Food and Agriculture Organization of the United Nations

# Antimicrobial Resistance (AMR)

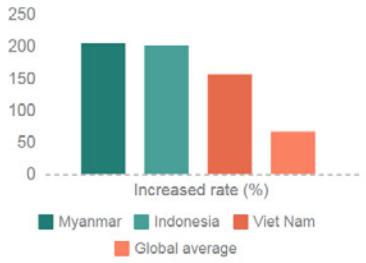
## Addressing Antimicrobial Usage in Livestock Production Industry

### WHAT IS AMR?

Antimicrobial resistance (AMR) is a natural phenomenon in which microorganisms such as bacteria, viruses, fungi and parasites adapt to antimicrobial agents and cause medications to be ineffective for its curing purpose. AMR is often the consequence of any use of antimicrobial drugs, exacerbated by inappropriate use.

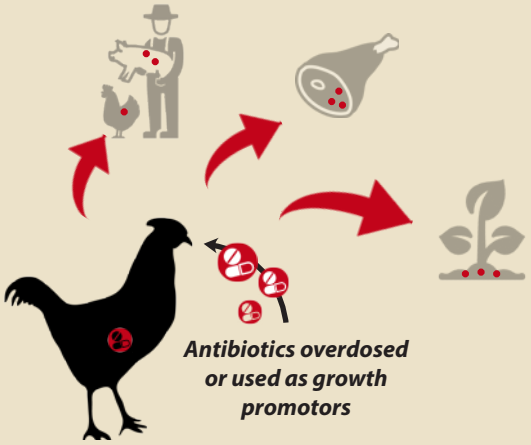
### GAPS TO ADDRESS ON AMR

Uncontrolled use of antibiotics for disease control and treatment or growth stimulation in livestock, have increased resistance to antibiotics of bacteria that can reach humans through the food chain. Especially in Viet Nam, the problem of antimicrobial overuse or abuse in poultry and pig farms is worse due to **weak law enforcement** and **drug-use monitoring**. Also, due to the growing demand for animal protein, Viet Nam is one of three countries in the region to be projected to see the greatest increase rate in antimicrobial use in livestock between 2010 and 2030. In order to ensure food safety and minimize the AMR effect in human, well designed interventions in antimicrobial usage in the livestock production industry is necessary.




*Projected rate of increased use of antimicrobials in livestock between 2010 and 2030*

### HOW CAN RESISTANCE SPREAD FROM THE FOOD CHAIN?




*When antibiotics are improperly used to animals, it could result in developing bacteria, aka superbugs, that are antimicrobial resistant. They could be passed to people who often have direct contact with animals or could linger in improperly cooked meat. Also, fertilizer or water containing animal feces can spread antimicrobial resistant bacteria to food crops.*

## FAO ACTIVITIES

**Objective** | A more prudent use of antimicrobial in the livestock production industry in Asia/Viet Nam to contain the development and spread of AMR

**#1 GOVERNANCE**
Establish national platform for the promotion of antimicrobial usage (AMU) stewardship

- *Develop National Action Plan on AMU and AMR*
- *Develop AMU database*

**#2 AWARENESS**
Enhance awareness amongst target groups of AMR impacts and AMU best practices

- *Conduct survey to understand the knowledge, attitude and practices on antibiotic usage in livestock production*
- *Develop Communication & advocacy plan and raising awareness materials*
- *Antibiotic Awareness week*

**#3 PRACTICE**
Strengthen capacity in surveillance of AMR and antimicrobial residue in livestock & livestock product

- *Assess laboratory capacity and conduct proficiency testing and trainings on AMR detection & characterization*
- *Develop and pilot an AMR monitoring program in livestock & food*
- *Support the amendment and revision of AMU/AMR legislation & regulation*

**#4 EVIDENCE**
Improve understanding and document AMU & AMR in livestock production industry

- *Quantify and characterize AMU in the livestock production & aquaculture in Viet Nam*
- *Assess financial and food security impacts from various AMU policy options*