

Updates on AMU data collection and guidelines for AMU monitoring in aquaculture at field-level

Regional Workshop for WOAHA Focal Points for Aquatic Animals

Dr Dante Mateo

7 – 9 July 2026 | Tokyo, Japan

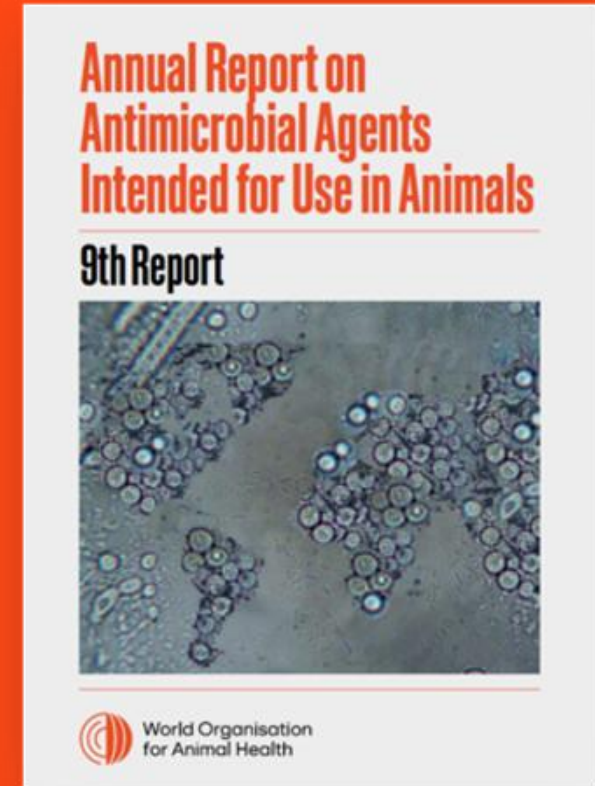
Scientific Coordinator
Veterinary Products and Drug
Resistance Department



Australian Government
Department of Agriculture,
Fisheries and Forestry



AMU data collection



WOAH's Global database on ANImal antiMicrobial USE: ANIMUSE³



World Organisation
for Animal Health

ANIMUSE



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NATIONAL DATA

FREQUENTLY ASKED QUESTIONS

RESOURCES ▾

AMU FIELD LEVEL

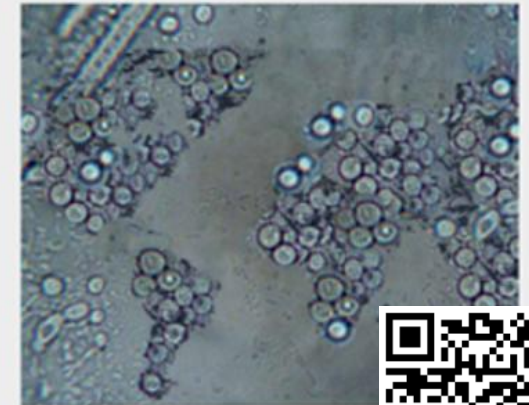
ANIMUSE

The World Organisation for Animal Health (WOAH) has been collecting data on the amounts and reasons for antimicrobial use in animals since 2015. This information is an essential asset to reduce the overuse and misuse of medication and to curb the spread of [antimicrobial resistance](#) (AMR). ANIMUSE, the global database on ANImal antiMicrobial USE, facilitates access to this crucial and growing set of information.



Annual Report on Antimicrobial Agents Intended for Use in Animals

9th Report



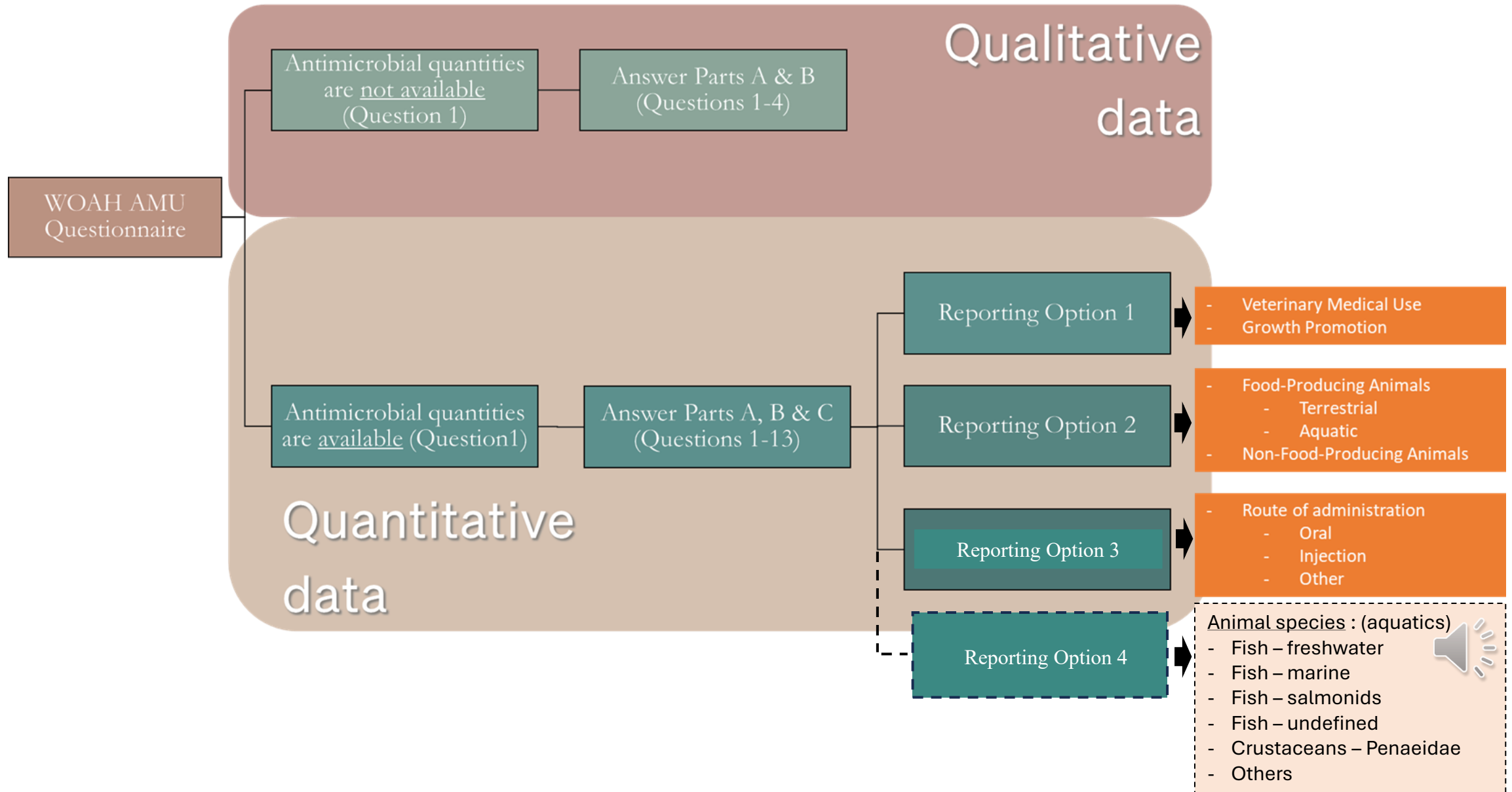
World Organisation
for Animal Health





ANIMUSE: Qualitative & Quantitative AMU data

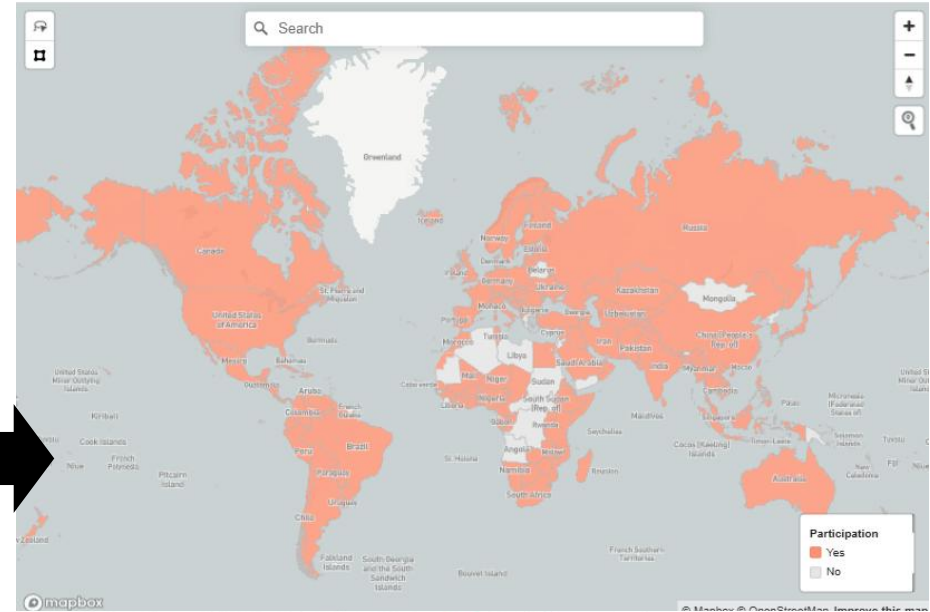
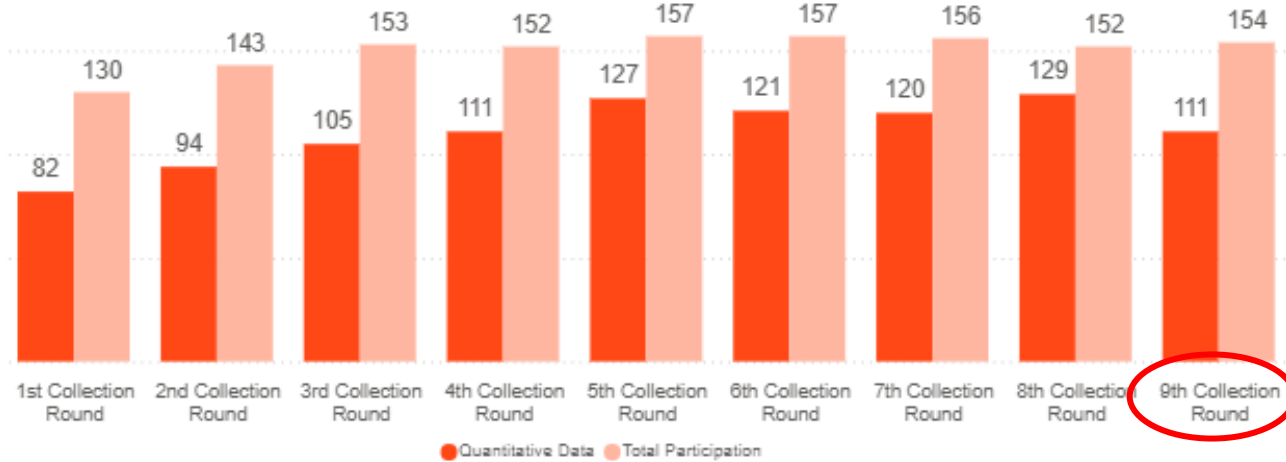
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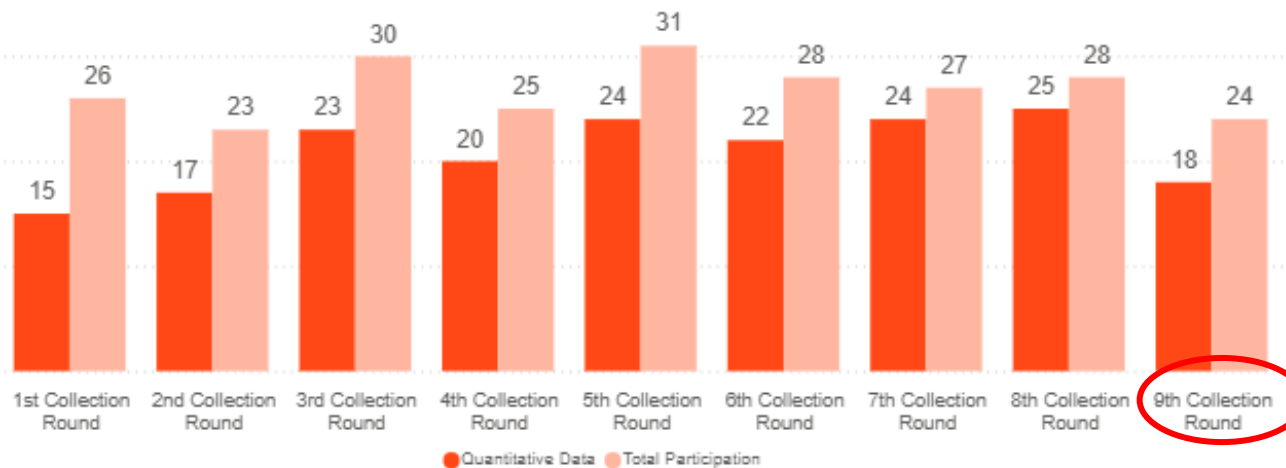


Participation in ANIMUSE – 9th Round

Global

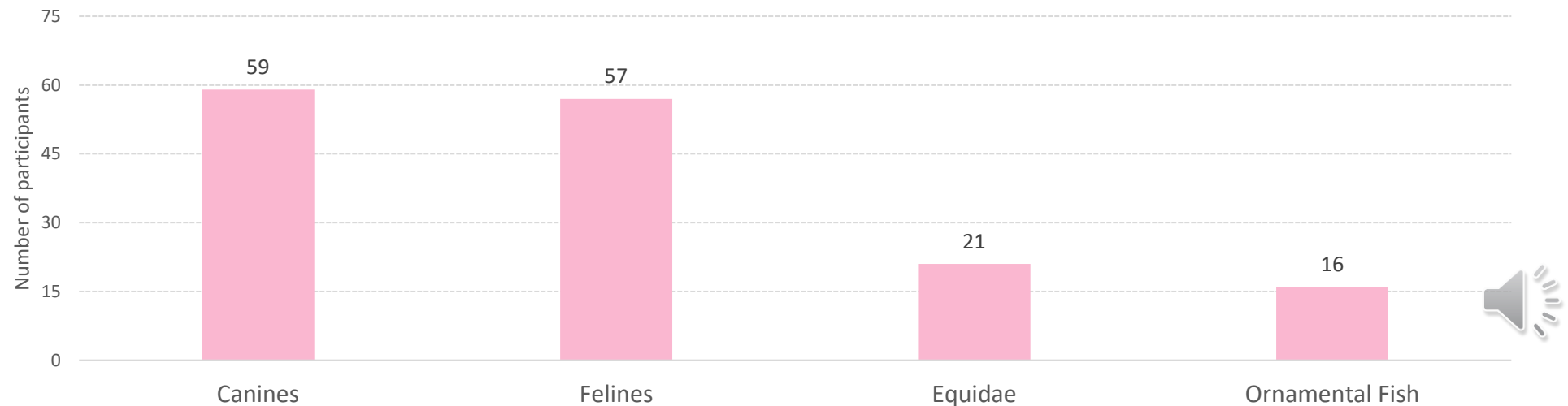
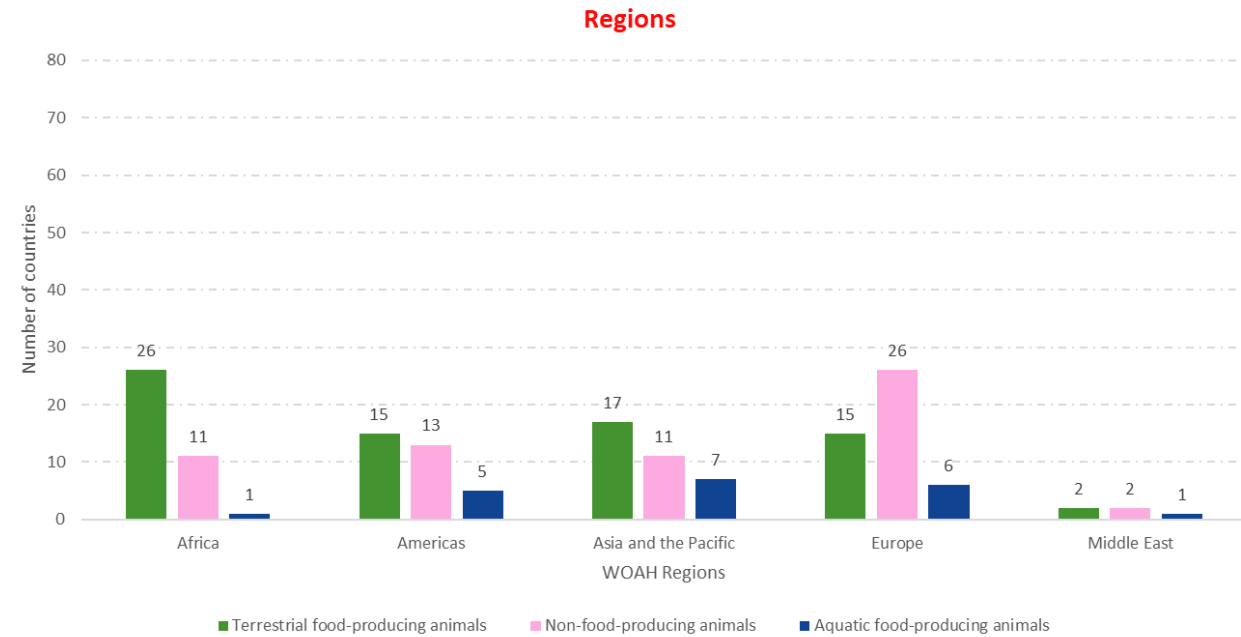
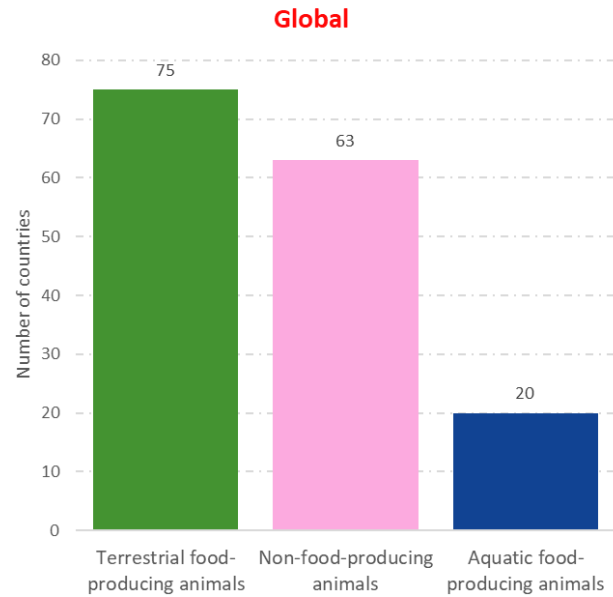


Asia and the Pacific





Non-food-producing animals – 2022



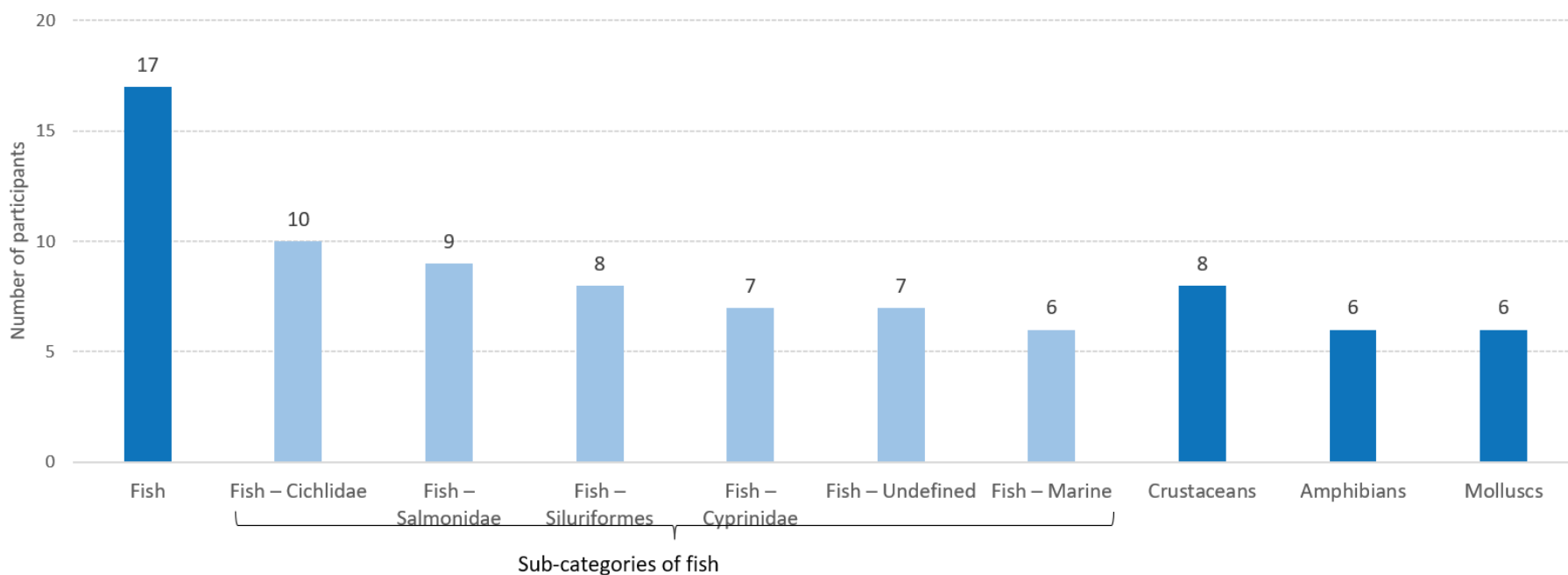
Non-food-producing animals covered according to the label of the veterinary product





Differentiated quantities – animal groups – 2022

7



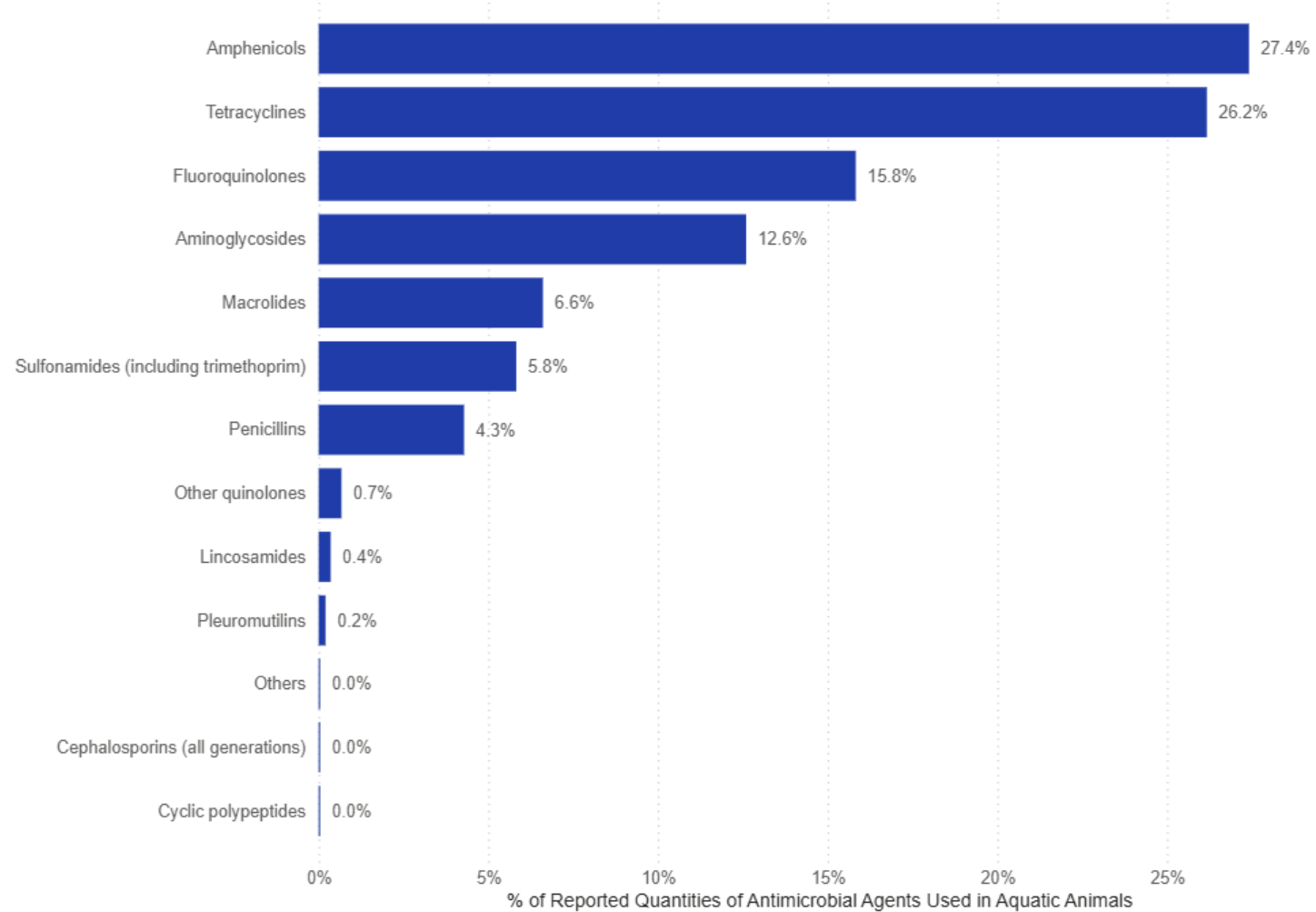
Aquatic food-producing animals covered according to the label of the veterinary product





Antimicrobial classes – aquatic animals – 2022

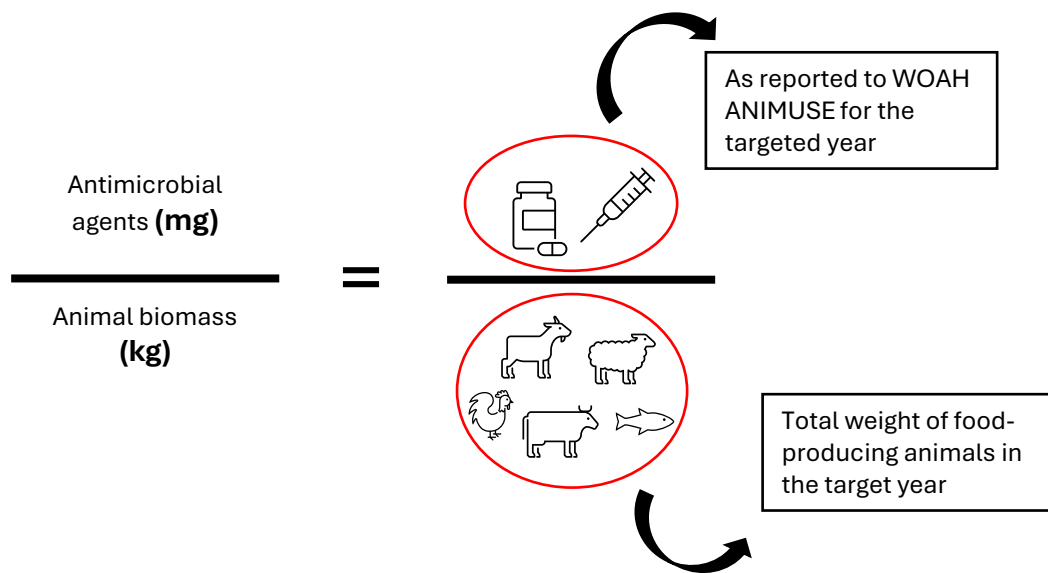
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AMU adjusted by animal biomass - 2022

9



Terrestrial food-producing animals

47% covered by AMU data



98
milligrams

of antimicrobials adjusted by kilograms of animal biomass

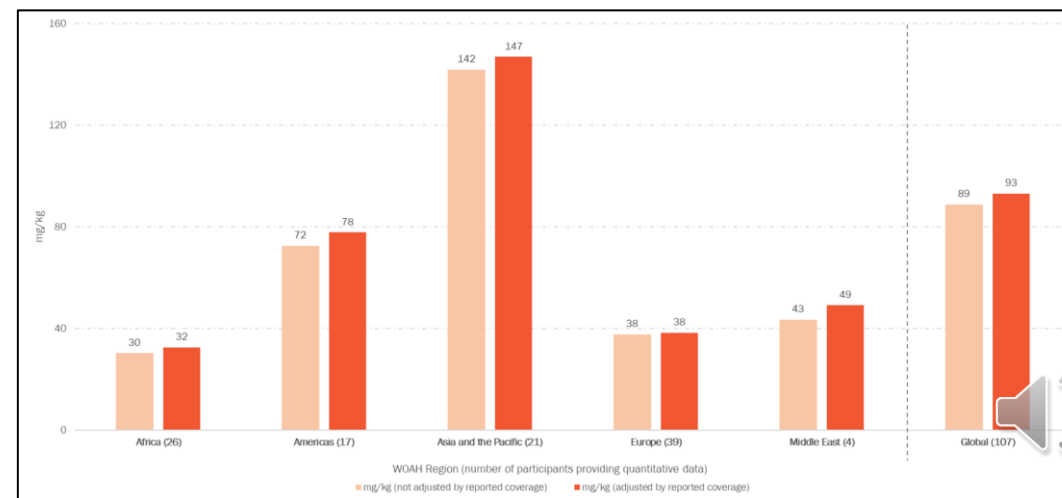
Aquatic food-producing animals

64% covered by AMU data



21 milligrams

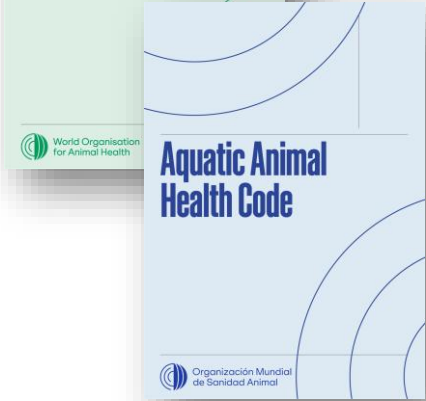
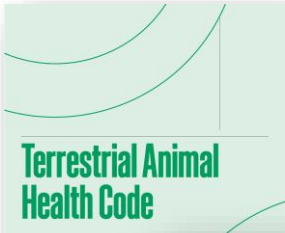
of antimicrobials adjusted by kilograms of animal biomass





AMU monitoring at field-level





Terrestrial Code: Chapter 6.9 *Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals*

Aquatic Code: Chapter 6.3 *Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals*

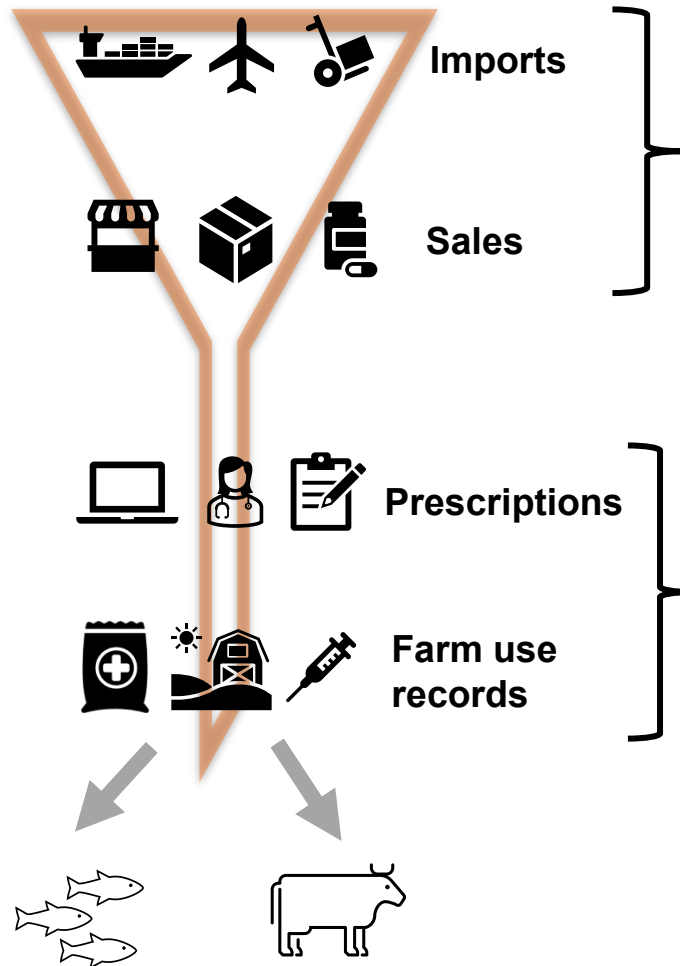
Articles 6.9.4 (Terrestrial Code) & 6.3.3 (Aquatic Code): ***Development and standardisation of monitoring systems for antimicrobial agents***

Sources of data on antimicrobial agents

- a) *Basic sources:* customs, imports, sales, etc.
- b) *Direct sources:* registration authorities, manufacturers, wholesalers, retailers, feed stores, feed mills
- c) ***End-use sources: Veterinarians, Aquatic Animal Health Professionals, Animal Producers (terrestrial and aquatic)***
Useful for accurate/specific data: captures extra/off label use
- d) *Other sources:* Pharmaceutical industry associations, veterinary and aquatic animal health professionals' associations

Field & farm level data



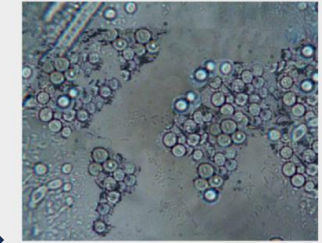


Imports & sales data

- Obtained mainly from **wholesalers, retailers, feed mills, customs declarations**
- Provides an estimation of AMU at a **country level**
- International reporting: data collected by WOAH through **ANIMUSE**

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World Organisation for Animal Health

Field level data

- Originates from monitoring antimicrobials **directly administered or prescribed** to animals
- Usually at a very **local level**



Recipient species

- Finfish, crustaceans, mollusks, amphibians



Route of administration

- Oral (medicated feed, water), Injection



Dosage and duration

- Amount of mg per kg fish per number of days



Purpose of treatment

- Treatment (therapeutic), control (metaphylaxis), prevention (prophylaxis)

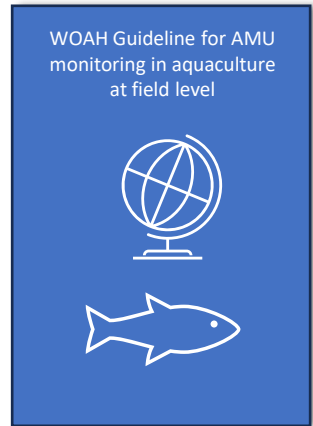


Type of use

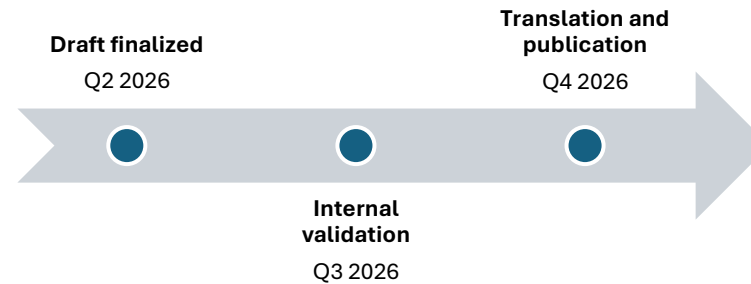
- On/Off label, Authorized/unauthorized



Guideline for AMU monitoring in aquaculture at field-level



Q4 2026

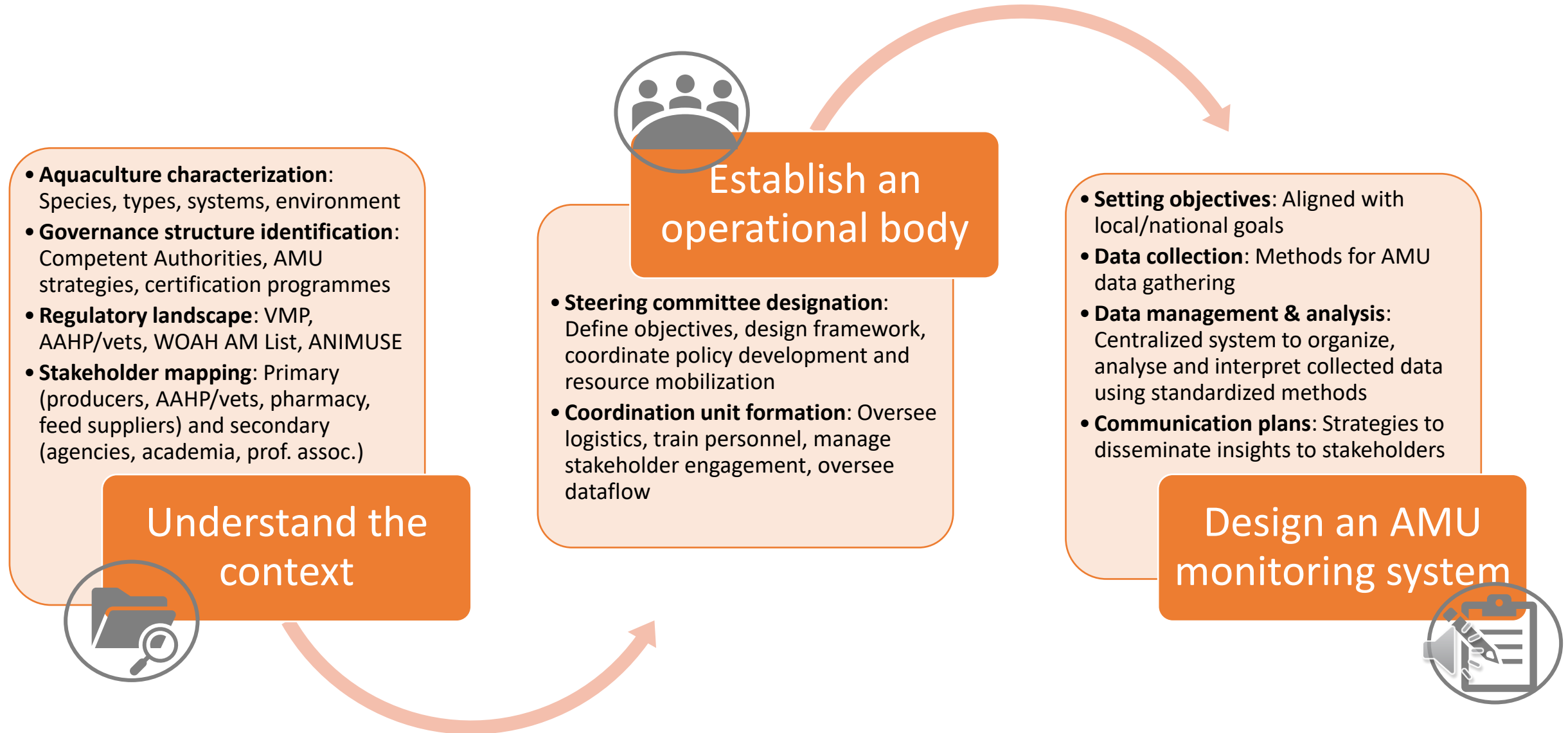


Technical Expert Group

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WOAH-HQ, June 2024. Missing: Sameh A. and Sophie St-H.





Objectives of AMU field level monitoring

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**Characterize
AMU patterns**
(Baseline setting)

Qualitatively

Targeted species,
importance to
human health,
route of
administration,
purpose

Quantitatively

Absolute or
relative to animal
biomass, feed
weight, water
volume



**Track AMU
trends over
time**

Repetitive surveys

"Snapshot" from
different farms
each round

**Time series
analysis**

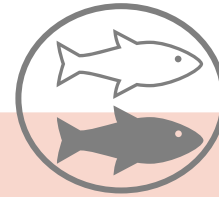
Trend analysis
from same farms



**Ensure
regulatory
compliance**

**Detect off-label
applications**

**Detect
unauthorized use**



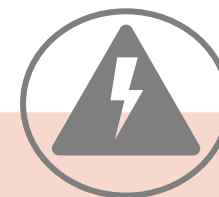
**Carry out
comparative
analysis**

Species: Finfish
spp, shellfish spp

Env.: Freshwater,
marine, brackish
Temp.: Cold,
temperate, tropical

Prod. Types:
Extensive vs
intensive; small-
scale vs large-scale

Prod. Systems:
Ponds, tanks,
raceways, netpens,
cages



**Support AMR
risk assessment**

**Identify selective
pressure for AMR**
Determine AMU-
AMR associations

**Evaluate
intervention
impacts**



Benchmarking

Self-assessment
(against local,
national, regional
or global averages)

**Stewardship
programmes**

Incentives:
discounts,
certifications





Thank you

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