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**REPORT OF THE MEETING OF THE OIE AD HOC GROUP ON
VETERINARY PARAPROFESSIONALS¹
Paris, 12–14 February 2018**

The OIE *ad hoc* Group on Veterinary Paraprofessionals met from 12–14 February 2018 at the OIE Headquarters in Paris, France.

1. Welcoming remarks and adoption of agenda

Dr Tomoko Ishibashi, OIE Senior Manager, Horizontal Coordination and Special Projects, welcomed the participants on behalf of the OIE and spoke about the importance of veterinary paraprofessionals (VPPs) in the current working programme of the OIE. She updated the Group on the events that have occurred since the last core *ad hoc* Group meeting in July/August 2017, such as the Special Session for Curricula Development and the Regional Conference on Veterinary Paraprofessionals in Asia. Dr Ishibashi then presented the objectives of the present meeting, being to examine the comments provided by Member Countries and to modify the draft Competencies for VPPs for publication at the General Session in May 2018 and to then examine the work on draft core curricula for VPPs prepared by the Special Session experts to date.

Dr Monique Eloit, Director General of the OIE, welcomed the participants and highlighted the pragmatic approach to the development of the competencies and the model curricula for VPPs for Member Countries, so that they may be encouraged to implement the guidelines by refining existing curricula or building training programmes where none exist. She underlined that VPPs play a crucial role in global eradication and national disease control programmes and are needed in the short term in order to assist the Veterinary Services of Member Countries to advance. Therefore, the competencies and the model curricula guidelines should be realistic, pragmatic and provide a starting point and first step to theoretical and practical learning in the long-term training and recognition of VPPs in Member Countries.

Dr Eloit also informed the participants that global disease control efforts, such as the peste des petits ruminants (PPR) Eradication and Control strategy, depend on the availability of competent veterinary paraprofessionals to ensure the successful implementation of control strategies. She reiterated that the provision of good guidelines for VPPs is important, and expressed her expectation to have the Competency Document on which Member Countries can build training programmes ready for their implementation of National Strategic Plans for PPR.

In response to a question raised by the Group regarding the treatment of so-called “community-based animal health workers” (CAHWs) which seemed not yet clear enough among Member Countries, Dr Eloit noted that the discussion of competency and training of CAHWs and their position in the national veterinary services, while it is well acknowledged that they contribute to the work in certain settings, is not included in the expected work of this Group. It is the responsibility of the Member Countries to develop their training programmes according to their own administrative frameworks using the guidelines on the competencies and curricula of veterinary paraprofessionals under development. Dr Eloit further stated that the OIE will advocate with donors for the Member Countries to develop these programmes with the Member Countries. She also noted the importance of a pragmatic and stepwise approach.

¹ Note: This *ad hoc* Group report reflects the views of its members and may not necessarily reflect the views of the OIE. This report should be read in conjunction with the February 2018 report of the Terrestrial Animal Health Standards Commission because this report provides its considerations and comments. It is available at <http://www.oie.int/en/international-standard-setting/specialists-commissions-groups/code-commission-reports/meetings-reports/>

It was agreed that Dr Johan Oosthuizen continue to act as the chairperson and it was confirmed that the OIE staff would be the rapporteur. The adopted Agenda and List of Participants are presented in Annexes I and II of this report, respectively.

2. Report of progress since the second meeting in July-August 2017

Dr Ishibashi summarised the progress of the work as well as relevant events since the last Core Group meeting in July/August 2017. They are:

Discussion at the Terrestrial Animal Standards Commission (the Code Commission), September 2017

The Group's work at its July/August meeting was presented at the September meeting of the Code Commission. The report of the core Group with a one-page questionnaire to facilitate commenting on the draft Competency Document was then attached to the report of the Code Commission meeting for Member Country consultation. Eleven replies to the questionnaire were received for the Group's review.

Recommendations of Regional Commission Conferences in 2017

The important role VPPs have in the veterinary services was mentioned at both the 14th Conference of the Regional Commission for the Middle East in Turkey in October 2017 and the 30th Conference of the Regional Conference for Asia, the Far East and Oceania, in Malaysia in November 2017. Recommendations of these Regional Conferences include the need for competencies related to epidemiological surveillance, farm biosecurity, and disease detection activities at markets as well as border checkpoints.

Discussion at the Special Session for Curricula Development, 6-8 November 2017

The Special Session for Curricula Development was held from 6-8 November 2017. The Session experts examined the draft Model Curriculum Matrix, prepared by the IIAD on the basis of the core Group's work in July/August 2017. The Session experts identified 23 courses all together and developed an initial draft for the course descriptions. It was agreed that after reporting to the core Group, further work is required with experts from the laboratory side. During the Session, the experts provided some suggestions for improvement of the Competency Document.

Regional Conference on Veterinary Paraprofessionals in Asia

The OIE and GALVmed held a Regional Conference on Veterinary Paraprofessionals in Asia in Bangkok, Thailand, from 6 to 8 December 2017, following the success of a similar conference held in South Africa in 2015. Nearly 100 participants, including some from National Veterinary Services, VPP training institutes, veterinary statutory bodies and NGOs, shared the situation of VPPs in the regional Member Countries, including roles, challenges, administrative frameworks and training/education. The Conference provided an opportunity for the OIE to present the work on developing competencies and core training curricula for VPPs. While the Conference participants were generally supportive of the OIE's on-going work on VPPs, there was a concern expressed that the level assumed by the draft competency document might be too high for many of the regional Member Countries to achieve.

3. Examination of the draft Competency Document

The Experts addressed all comments provided by Member Countries in the questionnaire and other feedback from the experts of the Special Session for Curricula Development and OIE partners, as well as the relevant recommendations from the Regional Conferences. After thorough review, changes were made in the introductory part and almost all Spheres of Activity (SOAs), but in general, such changes were clarifications or addition of missing elements.

Major discussion points were as follows:

In the Scope section, the Group agreed to:

- clarify the nature of this document, which is not standards, but guidelines for Member Countries and that competencies for three different tracks are included in the one document: it should not be considered that all competencies listed have to be achieved; Member Countries should decide how to apply them according to their needs, by track, by level and by activity.
- develop a sub-section on “how to use this document” to facilitate readers’ understanding about above-stated nature of the document;
- while the terms “basic” and “advanced” were taken from the “OIE Recommendations on the Competencies of graduating veterinarians (‘Day 1 graduates’) to assure National Veterinary Services of quality,” considering the wide variation of activities and levels of the VPPs among Member Countries, clarify the meaning of “advanced” and remove the reference to “basic” to avoid misunderstanding that all basics have to be achieved by all VPPs before commencing work in the field;
- clarify that the target of this document covers both public and private VPPs who receive training based on a curriculum accredited by the government or the veterinary statutory body; and
- remove the reference to CAHWs, which creates confusion, as the definition of CAHW is beyond the scope of the document and as, per the Director General’s comments, it is the Member Countries’ responsibility to develop training programmes according to their own administrative frameworks.

The Group also noted that laboratory VPPs often come from training programmes for medical laboratory technicians, which provide training to achieve a substantial portion of the competencies listed in this document, but gaps may exist in terms of working in the veterinary laboratory setting.

Concerns were also raised regarding the *Terrestrial Code* glossary definition of veterinary statutory body. As currently written, it is not clear if a single veterinary statutory body is proposed for regulation of both veterinarians and veterinary paraprofessionals or a separate veterinary statutory body for each group. It was considered important for there to be a single veterinary statutory body as it would require representation, interaction and consensus between veterinarians and veterinary paraprofessionals on how their professional activities serve the best interest of the country. It was noted by some members of the Group that this very same concern was voiced at the regional conferences on veterinary paraprofessionals in Africa and Asia and that the definition could be reconsidered.

In the Competency section, the Group agreed to:

- remove all references to “shall” in all competency descriptions, as the competencies are an expected state of achievement without any implication of being compulsory;
- clearly include issues to which VPPs definitely contribute, such as “zoonoses” in Sphere of Activity (SOA)1, and “surveillance” in SOA14 and SOA16;
- broaden the definition of biosecurity, based on the OIE *Terrestrial Manual*, so that the inclusion of laboratory biosecurity in SOA3 is clearly recognised;
- adjust the expected level of responsibility by modifying wording, such as replacing “infrastructure” with “facilities” and removing “manage” in SOA6, limiting the tests the results of which VPPs interpret to basic tests in SOA10, and replacing “analysis” by “management” in SOA13; and

- reorder the competencies in SOA14 in order to improve their logical flow from learning to apply disease control skills to learning the specifics of each disease that might be the subject of a national control programme, to finally participation in such programmes.
- rephrase competency descriptions of SOA16 to accommodate various administrative frameworks regarding food hygiene.

The Group considered that VPPs who manage laboratory animals are considered as within the animal health track, rather than the laboratory track, and did not add a specific reference to laboratory animals in competencies relevant to the laboratory track.

After these modifications, the Group felt confident that the revised Competency Document is ready to be published for the use of Member Countries. After presentation at the Code Commission on 22 February 2018, the internal process will be commenced to seek approval by the Director General for publication as an OIE guidelines document (See [Annex III](#)).

On Day 3, Dr Eloit provided further guidance about the form of the Competency Document to facilitate its use by Member Countries. She was fully supportive of the Group's idea to include an annex with examples for each track as possible situations in which to apply the Competency Document in VPP training programme evaluation and development. To avoid any confusion about the nature of such cases, she advised that a clear statement should be given at the beginning of the annex that they are simply examples, not compulsory models. She also stated that the Competency Document to be published soon does not have to be considered as the final, fixed document: in the future, there are possibilities to continue additional work if necessary.

Following the guidance of Dr Eloit, the Group split into track-by-track expert subgroups and developed examples for each track. The results were examined by the entire Group for applicability and consistency.

The three track-specific subgroups then conducted a preliminary exercise to allocate all competencies relevant to each track to four sequential stages of the curriculum, i.e. early, mid, late and advanced, allowing duplication as some may need to be taught throughout the curriculum. One additional purpose of the exercise was to determine how many competencies needed to be addressed in the early stages of the curriculum to make VPPs from each track employable at the entry level.

The result of this preliminary exercise will be provided to the Special Session for Curricula Development for its consideration.

4. Examination of curricula matrix

The Group reviewed the draft course descriptions developed by the Special Session experts for each of the 23 courses they identified as necessary for achieving the competencies. The Group suggested that the style should be harmonized, starting with a short description of the course itself followed by the objectives on what students should know or be able to perform upon course completion.

The Group was asked to review the correspondence between the revised competencies and the 23 identified courses to determine whether they are appropriate and sufficient. Because of time constraints, the Group's members were requested to independently review and return comments in two weeks. It was agreed that in case an additional course is suggested, a draft course description should be included for the ease of further work by the Special Session experts.

5. Regional/country consultations

Dr Ishibashi updated the Group about the future plan for regional and country consultations. Noting that consultation is critical for actual use of the OIE guidelines documents, she advised that such consultation has fortunately been included among the tasks of this DTRA project. Regarding regional consultations, Dr Ishibashi explained that the regular (biennial) Conferences of Regional Commissions will be used as an opportunity to present the ongoing work: there will be two Regional Conferences in 2018, one in Europe in September and another in the Americas in November, with one in Africa in early 2019.

Regarding country consultations, she noted that once the curricula work is more advanced, in addition to circulation of the draft document among Member Countries as was done for the draft Competency Document, three or four pilot country missions will be take place during 2018 to test and adapt as necessary the work developed by the Group. Dr Ishibashi expressed the OIE's hope that once all these consultations have been held and finalised by the Group's fine-tuning, the Core Curricula Guidelines are targeted for completion by May 2019.

The Group appreciates the OIE's intention to share the tentative plan and agreed that pilot missions would be very useful, as they have the possibility of creating models for the other Member Countries in the region or sub-region.

6. Other

Dr Isabelle Dieuzy-Labaye, Senior Advisor, Public-Private Partnerships, joined the Group to provide information about the partnership currently explored between the OIE, the industry association HealthForAnimals (H4A), the World Veterinary Association (WVA) and the Bill & Melinda Gates Foundation (BMGF), to contribute to the implementation of VPP training in sub-Saharan Africa. She explained that the general objectives are: to use the convergence of interests of all four organisations for the reinforcement of animal-health-services delivery in the field; and to further the current OIE and BMGF focus on promoting sustainable Public-Private Partnerships in the field of animal health by designing a collaborative Public-Private initiative aimed at providing support to and reinforcement of the current global OIE initiative on VPP training and capacity-building within the local Veterinary Services. She noted that support is envisaged from OIE Collaborating Centres on Training and existing Veterinary and Veterinary Paraprofessional Education Establishments.

The Group is supportive of this opportunity and expressed interest in helping provide necessary data, especially concerning the parts of the curriculum that might receive support from H4A or WVA, as well as in the gathering of information to map existing official VPP Education Establishments in Africa.

.../Annexes

OIE AD HOC GROUP ON VETERINARY PARA-PROFESSIONALS

Paris, 12–14 February 2018

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MEETING OF THE OIE AD HOC GROUP ON VETERINARY PARA-PROFESSIONALS

Paris, 12–14 February 2018

Draft agenda

- Item 1 Welcome, introductory remarks and adoption of agenda
- Item 2 Report of progress since the second meeting in July-August 2017
- Discussion at the Terrestrial Animal Standards Commission, September 2017
 - Recommendations of Regional Commission Conferences in 2017
 - Discussion at the Special Session of Curricula Development, 6-8 November 2017
 - Discussion at the Regional Conference on Veterinary Paraprofessionals in Asia, 6-8 December 2017
- Item 3 Examination of the draft Competency Document
- Review of Member Country comments
 - Way forward
- Item 4 Examination of curricula matrix
- Reviewing draft course descriptions
 - Review of the correspondence between the competencies and courses
 - Way forward
- Item 5 Regional/country consultations
- Item 6 Other matters
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VETERINARY PARAPROFESSIONALS COMPETENCY DOCUMENT

INTRODUCTION

BACKGROUND

The effective delivery of national veterinary services for the protection of animal and public health requires a well-trained cadre of veterinarians and, in many situations, veterinary paraprofessionals (VPPs) working in both the public and private sectors.

The OIE supports the participation of VPPs in the delivery of national veterinary services and recognises the variety of roles that VPPs can play, including: participation in animal health field activities related to disease prevention and control; participation in veterinary public health activities such as rabies control and food safety; and participation in veterinary laboratories, such as conducting diagnostic tests.

Chapter 3.4 of the OIE *Terrestrial Code* indicates that a Member Country's veterinary legislation should provide a basis for the regulation of veterinarians and VPPs in the public interest and suggests the creation of a regulatory entity, the veterinary statutory body (VSB), to carry out that regulation. Article 3.4.6 indicates that the relevant veterinary legislation should:

- a) define the prerogatives of veterinarians and of the various categories of VPPs that are recognised by the Member Country;
- b) define the minimum initial and continuous educational requirements and competencies for veterinarians and VPPs;
- c) prescribe the conditions for recognition of the qualifications for veterinarians and VPPs;
- d) define the conditions to perform the activities of veterinary medicine/science; and
- e) identify the exceptional situations, such as epizootics, under which persons other than veterinarians can undertake activities that are normally carried out by veterinarians.

In this context, it is essential that the desired competencies of VPPs working in the areas of animal health, veterinary public health and laboratory diagnosis in both the public and private sectors are established and that guidelines for core curricula are developed to ensure that graduating VPPs possess the desired competencies for each of these areas. The competencies presented in this document correspond to three tracks of VPPs— animal health², veterinary public health³ and laboratory diagnosis⁴. The curricula required to instill these competencies will be presented in a separate document.

Member Countries may use different terms to characterize VPPs that are trained to a similar level. Likewise, Member Countries may use similar terms for VPPs trained to different levels. Therefore, the OIE has avoided naming categories of VPPs and instead has assumed that VPPs will receive formal training at either the certificate, diploma or degree level from training institutions accredited by the appropriate government agency or the veterinary statutory body and the activities that they are permitted to conduct will reflect their level of formal training.

² Training track to acquire the specific competencies recommended for VPPs working in animal health.

³ Training track to acquire the specific competencies recommended for VPPs working in veterinary public health.

⁴ Training track to acquire the specific competencies recommended for VPPs working in the diagnostic laboratory.

Annex III (contd)

This document has been developed as applicable to VPPs involved with terrestrial animals as defined in the *Terrestrial Animal Health Code* and *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*, although the OIE recognises that many of the competencies identified here may be applicable to aquatic paraprofessionals as well.

STRUCTURE OF THE DOCUMENT

This document identifies 16 key spheres of activity (SOA) in which VPPs may be involved when conducting work within the veterinary domain. For each sphere of activity, between two and four relevant competencies are also identified. For each competency, the tracks to which it is applicable are also identified i.e. animal health, veterinary public health and/or laboratory diagnostics..

In identifying the spheres of activity and their related competencies for the various VPP tracks, a number of important factors were considered:

1. It was recognised that overlaps occur among the required competencies for the three different tracks of VPP activity. Some core knowledge is relevant to all three tracks.
2. It was noted that while most competencies can be considered as foundational for a given track, the same competency may be considered as advanced for another track or tracks, in which case it would be introduced later in the VPPs' professional development.
3. It was acknowledged that the prerogatives and activities allowed for various categories of VPPs will vary between Member Countries depending on a variety of local considerations.
4. The OIE, as indicated in the *Terrestrial Code* definition of veterinary paraprofessional, expects VPPs to be under the responsibility and direction of veterinarians when conducting their work.

These factors were addressed as follows.

For each of the sixteen spheres of activity, its relevance to the three VPP tracks (laboratory diagnosis, animal health and veterinary public health) is identified by abbreviations in parentheses on the heading line that introduces that sphere of activity. Each sphere of activity may be relevant for one, two or three of the tracks.

An attempt was made to present the spheres of activity in a sequence beginning with spheres of activity that cover basic knowledge requirements followed by those that involve the application of skills. However, this sequential approach could not be stringently observed because many of the spheres of activity apply to all three tracks and the sequencing order varies somewhat between the tracks. Similarly, the competencies under each sphere of activity are presented in a sequence moving from basic knowledge requirement towards the application of basic skills.

In Table 1, all spheres of activity are presented and cross-listed by VPP track. Eleven out of 16 spheres of activity are relevant for all three tracks.

Table 1: Spheres of Activity by VPP track

Sphere of Activity	Tracks of Veterinary Paraprofessionals		
	<u>Lab</u>	<u>Animal Health</u>	<u>Public Health</u>
1. Animal and Veterinary Science		•	•
2. Laboratory Science	•		
3. Biosafety, Biosecurity and Occupational Health & Safety	•	•	•
4. Communication	•	•	•
5. Veterinary Legislation, Policies, Ethics and Professionalism	•	•	•
6. Use and Management of Equipment and Facilities	•	•	•
7. Animal Handling and Animal Welfare	•	•	•
8. Animal Production and Agricultural Economics		•	•
9. Specimen Collection and Sampling	•	•	•
10. Laboratory and Field Testing	•	•	•
11. Laboratory Quality Management	•		
12. Workflow Management	•	•	•
13. Record Keeping, Data Collection and Management	•	•	•
14. Disease Prevention and Control Programmes	•	•	•
15. Veterinary Products		•	•
16. Food Hygiene	•	•	•

The reader will note that under some spheres of activity, a specific competency may be identified as advanced for a given track or tracks. This means that the competency is not considered as a core requirement for beginning work in that track but would be useful later as the VPP assumed broader work responsibilities. For example, a given competency might be considered as core for the animal health and veterinary public health tracks, but identified at an advanced level for the laboratory diagnosis track. The advanced designation, when relevant to a particular track or tracks, is provided in indented bullets after the description of each competency.

Annex III (contd)

With regard to the responsibilities or prerogatives of VPPs in different Member Countries, the needs of the Member Country's Veterinary Services and the decisions of its VSB should converge to determine what activities VPPs are allowed to undertake. Consider, for example, Member Countries with a limited number of veterinarians and large livestock populations, some of which are in remote places. For livestock owners to obtain any clinical veterinary services at all, it may be necessary for the VSB to sanction VPPs to provide those services in remote areas. Similarly, this document identifies expected competencies for VPPs that are approved to carry out *ante-* and *post-mortem* meat inspection under the overall supervision and responsibility of veterinarians, but whether or not they are allowed to do so remains a policy decision of the specific Member Country.

The present document is designed to identify the likely range of activities that VPPs might be involved in and then to establish the required competencies necessary to ensure that the activities would be carried out properly. In that context, it should be understood that the inclusion of diagnosis and treatment of livestock disease as a competency for VPPs in this document does not imply an endorsement of their right to do so, but only their competency to do so where permitted. Granting that prerogative will be the decision of each Member Country.

With regard to VPPs working under the responsibility and direction of veterinarians, OIE confirms and supports this expectation but also recognizes that it is the prerogative of the VSB in each Member Country to determine the extent and nature of that responsibility and direction relative to the various activities that are sanctioned for VPPs to perform.

The present document may have a unique function in the context of the laboratory track, where many—or perhaps most—paraprofessionals working in the veterinary laboratory setting are, in fact, trained in biomedical laboratory training programmes. While these paraprofessionals may be competent to exercise in the biomedical laboratory, it is important to note that in the veterinary domain, additional veterinary-specific knowledge, skills and abilities may be needed.

RELEVANT DEFINITIONS

Competencies⁵ means knowledge (e.g., cognitive abilities), skills (e.g., ability to perform specific tasks), attitudes (e.g., affective abilities, feelings and emotions), and aptitude (e.g., natural ability, talent, or capacity for learning).

Sphere of Activity⁶ means skill areas in which a VPP should demonstrate competency.

Veterinarian⁷ means a person with appropriate education, registered or licensed by the relevant veterinary statutory body of a country to practice veterinary medicine/science in that country.

Veterinary Authority⁸ means the Governmental Authority of a Member Country, comprising veterinarians, other professionals and paraprofessionals, having the responsibility and competence for ensuring or supervising the implementation of animal health and welfare measures, international veterinary certification and other standards and recommendations in the *Terrestrial Code* in the whole territory.

Veterinary domain⁹ means all the activities that are directly or indirectly related to animals, their products and by-products, which help to protect, maintain and improve the health and welfare of humans, including by means of the protection of animal health and welfare, and food safety.

⁵ From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality'.

⁶ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

⁷ From glossary of *Terrestrial Animal Health Code*.

⁸ From glossary of *Terrestrial Animal Health Code*.

⁹ From Article 3.4.2 of *Terrestrial Animal Health Code*.

Veterinary paraprofessional¹⁰ means a person who, for the purposes of the *Terrestrial Code*, is authorised by the veterinary statutory body to carry out certain designated tasks (dependent upon the category of veterinary para-professional) in a territory, and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary para-professional should be defined by the veterinary statutory body depending on qualifications and training, and in accordance with need.

Veterinary Services¹¹ means the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and recommendations in the *Terrestrial Code* and the OIE *Aquatic Animal Health Code* in the territory. The Veterinary Services are under the overall control and direction of the Veterinary Authority. Private sector organisations, veterinarians, veterinary paraprofessionals or aquatic animal health professionals are normally accredited or approved by the Veterinary Authority to deliver the delegated functions.

Veterinary statutory body¹² means an autonomous regulatory body for veterinarians and veterinary paraprofessionals.

HOW TO USE THIS DOCUMENT

The purpose of this document is to provide guidelines for the identification of desired competencies expected of VPPs working in animal health, veterinary public health or laboratory diagnosis. These guidelines can be used to help veterinary statutory bodies, national veterinary services, private sector employers and other stakeholders to define the competencies that they expect in the VPPs they register, license or hire. They can also be used by educational institutions to develop the curricula necessary to deliver the desired competencies over the course of the formal training.

As it concerns the laboratory diagnosis track, veterinary statutory bodies could consider consultation with medical regulatory agencies registering biomedical laboratory paraprofessionals and regulating their training standards when determining the needs for competencies of laboratory VPPs. This consultation in a “One Health” spirit could be beneficial in order to avoid duplication and the development of parallel infrastructure when most needs may already be met by existing programmes, even when outside of the veterinary domain.

One helpful approach to using the document would be to develop a job description for VPPs who are to be recruited for a specific position or for a specific category of licensure to be defined by a VSB. This description should include the activities that the VPPs are expected to competently perform. Based on this description, the relevant sphere of activity can be identified and listed. This selection is aided by the inclusion, at the beginning of each sphere of activity, of the track or tracks for which the sphere of activity is relevant. Once the relevant spheres of activity are identified, each can be reviewed again to determine which competencies listed under each sphere of activity are applicable to the position described.

In order to illustrate how this procedure can work, the annex of this document includes six sample job descriptions, two each for the animal health track, the veterinary public health track and the laboratory diagnosis track. In each track, one job description pertains to an entry or mid-level position, while the second refers to an advanced level position to illustrate how the selection of competencies would vary. These job descriptions are:

10 From glossary of *Terrestrial Animal Health Code*.

11 From glossary of *Terrestrial Animal Health Code*.

12 From glossary of *Terrestrial Animal Health Code*.

Animal Health

1. Scenario 1: VPPs to work in a National PPR Control and Eradication Campaign
2. Scenario 2: VPPs authorised to provide both clinical services to livestock owners and government regulatory services in a designated area

Veterinary Public Health

1. Scenario 1: VPPs to work in a meat quality assessment programme
2. Scenario 2: VPPs to work in a porcine cysticercosis control programme

Laboratory Diagnosis

1. Scenario 1: VPPs to work in the district or provincial laboratories to support the efforts of a National PPR Control and Eradication Campaign
2. Scenario 2: Laboratory VPPs to support enhanced disease surveillance and diagnostic capacity in screening program for Brucellosis

For educators, following the identification of the desired competencies, existing curricula would need to be assessed to determine if those desired competencies are addressed or if modifications in the existing curricula would need to be considered. Efforts to develop new curricula will be assisted by the companion curricula guidelines for VPP to be produced by OIE.

VPP Spheres of Activity and Related Competencies

1. Animal and Veterinary Science

[Tracks: AH, VPH]

Animal science means the study of the biology, growth, husbandry, and production of animals under human control¹³. Veterinary science is the art and science concerned with the health of animals and the treatment of injuries and diseases that affect them¹⁴.

For this sphere of activity, animal and veterinary science, veterinary paraprofessionals (VPPs) are expected to have the following competencies:

- Competency 1: VPPs know the fundamentals of animal science including the care, nutrition and reproduction of animal species relevant to the country and region.
 - AH, VPH
- Competency 2: VPPs know the fundamentals of veterinary science and are able to examine animals, assess their environment and interview animal keepers, recognize signs of health and disease, identify common non-infectious and infectious diseases, including zoonoses, differentiate among similar diseases, evaluate injuries and *support reproduction and herd health management*.
 - AH, VPH (for VPH excluding the section in italics)
- Competency 3: VPPs are able to administer first aid to animals and follow established guidelines to select, properly utilise and advise on the use of the appropriate veterinary products and procedures necessary to successfully treat, manage and/or prevent common infectious and non-infectious diseases, basic reproductive conditions, trauma and other emergencies of domesticated animal species.
 - AH

¹³ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

¹⁴ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

2. Laboratory Science

[Track: Lab]

Laboratory science means the study of methods to analyse biological materials, feed, food and environmental samples that provide information needed for the diagnosis and treatment of disease as well as detection of drug residues, monitoring the quality and safety of feed, detecting environmental contaminants, and other aspects of animal, human, and environmental health¹⁵.

For this sphere of activity, laboratory science, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the fundamentals of laboratory science.
 - Lab
- Competency 2: VPPs have fundamental knowledge of pathology and pathogenesis of relevant key diseases.
 - Lab
- Competency 3: VPPs have knowledge of the appropriate assays and the available range of equipment within the various laboratory disciplines in support of animal health and production, food safety and the diagnosis of animal and zoonotic diseases in the country and region.
 - Lab
- Competency 4: VPPs have the basic knowledge of animal production, veterinary science, and veterinary public health.
 - Advanced: Lab

¹⁵ Adapted from <https://www.med.unc.edu/ahs/clinical/about/glance> and <http://www.reference.md/files/D013/mD013677.html>

3. Biosafety, Biosecurity & Occupational Health & Safety

[Tracks: Lab, AH, VPH]

Biosafety means the principles and practices for the prevention of unintentional exposure to biological materials or their accidental release¹⁶.

Biosecurity means a set of management and physical measures designed to reduce the risk of the introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population¹⁷.

In the laboratory setting, biosecurity describes the controls on biological materials within laboratories, in order to prevent their loss, theft, misuse, unauthorised access, or intentional unauthorised release¹⁸.

Occupational health and safety means all aspects of health and safety in the workplace, with a strong focus on primary prevention of hazards¹⁹.

For this sphere of activity, biosafety, biosecurity and occupational health and safety, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the principles of biosafety and biosecurity and are able to advise on preventing human or animal exposure and spread from accidental or intentional release of biological agents and materials in laboratory, farm, processing plant, market and other settings where such risks might occur. VPPs conduct their duties in accordance with these principles and in compliance with relevant laws, regulations and policies.
 - Lab, AH, VPH
- Competency 2: VPPs know the principles and practices relating to occupational health and safety and are able to carry out their required workplace activities without endangering the health and safety of themselves or others present.
 - Lab, AH, VPH
- Competency 3: VPPs know the terminology and principles of risk analysis, which includes hazard identification, risk assessment, risk management and risk communication, and are able to observe and apply these principles in relation to minimizing the risk of spreading animal and zoonotic disease and protecting food safety.
 - Advanced: Lab, AH, VPH

¹⁶ *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* definition: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/0.04_GLOSSARY.pdf

¹⁷ *Terrestrial Animal Health Code* definition: <http://www.oie.int/index.php?id=169&L=0&htmfile=glossaire.htm>

¹⁸ *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* definition: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/0.04_GLOSSARY.pdf

¹⁹ Adapted from the WHO definition: http://www.who.int/topics/occupational_health/en/

4. Communication [Tracks: Lab, AH, VPH]

Communication means the knowledge, skills and practices necessary for conducting the effective exchange of information between various individual, institutional and public audiences for purposes of informing, guiding and motivating action in relation to animal health, production and welfare as well as diagnostic laboratory matters²⁰.

For this sphere of activity, communication, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the principles of effective communication and possess the communication skills necessary to carefully listen to and be clearly understood by clients, colleagues and other stakeholders and to deliver extension services.
 - Lab, AH, VPH
- Competency 2: VPPs are able to use appropriate platforms to prepare reports, develop extension messages, and make public presentations.
 - Advanced : Lab, AH, VPH

²⁰ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

5. Veterinary Legislation, Policies, Ethics and Professionalism [Tracks: Lab, AH, VPH]

Veterinary legislation means the laws, regulations and all associated legal instruments that pertain to the veterinary domain, while policies refer to the official actions taken to implement the veterinary legislation²¹.

Veterinary ethics means a code of conduct followed to ensure impartial, independent and objective judgement, honest behaviour and integrity consistent with relevant veterinary legislation and policies²².

Professionalism means the desired qualities and competencies that characterise the expected performance of veterinary paraprofessionals²³.

For this sphere of activity, veterinary legislation, policies, ethics and professionalism, VPPs are expected to have the following competencies:

- Competency 1: VPPs are able to conduct their work in keeping with the rights, responsibilities, prerogatives and obligations that pertain to VPPs under the laws regulations and policies of the country in which they work.
 - Lab, AH, VPH
- Competency 2: VPPs are able to cite the relevant laws, regulations and policies that provide the legal justification for any actions they are taking which may affect the rights and property of interested parties.
 - Advanced: AH, VPH, Lab
- Competency 3: VPPs act in a manner consistent with the professional and ethical standards to which VPPs are expected to adhere and understand the penalties and procedures associated with violation of those standards.
 - Lab, AH, VPH

²¹ From glossary of *Terrestrial Animal Health Code*.

²² Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

²³ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

6. Use and Management of Equipment and Facilities

[Tracks: Lab, AH, VPH]

Use and management of equipment and facilities means the knowledge, skills and procedures necessary for the proper and safe use, care and maintenance of equipment and facilities used in the course of professional activity²⁴.

For this sphere of activity, use and management of equipment and facilities, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the function, operational procedures, proper and safe use of all equipment utilized during the course of their routine work.
 - Lab, AH, VPH
- Competency 2: VPPs are able to properly maintain, clean, disinfect and store all equipment used.
 - Lab, AH, VPH
- Competency 3: VPPs are able to detect and report routine operational malfunctions on equipment and conduct, routine repairs when necessary to keep equipment operational.
 - Lab, AH, VPH
- Competency 4: VPPs are able to monitor facilities, including environmental conditions and utilities, perform routine maintenance, note anomalies, and conduct simple interventions.
 - Lab, AH, VPH

²⁴ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

7. Animal Handling and Animal Welfare

[Tracks: Lab, AH, VPH]

Animal handling means the knowledge and skills to understand the behaviour and needs of animals in order to manage their movement and effectively restrain them in a manner consistent with their behaviour and needs while ensuring the safety and well-being of both the animal and the handler²⁵.

Animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear and distress²⁶.

For this sphere of activity, animal handling and animal welfare, VPPs are expected to have the following competencies:

- Competency 1: VPPs understand the behaviour of relevant animal species under natural and controlled environments and are competent in the use of techniques and equipment for animal handling to minimize stress and risk during management of animals and delivery of veterinary care.
 - Lab, AH, VPH
- Competency 2: VPPs are able to recognize signs of fear, pain, stress and discomfort in relevant animal species in situations involving housing, lairage, restraint, movement, transport and slaughter, and to make suitable recommendations or interventions for alleviating those adverse effects.
 - AH, VPH
 - Advanced: Lab

²⁵ Adapted from definitions of 'animal handler' and 'animal welfare' in the glossary of the *Terrestrial Animal Health Code*.

²⁶ From glossary of *Terrestrial Animal Health Code*.

8. Animal Production and Agricultural Economics

[Track: AH, VPH]

Animal production means the technology and management practices applied to the keeping of animals for profit. Amongst others, it includes feeding, breeding, housing and marketing. Of great importance is the making of the financial arrangements necessary to the successful carrying out of each enterprise in the light of the market conditions for the sale of the end products.²⁷ For this reason, animal production is closely linked to agriculture economics.

Agricultural economics is the applied field of economics concerned with the application of economic theory in optimising the production and distribution of animals, animal feed and animal products²⁸.

For this sphere of activity, animal production and agricultural economics, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the basic technical characteristics of the commercial and non-commercial livestock production systems present in their country and region for the relevant animal species.
 - AH, VPH
- Competency 2: VPPs know the basic agriculture economic trends, value chain and market dynamics for the various livestock production systems with which they work in order to effectively communicate with stakeholders.
 - Advanced: AH, VPH

²⁷ Animal Production, in Saunders Comprehensive Veterinary Dictionary, 3 ed. © 2007 Elsevier, Inc.

²⁸ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

9. Specimen Collection and Sampling

[Tracks: Lab, AH, VPH]

Specimen collection and sampling means the act of collecting, identifying, properly handling and transporting tissues or materials from animals, feed, food, or the environment for the purpose of conducting analysis on them²⁹.

For this sphere of activity, specimen collection and sampling, VPPs are expected to have the following competencies:

- Competency 1: VPPs are able to properly collect, or provide advice on the collection of, necessary environmental, food, feed, water and animal samples for diagnostic or testing purpose according to established protocols and techniques utilizing appropriate materials and equipment.
 - Lab, AH, VPH
- Competency 2: VPPs are able to carry out the necessary record keeping associated with sample identification, submission and tracking.
 - Lab, AH, VPH
- Competency 3: VPPs are able to select and utilize proper packaging and shipping supplies and procedures to ensure that the safety and quality of samples is maintained and assured during transit to testing sites.
 - Lab, AH, VPH

²⁹ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals

10. Laboratory and Field Testing

[Tracks: Lab, AH, VPH]

Laboratory and field testing means the performance of accepted, standardized tests on specimens, or live animals to determine the presence of chemical, physical or biological agents, or pathological changes associated with disease³⁰. Field testing is the act of conducting an assay in the field and making a determination of the test result³¹.

For this sphere of activity, laboratory and field testing, VPPs are expected to have the following competencies:

- Competency 1a: VPPs are able to perform required laboratory and field assays according to the related SOPs throughout the range of laboratory disciplines and assays expected of them.
 - Lab
- Competency 1b: VPPs are able to perform basic assays expected of them according to the related SOPs.
 - AH, VPH
- Competency 2a: VPPs are able to interpret laboratory and field test results, as permitted, as well as identify and when possible, correct non-conforming tests.
 - Lab
- Competency 2b: VPPs are able to interpret basic test results as permitted, as well as identify and when possible, correct non-conforming tests.
 - Advanced: AH, VPH

³⁰ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

³¹ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

11. Laboratory Quality Management

[Track: Lab]

Laboratory quality management means the coordinated activities including good management practices, valid test and calibration methods, proper techniques, quality control and quality assurance required to manage a laboratory. It includes the quality system essentials: personnel, equipment, purchasing & inventory, facilities & safety, process control, documents & records, information management, assessments, corrective and preventive actions, customer service, organisation, and process improvement necessary to achieve objectives and improve consistency in all activities and tasks³².

For this sphere of activity, laboratory quality management, VPPs are expected to have the following competencies:

- Competency 1: VPPs understand quality management principles and concepts to ensure the efficient operation and quality of outputs from the laboratories where they work.
 - Lab
- Competency 2: VPPs are able to implement and maintain quality management system processes and procedures to ensure the efficient operation and quality of outputs from the laboratories where they work.
 - Lab

³² Adapted from Chapter 1.1.1. & 1.1.5 of the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/1.01.01_MANAGING_VET_LABS.pdf ; http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/1.01.05_QUALITY_MANAGEMENT.pdf

12. Workflow Management

[Track: Lab, AH, VPH]

Workflow management means managing and monitoring the activities in human, physical, and financial resources to maximize efficiency of performance³³.

For this sphere of activity, workflow management, VPPs are expected to have the following competencies:

- Competency 1: VPPs are able to organize and coordinate work activities.
 - Lab, AH, VPH
- Competency 2: VPPs are able to manage relevant supplies, reagents, veterinary products, equipment, vehicles, cold chain, consumables, financial and/or other necessary resources to ensure an efficient workflow for which the VPP is responsible.
 - Lab, AH, VPH

³³ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

13. Record Keeping, Data Collection and Management

[Track: Lab, AH, VPH]

Record keeping, data collection and management means the systematic collection and recording of information related to professional activities and the storage of such recorded information in a manner that makes it readily available for retrieval and analysis³⁴.

For this sphere of activity, record keeping, data collection, and management, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the principles of data collection and record keeping and data management.
 - Lab, AH, VPH
- Competency 2: VPPs are able to use appropriate paper-based and/or electronic means for the proper and systematic collection, recording, storage, retrieval, management, and reporting of relevant information in the veterinary domain.
 - Lab, AH, VPH

³⁴ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

14. Disease Prevention and Control Programmes

[Track: Lab, AH, VPH]

Disease prevention and control programmes, whether or not approved, managed or supervised by the veterinary authority, include movement controls, vaccination, and treatment. Disease prevention and control programmes will be specific to each country or region and should comply with applicable OIE standards, as appropriate³⁵.

For this sphere of activity, disease prevention and control programmes, VPPs are expected to have the following competencies:

- Competency 1: VPPs understand and are able to apply disease control measures, including animal identification, sampling for laboratory testing, vaccination and other preventive services, treatment when appropriate, vector control, quarantine, movement control, disinfection, humane killing of animals and the proper disposal of carcasses in a manner consistent with public and environmental health.
 - AH, VPH
- Competency 2: VPPs understand and are able to apply their knowledge of the clinical and epidemiological characteristics of those infectious diseases for which programmes exist.
 - AH, VPH
- Competency 3: VPPs are able to participate in national disease prevention and control programmes, including the reporting of notifiable diseases, collection of basic epidemiologic field data, disease surveillance activities and support of disease investigation and control efforts, including communication with stakeholders.
 - Lab, AH, VPH
- Competency 4: VPPs understand the One Health approach and are able to work effectively within integrated teams.
 - Lab, AH, VPH

³⁵ From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality'.

15. Veterinary Products

[Tracks: AH, VPH]

Veterinary products means drugs, insecticides/acaricides, vaccines, and biological products used or presented as suitable for use to prevent, treat, control, or eradicate animal pests or diseases; to be used to establish a veterinary diagnosis; or to restore, correct or modify organic functions in an animal or group of animals³⁶.

For this sphere of activity, veterinary products, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the characteristics and use of the various categories of veterinary medicines and biologicals used in the country and region, the available products approved for use within each category and know the conditions for the appropriate selection of each for therapeutic purposes. They also know the permitted drugs, conditions, and circumstances in the country, if any, under which VPPs can prescribe and/or administer medicines.
 - AH
- Competency 2: VPPs know the species of animals for which each drug is approved and its proper route of administration. They are able to reliably calculate the correct dosage of drug, determine period, condition of administration, and properly administer it for the prescribed period and communicate adverse effects, including the development of drug resistance.
 - AH
- Competency 3: VPPs know the conditions for the proper storage, display and handling of approved veterinary medicines and biologicals to ensure the maintenance of their quality and efficacy, taking note especially of cold chain requirements, expiry dates, and proper disposal.
 - AH
- Competency 4: They are able to communicate to animal owners how the improper use of drugs can have adverse effects on public health, such as the importance of respecting drug withdrawal times and how the improper administration of antimicrobials may contribute to the development of antimicrobial resistance.
 - AH, VPH

³⁶ From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality.

16. Food Hygiene

[Tracks: Lab, AH, VPH]

Food hygiene means all conditions and measures necessary to ensure the safety and suitability of food of animal origin from production to consumption³⁷.

For this sphere of activity, food hygiene, VPPs are expected to have the following competencies:

- Competency 1: VPPs know the principles of food hygiene.
 - AH, VPH
 - Advanced: Lab

- Competency 2: VPPs are able to recognize and monitor or advise if animal slaughter, processing, storage, and transport facilities are properly designed and operating according to food hygiene principles, including the application of quality management systems.
 - Advanced: AH, VPH

- Competency 3: VPPs are able to participate in foodborne disease surveillance and investigations, including conducting interviews, accurately recording information and properly selecting and handling samples for testing.
 - Lab, AH, VPH

- Competency 4: VPPs working in abattoirs or other slaughter facilities understand the procedures and are able to monitor humane stunning and killing of slaughter animals including animal welfare issues that affect product quality. They are also able to conduct ante- and post-mortem meat inspections and reporting abnormal findings to proper authorities where so permitted.
 - VPH
 - Advanced: AH

- Competency 5: VPPs are able to properly inspect facilities and means of transport related to production, processing, storage and distribution of products of animal origin and to advise on improvements, to ensure compliance with regulatory requirements for food hygiene throughout the processing chain.
 - Advanced: VPH

³⁷ WHO definition: http://www.who.int/foodsafety/areas_work/food-hygiene/en/

ANNEX

The purpose of this Competency Document for Veterinary Paraprofessionals is to provide guidelines for the identification of necessary competencies for veterinary paraprofessionals (VPPs) to properly carry out the responsibilities which are expected of them depending on the nature of their work, the extent of their training, and the prerogatives defined for them by the veterinary statutory body (VSB).

This document is organised according to various spheres of activity, which are defined as skill areas in which VPPs should demonstrate competency depending on the scope and nature of their work. For each sphere of activity, 2 – 5 relevant competencies are identified. Overall there are 16 spheres of activity and 47 competencies identified. Various combinations of these competencies will define what is expected of VPPs assuming particular roles in the animal health, veterinary public health and laboratory diagnosis tracks

The document will be useful to VSBs seeking to define different categories of veterinary paraprofessional, the activities they are allowed to perform and the level of formal training they are expected to have. The document will also be of value to educators who need to develop curricula that ensure the expected competencies are addressed during the training of VPPs. It will also be helpful to potential employers, both in the public and private sector, to determine what competencies are required to fulfil the job for which they are seeking qualified VPP.

To illustrate how the document may be useful in these contexts, six sample job descriptions, two each for the animal health track, the veterinary public health track and two for the laboratory diagnosis track. In each track, one job description pertains to an entry -level position or limited/specific activities, while the second refers to higher level position or more comprehensive activities to illustrate how the selection of competencies would vary.

Based on the tasks expected for the VPPs in each scenario, the appropriate spheres of activity are identified and then the relevant competencies within each chosen sphere of activity are selected as well. The examples are designed to suggest the variability that exists across the range of the three VPP tracks as well as the adaptability of the spheres of activity and competencies to help define the necessary skills, knowledge and abilities required for the VPPs to do their jobs properly.

Again, these scenarios serve as examples of the use of this document, not as compulsory models. Readers are encouraged to develop their own scenarios and build the appropriate sets of spheres of activity and competencies to further test the usefulness of this document.

Animal Health Track

Scenario 1: VPPs to work in a National PPR Control and Eradication Programme

Peste des petits ruminants (PPR) is endemic in Country A and the government has decided to embark on a National PPR Control and Eradication Programme in the context of the OIE/FAO Global PPR Eradication Programme. There are areas of the country where there are large numbers of small ruminants but few or no veterinarians to carry out disease control programmes.

The decision is made to develop a cadre of veterinary paraprofessionals (VPP), under the supervision of a designated government veterinarian, who can implement the national PPR control and eradication programme in defined areas (e.g., sub-districts) for which they are responsible. The Veterinary Services wants to be sure that the VPPs are properly trained to carry out high-quality work and successfully eradicate PPR following the key elements of the Global Control and Eradication Strategy, namely outreach and extension, epidemiologic surveillance including interviews and sero-surveillance, disease investigation and vaccination.

Expected tasks	Sphere of Activity	Competencies
PPR extension and awareness	SOA 1: Animal and Veterinary Science	1.1
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.3
Epidemiological and serological surveillance	SOA 1: Animal and Veterinary Science	1.2
	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.3
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2
	SOA 9: Specimen Collection and Sampling	9.1, 9.2, 9.3
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.3

Disease investigation and sampling	SOA 1: Animal and Veterinary Science	1.1, 1.2
	SOA 3 :Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1
	SOA 9: Specimen Collection and Sampling	9.1, 9.2
	SOA 10: Laboratory and Field Testing	10.1b
	SOA 12: Workflow Management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1
PPR Vaccination	SOA 1: Animal and Veterinary Science	1.2
	SOA3: Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.3
	SOA 6:Use and Management of Equipment and Facilities	6.1, 6.2, 6.3
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2
	SOA 12: Workflow Management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.3
	SOA 15: Veterinary Products	15.1, 15.3

Scenario 2: VPPs authorised to provide both clinical services to livestock owners and government regulatory services in a designated area

Under the rules of the Veterinary Statutory Body in Country B, veterinary paraprofessionals can be registered to provide clinical services to farmers and regulatory services on behalf of the government within a specific geographical area. In order for a VPP to be registered to carry out these specific activities, the Veterinary Statutory Body requires demonstration of specific competencies acquired through formal training at an accredited training institution. The VPP, so registered, should be able to perform the following tasks:

Expected tasks	Spheres of Activity	Competencies
Routine veterinary extension services	SOA 1: Animal and Veterinary Science	1.1, 1.2, 1.3
	SOA 3: Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2, 3.3
	SOA 4: Communication	4.1, 4.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.2, 5.3
	SOA 8: Animal Production and Agricultural Economics	8.1, 8.2
	SOA 12: Workflow Management	12.1
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.4
	SOA 15: Veterinary Products	15.2, 15.4
	SOA 16: Food Hygiene	16.1
Veterinary clinical services e.g., reproduction related activities, basic treatment, internal external parasite control, preventive vaccination, sampling, dehorning, castration and other production related interventions, disease control.	SOA 1 Animal and Veterinary Science	1.1, 1.2, 1.3
	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2, 3.3
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.2, 5.3
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2, 6.3, 6.4
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2

	SOA 8: Animal Production and Agricultural Economics	8.1, 8.2
	SOA 9: Specimen Collection and Sampling	9.1, 9.2, 9.3
	SOA 10: Laboratory and Field Testing	10.1b, 10.2b
	SOA 12: Workflow management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1,13.2
	SOA 14: Disease Prevention and Control Programmes	14.2, 14.3, 14.4
	SOA 15: Veterinary Products	15.1, 15.2, 15.3, 15.4
	SOA 16: Food hygiene	16.3
Regulatory services e.g., surveillance, reporting, vaccination, meat examination, where applicable	SOA 1: Animal and Veterinary Science	1.2
	SOA 3: Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.3
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2, 6.3
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2
	SOA 9: Specimen Collection and Sampling	9.1, 9.2, 9.3
	SOA 12: Workflow Management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.3
	SOA 15: Veterinary Products	15.1, 15.3
	SOA 16: Food Hygiene	16.2, 16.4

Veterinary Public Health Track

Scenario 1: VPPs to work in a meat quality assessment programme

The government of Country C has established that a programme for the assessment of meat quality as well as a framework for improved monitoring of abattoirs, community slaughter slabs and retail outlets of raw meat be established. There are areas of the country where there are few or no veterinarians to carry out this programme, and therefore government has decided that VPPs will be able to make a contribution to this objective. The government has decided to recruit veterinary public health paraprofessionals to enter into the programme. A government-employed veterinary epidemiologist will design a sampling strategy and VPPs will be expected to collect samples, gather data and administer a questionnaire among abattoirs, community slaughter slabs and retail outlets of raw meat in Country C. The government wants to be sure that the VPPs are properly trained to carry out high-quality work and successfully implement the programme and framework as envisioned.

Expected Tasks	Sphere of Activity	Competency
Organisation of workflow	SOA 12: Workflow Management	12.1, 12.2
Communication with stakeholders	SOA 3: Biosafety, Biosecurity, & Occupational Health & Safety SOA 4: Communication SOA 5: Veterinary Legislation, Policies Ethics, and Professionalism	3.1, 3.2 4.1 5.1
Physical assessment of meat	SOA 1: Animal and Veterinary Science SOA 16: Food Hygiene	1.2 16.1, 16.3
Data collection and recording	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2
Sample collection	SOA 3: Biosafety, Biosecurity, & Occupational Health & Safety SOA 6: Equipment and Facilities SOA 9: Specimen Collection and Sampling SOA 16: Food Hygiene	3.1, 3.2, 6.1, 6.2 9.1, 9.2, 9.3 16.1, 16.3

Scenario 2: VPPs to work in a porcine cysticercosis control programme

There have been increased reported incidents of neurocysticercosis in humans. The government of Country D has decided to monitor practices in the pork sector in order to help prevent outbreaks. The government has requested that VPPs working in veterinary public health should work with veterinarians to implement a control programme in the affected communities to assess if porcine cysticercosis incidence has also increased in the region. Specifically, VPPs will help with an awareness campaign for consumers, farming system improvement, slaughterhouse inspection, and reporting.

Expected Tasks	Sphere of Activity	Competency
Assessment of risk areas /situations	SOA 1: Animal and Veterinary Science SOA 8: Animal Production and Ag Economics SOA 12: Workflow management SOA 14: Disease Prevention and Control Programmes	1.2 8.1, 8.2* 12.1, 12.2 14.1, 14.2, 14.3, 14.4
Communicate with stakeholders (i.e., affected community)	SOA 1: Animal and Veterinary Science SOA 4: Communication SOA 5: Veterinary Legislation, Policies Ethics, and Professionalism SOA 12: Workflow management SOA 14: Disease Prevention and Control Programmes	1.2 4.1., 4.2* 5.1, 5.2*, 5.3 12.1, 12.2 14.1, 14.2, 14.3, 14.4
Animal identification before slaughter	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety SOA 7: Animal Handling and Welfare SOA 13: Record Keeping, Data Collection, and Management	3.2 7.1, 7.2 13.1, 13.2
<i>Post-mortem</i> inspection	SOA 1: Animal and Veterinary Science SOA 3: Biosafety, Biosecurity & Occupational Health & Safety SOA 6: Equipment and Facilities SOA 12: Workflow management SOA 13: Record Keeping, Data Collection, and Management SOA 16: Food Hygiene	1.2 3.1, 3.2, 3.3* 6.1, 6.2 12.1, 12.2 13.1, 13.2 16.1, 16.2, 16.3., 16.4*
Sample collection	SOA 9: Sample Collection SOA 12: Workflow management	9.1, 9.2, 9.3 12.1, 12.2
Data collection and recording	SOA 12: Workflow management SOA 13: Record Keeping, Data Collection, and Management	12.1, 12.2 13.1, 13.2
Data reporting to veterinarian for disease control programme	SOA 12: Workflow management SOA 14: Disease Prevention and Control Programmes	12.1, 12.2 14.1, 14.2, 14.3, 14.4

*Advanced competency for track

Based on this situation, *ante-mortem* inspection skills will not be required for this specific disease. It is understood that for other diseases, *ante-mortem* inspection would need to be included.

Laboratory Diagnosis Track

Scenario 1: VPPs to work in the district or provincial laboratories to support the efforts of a National PPR Control and Eradication Campaign

The government of Country E has evaluated workforce needs in its national veterinary laboratory network and recognizes the need for entry-level laboratory VPPs for engagement in the National PPR Control and Eradication Strategies in the context of the OIE/FAO Global PPR Eradication Programme. The government has decided that particular competencies at the entry level are required to develop capabilities at the provincial and district levels of the veterinary laboratory network, in order to assist with ramped-up activities in the field that will generate increased sample flow and work for the laboratories at those levels. The government wants to be sure that the laboratory VPPs are properly trained to carry out high-quality work and successfully implement the programme as envisioned.

The following tasks are determined for an entry-level Laboratory VPP:

Expected tasks	Sphere of Activity	Competencies
Performs laboratory testing according to Standard Operating Procedures, including pre- and post-analytic phases	SOA 2: Laboratory Science	2.1, 2.2, 2.3
	SOA 10: Laboratory and Field Testing	10.1a
	SOA 4: Communication	4.1
Understands the principles of biosafety, biosecurity, and OHS and uses appropriate PPE	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.2
Autoclaves and sterilizes glassware, instruments and waste	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
Cleans and maintains work area and all laboratory equipment and supplies	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
Collects and prepares samples for testing using various types of laboratory equipment	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
	SOA 9: Specimen Collection and Sampling	9.2
	SOA 10: Laboratory and Field Testing	10.1a
	SOA 12: Workflow Management	12.1
Prepares and maintains accurate and reliable laboratory records and interprets results	SOA 10: Laboratory and Field Testing	10.1a
	SOA 13: Record Keeping, Data Collection, and Management	13.1

Scenario 2: Laboratory VPPs to support enhanced disease surveillance and diagnostic capacity in screening program for Brucellosis

There has been an increase in the reported instances of abortions in dairy cattle in Country F. The government is also concerned about a rise in the number of villagers in two communities demonstrating antibodies to *Brucella abortus* in a recent health study.

In a preliminary epidemiological investigation, conducted by the Department of Livestock, 8/100 cattle in the same communities have tested positive serologically to *Brucella abortus*. Due to the growing dairy sector in Country F, and the recent import of vaccinated cattle from a number of other countries, the government would like to establish a country wide screening program for Brucellosis. In order to assess the extent of the problem and to develop a disease control plan, the government recognizes that the laboratory capability and competencies required to support this work will need to be expanded significantly.

The following tasks are determined for a mid-level Laboratory VPP:

Expected tasks	Sphere of Activity	Competencies
Performs laboratory testing according to Standard Operating Procedures, including pre- and post-analytic phases	SOA 2: Laboratory Science	2.1, 2.2, 2.3
	SOA 4: Communication	4.1
	SOA 10: Laboratory and Field Testing	10.1a, 10.2a
Contributes to a safe and secure environment for customers, visitors and co-workers by following established standards and procedures; complying with legal regulations	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.2
Oversees and monitors quality management & biosafety systems	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
	SOA 11: Laboratory Quality Management	11.1, 11.2
Keeps equipment operating by following operating instructions; troubleshooting breakdowns; maintaining supplies; performing preventive maintenance; calling for repairs.	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2, 6.3, 6.4
	SOA 11: Laboratory Quality Management	11.1, 11.2
Understands, troubleshoots, and recognizes non-conforming work and selects corrective steps	SOA 10: Laboratory and Field Testing	10.1a, 10.2a
	SOA 11: Laboratory Quality Management	11.1, 11.2

Annex III (contd)

Keeps laboratory supplies ready by inventorying stock; placing orders; verifying receipt	SOA 12: Workflow Management	12.1, 12.2			
Collects and prepares samples for testing using various types of laboratory equipment or delegates such task <table border="1" data-bbox="188 488 751 689"> <tr> <td>Uses databases and paper means to keep, retrieve, and analyse records and prepare reports</td> <td>SOA 13: Record Keeping, Data Collection, and Management</td> <td>13.1, 13.2</td> </tr> </table>	Uses databases and paper means to keep, retrieve, and analyse records and prepare reports	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	Uses databases and paper means to keep, retrieve, and analyse records and prepare reports	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2		
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2			
	SOA 9: Specimen Collection and Sampling	9.2			
	SOA 10: Laboratory and Field Testing	10.1a			
SOA 12: Workflow Management	12.1				
Uses databases and paper means to keep, retrieve, and analyse records and prepare reports	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2			
Participates in national disease control programmes	SOA 14: Disease Prevention and Control Programmes	14.3, 14.4			
Understands the principles for food hygiene and participates in food borne surveillance activities	SOA 16: Food Hygiene	16.3			

