World Organisation for Animal Health

October 2025

Prioritisation of diseases for which vaccines could reduce global antimicrobial use in animals

Concept Note & Terms of Reference

1. Purpose

The purpose of this concept note is to describe the principles for the update of WOAH's list of priority diseases for which vaccination can reduce global antimicrobial use (AMU), by a group of multidisciplinary experts (*ad hoc* Group), with a clear line of sight to the 2030 AMR targets set out in the 79th UNGA[1] Political Declaration on AMR.

The *ad hoc* Group will provide WOAH's membership with an updated, evidence-based list of priority animal diseases for which vaccines could achieve the greatest global reduction in AMU in pigs, chickens and fish. The *ad hoc* Group will also compile, where appropriate, preferred product characteristics (PPCs) as a preamble to eventually define target product profiles (TPPs), an analysis of the barriers and levers to vaccine uptake and produce a communication, dissemination and exploitation (CDE) plan for the most important disease/vaccine combination.

2. Background

Today, antimicrobial resistance (AMR) is already claiming lives on a scale comparable with HIV/AIDS and malaria combined. Forecasts for 2025–2050 show that 38.5 million human deaths will be associated with bacterial AMR (1). Resistant pathogens already threaten animal health, welfare and productivity, affecting livestock and aquaculture-based livelihoods worldwide. Without further action to curb AMR, its negative impacts on animal production and the global economy will intensify over time, predicted to reach US$ 575 billion and equalling the food needs of 746 million people by 2050 (2).

Recognising both the urgency and the need for global efforts to address AMR through a One Health approach, world leaders at the 79th UNGA adopted a Political Declaration on AMR (3) that commits every country to measurable action by 2030, including cutting global AMR-related human deaths by 10 %. The declaration stresses the need for accelerated research and development (R&D) and wider uptake of preventative measures, particularly vaccines. In that regard, signatories of the political declaration commit to '*ensure, by 2030, that animal vaccination strategies are defined with an implementation plan, including with international cooperation, taking into account WOAH's list of priority diseases for which vaccines could reduce antimicrobial use*' (commitment #72).

WOAH identifies prevention (through appropriate animal husbandry practises, improved biosecurity and the use of vaccines) as one of four strategic priorities (alongside cross-sector coordination, surveillance and sustainable financing) for tackling AMR (4). This emphasis was reinforced at WOAH's 92nd General Session (May 2025), whose Animal Health Forum ("Veterinary vaccines and vaccination: from science to action – reflections for change"(5)) highlighted how rising demand for sustainable animal protein, increased zoonotic risk, climate change and public expectations underscore the need to develop sustainable disease prevention and control strategies where vaccination plays a pivotal role. During the General Session, Members voted in favour of the adoption of Resolution 29 (6) which recommends that "WOAH updates the list of

[1] United Nations General Assembly

priority diseases for which vaccines could reduce AMU" (Recommendation 10), in alignment with commitment #72 from the 79th UNGA political declaration on AMR.

WOAH had previously convened *ad hoc* working groups to produce the first global lists of priority diseases for which vaccines could meaningfully lower antimicrobial use in swine, poultry, and fish (7) and cattle, sheep, and goats (8). However, the landscape has evolved: novel and re-emerging pathogens, climate-linked disease pressures, rapidly advancing vaccine technologies and fresh political commitments all demand an updated, forward-looking prioritisation. Refreshing the list of animal diseases for which vaccines would have the greatest impact on global AMU is therefore critical to align R&D and manufacturing investments in the mid- long-term, as well as to guide short-term implementation efforts for tangible impact before next UNGA High-Level meeting on AMR, planned for 2029.

The *ad hoc* Group will consider the following diseases:

- Diseases for which safe and efficacious vaccines are commercially available (existing vaccines or 'EV') but for which uptake is limited.
- Diseases for which vaccines are commercially available but where sub-optimal efficacy or other concerns (e.g. delivery technology) have been a barrier to wide uptake (in need of improvement vaccines or 'IV').
- Diseases for which no vaccine is currently commercially available (new vaccines or 'NV').

3. Objectives

As a first step, this update will concentrate exclusively on three production sectors - pigs, chickens and fish. These sectors were selected because:

- Pigs are projected to contribute 45 % of the total global increase in antimicrobial usage (AMU) between 2017 and 2030 (9);

- Chickens show strong production growth (10) and have already reduced AMU (11) in part through greater uptake of biosecurity measures. Yet smallholder vaccine uptake remains low (12). New, context-appropriate vaccines could consolidate gains;

- The growth in aquaculture is expected to continue with a forecast 17.4% growth by 2032 (compared to 2022 levels) (13). Production intensification and increasing incidence of aquatic animal pathogens are driving AMU and AMR across a diversity of farmed aquatic species. Farmed fish are highly susceptible to bacterial diseases, such as streptococcosis and piscirickettsiosis, making it a priority for global AMU reduction. (14).

The *ad hoc* Group will pursue five specific objectives:

- **Explore past influence (short uptake report)**: assess use and utility of the 2015 and 2018 priority-disease lists by funders, research consortia, food producing and pharmaceutical industry, and governments to steer vaccine research, development and manufacturing investment.

- **Update and prioritise the disease portfolio**: rank candidate diseases for pigs, chickens and fish and deliver a "Top 6" list (two priorities per production sector) on which advocacy and investment efforts over the next five years should concentrate.

- **For NV and IV in the "Top 6" list** :

a. **Define PPCs** that set out desired vaccine performance and operational characteristics (including indication, target population, safety and efficacy, formulation and presentation, dose regimen, co-administration, route of administration, product stability and storage, and access and affordability considerations for smallholders as well as commercial operations).

b. **Define a CDE plan** (2026-2030), covering the promotion and visibility of the updated list and TPPs to all relevant stakeholders (i.e., regulators, funders, developers, etc.) and alignment of partners around R&D incentives and manufacturing scale-up.

- **For EV in the "Top 6" list**, an **analysis of the barriers and levers to vaccine uptake** to inform the design of future communication and vaccine programmes.

Together these objectives will ensure that WOAH Members and relevant partners focus resources on the vaccines most likely to meaningfully reduce global AMU in high-growth animal sectors, while providing a concrete roadmap for turning scientific priorities into deliverables on the farm and in the marketplace.

4. Composition & Membership

The *ad hoc* Group will strive for good representation of sectors, regions and gender. It will be composed of a maximum of 15 internationally recognised experts

- animal health/diseases (n=6; two per production sector),
- food producing industry (n=3; one representative per production sector), and
- vaccine R&D and manufacturing (n=3)
- veterinary products regulators (n=3)

Identification of candidates will be done through a public open call, with proactive dissemination across WOAH Collaborating Centres, Reference Laboratories, regional and sub-regional offices, relevant organisations, or any other stakeholder within WOAH's network.

Upon appointment, selected *ad hoc* Group members should:

- Sign off the WOAH Undertaking on Confidentiality of information (if not done already)
- Complete the declaration of Interest Form
- Read and study in detail all dossiers provided by the WOAH prior to the meetings
- Agree on the appointment of the chair and rapporteur of the meeting
- Contribute to discussions
- Contribute to drafting texts
- Understand that the membership of the group may be retained between ad hoc group meetings to ensure continuity of the work

5. Mode of Operation

- The operating language of the *ad hoc* Group will be English.
- The role of *ad hoc* Group Members will be science and evidence based, should not be driven by policies of national level, and *ad hoc* Group Members will actively contribute on the review of the current knowledge on the topics, actively propose, drive specific sections and draft the documents within the specified deadlines.
- The *ad hoc* Group will appoint a Chair and a Rapporteur for the whole duration of their duties. Roles & responsibilities are described later in this document
- The *ad hoc* Group will be supported by a Secretariat. Roles & responsibilities are described later in this document.
- The *ad hoc* Group will meet virtually at least four times. These meetings are expected to last 3h.
- The *ad hoc* Group will meet at least once in-person, at WOAH HQ in Paris.
- A written summary of each meeting will be provided to the Head of the AMR&VP Department via the Secretariat.
- Offline work is expected to occur between meetings, enabling delivery of the workplan. This will include email exchanges to complement the discussions and information exchange with the creation of a dedicated SharePoint folder accessible to external users.
- Progress reports will be made by the *ad hoc* Group Chair and the Secretariat to the Scientific Commission for Animal Diseases (SCAD) during their regular meetings in February & September. Other Specialist Commissions might be informed via the *ad hoc* Group Secretariat, if deemed necessary.
- Progress reports will be made by the *ad hoc* Group Chair and the Secretariat to the AMR Working Group during their in-person meetings in April and October.
- The *ad hoc* Group written outputs written will be reviewed by set of external reviewers identified by WOAH
- Final version of workplan deliverables will be submitted to the Standard Setting & Implementation Deputy Director General, and WOAH Director General, before final submission to SCAD for update and presentation of the work to the World Assembly of Delegates (WAD) during their General Assembly.

6. Responsibilities

Chair:

- The Chair, selected within the *ad hoc* Group, liaises with the Secretariat on behalf of the *ad hoc* Group.
- The Chair revises and approves the agenda developed by the Secretariat for the *ad hoc* Group meetings.
- The Chair moderates the *ad hoc* Group meetings with support of the Secretariat and enumerates the agreed actions made by the *ad hoc* Group to be included it is meeting report.
- The Chair will represent the *ad hoc* Group, in collaboration with the Secretariat, when meeting the SCAD

Rapporteur:

- The Rapporteur, selected within the *ad hoc* Group, consolidates feedback among *ad hoc* Group on the different reports established, validating their content with the Chair and the Secretariat.

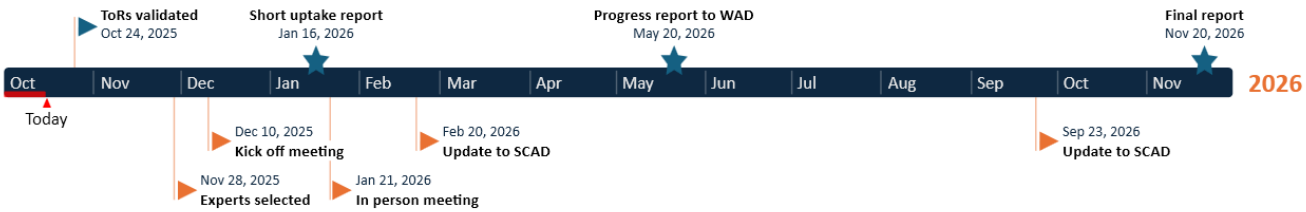
Secretariat:

- The Secretariat will set up and send formal meeting invitations on behalf of WOAH to members of the *ad hoc* Group via email at the beginning of the process. For the following meetings, invitations will be sent in emails only.
- The Secretariat will assist in the collation and preparation of meeting working documents and agenda with the input of the Chair.
- The Secretariat may provide suggestions but will not interfere in the technical development of the guidelines. The Secretariat will limit its activities to facilitating the work of the *ad hoc* Group.
- The Secretariat will prepare, in collaboration with Rapporteur, *ad hoc* Group meeting reports to be reviewed by the Head of the AMR&VP Department.
- The Secretariat will lead the *ad hoc* Group during the whole process, promoting teamwork and engagement.

7. Workplan & Deliverables

The proposed time for completing this task is 12 months (November 2025 – Novembre 2026). Workplan proposed below could be adjusted by *ad hoc* Group members in agreement with Secretariat, during the development process, depending on progress and external context.

1. SCAD is informed – September 2025
2. Terms of Reference validated – October 2025
3. Selection and list of experts validated – November 2025
4. Kick off meeting – December 2025
5. Short uptake report – January 2025
6. In-person meeting report – January 2026
7. Updated and prioritised disease portfolio and first draft of the 2026-2030 CDE plan– February 2026
8. Progress report to SCAD – February 2026
9. First draft PPCs for the (up to six) priority diseases (NV and IV) – March 2026
10. First draft analysis of the barriers and levers to uptake for the (up to six) priority diseases (EV) – March 2026
11. External reviewers feedback on PPCs, analysis of barriers and levers and 2026-2030 CDE plan– April 2026
12. Progress report to WAD, via SCAD – May 2026
13. Final draft PPCs, analysis of barriers and levers and 2026-2030 CDE plan – June 2026
14. Final outputs validated by SCAD – September 2026
15. Final *ad hoc* Group report – November 2026
16. Resolution for adoption presented to WAD via SCAD – May 2027



8. Expert's roles in the production of the various deliverables

Deliverables

Type of experts (number)	*Short uptake report*	*Updated disease portfolio*	*Top-6 priority disease list*	*Analysis barriers/levers to uptake*	*Defined TPPs*	*CDE plan*	*Final group report*
Animal health/diseases experts (6)	Contribute	Contribute	Contribute	Contribute	Contribute	Contribute	Contribute
Industry representatives (3)	Contribute	Contribute	Contribute	Contribute	Contribute	Contribute	Contribute
Vaccine R&D and manufacturing representatives (3)	Contribute	Contribute	Observe	Contribute	Contribute	Contribute	Contribute
Veterinary products regulators (3)	Observe	Contribute	Observe	Contribute	Contribute	Contribute	Contribute

The *ad hoc* Group outputs will be reviewed and completed by inputs from a set of external reviewers, including other animal health experts, food producing industry representatives, vaccine R&D and manufacturers, veterinary products regulators, funders, social scientists and other stakeholders part of the wider enabling environment. External reviewers may be punctually invited to attend an *ad hoc* group meeting when it is felt their complementary expertise is valuable to the validation of a specific output.

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