need monitoring, detection and reporting. One tool being developed by FAO is the *Progressive Management Pathway for AMR*, which captures the capacity building and risk management needs of countries to meet their international obligation and standards as members of Codex and OIE.
- The benefits and issues concerning the use of antimicrobials in aquaculture were presented. The two major hazards are antimicrobial resistance and residues. It is important to have a good understanding of the threat of AMR and how to avoid it. While antimicrobial genes may have evolved naturally, indiscriminate use of antibiotics in human and animal sectors has led to selection and spread of resistant bacteria. The link between the resistance profile and AMU needs to be better understood. AMR may be naturally present in the aquatic environment or derived from AMU in other sectors or derived from AMU in aquaculture. Ongoing support include assistance in the development of the aquaculture component of the AMR NAP, awareness, best practice guidance for shrimp, tilapia and carp and surveillance on AMU and AMR in aquaculture.
- AMR occurs naturally over time and can be accelerated by poor infection control, inadequate sanitary conditions and misused or overused of antimicrobials due to diverse reasons. In that sense, it is known that AMR selection has been driven by antimicrobial exposure in health care, agriculture and the environment, and animal AM misuse or overuse is considered to be the second driver for AMR. One important indicator of misuse or overuse of antimicrobials are its residues in fisheries and aquaculture products. An analysis of the global detections and rejections in some of the main importing countries was made to see the current status. These results indicate that more efforts are needed at pre- and post-harvest stages to avoid AMR, as well as to ensure food safety, and that there is a need to harmonize regulatory frameworks related to the use of antimicrobials and establishment of its maximum residue limits.
- The development of a Concept Note on a Progressive Aquaculture Biosecurity Management Framework, was presented. Addressing disease situation in aquaculture needs a new paradigm shift towards more proactive (prevention, risk analysis) and vigilant approach and effective implementation of existing aquatic animal health standards (i.e. OIE) and other relevant voluntary guidelines. Being complacent (in the absence of disease event) and reactive (only when an outbreak occurs). A consultation being planned in March 2018 hosted by FAO Washington DC that will engage governments, producer and academic/research sectors will discuss this concept note, take stock of the disease situation in aquaculture and build consensus on the way forward. It will examine the potential

application to aquatic diseases of the Progressive Management Pathway (PMP) framework as used in terrestrial animal diseases. Whatever direction aquaculture development is going, an appropriate biosecurity framework needs to be developed in parallel.

Conclusions

- AMR was already highlighted as a timely topic as expressed by members in previous agenda items during the session, thus the holding of the event was much appreciated.
- It is essential to address the AMR in a collaborative manner across all sectors and ecosystems within the One Health platform.
- There was strong consensus that good aquaculture and biosecurity practices, vaccines and prudent use of antimicrobials, microbial management taking into account quorum sensing mechanisms, aquaculture zoning, are key prevention measures to development of AMR. Trade aspects, e.g. antibiotic residue testing for traded fish (both export and import) need full attention as they can lead to product rejections.
- Awareness is a necessary first step in addressing AMR. However, one of the major challenges is how to reach the hundreds of thousands of small-scale aquaculture producers. Efforts toward this direction should be enhanced.
- Members encouraged FAO to continue support to AMR work on aquaculture and fisheries, continue working closely with Members and with regional and international partners.
- Members welcomed the preliminary information presented concerning the preparation of a Concept Note on Progressive Aquaculture Biosecurity Management Framework including the planned consultation in 2018. The concept note was viewed as valuable starting point. However, further improvements of the concept note were recommended taking into account new knowledge in different disciplines. The call for support for this initiative was encouraged and a special working group could assist in the further improvement of this concept note. The progress in the development of the concept note was suggested to be reported and discussed during the COFI meeting (2018) and next SCA.



R1 L-R: Malaysia (Ms Moi Eim Yeo, Director, Aquaculture Development Division, Department of Fisheries Malaysia); Singapore (Mr Huan Sein Lim, Director, Technology & Industry Development, Agri-Food & Veterinary Authority of Singapore); EU (Ms Anna Zito, Team Leader for EU Aquaculture Policy, Directorate-General for Maritime Affairs and Fisheries-DG MARE, European Commission in Brussels)

R2 L-R: FAO: Mr Manuel Barange, Director, Fisheries and Aquaculture Policy and Resources Division (FIAX); Mr Malcolm Beveridge, Acting Chief, Aquaculture Branch (FIAA)

R3 L-R: FAO: Mr Juan Lubroth (FAO Chief Veterinary Officer. Animal Health Service, AGAH); Ms Melba Reantaso (Aquaculture Officer, FIAA); Ms Esther Garrido-Gamaro (Food Safety and Quality Officer, Products, Trade and Marketing Branch (FIAM)