Food and Agriculture Organization of the United Nations

FAO ELEARNING ACADEMY

Social and behavioural science to address AMR in agrifood systems

MASSIVE OPEN ONLINE COURSE

INFORMATION NOTE

30 June – 28 July 2025

on FAO elearning Academy collaborative platform

Scan the QR code to register or visit the following link:

https://bit.ly/AMRregistrationform

The Fleming Fund

UKaid from the British people

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Acknowledgements

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Overview

Antimicrobial resistance (AMR) is the ability of microorganisms to persist or grow in the presence of drugs designed to inhibit or kill them. These drugs, called antimicrobials, are used to treat infectious diseases caused by microorganisms such as bacteria, fungi, viruses and protozoan parasites. When microorganisms become resistant to antimicrobials, standard treatments are often ineffective, and in some cases, no drugs provide effective therapy. Consequently, treatments fail. This increases illness and mortality in humans, animals, and plants. For agriculture, this causes production losses, damages livelihoods, and jeopardizes food security. Moreover, AMR can spread among different hosts and the environment, and antimicrobial resistant microorganisms can contaminate the food chain.

AMR has been framed as a purely scientific challenge, one that can be solved with better drugs, stricter regulations, and more advanced diagnostics. But *what if some of the biggest barriers aren't biological at all? What if a pathway to solving AMR lies not just in laboratories but in the decisions made by farmers, veterinarians, and policymakers every single day?*

Indeed, a growing body of evidence underscores that human behaviour is a critical driver in the AMR crisis, particularly within key sectors like food production. For instance, everyday practices in agrifood systems, such as how antimicrobials are used in livestock or how biosecurity measures are implemented on farms, directly influence the development and spread of resistance, highlighting the urgent need for effective behavioural interventions.

This course, "Social and behavioural science to address AMR in agrifood systems" is therefore a critical initiative to understand the factors influencing AMR-relevant practices and behaviours of livestock producers and other stakeholders and promote sustainable behavioural change.

The course provides a foundational understanding of social and behavioural science methods, the theories that underpin them, and how they can be applied to mitigate AMR in livestock production by reducing the need for antimicrobials. It is designed for veterinarians, animal scientists, livestock extension workers, and social and behavioural scientists interested in agricultural production and policy.

By the end of this course, you will begin to see AMR not just as a medical or technical crisis, but as a fundamentally human challenge.

1. Scope

This MOOC explores how social and behavioural science can be applied to address antimicrobial resistance (AMR) in livestock systems by understanding factors that influence AMR-related behaviours. This course provides both theoretical foundations and practical scientific frameworks to help learners identify barriers to behaviour change and design theory-driven behaviour change interventions.

The course is divided into two parts:

1. **Practical application** which focuses on the application of behavioural science frameworks, including identifying which behaviours of whom should be addressed, when, and how. Participants will learn to identify what influences these behaviours, recognize barriers, and apply behavioural design principles and frameworks to develop interventions that address these barriers.

2. **Deepen your knowledge** which introduces key behavioural science concepts and theories, explaining why providing information alone is often insufficient to change behaviour.

2. Overall objective

This course is not a substitute for engaging with behavioural scientists, particularly for research or project design, which requires years of dedicated study. Instead, it is designed to help policymakers, veterinarians, and animal health and production professionals apply a social and behavioural science lens to their daily work, particularly in efforts to reduce the need for antimicrobials in agrifood systems. The MOOC provides a solid foundation for recognizing when social and behavioural science methods and frameworks are practical and how to collaborate more effectively with behavioural science experts.

Understanding human behaviour through a behavioural science lens often requires a shift in how we think about behaviour change. Therefore, this MOOC goes beyond providing technical skills and aims to foster a better understanding of the behaviours and psychological realities of stakeholders in the agrifood system.

3. Audience

The course's target audience is divided into two main professional profiles:

- Practitioners in livestock production and health sectors (Veterinarians and animal health professionals, animal production experts, government officials, non-governmental organizations (NGOs), inter-government organizations)

- Social and behavioural scientists and practitioners with an interest in agriculture production and health (e.g. consultancies, academia)

4. Course structure

The course will be delivered over four weeks and opens with an ***introductory section*** that will help participants familiarize with the platform and concludes with a certification section. The content is structured in two main parts, *Practical application* and *Foundation knowledge*, comprising four units which participants can complete at their own pace within the timeframe of the course. Although the units are kept open until the permanent closure of the course (giving extra time to review the content and attempt the final test), interactive facilitation by the course subject matter experts will be available only during the official duration (see timeline).

The units included in the two main parts of the course:

Practical application

- **Unit 1:** Setting the scene
- **Unit 2**: Applying behavioural science in 5 steps

Deepen your knowledge

- **Unit 1**: Understanding social and behavioural science
- **Unit 2**: Behavioural science theories

The following table summarizes the learning objectives of each unit and the competencies participants may acquire by completing them:

	Unit	**Learning objectives** At the end of this unit, learners will be able to:
Practical application	**Unit 1:** Setting the scene	• Critically analyze common approaches currently used to address AMR-related behaviours and identify their potential limitations. • Describe the value of understanding the current landscape of AMR interventions and behavioural science applications as a foundation for the 5-step practical process. • Summarize key insights from provided overview readings/case studies on how behavioural science is being conceptualized and applied in AMR research and stewardship.
	Unit 2: Applying behavioural science in 5 steps	• Develop a strategic outline for addressing an AMR-related behavioural challenge by applying a systematic five-step behavioural science process, encompassing problem definition, diagnosis of underlying drivers, intervention strategy design, and key considerations for implementation and evaluation within agrifood systems
Deepen your knowledge	**Unit 1:** Understanding social and behavioural science	• Describe key social and behavioural science concepts, including bounded rationality, the knowledge-action gap, the empty vessel assumption, and their relevance to AMR interventions. • Differentiate between behaviour change interventions (the intended outcome of most AMR strategies) and behavioural science (as an approach to identifying and designing evidence-based behaviour change interventions). • Critically assess the limited integration of social and behavioural science approaches in veterinary medicine and its implications for AMR strategies.
	Unit 2: Behavioural science theories	• Explain foundational behavioural science theories, including bounded rationality, dual-process models, cognitive dissonance, and psychological distance and how they shape decision-making. • Understand how these theories help explain the knowledge-action gap, particularly in the context of AMR.

	• Identify common biases and heuristics influencing decision-making, such as confirmation bias, availability heuristic, and present bias.

Each unit contains:

- one or more lesson in pdf format;
- dedicated discussion forums;
- exercises;
- quizzes; and
- further relevant material such as videos and publications.

In addition to the above activities, a **live session** is scheduled towards the end of the course to highlight the key points and essential concepts that were covered throughout the learning experience. This session will serve as a comprehensive summary, reinforcing participants' understanding of the material and answering any lingering questions participants may have.

5. Certification

The course has a competency-based final test, which, if passed, enables participants to obtain a digital badge (in JPEG/Metadata format) that attests to the acquisition of the related competencies. An FAO digital badge offers learners a visible, verifiable and sharable recognition of their certification. Digital badges can be displayed on social media, personal websites, e-mail signatures, e-portfolios and even on resumes to showcase the skills the participant has acquired to boost opportunities for employment and recognition.

6. Timeline

The official timeframe of the course is **from 30 June to 28 July 2025**. To allow participants maximum flexibility, extra time is allocated after the official closure date to complete the course and attempt to earn the digital badge. During this period and beyond the official end date, interactive facilitation by the subject matter experts will no longer be available.