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Biological Standards Commission - 2025

Prof Emmanuel Couacy-Hymann

92nd General Session



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Agenda

- 1. WOAH Standards Setting Process
- 2. Updates of the work of the BSC
- Main changes emanating from the 2025
 General Session
- 4. 2025-2026 Workprogramme



1.WOAH Standards Setting Process



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Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

Aims to facilitate international trade in animals and animal products and to contribute to the improvement of animal health services world-wide.

The principal target readership is laboratories carrying out veterinary diagnostic tests and surveillance, plus vaccine manufacturers and regulatory authorities in the WOAH Member Countries.

The objective is to provide internationally agreed diagnostic laboratory methods and requirements for the production and control of vaccines and other biological products.





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Participation of all the Members





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Review cycle

<u>**Review cycle**</u> (from the September meeting to the General Session)

Two rounds of commenting aimed at proposing updates for adoption within 1 year:

- First-round in October: Members submit their experts' indepth reviews
- Second-round in March as the version to be presented for adoption: <u>only essential amendments</u> that are crucial to the update. All remaining comments will be filed and addressed when the chapter is next updated





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Structure of the Manual - 2025

- General Standards (10 Chapters)
- Specific Recommendations
 - Laboratory diagnostics (3 Chapters)
 - Validation of diagnostic tests (8 Chapters)
 - Veterinary vaccines (4 Chapters)

121 Chapters of diagnostic procedures and source of information for any veterinary diagnostic laboratory

- WOAH Listed Disease and other disease of importance
 - Multiple species (26 Chapters)
 - Apinae (6 Chapters)
 - Aves (11 Chapters)
 - Bovidae (14 Chapters)
 - Camelidae (2 Chapters)

- Equidae (10 Chapters)
- Leporidae (2 Chapters)
- Caprinae (12 Chapters)
- Suidae (8 Chapters)
- Other disease (5 Chapters)

2.Updates of the work of the Biological Standards Commission



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Activities New term of the Biological Standards Commission

Since May 2024, the BSC met:

- 9 13 September 2024
- 3 7 February 2025

Electronic exchanges between meetings



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Chapters proposed for adoption

WOAH Delegates Portal

A total of 28 chapters were proposed and adopted at the 92nd General Session

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The chapters are available through a link in the BSC report, which is available on the Delegates website and in WOAH's portal

BSC report





Spanish

English



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8 General chapters and 20 disease specific chapters

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#	Chapter number	Chapter title	Level amendments
1	1.1.3.	Transport of biological materials	Minimal
2	1.1.7.	Standards for high throughput sequencing, bioinformatics and computational genomics	Moderate
3	1.1.9.	Tests for sterility and freedom from contamination of biological materials intended for veterinary use	Moderate
4	2.1.1.	Laboratory methodologies for bacterial antimicrobial susceptibility testing	Extensive
5	2.2.1.	Development and optimisation of antibody detection assays	Moderate
6	2.2.2.	Development and optimisation of antigen detection assays	Extensive
7	2.2.3.	Development and optimisation of nucleic acid detection assays	Extensive
8	2.2.5.	Statistical approaches to validation	Extensive
9	2.2.8.	Comparability of assays after minor changes in a validated test method	Extensive
10	3.1.2.	Aujeszky's disease (infection with Aujeszky's disease virus)	Moderate
11	3.1.8.	Foot and mouth disease (infection with foot and mouth disease virus)	Moderate
12	3.1.9	Heartwater	Minimal
13	3.1.21.	Rinderpest (infection with rinderpest virus)	Moderate
14	3.2.4.	Infestation of honey bees with Aethina tumida (small hive beetle)	Extensive



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#	Chapter number	Chapter title	Level amendments
15	3.2.5.	Infestation of honey bees with Tropilaelaps spp.	Extensive
16	3.3.1.	Avian chlamydiosis	Moderate
17	3.3.2.	Avian infectious bronchitis	Moderate
18	3.3.4.	Avian influenza (including infection with high pathogenicity avian influenza viruses)	Extensive
19	3.4.9.	Enzootic bovine leukosis	Moderate
20	3.4.13.	Theileriosis in cattle (infection with Theileria annulata, T. orientalis and T. parva)	Minimal
21	3.4.14.	Trichomonosis	Extensive
22	3.6.1.	African horse sickness (infection with African horse sickness virus)	Extensive
23	3.6.5.	Equine infectious anaemia	Extensive
24	3.8.2.	Caprine arthritis/encephalitis and Maedi-visna	Moderate
25	3.8.5.	Enzootic abortion of ewes (ovine chlamydiosis) (infection with Chlamydia abortus)	Moderate
26	3.9.2.	Classical swine fever (infection with classical swine fever virus)	Moderate
27	3.9.7.	Swine vesicular disease	Moderate
28	3.9.1.	African swine fever (vaccine section only)	Extensive



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•Thoroughly updated Section C '*Requirements for vaccines*' of the African swine fever (ASF) chapter, covering the manufacture of pure, potent, safe, and efficacious vaccines for ASF, including key vaccine performance and quality criteria

•Presented the newly drafted section for four rounds of comment

•Acknowledged that live modified vaccines are already in use in some Members highlighting the Commission's decision to establish a minimum standard in the WOAH *Terrestrial Manual*, with a commitment to reviewing it regularly as new scientific evidence becomes available

•Main focus on Safety and Reversion-to-virulence of the vaccine strain:

•Review to Introduce mock-vaccinated control groups in the piglet and sow safety studies

•Clarified the reversion-to-virulence experiment, specifying that: The same quantity and viral titre of the master seed vaccine virus used in the first passage (P1) must be used : An equal quantity and viral titre (diluted if necessary) of the positive material used for the final passage (P5) should be used to inoculate the two groups of pigs



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Following second-round Member comments, the Commission proposes:

In Section C.1. 'Background', add a new paragraph mentioning that: "There is evidence that first generation MLV vaccines may revert to virulence and negatively affect the reproductive performance of pregnant sows (Nguyen *et al.*, 2025; Van den Born *et al.*, 2025). Additionally, as first generation MLV vaccines are unlikely to cause sterile immunity, immunised pigs are likely to shed the vaccine viruses, which may result in horizontal transmission of the vaccine viruses. This could affect reproductive performance of pregnant sows and may also increase the risk or recombination of the vaccine virus with circulating strains." And add the references.



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Deletion of Chapter 2.3.2. 'The role of official bodies in the international regulation of veterinary biologicals'

 \rightarrow Commission agreed to remove it from the Terrestrial Manual as the chapter is <u>not fit for purpose</u>. The role of the *Terrestrial Manual* in providing a standard on regulation of biologicals should be further discussed

CHAPTER 2.3.2.

THE ROLE OF OFFICIAL BODIES IN THE INTERNATIONAL REGULATION OF VETERINARY BIOLOGICALS



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Changes to the Glossary of the WOAH Terrestrial Manual

Biosafety

Laboratory biosafety describes the principles and practices for the prevention of unintentional exposure to biological materials, or their accidental release.

Biosecurity

Laboratory biosecurity describes the controls on biological materials within laboratories, in order to prevent their loss, theft, misuse, unauthorised access, or intentional unauthorised release.

Laboratory biosafety

See Biosafety Laboratory biosafety describes the principles and practices for the prevention of unintentional exposure to biological materials, or their accidental release.

Laboratory biosecurity

See Biosecurity Laboratory biosecurity describes the controls on biological materials within laboratories, in order to prevent their loss, theft, misuse, unauthorised access, or intentional unauthorised release.

3. Main changes from the 2025 General Session









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Reference Centres

FIGURES FROM END OF MAY 2025			
	Reference Laboratories	Collaborating Centres	Total
Number	270	80	350
Countries	39	33	48
Diseases/To pics	109	All 6 main focus areas: – 36 specialities	
Experts	206	-	_

FIGURES FROM END OF MAY 2025			
Region	Reference Laboratories	Collaborating Centres	Total
Africa	14	7	21
Americas	49	23	72
Asia–Pacific	64	16	80
Europe	138	27	165
Middle East	7	5	12

3 New Reference Laboratories:

- Equine piroplasmosis INDIA
- Equine rhinopneumonitis JAPAN
- African swine fever SPAIN

5 New Collaborating Centres:

- Wildlife Trade and Wildlife Health SINGAPORE
- Wildlife Health Surveillance and Epidemiology THAILAND
- One Health KENYA
- Advanced Training in Livestock Health CANADA
- Research, Diagnosis and Surveillance of Wildlife Pathogens – USA



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Reference Centre activities

- Performance review of annual reports submitted by Reference Centres
- Amendments to the annual report template to improve the quality of data collected
- Review of new applications for Reference Centre status
- Review of nominations for changes of experts at Reference Laboratories
- Review of new applications for laboratory twinning projects
- Monitoring the functioning of Reference Centre networks for ASF, PPR, FMD, Rabies, welfare and wildlife.





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Important change to the requirement regarding accreditation to ISO 17025 or equivalent quality management system

As Reference Laboratories are designated for a specific disease, they must hold accreditation for the disease's frontline diagnostic test

Recognising that some laboratories would not currently meet that criterion, the Biological Standards and Aquatic Animals Commissions agreed to give a <u>3-year deadline</u> before introducing the new requirement.

The new criterion will be as follows:

"Provide documented proof (certificates) of accreditation to the ISO 17025 or equivalent quality management system, ideally with relevant tests (at least one test described in the corresponding Manual chapter) included in the scope of the accreditation."



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 WOAHapproved
 International Standard reagents
 WOAH aims to reinforce the availability of high-quality diagnostic reagents for its Members, providing them with a trusted global repository while also offering Reference Laboratories an opportunity to showcase their validated reagents

WOAH supports international collaboration and strengthen laboratory capacities worldwide



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6 new lab twinning projects approved:

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- 1. Australia Indonesia (avian influenza)
- 2. Canada Nigeria (Anthrax)
- 3. China Kazakhstan (equine infectious anaemia)
- 4. Italy Saudi Arabia (aquatic diseases)
- 5. Italy Uzbekistan (quality management, biosafety and biosecurity)
- 6. Italy Algeria (quality management, biosafety and biosecurity)





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Laboratory Twinning Programme Implementation 2024-2025





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Identified opportunities and needs of WOAH Reference Centres

Type of Centre	Disease/ Area	Region
Reference Laboratory	Equine encephalitides	All
Reference Laboratory	PPR	Africa
Reference Laboratory	Nagana	Africa
Reference Laboratory	Rabies	Africa
Reference Laboratory	Glanders	Americas & Asia and the Pacific
Reference Laboratory	West Nile fever	Americas
Reference Laboratory	Caprine arthritis/encephalitis and maedi Visna	All
Reference Laboratory	Lumpy skin disease	All
Reference Laboratory	Mammalian tuberculosis	Africa
Collaborating Centre	Artificial Intelligence	All



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Scientific Commission for Animal Disease (SCAD)

- Case definitions: Paratuberculosis and caprine arthritis/encephalitis and maedi visna
- Listing assessment: Nairobi sheep disease

Terrestrial Animal Health Standards Commission

- Provided advice on a number of topics requested by the Code Commission
- Ensure that relevant amendments in the corresponding chapters of the *Terrestrial Code* and the *Terrestrial Manual* are well coordinated

Aquatic Animals Commission

• Discussion of management of the Reference Centres and other transversal topics

4. 2025-2026

Work programme









Health

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Work programme

Terrestrial Manual

- Updating the chapters of the Terrestrial • Manual
- Report format and publishing of • comments

Reference Centres

- Enhance annual performance review •
- **Evaluate Annual Reports** •
- Increase the visibility and accessibility of ۲ current Centres
- Explore mechanisms improve • to collaboration by bringing together the Centres with the same main focus area

Case definitions

Follow up the implementation of the SOPs for case definitions

Standardisation/Harmonisation

- Project to extend the list of WOAHapproved reference reagents
- Project to develop replacement International Standard Bovine and Avian Tuberculin

Projects

Virtual Biobanks



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Thank you