



Food and Agriculture
Organization of the
United Nations

FMM/RAS/298: Strengthening capacities, policies and national action plans on
prudent and responsible use of antimicrobials in fisheries Final Workshop
in cooperation with AVA Singapore and INFOFISH

12-14 December, Concorde Hotel, Singapore

Introduction to objectives and expected outcomes of the workshop

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FAO Project FMM/RAS/298/MUL: Strengthening capacities, policies and national action plans on prudent and responsible use of antimicrobials in fisheries: **Objectives**

- Provide technical assistance to selected countries (China, Malaysia, the Philippines and Viet Nam) in strengthening capacities, policies and national actions plans on prudent and responsible use of antimicrobials in the aquaculture sector.
- (i) documentation of antimicrobial use (AMU) in aquaculture through AMU and possibly antimicrobial resistance (AMR) surveillance and other relevant informal survey; (ii) enhancing capacities on prudent use of antimicrobials and good biosecurity and husbandry best practices; and (iii) promoting advocacy, communication and education activities.

These actions could lead to policy support towards AMR prevention.

A decorative illustration at the bottom of the slide shows a green field with a blue stream. In the foreground, there are stylized white sheep and a white cow. To the left, there are stalks of wheat. The background features rolling green hills under a light blue sky.

FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): Purpose

- gain further knowledge on best practices in diagnostics, AMU and other good aquaculture and biosecurity practices at different levels and continuing education on AMU/AMR
- present the outcomes and experiences of three related projects on AMR
 - Aquaculture biosecurity component of FAO Aquatic AMR Project (FMM/RAS/298):
 - Food safety component of FAO Aquatic AMR Project (FMM/RAS/298):
 - FAO project (OSRO/RAS/502/USA): Addressing Antimicrobial Usage in Asia's Livestock, Aquaculture and Crop Production Systems, subproject: Documentation and characterizing antimicrobial use in the aquaculture sector being implemented by NACA
- discuss capacity building requirements for implementation of the NAP on AMR and
- build consensus on the way forward



FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): **Participation**

- Aquaculture biosecurity component: 7: delegates from participating countries (i.e. China, Malaysia, the Philippines, Viet Nam)
- Proponents of the FAO project (OSRO/RAS/502/USA): Addressing Antimicrobial Usage in Asia's Livestock, Aquaculture and Crop Production Systems: 8 delegates from (Indonesia, Myanmar, the Philippines, Thailand, Viet Nam)
- AVA: 15
- Others: 1 (City University of Hong Kong); MSD Singapore
- FAO Resource Experts: 7 (Croatia, India, Ireland, the Philippines, Netherlands, Sri Lanka, USA)
- FAORAP (Bangkok): 1 officer; FAO (HQ, Rome): 4 officers (FIAA, FIAM)



FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): **Process**

Day 1

- Opening
- Session 1: Governance
- Session 2: Awareness
- Session 3: Evidence

Day 2

Session 4: Best practice
Session 5: Country presentations
Session 6: Discussions on capacity building requirements and the Way Forward

Day 3

Session 6: Discussions on capacity building requirements and the Way Forward
Session 7: Conclusions and Closing
Field trip



FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): **Process**

SESSION 1: GOVERNANCE

1. Progress report on Aquaculture Component of FAO Project FMM/RAS/298/MUL “Strengthening capacities, policies and national action plans on prudent and responsible use of antimicrobials in fisheries” (Ms Elena Irde, FAO)

4. Codex Alimentarius as food safety standard, relationship with AMR and country responsibilities (Dr Iddya Karunasagar, India)

7. Example of NAP: Singapore (Dr Kelvin Lim, Singapore)

2. Progress report on Food Safety Component of FAO Project FMM/RAS/298/MUL “Strengthening capacities, policies and national action plans on prudent and responsible use of antimicrobials in fisheries” (Ms Esther GarridoGamarro, FAO)

5. EU Action on Plan on AMR and implications for trading partners with two examples of NAP: Croatia (Drs Snježana Zrnčić, Croatia)

8. Example of NAP: USA (Dr Larry Hanson, USA)

3. AMR, Aquaculture and One Health (Dr Melba Reantaso, FAO)

6. Example of NAP: Netherlands (Dr D. Ceccarelli, presented by Dr Olga Haenen, Netherlands)

9. Current status of NAP on AMR (WHO website) (Dr Melba Reantaso, FAO)

DISCUSSION

FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop

(Workshop 3): **Process**

SESSION 2: AWARENESS	SESSION 3: EVIDENCE
<p>1 Critical analysis of available data on use of antibiotics in aquaculture (Dr Peter Smith, Ireland)</p>	<p>1 Mechanisms and pathways of AMR in the environment (Dr Iddya Karunasagar, India)</p>
<p>2 Review of AMR in aquaculture work in China (Dr Li Aihua, China)</p>	<p>2 Global overview on fishery products rejections due to residues of antimicrobials (Ms Esther GarridoGamarro, FAO)</p>
<p>3 Global ornamental fish trade as a risk of AMR development and transfer (Dr Olga Haenen, Netherlands)</p>	<p>3 Assessing antibiotic treatment failure in salmon aquaculture (Dr Sophie St. Hilaire, Hong Kong SAR)</p>
<p>Discussions</p>	<p>Discussion</p>

FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): **Process**

Session 4: Best practice

1 Diagnostics and antimicrobial administration (Dr Snježana Zrnčić, Croatia)

2 Practical management of bacterial diseases in finfish aquaculture to minimize AMR (Dr Larry Hanson, USA)

3 Best practice in carp aquaculture (Dr Rohana Subasinghe, UK/Sri Lanka)

4 Best practice in shrimp aquaculture (Dr Celia Lavilla-Pitogo, Philippines)

5 Best practice in tilapia aquaculture (Dr Rohana Subasinghe, UK/Sri Lanka)

6 Future of vaccination in Asian aquaculture (Mr Lee Yeng Sheng, Singapore).

7 Fish Waste Management: Turning fish waste into healthy feed (Mr OmarRiego Penarubia, FAO)

Discussion

FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): **Process**

Session 4: Country presentations

1 China (Dr Aihua Li)

2 Malaysia (Ms Wan Norhana Bt Md Noordin and Mr Gerald Misol Jr.)

3 Philippines (Drs Simeona E. Regidor and Sonia Somga)

4 Viet Nam (Dr Dang Thi Lua and Ms Thi Han Huong Nguyen)

5 Progress Report: Documentation and Characterization of AMU in the Aquaculture Sector: Thailand, Vietnam, Myanmar and Indonesia (FAO project OSRO/RAS/502/USA implemented by NACA) (Dr Eduardo Leano, presented by Dr Rolando Pakingking, Jr.)



FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): **Process**

Session 6: Discussions on capacity building requirements and the Way Forward

1 Aquaculture production and trade trends: carp, tilapia, shrimp and ornamental fish (Mr Miao Weimin, FAO)

2 Introduction to Working Group discussions: each of the 4 Working Group will discuss on the 4 pillars: governance, awareness, evidence, best practice (Dr Melba Reantaso, FAO)

3 Working Group (WG) Capacity Building Requirements: Discussions and Presentations

WG1: Governance	WG2: Awareness	WG3: Evidence	WG4: Practice
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Session 7
Conclusions
Distribution Certificates

Field Trip



FAO Aquatic AMR Project (FMM/RAS/298/MUL): Final Workshop (Workshop 3): **Products (Expected outcomes)**

- further knowledge gained and continuing education on AMR, AMR and aquaculture within One Health, tripartite collaboration (FAO/OIE/WHO) and FAO Action Plan pillars: governance, awareness, evidence and practice
- sharing of experience of three related FAO projects on AMR
- capacity building requirements for implementation of the NAP on AMR
- consensus built on the way forward
- documentation outcomes of the project: combined 3 workshop reports; technical paper containing expert presentations; NAP plans; best practice guidance (carp, tilapia and shrimp)



THANK
YOU

