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Annex 43

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REPORT OF THE OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS

Paris, 16–18 January 2018

1. Welcome and introduction

The OIE *ad hoc* Group on Animal Welfare and Pig Production Systems (the *ad hoc* Group) held its fourth meeting at the OIE Headquarters on 16–18 January 2018.

The members of the *ad hoc* Group and other participants at the meeting are listed at Annex I.

Dr Leopoldo Stuardo, Chargé de mission of the Standards Department, welcomed and thanked the *ad hoc* Group on behalf of the Director General for their agreement to work with the OIE on this important topic.

Dr Stuardo asked Members to carefully consider all comments provided by OIE Member Countries and partner organisations in the working document presented for this meeting and reminded them of the need to provide a clear rationale, particularly when not accepting a comment.

Dr Stuardo indicated that the report of the meeting will be presented to the Terrestrial Animal Health Standards Commission (Code Commission) in February 2018, and as it was mentioned in the Code Commission report of its September 2017 meeting, it was anticipated that this chapter will be proposed for adoption at the next OIE General Session in May 2018.

The draft agenda was adopted without modifications. The adopted agenda is at Annex II. Dr Birte Broberg, chair of the *ad hoc* Group, opened the meeting thanking the members for their dedicated work, and the Member Countries and organisations in sending their constructive comments.

2. Review of Member Countries comments on the draft chapter on Animal Welfare and Pig Production Systems

The *ad hoc* Group developed the revised draft Chapter 7.X, which is included as Annex III for consideration by the Code Commission at its February 2018 meeting.

Some OIE Members and partner organisations made proposals without providing a (scientific) rationale, making it difficult to take these comments into account.

Comments were received from Argentina, Australia, Canada, China, Japan, Malaysia, New Caledonia, New Zealand, Singapore, Switzerland, United States of America (USA), OIE Members of the Region of the Americas, European Union (EU), International Coalition for Animal Welfare (ICFAW) and African Union-Interafrican Bureau for Animal Resources (AU-IBAR).

During the revision of the chapter and in response to several Member Countries comments, the *ad hoc* Group made various changes throughout the text to improve grammar, syntax, and clarity.

Annex 43 (contd)**General comments**

In response to a Member Country general comment, the *ad hoc* Group reviewed the scientific references and added additional references to align them with the corresponding statements. However, the *ad hoc* Group at the same time clarified that references are only needed for indicators that are less recognised or contentious. These references will be removed when the chapter is adopted and published.

Article 7.X.1.

The *ad hoc* Group did not agree with the suggestion of Member Countries to change the title of the chapter to “Animal welfare and commercial pig production systems”, as this would be inconsistent with the title of other chapters on the welfare of farm animals.

The *ad hoc* Group did not agree with the addition of text in relation to the provision of foraging material for behavioural needs, as this is already addressed in Article 7.X.10. in the form of recommendations on environmental enrichment.

With reference to the comments of a Member Country to modify the fourth paragraph in three different sections. The *ad hoc* Group did not agree to add the words “and unvarying”, as according to Mason (2006), and based on the literature, many stereotypies show significant variation in action pattern. Based on recent research (reported in Mason and Rushen, 2006, pg. 327), Mason (2006) concluded that:

“captive animals show diverse forms of repetitive behaviour which baffle, intrigue or worry us. Many broadly fit the classic, decades-old definition of ‘stereotypy’, in being ‘unvarying and repetitive . . . with no apparent goal or proximate function’ (see previous chapters). However, different cases meet this description to very different extents. Some are highly unvarying: route tracing Amazon parrots and polar bears, for instance, may place their feet in exactly the same location each time they repeat a circuit (e.g. Wechsler, 1991; Garner *et al.*, 2003b); but in others, in contrast, a variety of postures and movements are employed (as in self-biting or hair-plucking, cf. e.g. Chapters 4–6), animals seeming to have an inflexibility of goal rather than an inflexibility of action pattern.”

Concerning the deletion of the reference to the purpose or function of this behaviour and the addition of a new sentence in relation to the use of stereotypies as a welfare indicator, the *ad hoc* Group agreed with the proposal but with modifications. In considering the practical and ethical implications of stereotypic behaviour, Mason (2006) argues that:

“environments that induce stereotypies typically also reduce animal welfare. However, at the individual level, ‘coping’, and the ‘scar-like’ effects of routine-formation and early experience, may eliminate close correspondence between the behaviour and underlying stress and frustration. Indeed paradoxically, highly stereotypic individuals often fare better in these inadequate environments than their less active peers: patterns that could reflect coping, or perhaps instead the activity-reducing effects of some other psychological or physical conditions.”

On the same topic, the *ad hoc* Group proposed to add a new paragraph under the section of behaviour in Article 7.X.4. to reflect that certain behaviours could be useful to cope in certain situations and some indication to use stereotypy as a welfare measure.

In relation to a Member Country comment on the same paragraph, the *ad hoc* Group agreed with part of the proposal, the comment related to social structure was not included as the *ad hoc* Group did not find any evidence in the reference provided by the Member Country to support this as an effective strategy.

Annex 43 (contd)

The *ad hoc* Group agreed with the inclusion of the example of fighting proposed by a Member Country as it helps to better explain the concept of aggressive behaviour.

The *ad hoc* Group agreed with a Member Country proposal to include a definition of “play behaviour”, which is a concept that is used throughout the recommendations in this chapter. However, they suggested a different wording from the one proposed and included an appropriate reference.

Article 7.X.3

In respect of the definition of outdoor systems, the *ad hoc* Group did not agree with the inclusion of new text to require both shelter and shade, because the availability of shelter is not applicable to all outdoor production systems.

On the same topic the *ad hoc* Group did not agree with the modification proposed by another Member Country to make a reference to the scale of production, as this suggestion did not improve the text. The *ad hoc* Group also did not agree to use the word “confined”.

Article 7.X.4.

Regarding to the comment of a Member Country on the consistency of the use of some concepts in the French version, the *ad hoc* Group recommended the OIE Headquarters to check and harmonise the terminology where necessary.

The *ad hoc* Group did not agree with the suggestion of some Member Countries to use either the word “criteria” or “measurables” throughout the text of the Chapter, as the existing wording had the agreement of several Member Countries and the *ad hoc* Group.

The *ad hoc* Group agreed with the proposal of a Member Country to add a reference on the provision of resources to be consistent with the draft chapter on animal welfare and laying hen production systems. The last sentence was also modified to improve clarity.

In relation to the proposal of a Member Country to replace the word “thresholds” with “reference values”, the *ad hoc* Group did not agree with this proposal, as the existing text provides enough flexibility to determine thresholds according to the conditions or context in which they will be used.

1. Behaviour

The *ad hoc* Group agreed with the suggestion of a Member Country to relocate a paragraph to the beginning of point 1 on Behaviour. They also modified the original proposal to include examples of behaviour where there is sufficient scientific evidence that they appear to be indicators of good pig welfare.

The *ad hoc* Group did not agree to delete the word “health” in relation to potential animal welfare problems, at the beginning of the first paragraph, as it is consistent with the terminology used by the OIE in other animal welfare chapters and in general when referring to the OIE work on animal welfare.

The *ad hoc* Group considered that it was not appropriate to delete the word “stereotypic” in the second paragraph of the Behaviour point, proposed by a Member Country, as this behaviour can be an indicator of a present problem or at least a past problem that has been resolved. Furthermore, the *ad hoc* Group modified the paragraph to include additional examples of behaviours indicative of poor welfare with corresponding scientific references.

Annex 43 (contd)

The *ad hoc* Group did not agree with the proposal of a Member Country to modify this paragraph as it was already amended based on a previous comment. Nevertheless, they modified the original proposal to include specific examples of positive behaviours where there is sufficient scientific evidence that they appear to be indicators of good welfare in pigs.

The *ad hoc* Group discussed the need to consider the practical and ethical implications of stereotypic behaviour (Mason, 2006). The *ad hoc* Group proposed to include a new paragraph under this section to reflect the idea that certain behaviours could be useful to cope in certain situations and some indication to use stereotypies as a welfare measure.

2. Morbidity rates

In relation to the comment of a Member Country requesting information on the use of thresholds, the *ad hoc* Group indicated that thresholds used in this chapter should be defined according to multiple variables including, for example, regional differences, herd health and climate. To provide further information, the *ad hoc* Group added these examples in the first paragraph of Article 7.X.4., and provided some references, on the use of scoring systems for body condition, lameness and injuries under point 2 Mortality rates.

The *ad hoc* Group did not agree with the proposal of a Member Country to insert “or transport” after “slaughterhouse/abattoir”, as it is neither practical nor common practice to collect information during transport.

4. Changes in weight and body condition

The *ad hoc* Group did not agree with a Member Country proposal to add a new statement in relation to using body condition scoring as an indicator of good welfare, as it is already mentioned in the second paragraph of this section.

5. Reproductive efficiency

The *ad hoc* Group did not agree with a comment of a Member Country to use “inefficiency” instead of “efficiency” as the use of the term was clarified in the second paragraph of the section (poor reproductive efficiency).

Regarding the proposal of an Organisation to include ‘high mortality before weaning’ as an example of poor reproductive efficiency, the *ad hoc* Group did not agree as it is not a measure of reproductive efficiency and is included under the criteria of mortality.

6. Physical appearance

The *ad hoc* Group did not agree with the suggestion of a Member Country to include examples of general “aspects of physical appearance” as the attributes mentioned are not related to animal welfare problems.

Regarding the request of a Member Country to receive guidance on the acceptable range for body condition, the *ad hoc* Group included a new reference in the draft text.

Upon the request of an Organisation, the *ad hoc* Group reinstated sunburn as an example of skin decolouration to emphasise its importance in some production systems and to be consistent with articles related to housing and heat stress.

Annex 43 (contd)

In response to a general comment of a Member Country regarding the need to provide the scientific references for each of the examples listed, the *ad hoc* Group recalled that references are only needed for indicators that are less recognised or contentious.

The *ad hoc* Group did not agree with the addition proposed by a Member Country in relation to animal handling and welfare outcomes because it is already mentioned in the following paragraph and in Article 7.X.7. on handling and inspection. Nevertheless, the *ad hoc* Group considered it useful to include in Article 7.X.7. some of the factors related to stockpersons or characteristics associated with positive handling and the reference mentioned in the comment and add a new paragraph at the beginning of the before mentioned article.

In reference to the proposal of a Member Country to include wording related to the lack of “habitual and humane” contact, the *ad hoc* Group did not agree, as these aspects are included in the revised version of Article 7.X.6. on training of personnel and in the recommendation in Article 7.X.7. on handling and inspection.

Regarding the suggestion of a Member Country to remove the reference to fractures just on legs, the *ad hoc* Group agreed with the comment as fractures can occur in other body parts, as mentioned in the justification provided.

9. Complications from common procedures

In response to several proposals of Member Countries to make minor editorial changes to this section, the *ad hoc* Group did not agree that the proposals improved the clarity of the text.

Regarding a comment of a Member Country, as mentioned previously, the *ad hoc* Group did not consider it necessary to provide the scientific references for each one of the examples listed.

Article 7.X.5.

The suggestion of a Member Country to add “(or measurable)” was accepted to ensure consistency with the other articles of this chapter.

Article 7.X.7.

The *ad hoc* Group agreed to add a new sentence at the beginning of Article 7.X.7. in response to an earlier suggestion of Member Country to include some (stockperson) factors (or characteristics) associated with positive handling.

The *ad hoc* Group did not agree with the comment of a Member Country to delete the reference to situations where pigs are fully dependent on humans, as there are some extensive production systems where it is not feasible to inspect the pigs each day.

The *ad hoc* Group agreed with the comment of a Member Country to add “without delay” to the text to emphasise the need to provide appropriate treatment in a timely manner.

Regarding the comment of Member Countries, the *ad hoc* Group did not agree with the need to mention that piglets should not be thrown as it was already covered in the examples given for improper or aggressive handling of the pigs.

The *ad hoc* Group agreed with the suggestion of a Member Country to include a sentence at the end of the fourth paragraph to highlight the importance of releasing pressure to reduce the level of threat of injury when handling pigs.

Annex 43 (contd)**Article 7.X.8.**

The *ad hoc* Group agreed with the suggestion of a Member Country to add a sentence regarding staff training.

In relation to the suggestion of some Member Countries to replace the word 'in' by 'on' in the second line of the first paragraph of the article on painful procedures the *ad hoc* Group did not agree as the suggestion do not improve the text.

Regarding the suggestion of an Organisation to add a new sentence at the end of the second paragraph of Article 7.X.8. concerning the need for supervision of a veterinarian when using analgesia or anaesthesia. The *ad hoc* Group did not accept the suggestion as the proposed sentence is included in the following paragraph.

In response to a comment of a Member Country and an Organisation to include wording to emphasise the possibility of using analgesia and anaesthesia at the same time, the *ad hoc* Group agreed with the proposal to insert the words "or both". Furthermore, this proposal generated consensus among other Member Countries which commented on the same point.

The *ad hoc* Group did not agree to specify the use of local anaesthesia, as was proposed by a Member Country as the *ad hoc* Group considered that anaesthesia could be provided in other ways, and not only locally.

The *ad hoc* Group agreed with the suggestion of a Member Country to add the word "surgically", as it was considered that the addition improved the clarity of the text.

Regarding some Member Countries comments referring to the use of anaesthesia and analgesia to conduct an ovariectomy. The *ad hoc* Group did not agree with the questioning of the relevance of the statement "Ovariectomy should not be performed without anaesthesia and prolonged analgesia", as there are several examples of practices mentioned in the present chapter that could be defined as the natural way of behaving, but for their relevance it is important to not forget to include the proper management of this surgical procedure or even mention possible alternatives.

The *ad hoc* Group did not agree with the proposal of a Member Country to replace "should" by "must" concerning the use of anaesthesia and analgesia when performing an ovariectomy, as the proposed language was considered too restrictive.

The *ad hoc* Group did not agree with the proposal of Member Countries to include two new paragraphs in relation to tail docking and teeth trimming and grinding, because they are already considered in other parts of Article 7.X.8. on Painful procedures, specifically in the introduction and in the paragraph in which recommended options for enhancing animal welfare in relation to these procedures are given, including the 3Rs.

Article 7.X.9.

The *ad hoc* Group agreed with a Member Country proposal to modify the title of Article 7.X.9. to improve its clarity.

With reference to the suggestion of several Member Countries to reinstate the words "and behavioural" in the second bullet point in relation to provisions for feed and nutrients, the *ad hoc* Group reiterated the justification for not accepting this proposal as it is not clear what is meant by "behavioural requirements" and it is inconsistent with other OIE *Terrestrial Code* chapters on animal welfare.

Annex 43 (contd)

Also responding to the proposal of some Member Countries to delete the third bullet point of this section, the *ad hoc* Group did not agree. References to support the inclusion of the third point can be found in Bergeron *et al.* (2006), where the editorial introduction concludes that:

“for sows (as with other ungulates) low fibre, high-concentrate diets that require little food-searching behaviour and consummatory behaviours, like chewing, result in unfulfilled motivations to perform these natural foraging activities, leading to increased oral stereotypies (oral stereotypic licking, bar-biting and sham-chewing). Also, it has been shown in several studies that high-fibre diets, similar in dietary energy and major nutrient levels, fed to sows markedly increased feeding time and that this increased feeding time accounted for much of the differences in level of stereotypies between diets.”

Thus, these results support the view that expressing foraging and feeding behaviour can reduce stereotypies. (Robert *et al.*, 1993, 1997; Brouns *et al.*, 1994; Ramonet *et al.*, 1999; Bergeron *et al.*, 2006).”

Consequently, the *ad hoc* Group added the words, ‘and feeding behaviours’ to the bullet point on foraging.

In response to Member Countries comments in relation to the importance of dietary aspects on the occurrence of gastric ulcers. The *ad hoc* Group agreed with the proposal to modify the statement to acknowledge that multiple dietary factors can influence gastric ulcers and added a new scientific reference which highlights the importance of providing adequate dietary fibre, and the reduction of crude protein (Jha and Berrocós, 2016).

Regarding some Member Countries comments to clarify the descriptor for the water provision for pigs, the *ad hoc* Group decided to modify the text, and to just recommend the supply of water, without giving any kind of descriptor to it. The *ad hoc* Group noted that the conditions to be met by the water supply are indicated further on in the same paragraph.

The *ad hoc* Group agreed with the comment of a Member Country to include a sentence on the necessary flow rates for water in pig production.

The *ad hoc* Group agreed to move the sentence related to diet selection in outdoor systems (Point 1 of Article 7.X.13.) at the end of this Section to give more clarity to the text.

Article 7.X.10.

The *ad hoc* Group did not accept the proposal of a Member Country to delete the reference to ‘biting/foraging’, but clarified that the normal behaviours that are being promoted are foraging behaviours that include biting enrichment materials.

The *ad hoc* Group did not agree with the proposal of a Member Country to include the term ‘behavioural need’ as the *ad hoc* Group agreed to use the term ‘normal behaviour’. The *ad hoc* Group did include some of the proposed examples of stereotypies supported by scientific references. Moreover, of the references provided (Brouns *et al.*, 1994; Bergeron and Gonyou, 1997 [referred to in Bergeron *et al.*, 2006]; Ramonet *et al.*, 1999) only Bergeron and Gonyou (2006) show that provision of straw reduces oral stereotypies. The *ad hoc* Group also added a second reference that shows that straw reduces oral stereotypies (Spoolder *et al.*, 1995).

The *ad hoc* Group agreed to delete the words ‘multiple forms of’ in relation to the different kinds of enrichment to avoid confusion with the descriptions given in the bullet points of this section.

Annex 43 (contd)

Regarding the proposal of a Member Country to include a sentence on “other abnormal behaviours”, the *ad hoc* Group did not accept this proposal as it did not add new information and could exclude the possibility of using positive behaviours as a measurable.

Article 7.X.11.

The *ad hoc* Group did not agree with the comment of a Member Country to include text to cover some aspects related to normal behaviour and space allowance. The *ad hoc* Group considered that this is already partially covered in Article 7.X.13. on space allowance.

The *ad hoc* Group did not agree with the proposal of a Member Country and an Organisation to include “additional space” in the point in relation to oral stereotypies, as the scientific references used to support this modification were related to the use of crates versus loose housing, not to the provision of additional space.

Under the request of a Member Country, the *ad hoc* Group replaced the word “can” with “may” as sometimes, even if environmental enrichment or other treatments are provided, oral stereotypies will continue.

The *ad hoc* Group agreed with a Member Country proposal to include language to emphasise that competition for other resources, and not only feed and water, is a factor when managing tail biting issues.

The *ad hoc* Group did not agree with the proposal of a Member Country to include vitamins as a deficiency that could trigger tail biting, as this it is not mentioned in the scientific reference provided or in other references that the *ad hoc* Group reviewed.

The *ad hoc* Group did not agree with the proposal of a Member Country to include stocking density. Research by Rizvi *et al.* (1998) (and quoted by Rodenburg and Koene, 2007) has shown that group size was positively associated with vulva biting in group-housed gestating sows. A sentence to this effect was added.

Article 7.X.12.

In response to a comment from a Member Country, the *ad hoc* Group agreed with the proposal to delete the word “humano” in the Spanish version of this article.

Regarding the comment of a Member Country to add a new sentence to highlight the importance of having a separate space to accommodate animals in emergency situations, the *ad hoc* Group did not agree as this aspect is already considered in a general way in the original paragraph.

In response to Member Countries comments to add two sentences in the paragraph dealing with the social characteristics of pigs, the *ad hoc* Group did not agree. In the case of the first sentence, the proposition is already considered in Article 7.X.13 on Space allowance. Concerning the proposal for the second sentence, the *ad hoc* Group did not agree to reinstate the last sentence of the paragraph, as although there is increasing anecdotal evidence, the statement is not well supported by literature. Recent research under controlled experimental conditions indicates risks to reproduction in mixing early after breeding.

“Conception rates (and farrowing rates) were lower for sows mixed early in gestation than for those mixed later in gestation or those housed in stalls for the entire gestation (conception rates of 87.1% and 89.2% for sows mixed at Days 3 and 14 after breeding vs 92.2% for sows mixed at Day 35 after breeding and 96.2% for sows continuously housed in stalls, Knox *et al.* 2014), and farrowing rates were lower for sows mixed early in gestation than for those mixed later in gestation (82.3% for sows mixed at Days 2 and 9 after artificial insemination vs. 86.7% for sows mixed at day 35 after artificial insemination, Li and Gonyou 2013).”

Annex 43 (contd)

On the same topic, the *ad hoc* Group did not agree with the deletion suggested by a Member Country referring to the statement that pregnant sows and gilts should preferably be housed in groups.

The justification for not agreeing with this proposal can be summarised as follows:

“The evaluation of animal welfare can be grouped into three general categories: 1) biological functioning; 2) affective states; and 3) natural living. These categories form the basis for different approaches to animal welfare research (Fraser *et al.*, 1997).”

“When comparing stall gestation to group housing systems, both systems show similar levels of biological function, with generally equivalent measures of productivity and health (NFACC, 2012, Karlen *et al.*, 2007, Marchant and Broom, 1996). Group housing systems arguably provide better measures of affective state and natural living for sows based on reduced levels of stereotypies (Broom *et al.*, 1995) and increased ability to express normal behaviours (Von Borrell *et al.*, 1997). In comparison to stall housing systems, group housing systems can result in aggression and higher lesion scores (Karlen *et al.*, 2007), particularly if space allowance is insufficient, or if subordinate animals are not adequately protected from aggression or feeding competition (Verdon *et al.*, 2015). Therefore, when managing sows in groups it is important to provide adequate space allowance, and to ensure the proper distribution of resources and management of feed delivery to minimize the effects of social competition (EFSA, 2007).”

“The main concerns with stall housing are the general lack of social contact, inability to exercise and restricted choice of stimuli to interact with (Barnett *et al.*, 2001). Some negative consequences of stalls compared to group housing include reduced bone strength (Marchant and Broom, 1996), increased stereotypies (Broom *et al.*, 1995), higher resting heart rate (Marchant *et al.*, 1997), reduced body weight (Broom *et al.*, 1995) and prolonged farrowing time (Anil *et al.*, 2005).”

The *ad hoc* Group agreed that, when using gestation stalls, there are no measures which can be implemented to avoid the problem of behavioural restriction in stall gestation. Considering the limitations of stall housing, the *ad hoc* Group decided to maintain the statement regarding group housing for sows.

Broom, D.M., Mendl, M.T. and Zanella, A.J. 1995. A comparison of the welfare of sows in different housing conditions. *Animal Science* 61, 369-385.

EFSA. 2007. Scientific Report on animal health and welfare aspects of different housing and husbandry systems for adult breeding boars, pregnant, farrowing sows and unweaned piglets. European Food Safety Authority. *The EFSA Journal* 572:1-107.

<http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2007.572/epdf>

Fraser D. 1975. The effect of straw on the behaviour of sows in tether stalls. *Animal Production* 21: 59-68.

Karlen, G.A.M., Hemsworth, P.H., Gonyou, H.W., Fabrega, E., Strom, A.D. and Smits, R.J. 2007. The welfare of gestating sows in conventional stalls and large groups on deep litter. *Applied Animal Behaviour Science*, 105: 87-101.

Marchant, J.N. and Broom, D.M. 1996. Effects of dry sow housing conditions on muscle weight and bone strength. *Journal of Animal Science* 63: 105-113.

Marchant, J.N., Rudd, A.R., Broom, D.M. (1997) The effects of housing on heart rate of gestating sows during specific behaviours. *Applied Animal Behaviour Science*. 55, 67-78.

Annex 43 (contd)

NFACC 2012. Code of Practice for the Care and Handling of Pigs: Review of Scientific Research on Priority Issues. Lacombe AB: National Farm Animal Care Council.

Verdon, M., Hansen, C.F., Rault, J-L., Jongman, E., Hansen, L.U., Plush, K. and Hemsworth, P.H. (2015), 'Effects of group-housing on sow welfare: A review'. J. Anim. Sci., 93, 1999–2017.

Von Borrell, E., Broom, D.M., Scermely, D., Dijkhuizen, A.A., Hylkema, S., Edwards, S.A., Jensen, P., Madec, F. and Stamataris, C. 1997. The welfare of intensively kept pigs. A report of the Scientific Veterinary Committee. Available online at: http://ec.europa.eu/food/fs/sc/oldcomm4/out17_en.pdf.

Regarding the proposal of a Member Country to add a sentence at the end of the last paragraph of this section, the *ad hoc* group agreed to include a reference to the management of boars.

The *ad hoc* Group did not agree to add a statement on how to manage the housing of aggressive pigs, as it is already considered in the third paragraph of this section.

The *ad hoc* Group did not agree with the suggestion of a Member Country to add a new sentence on the different factors to consider in the management of pregnant sows and gilts kept in groups, since it is considered in Article 7.X.21 on Mixing.

Article 7.X.13.1. Group housing

Regarding the second recommendation of Member Countries to include a new sentence after the second paragraph of the section on Group housing. The *ad hoc* Group did not agree as this is already mentioned in Article 7.X.12. on housing.

The *ad hoc* Group did not agree with the suggestion of a Member Country to change the word “should” by “needs to”, as the Group considered the later to be more restrictive than the existing wording.

In response to the suggestion of a Member Country to adapt the stocking density to the availability of water and shelter in outdoor production systems, the *ad hoc* Group did not agree with the proposal as the critical aspect in this kind of system is the supply of feed. Nevertheless, to be consistent with the order of the Chapter, the *ad hoc* Group moved the relevant text to Article 7.X.9 on Provision of feed and water.

2. Individual pens

The *ad hoc* Group did not agree with the suggestion of a Member Country to include lameness as an animal-based criteria, as it is related to flooring conditions and also because this aspect is covered in Article 7.X.14.

3. Stalls and crates

Regarding Member Countries' proposals to limit the time spent in gestation stalls, the *ad hoc* Group did not agree and reiterated the justification provided previously (meeting report of August 2017), that the proposal is too prescriptive at a global level and due to on-going controversy as to how many days should be adopted. Also, the *ad hoc* Group stated that despite the references provided, there is still no strong evidence to support this change.

Annex 43 (contd)

The *ad hoc* Group agreed partially with comments of a Member Country and an Organisation on the stall and crate section. The *ad hoc* Group added a new sentence to include an exemption when using feeding stalls in the fourth bullet point. On the other hand, the *ad hoc* Group decided not to include the proposal to add a new paragraph on pregnant sows in groups at the end of the section as this is included in Article 7.X.12. on housing.

The *ad hoc* Group acknowledged the support of a Member Country related to the concepts developed in this section.

Regarding the suggestion of a Member Country to add “injuring” in the fourth bullet point of the section recommending the conditions for stalls and farrowing crates, the *ad hoc* Group did not accept the proposal as it does not add new information or facilitate the comprehension of the section.

Article 7.X.14.

The *ad hoc* Group partially agreed with the comment of a Member Country to add a new sentence to consider the conditions and ways that are used to help pigs cope with heat stress, flooring, bedding and resting surfaces conditions.

Regarding the comments of some Member Countries and an Organisation in relation to the use of fully slatted floor. The *ad hoc* Group did not agree to modify the current text and reiterated its justification included in its report of August 2017, in which it stated that “the scientific references provided do not give sufficient evidence to differ between partially and fully slatted floors in terms of foot and leg injuries and the ability to provide enrichment”. In addition, the *ad hoc* Group could not find other references that could support a phasing out of fully slatted floors.

The *ad hoc* Group did not agree with the addition of new text proposed by a Member Country to recommend the characteristic of the slope of the floor as there is no research available to support the addition of such a text and the pigs could slip independently of the floor slope under certain conditions.

Regarding a Member Country proposal to reinstate the text indicating the characteristics of bedding or rubber mats provided to pigs, the *ad hoc* Group did not agree as they considered that the term “suitable” did not add value to the text. Furthermore, characteristics relating to bedding and rubber mats are included at the end of the paragraph, and in the second paragraph of this section.

Article 7.X.15.

The *ad hoc* Group accepted the suggestion of a Member Country that draughts have a detrimental effect on the behaviour, health status and performance of pigs. ‘Daily but unpredictable draughts reduced growth rate, and increased coughing, sneezing, diarrhoea, skin lesions and injurious behaviour, such as ear-biting and aggression, in weaned pigs’ (Scheepens *et al.*, 1991). The *ad hoc* Group highlighted the importance of correctly understanding the concept of “draught”. “Draught” should be understood as ‘a current of unpleasantly cold air blowing through a room that can have a detrimental effect in weaning pigs’, or ‘an air stream needed for growing pigs, under heat stress conditions, to lose some body heat’. This is also important when translating the concept in French or Spanish.

The *ad hoc* Group reviewed the scientific references that support the examples of physical appearance “excessive soiling and tear staining” and agreed to delete it as no scientific references were found to support keeping the examples in relation to air quality.

Annex 43 (contd)**Article 7.X.16.**1. Heat stress

The *ad hoc* Group did not agree with the suggestion of a Member Country to add “when it occurs” in the sentence since it did not add clarity to the text and because it is implicit in the text that heat stress is only a problem when this occurs.

The *ad hoc* Group agreed with the suggestion of a Member Country to add “solar radiation” as an environmental factor that could contribute to heat stress in pigs. The *ad hoc* Group considered this relevant in the light of the fact that shade is recommended elsewhere in the chapter to protect against solar radiation.

The *ad hoc* Group agreed with the suggestion of a Member Country that heavier pigs can experience more heat stress, at the same temperature, than growing pigs, once they are exposed to a higher heat load. However, the *ad hoc* Group based their decision on a more recent bibliography reference than the one provided by the Member Country.

2. Cold stress

The *ad hoc* Group accepted the recommendation of a Member Country to exclude the reference to “long hair” as an example of response to cold stress. According to scientific references, long hair is a natural condition for pigs in outdoor systems and would not be a useful measure to check if cold stress is occurring.

Article 7.X.17.

The *ad hoc* Group agreed with a Member Country suggestion to add a characteristic as to the type of noise that should be avoided, and to include “increased aggression” as a negative reaction to sudden or prolonged loud noises, as it is supported by the scientific references provided.

Article 7.X.18.

The *ad hoc* Group reinstated the justification for not accepting the request of a Member Country to mention the limit of 40 lux as a light intensity recommended to avoid increased aggression. In its previous report of August 2017, the *ad hoc* Group, following a recommendation of another Member Country, had removed the reference to this limit. However, the *ad hoc* Group emphasized the requirements for a suitable photoperiod and provision of suitable lighting levels for caretakers to properly inspect pens and animals. The *ad hoc* Group further noted that this was justified because of a general shortage of studies looking at lighting levels, not because any contradictory results have been found regarding the 40 lux recommendation.

Article 7.X.19.

The suggestion by a Member Country to add a sentence stating that nesting material should be provided only when “the equipment used is not sufficient to provide appropriate farrowing accommodation” has not been accepted by the *ad hoc* Group as nesting material is used to promote nest-building behaviour regardless of accommodation and is not related to the equipment.

The *ad hoc* Group did not agree with a Member Country and an Organisation suggestion to insert a new paragraph specifying the period that producers should consider using the farrowing crate during farrowing and after farrowing. Nevertheless the *ad hoc* Group agreed that this is an important aspect to be considered for future revisions considering the results of current research when they become available.

Annex 43 (contd)

A suggestion of a Member Country to add a new paragraph on requirements for farrowing accommodations that provide comfort, warmth and protection to piglets was partially accepted by the *ad hoc* Group. They rephrased the suggested sentence and added it after the first paragraph of this article.

Regarding a Member Country's suggestion to add a new paragraph on the adaptation time of sows to farrowing accommodation, the *ad hoc* Group did not agree to add this information because they considered that this subject is already covered in other articles of this chapter.

The suggestion by a Member Country to add “gilts” as an example, to which the mortality or culling rate as a criterion could be applied to, was accepted by the *ad hoc* Group, as they considered it would improve the clarity of the text.

Article 7.X.20.

Regarding some Member Countries proposals to add a recommendation to delaying weaning, the *ad hoc* Group did not agree with this proposal, as no scientific reference was provided and as they considered that it is already addressed in the current paragraph.

The *ad hoc* Group did not agree with the request from Member Countries to reword the sentence on delay in weaning and the suggestion to remove the word “delay”. The *ad hoc* Group considered that this suggestion does not improve the clarity of the sentence and they also stated that the present text is in line with the sentence above.

The *ad hoc* Group did not agree with the suggestion of a Member Country to delete “less use” and replace it with “reduce the need for”, when referring to the use of antimicrobial agents as in their opinion it has the same meaning and also did not improve the clarity of the sentence.

Regarding the comment of a Member Country in order to emphasise that particular attention should be given to monitoring of newly weaned pigs during the first two weeks after weaning; the *ad hoc* Group did not agree as they considered that this comment did not contribute to improving the clarity of the text.

Article 7.X.21.

The *ad hoc* Group accepted the suggestion of a Member Country to reformulate the last paragraph on the pig-mixing procedure to emphasise that after mixing, pigs should be observed and that interventions should be applied when needed to minimize stress and injury.

The *ad hoc* Group did not agree with a Member Country to include a new sentence about the appropriate period to mix pregnant sows, as it considered that is already addressed in Article 7.X.12. on Housing.

Article 7.X.22.

Considering the suggestion of some Member Countries and an Organisation to include a reference about genetic criteria on breeding selection to improve the welfare of pigs, the *ad hoc* Group considered that it is not appropriate to include “reduced litter size” as a genetic goal based on the current scientific information. Nevertheless, while it is recognized that excessive litter size generally results in smaller less viable piglets, there is clearly a balance to be sought between litter size and piglet viability.

“Reducing litter size could be taken to the opposite extreme and is too vague a statement for such an important production trait. Management measures should be implemented to identify small and weak piglets, reduce the risk of hypothermia, ensure early colostrum intake and cross foster in a timely manner to provide each piglet with a viable teat ‘Ferrari *et al.*, 2014; Decaluwe *et al.*, 2014)’”.

Annex 43 (contd)

“Reduced litter sizes may be more appropriate for specific genetic lines, e.g. such as those used for outdoor production, where less supervision is available to new born piglets.”

C.V. Ferrari, P. E. Sbardella, M. L. Bernardi, M. L. Coutinho, I. S. Vaz, I. Wentz, F.P. Bortolozzo, Effect of birth weight and colostrum intake on mortality and performance of piglets after cross-fostering in sows of different parities, Preventive Veterinary Medicine, Volume 114, Issues 3–4, 2014, Pages 259-266, <https://doi.org/10.1016/j.prevetmed.2014.02.013>. (<http://www.sciencedirect.com/science/article/pii/S0167587714000981>)

R. Decaluwé, D. Maes, B. Wuyts, A. Cools, S. Piepers, G.P.J. Janssens, Piglets' colostrum intake associates with daily weight gain and survival until weaning, Livestock Science, Volume 162, 2014, Pages 185-192, ISSN 1871-1413, <https://doi.org/10.1016/j.livsci.2014.01.024>. (<http://www.sciencedirect.com/science/article/pii/S1871141314000584>)

Regarding the suggestion of a Member Country to reword the sentence mentioning the social effects that could be achieved by the procedure of selective breeding, the *ad hoc* Group did not agree with the proposal. However, to improve the clarity of the text the *ad hoc* Group reworded the sentence and added a new scientific reference.

Article 7.X.23.

The *ad hoc* Group did not agree to include the suggestion of an Organisation to mention that pigs in outdoor systems should be protected from predators “using humane methods”, as no reference was provided to support this request, and it could not find a scientific reference where humane methods of predator control are mentioned.

Article 7.X.24.

a) Animal health management

Regarding a Member Country suggestion to add rodent control as a requirement to improve biosecurity and disease prevention in pig health management, the *ad hoc* Group accepted the suggestion which was supported by scientific references and considering that this had not been included in other parts of chapter.

The *ad hoc* Group accepted the request of a Member Country to include the point that in cases where the pigs may be suffering with severe pain that cannot be alleviated, that humane killing should be performed.

Article 7.X.25.

Regarding a Member Country suggestion to add “or any other problem that leads to loss of control”. Pig producers should have contingency plans in place; the *ad hoc* Group considered that this is already covered in the paragraph and did not propose changes to the text.

In relation to the suggestion from a Member Country that electricity installations and devices should be checked and tested regularly, the *ad hoc* Group considered that this is related to the maintenance of the installations rather than to contingency plans and therefore did not accept the suggestion to amend the text. However, the *ad hoc* Group accepted the second comment to move the sentence “Contingency plans should be documented and communicated to all responsible parties”.

Annex 43 (contd)**Article 7.X.26.**

The *ad hoc* Group agreed with some Member Countries on the importance to refer to the LEGS (Livestock Emergency Guidelines and Standards of the FAO) document, but they would like to seek the advice of the Code Commission to decide about the pertinence to include it.

Article 7.X.27.

The *ad hoc* Group did not agree with the recommendation of an Organisation, that the ‘reasonability’ of a person in charge to decide or to proceed to a kill of a pig should be considered, as the quality or capacity of being reasonable is difficult to evaluate and quite subjective. The *ad hoc* Group also considered that it would not improve the clarity of the sentence.

Regarding a Member Country suggestion to specify that the procedures for on-farm humane killing of pigs should be performed under the guidance of a veterinarian, the *ad hoc* Group considered that it was not necessary to emphasise this point, as it is already covered by in the text.

3. Programme for further work after this meeting

The *ad hoc* Group was informed about the next steps that the chapter should follow on its pathway for adoption next May. The report, including the amended draft chapter, will be discussed during the February 2018 meeting of the Code Commission, it is anticipated that the draft revised chapter will be annexed to the report for its adoption during the next General Session in May 2018. The OIE Headquarters will contact the Members of the *ad hoc* Group if some additional work will be required after the Code Commission meeting.

4. Other business

No other new issues were proposed for discussion.

.../Appendices

Annex 43 (contd)Annex I**OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS****Paris, 16–18 January 2018**

List of participants**MEMBERS OF THE AD HOC GROUP**

Dr Birte Broberg (Chair)

Senior Veterinary Officer
Animal Welfare and Veterinary Medicine
Ministry of Environment and Food
The Danish Veterinary and Food
Administration
I Stationsparken 31-33 I DK-2600
Glostrup I Tlf.
DENMARK
Tel.: +45 72 27 69 00
bb@fvst.dk

Dr Jennifer A. Brown

Prairie Swine Centre
Box 21057
2105 – 8th Street East
Saskatoon, Saskatchewan
S7J 5N9
CANADA
jennifer.brown@usask.ca

Dr Antoni Dalmau Bueno

Investigador
Subprogramas: Bienestar animal
Monells
Finca Camps i Armet
SPAIN
Tel.: +34 902 789 449 + 1434
antoni.dalmau@irta.cat

Prof. Paul Hamilton Hemsworth

Faculty of Veterinary and Agricultural
Sciences
21 Bedford St, Level 2
The University of Melbourne
North Melbourne
Victoria 3051
AUSTRALIA
Mob: +61 418 360 284
Tel.: + 613 83 448 383
phh@unimelb.edu.au

Dr Cleandro Pazinato Dias

Consultant IICA and MAPA
Av. José Gabriel de Oliveira,
915 ap. 1102 Torre I
Aurora - Londrina
86047360, PR
BRAZIL
Tel.: +55 43 911 269 38
cleandropazinato@uol.com.br

OIE HEADQUARTERS

Dr Leopoldo Stuardo

Chargé de mission
Standards Department
l.stuardo@oie.int

Dr Patricia Pozzetti

Chargé de mission
Standards Department
p.pozzetti@oie.int

Annex 43 (contd)

Annex II

OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS

Paris, 16–18 January 2018

Adopted agenda

1. Welcome and introduction
2. Consideration of Member Country's comments on draft Chapter 7.X. 'Animals welfare and pig production systems' and amend text as appropriate
3. Programme for further work after this meeting
4. Draft a report of the *ad hoc* Group meeting
5. Other business

Annex 43 (contd)

Annex III

[Note: this Annex has been replaced by Annex 18 to the report of the meeting of the OIE Terrestrial Animal Health Standards Commission which was held on 12–23 February 2018.]



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Annex 44

Original: English
January 2018

**OIE AD HOC GROUP ON KILLING METHODS FOR FARMED REPTILES
FOR THEIR SKINS AND MEAT
ELECTRONIC REVIEW AND TELECONFERENCE**

Paris, January 2018

1. Welcome and introduction

The OIE *ad hoc* Group on Killing Methods for Farmed Reptiles for their Skins and Meat (the *ad hoc* Group) conducted a review, electronically, of the draft chapter to consider Member Countries' comments and finalised its review via a teleconference on 25th January 2018.

The electronic work was coordinated by the OIE Headquarters.

The members of the *ad hoc* Group and other participants who participated in the review of the working document are listed at Annex I.

Dr Leopoldo Stuardo, Chargé de mission of the Standards Department, thanked the *ad hoc* Group, on behalf of the Director General, for their commitment to work with the OIE on this important topic.

Dr Stuardo requested that the participants in the teleconference give priority to discussion of the comments on which there were differing points of view, due to time constraints. Dr Slamet Raharjo did not participate in the discussion.

The draft agenda was adopted without modifications. The adopted agenda is at Annex II. Dr Karesh, chair of the *ad hoc* Group, welcomed and thanked the members of the *ad hoc* Group for their dedicated work, and the Member Countries and organisations for sending constructive comments.

2. Review of Member Countries comments on the draft chapter on killing of reptiles for their skins, meat and other products

The *ad hoc* Group proposed a revised draft Chapter 7.Y. included as Annex III, for consideration by the Code Commission at its February 2018 meeting.

Comments were received from Australia, Canada, New Zealand, Norway, Singapore, Switzerland, Thailand, United States of America (USA), European Union (EU) and International Coalition for Animal Welfare (ICFAW).

During the revision of this chapter and in response to a number of Member Countries' comments, the *ad hoc* Group proposed a number of changes throughout the text to improve grammar, syntax, and clarity.

General comments

The *ad hoc* Group did not agree with a Member Country general comment proposal to develop a table that would summarise the different slaughter methods used in reptiles. The *ad hoc* Group noted that some methods which are prohibited in some countries (as indicated in the comment) have been found to be acceptable (and advantageous) and the inclusion of a table would most likely not resolve this concern.

The *ad hoc* Group noted several other Members Countries' comments supported development of this chapter and encouraged the OIE to adopt it at the next General Session in May 2018.

Annex 44 (contd)**Article 7.Y.2.**

The *ad hoc* Group agreed with comments of some Member Countries that it is important to highlight reptiles have characteristics which differ from other animals included in the scope of the *Terrestrial Code* and agreed to insert introductory text, to reflect this in the definitions section.

The *ad hoc* Group agreed with the suggestion of some Member Countries to replace the word “animal” with “reptile”, when it is not a general statement, to be consistent with the particularities described in the chapter.

The *ad hoc* Group partially agreed with a Member Country comment to be consistent with the definition of unconsciousness. Nevertheless the *ad hoc* Group did not agree with the proposal to include a new sentence at the end of the definition of stunning as the possibility to recover consciousness is mentioned later.

Article 7.Y.3.

With reference to the suggestion of some Member Countries’ comments to include an introductory paragraph under Article 7.Y.3. in order to highlight some specificities of reptiles, the *ad hoc* Group agreed with the suggestion but modify the wording, to include “compared to other animals” rather than to “compared to mammals”, since reptiles also differ from birds, fish, etc.

1. Animal welfare plan

The *ad hoc* Group agreed with a Member Country comment to modify the wording of the first paragraph of the section on the animal welfare plan, for consistency with the proposed change in the definitions section used ‘reptiles’ instead of ‘animals’. This change will be made consistently, as appropriate, throughout the chapter.

In reference to the suggestion of an Organisation to include a sentence to connect the Standard Operating Procedures of the animal welfare plan to the guidelines. The *ad hoc* Group agreed with the suggestion but modified the wording proposed.

2. Competency and training of the personnel

The *ad hoc* Group agreed with the comments of Member Countries to add a sentence to highlight the importance of the competencies of the animal handlers in monitoring the effectiveness of the stunning and killing process. Nevertheless, the Group did not agree with the inclusion of the word “care”, as its definition is not clear.

The *ad hoc* Group did not agree with a Member Country proposal to include a new sentence concerning the risk posed to the personnel as this is covered in Article 7.Y.4. on selection of the killing process.

With reference to a suggestion of an Organisation to add a new sentence at the end of the first paragraph, the *ad hoc* Group did not agree, as the need to use proper handling of reptiles is already addressed in the paragraph. Moreover the *ad hoc* Group emphasised that it was unnecessary to single out any species-specific issues.

The *ad hoc* Group did not agree with the proposal of an Organisation to add a new paragraph after the third paragraph of this article to add reference to the way to transport or move reptiles, as the sentence content is already covered by the second part of the paragraph. However, the *ad hoc* Group included a new paragraph to reflect some Member Countries comments in relation to the need to have personnel that can physically cope with the effort carried out during a work shift so that fatigue does not impair performance of duties.

Annex 44 (contd)3. Source of animals

The *ad hoc* Group agreed with the proposal from an Organisation to change the word “jurisdiction” to “legislation”, to improve the clarity of the sentence.

Regarding the suggestion of a Member Country to add reference to relevant chapters of the *Terrestrial Code* dealing with transport in the section dealing with the source of the reptiles, the *ad hoc* Group did not agree noting these chapters do not include reptiles in their scope. Nevertheless the *ad hoc* Group agreed with the Member Country that the term “humane” may not be well understood, and agreed to delete it from the text.

The *ad hoc* Group did not agree with the suggestion of some Member Countries to delete or modify the text referring to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and to the use of reptiles captured in the wild. Several species considered in this chapter and covered by CITES are harvested from the wild in large numbers. This may be for local use or consumption or for international trade.

The *ad hoc* Group agreed with a Member Country suggestion to add “biosecurity” as an additional aspect to be considered when animals captured in the wild are to be used.

4. Behaviour

The *ad hoc* Group considered the suggestion of some Member Countries and an Organisation for rewording of the bullet point under the section on behaviour, and agreed to incorporate the suggestions in order to improve its readability.

Article 7.Y.4.

The *ad hoc* Group did not agree with the suggestion some Member Countries to add a new sentence at the end of the first paragraph of Article 7.Y.4., as the definitions of stunning and killing in Article 7.Y.2. already covers these aspects. Nevertheless, the *ad hoc* Group agreed to modify the wording for added clarity.

In the second paragraph of this section, an Organisation proposed to insert a new sentence regarding the variables that would not preclude the effective implementation of the chapter. The *ad hoc* Group did not agree with this inclusion as it considered that it would not add value to the existing text. Nevertheless, the *ad hoc* Group agreed to insert the word “killing” in the existing sentence.

The *ad hoc* Group agreed to add a new bullet point on the “species and size of the reptile” to the considerations when choosing the method used in the killing process as it is a helpful addition.

The *ad hoc* Group did not agree with the suggestion of some Members Countries to delete the bullet point on “cost of method”, as the criteria mentioned are not a list of welfare criteria, but factors that influence the choice of the method.

Regarding the first bullet point concerning the expected results of the killing process, the *ad hoc* Group agreed to replace the word “excitement” with “agitation”, as the latter has a more precise meaning in relation to the chapter.

The *ad hoc* Group agreed with the suggestion of a Member Country to add a new bullet point to this section to highlight the importance of shortening the time between the moment of rendering the reptile insensible and the killing process. Nevertheless, the *ad hoc* Group reworded the sentence to include the word “unconscious” for consistency.

Annex 44 (contd)

The *ad hoc* Group did not agree with a proposal to modify the last bullet point of this section as the justification provided was not an accurate statement, as in a clinical setting there are many parameters that are utilised and which have been addressed and included in this document. However, the indication of the use of adjunctive killing method is a valid statement but included further in the chapter.

Article 7.Y.5.

The *ad hoc* Group did not agree with the modifications proposed by an Organisation on the criteria to establish suspicion of consciousness, as for the first proposal, to modify the point on the spontaneous movement is too broad and for the second point, agreed that the response to superficial or deep pain stimuli is not considered to be a measure of pain and consciousness in reptiles.

The *ad hoc* Group agreed with the proposal of a Member Country to modify the first two bullet points of this section to add clarity. In the same section the *ad hoc* Group agreed with the proposal to add a new bullet point to consider the jaw tone as a criterion to be considered for measuring pain and consciousness in reptiles.

The *ad hoc* Group did not agree with the suggestion of an Organisation to modify the bullet points on the aspects that should be considered in addition to those already mentioned to confirm death on reptiles, as this section regards criteria for confirmation, not actions to be taken. The *ad hoc* Group recommend these criteria to be used to confirm death following any kill step, including brain destruction.

Regarding a Member Country proposal to remove the words “somatic stimuli” in the first bullet point on confirmation of death, the *ad hoc* Group partially agree with the proposal and only deleted the word “somatic”, as stimuli is the action that triggers the response.

The *ad hoc* Group, noting that stimulation to the head relates to brain activity while response in a lower limb may result from a spinal reflex, did not agree with a Member Country comment to modify the first bullet point of this section to add a reference on pain inducing stimuli.

In response to Member Countries proposal to insert specific language for chelonians, in the second bullet point of the section on the additional criteria to determine death, the *ad hoc* Group did not agree as many reptiles are resistant to anoxia not only chelonians.

The *ad hoc* Group thanked a Member Country for highlighting the characteristics of the respiratory and cardiac rate in hypothermic poikilotherms; however, it did not think it necessary to amend the article.

The *ad hoc* Group did not agree with the suggestion of a Member Country to delete the complete section on additional criteria to determine death in reptiles, as this section describes criteria to indicate the death of the reptile. Further, the *ad hoc* Group did not agree with the proposal to add a new sentence in relation to brain destruction, as this is a method rather than an assessment criterion and is described as an important method later in the chapter. Moreover, the scientific reference mentioned in the justification did not support the proposed modification.

In response to a Member Country proposal to add a new sentence at the end of the bullet point regarding cardiac activity, the *ad hoc* Group considered the addition useful to emphasise the variation of the timespan between heartbeats.

Article 7.Y.6.

The *ad hoc* Group agreed with the suggestion of an Organisation to modify the first paragraph of Article 7.Y.6. on physical restraint to add wording in relation to the control of the movement and the precision of the application.

Annex 44 (contd)

In the same article the *ad hoc* Group did not agree with a proposal to add a new bullet point on the characteristic of the method of physical restraint to indicate that it should not be used during electrical stunning. The *ad hoc* Group noted that physical restraint can be used effectively to aid electrical stunning taking the necessarily precautions, like using nonconductive material.

The *ad hoc* Group did not accept the suggestion of a Member Country to add the words ‘and effectively’, when referring to the use of the method, as its considered that for every method and procedure described in the chapter its application should be “effective”.

The *ad hoc* Group did not agree with an Organisation’s proposal to delete the eighth bullet point of this section as the statement clearly says when required, so it is not discarding this possibility, and just making sure it is done safely for the animals.

In response to a Member Country proposal to add a phrase to emphasise that some methods of restraint must not be used, the *ad hoc* Group proposed modified wording, consistent with other OIE chapters.

The *ad hoc* Group did not agree with the deletion of the words “blind animal” proposed by an Organisation but proposed to clarify the sentence by adding the wording “damage or injure the eyes to cause blindness” as it was not intended to mean covering the eyes to prevent vision.

Regarding the suggestion of an Organisation to add a new bullet point on unacceptable practices, the *ad hoc* Group did not agree to include a reference on its use in sensitive body parts, noting that even if it is a common requirement for other species, it is not for reptiles. For example, cloacal reflex, could be used as a reliable indicator to determine the degree of unconsciousness.

The *ad hoc* Group agreed with a Member Country suggestion to add vocalisation to the list of animal-based criteria.

Article 7.Y.7.

The *ad hoc* Group did not agree with the suggestion of a Member Country to add a new bullet point referring to the full recovery of consciousness. The *ad hoc* Group indicated that it is only necessary in the case of electrical stunning when used as a capture or restraint method and therefore not in the scope of this document.

With reference to the suggestion of a Member Country to add a new bullet point related to the stunning procedure. The *ad hoc* Group did not agree with the addition as it is included in the second bullet point of the section. Nevertheless, the *ad hoc* Group decided to insert the word “immediately” in the last bullet point to improve its clarity.

The *ad hoc* Group agreed with comments of some Member Countries that it was important to emphasise even if the equipment used in the stunning process is self-made, it should be well maintained.

The *ad hoc* Group agreed with the suggestion of an Organisation to add a reference to the necessary requirements to produce unconsciousness in Article 7.Y.5., for clarity.

Article 7.Y.8.

The *ad hoc* Group agreed with the comments of Member Countries on the need to clarify that in this context it is recommended to apply stunning to the head and amended the sentence to emphasise the appropriate manner to use electrical stunning is through the brain.

The *ad hoc* Group did not agree to include a new bullet point suggested by a Member Country to specify the size and condition of the animal to be stunned (only in unrestrained animals); however, they reworded the first paragraph for clarity.

Annex 44 (contd)

The *ad hoc* Group did not agree with the proposal of an Organisation to add a new bullet point to indicate the position of the device to carry out the stunning procedure. The *ad hoc* Group had already addressed this in the modifications proposed in response to the comment of a Member Country in the first paragraph of this article.

In response to Member Country proposal to delete the sentence recommending that stunning procedures and equipment be submitted for the approval of the competent authorities or the accredited authority, the *ad hoc* Group did not agree. For further clarity and to align the recommendation with Chapter 7.5. *Slaughter of animals*, Article 7.5.7., Stunning methods, point 1 on General considerations, the *ad hoc* Group reworded the sentence.

The *ad hoc* Group did not accept a suggestion of an Organisation to include in recommendations for effective stunning, that minimum electrical parameters should be applied to ensure that the animal remains stunned until its death. The *ad hoc* Group considered that this is a requirement for all the stunning methods presented in this chapter and that special emphasis should not be given only in this paragraph.

The *ad hoc* Group accepted the proposal of a Member Country to better clarify what is meant by “stunning duration” and for this purpose they decided to reword the sentence to clarify that as “stunning duration” is the “length of time of application of the current”.

Regarding an Organisation proposal to delete the bullet point on “minimum stun duration”, the *ad hoc* Group did not agree noting it had already proposed to reword the sentence as mentioned above.

The *ad hoc* Group did not agree with a Member Country comment regarding the duration of the application of the current; however, they reworded the sentence about “minimum stun duration” for better clarity as mentioned above and following a comment of another Member Country.

In relation to the proposals of Member Countries to include three new bullet points to the recommendations for effective use of stunning methods, the *ad hoc* Group considered that it would be repetitive, as the requirements suggested by the Member Countries are already covered in the general principles of this chapter.

In response to a Member Country suggestion to include a new reference point, stating that the electric stunning method should allow the recovery of consciousness if the animal is not killed, the *ad hoc* Group noted that it was necessary to include methods that do not allow full recovery of consciousness, since the animal may be seriously injured and suffering.

Article 7.Y.9.

The suggestion of a Member Countries to add the word “reliably” was not accepted by the *ad hoc* Group, as the comment was not clear whether it was referring to immediate or rapid death. Furthermore, the occurrence of death is a condition, after the use of a penetrating captive bolt.

The *ad hoc* Group did not agree the proposal of a Member Country of the need to mention that the restraint should be humanely applied during the use of captive bolt. The *ad hoc* Group considers that all recommendations in this chapter are referring to humane procedures to ensure animal welfare and that they are not only applicable this paragraph.

In response to a Member Country comment on the need to better specify what the *ad hoc* Group meant by “correct position to apply the captive bolt”, the *ad hoc* Group noted the relevance of the comment, but there was also a need for the chapter not to be too prescriptive. Therefore, they recommended that the OIE Headquarters consider placing this information on the OIE web site as an orientation, in the same place where technical information for Chapters 7.5. and 7.6. is posted.

Annex 44 (contd)

The *ad hoc* Group did not agree the suggestion of an Organisation to replace “type” of animal by “species” when they refer to the equipment and charge of the captive bolt should be chosen accordingly because the word “type” is a more comprehensive term and would cover species, sex, age, etc.

The suggestion of a Member Country and an Organisation to change “and” by “or” when they refer to either “immediate onset of unconsciousness or death” can be used as an animal-based criteria (measurables), was accepted by the *ad hoc* Group as they agreed with the rationale presented.

Article 7.Y.10.

The *ad hoc* Group did not agree with the proposal of a Member Country on the need to include an additional item that mentions that non-penetrative captive bolts are not appropriate in the stunning of large reptiles, as in some types of crocodiles. In the opinion of the experts in the *ad hoc* Group, the ability to stun an animal depends more on the type and fit of the equipment than on the size of the animal, and that when well-adjusted, proper equipment is used effective stunning can be obtained.

In relation to a comment of an Organization recommending that a secondary method should be always used to assure death when using non-penetrative captive bolt; the *ad hoc* Group did not agree as the scientific references provided did not support the changes requested, rather, the references support that captive bolt (penetrating or not) has been shown as an effective method to kill crocodylians and therefore would also be effective for all smaller reptile species.

In response to the suggestion of a Member Country to use “must” instead of “should” in reference to the need to use an additional killing method if death does not occur after the use of a percussive blow, the *ad hoc* Group agreed, as there aren’t any alternatives when the percussive blow is not effective.

The *ad hoc* Group did not agree with the suggestion of a Member Country to delete the word “preferably,” as it considers that procedures described in manufacturer’s recommendation should be followed when available.

Article 7.Y.11.

The *ad hoc* Group did not accept the comment of a Member Country about the use of percussive blow. According to the scientific reference mentioned the AVMA Euthanasia Guidelines 2013 Edition page 78, blunt force trauma to the head can be manually applied. The *ad hoc* Group also consider that a percussive blow is effective for many species and sizes of reptiles except for very large individuals as noted. For the millions of snakes killed for collection of skins and meat, a percussive blow results in immediate destruction of the brain (unconsciousness and death).

With reference to the comment of a Member Country on the need to highlight that percussive blow is applicable for determinate species. The *ad hoc* Group did not agree and reaffirmed that the chapter makes no specific recommendation on which method should be applied on a specific species because it would be impossible due to the large variety of species of reptiles. Nonetheless, the AVMA Euthanasia Guidelines 2013 Edition refers to manually applied blunt force trauma to the head on page 78.

The *ad hoc* Group did not agree with the proposal of an Organisation that a secondary method should always be performed to ensure death, in case of using percussive blow to the head. The *ad hoc* Group commented that a percussive blow to the head is effective for many species and sizes of reptiles.

With reference to the suggestion of a Member Country to add a new sentence emphasising that this method requires specific skills and adequate equipment, the *ad hoc* Group did not agree, as they consider that it is already covered in the general principles of this chapter. In respect of the second suggestion to use the “must” instead of “should” when referring to the need to immediately use an additional killing method, the proposal was accepted by the *ad hoc* Group, as it should always be used to avoid suffering.

Annex 44 (contd)

As mentioned previously, the *ad hoc* Group did not accept a suggestion of a Member Country to mention in this point that the restraint should be humanely applied in the use of captive bolt. As noted previously all recommendations in this chapter refer to humane procedures to ensure animal welfare and that they are applicable to the whole chapter.

As mentioned previously the *ad hoc* Group did not accept the suggestion of an Organization to replace “type” of animal by “species” when referring to the need for the equipment and charge of the captive bolt to be chosen accordingly. The *ad hoc* Group considered that the word “type” is more comprehensive term and would cover species, sex, age, etc.

The suggestion of a Member Country to add two new bullet points in the recommendations mentioning that the maximum animal live-weight, maximum number of animals stunned/killed per person and day, should be considered for effective use of the percussive blow, was not accepted by the *ad hoc* Group. However, the *ad hoc* Group proposed to add a new paragraph in the section on the Competency and training of the personnel to consider the conditions to carry out their duties.

Article 7.Y.12.

With reference to the proposal of a Member Country to highlight that the gunshot method requires skill and poses a risk to humans, the *ad hoc* Group considered it was not necessary to emphasise this point only for this method, as already mentioned in the general considerations, all methods require skilled and competent operators.

As mentioned previously, the *ad hoc* Group did not accept the suggestion of an Organisation to replace “type” of animal by “species” when referring to the equipment and charge of the captive bolt should be chosen accordingly. The *ad hoc* Group considered that the word “type” is more comprehensive term and would cover species, sex, age, etc.

Article 7.Y.13.

Concerning the suggestion of a Member Country to specify that pithing is a killing method. The *ad hoc* Group did not agree, as pithing can be considered as an adjunct method, as sometimes it is used only to ensure brain destruction in a dead animal.

The *ad hoc* Group did not agree with the suggestion of an Organisation to include a new paragraph explaining some features and consequences of using pithing. The *ad hoc* Group considered that the proposals go beyond of the scope of this chapter. The *ad hoc* Group also explained that the chapter was not addressing the technical issues of the type of instrument/tool to be used if it was it would have to be included for all the methods i.e. captive bolt guns, etc. and it could be counterproductive or disadvantageous.

Regarding a Member Country suggestion that clearer instructions with a focus on the outcome should be given rather than a description of the process, the *ad hoc* Group considered that in this case the outcome is destruction of the brain resulting in death, and sometimes it is difficult to assess the outcome and in this case the method should be described as an alternative. The *ad hoc* Group also noted that a minimum of 4-6 rotations, as opposed to simply entering the brain cavity is needed to ensure enough damage is done to the brain. Even in the largest of crocodylians, 4-6 rotations would cause enough damage to the brain; therefore, it would do the same in smaller species.

The *ad hoc* Group agreed with the comment of a Member Country that the use of the word “must” in the context of this article is more appropriate than “should” as this method is recommended only for unconscious animals.

Annex 44 (contd)**Article 7.Y.14.**

The *ad hoc* Group did not accept the proposal of a Member Country, as decapitation is not a method of death for reptiles as it may not produce unconsciousness or death within an acceptable period. Regarding the second proposal, of the same Member Country, to delete percussive blow as an alternative to ensure the destruction of the brain after decapitation the *ad hoc* Group indicated that a percussive blow can be used to destroy the brain and needs to be included as an option to pithing.

In response to the suggestion of an Organisation to substitute percussive blow by “crushing of the brain” when referring to the methods to be used to assure the destruction of the brain after decapitation the *ad hoc* Group considered that the change did not add clarity to the text and therefore did not change the original text.

Article 7.Y.15.

In relation to some Member Countries proposals to revise the article to emphasise that chemicals should be used carefully because the meat would be consumed. The *ad hoc* Group noted that there are a wide range of variations in chemicals; including type, availability and regulation by countries, which is why it had included in the first paragraph of this article the statement: “The use of these agents for either restraint or killing should be supervised by veterinarians or veterinary paraprofessionals in accordance with the requirements of the Competent Authority.

Regarding the comment of a Member Country that the effect of chemical agents on reptiles could be affected due to variation in animal temperatures, the *ad hoc* Group partially agreed and reworded the sentence to clarify that the use of chemical agents in reptilians varies according to their metabolic rates that could cause a low body temperature.

The *ad hoc* Group did not agree with the suggestion of an Organisation to add a new bullet point to emphasise that chemical agents used should cause rapid unconsciousness and death without causing suffering, as this aspect is considered in the first paragraph of this article.

The *ad hoc* Group did not agree with the suggestion of an Organisation to add a new bullet point stating that when death does not occur another method should be applied. The *ad hoc* Group considered that this is already covered in the general principles of this chapter.

Article 7.Y.16.

In response to Member Countries comments that exsanguination should not be performed without prior stunning, the *ad hoc* Group reminded Member Countries that this is unacceptable method, and should be used only in dead reptiles.

On the proposal of a Member Country to delete the examples of gases that should not be used to cause unconsciousness and death in reptiles, the *ad hoc* Group did not agree to delete them and reworded the sentence, in order to give more clarity to the example.

The *ad hoc* Group agreed with the suggestion of a Member Country to add “cervical dislocation” as a new bullet point to the unacceptable methods, as the rationale and scientific reference presented supported the proposal.

Annex 44 (contd)**3. Programme for further work after the teleconference**

The *ad hoc* Group was informed that the report of the electronic review and the teleconference, including the amended draft chapter, will be presented to the February 2018 meeting of the Code Commission. The OIE Headquarters will contact the Members of the *ad hoc* Group if additional work is required in the future.

4. Draft a report of the *ad hoc* Group meeting

The *ad hoc* Group agreed to complete their meeting report by January 2018 for submission to the February 2018 meeting of the Code Commission.

5. Other business

There was no other business proposed for discussion.

.../Appendices

Annex 44 (contd)Appendix I

**OIE AD HOC GROUP ON KILLING METHODS FOR FARMED REPTILES
FOR THEIR SKINS AND MEAT
ELECTRONIC REVIEW AND TELECONFERENCE**

January 2018

List of participants

MEMBERS OF THE AD HOC GROUP

Dr William B. Karesh
(Chairperson)
Executive Vice-President for Health
and Policy EcoHealth Alliance
460 West 34th St., 17th Floor
New York, NY 10001
UNITED STATES OF AMERICA
Tel.: (1-212) 380.4463
karesh@ecohealthalliance.org

Dr Leisha Hewitt
Livestock Welfare
PO Box 143
Franklin
Tasmania 7113
AUSTRALIA
leisha.hewitt@gmail.com

Dr Mathias Lörtscher
Head CITES MA Switzerland
Office fédéral de la sécurité alimentaire
et des affaires vétérinaires
Schwarzenburgstrasse 155
3003 BERN
SWITZERLAND
mathias.loertscher@blv.admin.ch

Paolo Martelli
Chief Veterinarian
Ocean Park
HONG KONG
paolo.martelli@oceanpark.com.hk

Dr Christopher Middleton Foggin
Wildlife Veterinarian
Victoria Falls Wildlife Trust
ZIMBABWE
cfoggin@zol.co.zw

Dr Javier G Nevarez
Associate Professor of Zoological
Medicine
School of Veterinary Medicine-Veterinary
Clinical Sciences
Louisiana State University
Skip Bertman Dr, Baton Rouge, LA 70803
UNITED STATES OF AMERICA
jnevare@lsu.edu

Dr Clifford Warwick
Consultant Biologist and Medical
Scientist
Riverside House, River Lawn Road
Tonbridge, Kent TN9 1EP UK
UNITED KINGDOM
cliffordwarwick@gmail.com

OIE HEADQUARTERS

Dr Leopoldo Stuardo
Chargé de mission
Standards Department
OIE
E-mail: l.stuardo@oie.int

Dr Patricia Pozzetti
Chargée de mission
Standards Department
OIE
E-mail: p.pozzetti@oie.int

Annex 44 (contd)

Appendix II

**OIE AD HOC GROUP ON KILLING METHODS FOR FARMED REPTILES
FOR THEIR SKINS AND MEAT
TELECONFERENCE**

January 2018

Adopted agenda

1. Welcome and introduction to the teleconference
 2. Consider Member Countries' comments on draft Chapter 7.Y. 'Killing of reptiles for their skins, meat and other products' and amend text as appropriate
 3. Programme for further work of the *ad hoc* Group
 4. Draft a report of the *ad hoc* Group electronic review and teleconference
 5. Other business
-

Annex 44 (contd)

Appendix III

[Note: this Annex has been replaced by Annex 36 to the report of the meeting of the OIE Terrestrial Animal Health Standards Commission which was held on 12–23 February 2018.]



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Annex 45

Original: English
December 2017

REPORT OF THE OIE AD HOC GROUP ON AVIAN INFLUENZA

Paris, 12–14 December 2017

A meeting of the OIE *ad hoc* Group on Avian Influenza (hereafter referred to as the Group) was held at the OIE Headquarters in Paris from 12 to 14 December 2017.

1. Welcome and adoption of the agenda

Dr Monique Eloit, Director General of the OIE, welcomed the participants and thanked them for making themselves available for the meeting on such short notice. Dr Eloit noted that avian influenza (AI) is one of the difficult diseases to manage because of significant disease control and trade issues arising from outbreaks, especially related to the role of backyard poultry flocks and wild birds in epidemics of highly pathogenic AI (HPAI), the lack of detailed vaccination provisions in the Terrestrial Code and clear understanding of the application and implementation of zoning and compartmentalisation concepts. To address these issues, Member Countries are looking to the OIE for improved tools and standards to manage AI.

Dr Eloit highlighted that in an effort to provide greater transparency of OIE activities, the Terms of Reference (ToR) for all *ad hoc* groups will be published on its website and this new approach has been received positively by Member Countries.

Dr Matthew Stone, Deputy Director General of the OIE, welcomed the *ad hoc* group members and acknowledged the representatives of three OIE Specialist Commissions in the *ad hoc* group as observers. Dr Stone noted that the last major revision of AI chapter in Terrestrial Code was completed in 2003 and considering developments in science, notifications and trading patterns the risk management measures need to be updated. To this effect, the OIE prepared a discussion paper on AI in order to identify the specific problems that needed to be addressed by a broad review of the AI chapter.

Dr Stone reminded the participants that they had been selected based on their scientific expertise and that they were not representing their own countries or institutions. Prior to the meeting all participants signed a confidentiality agreement and a declaration of conflict of interests. Dr Stone also emphasised that the discussions captured in the report would be attributed to the Group and not to the individual expert.

The *ad hoc* meeting was chaired by Dr David Swayne and the Group adopted the proposed agenda.

The Agenda and List of Participants are presented as Appendices I and II, respectively.

Annex 45 (contd)**2. Opening session on the global AI situation and the effective prevention and response to avian influenza outbreaks**

In the opening session, experts gave presentations introducing the themes and topics closely related to the meeting: “*HPAI prevention and control strategies including the use of vaccination*” (Dr David Swayne); “*The current global threats for transboundary spread of AI including virus properties with relevance to safe trade*” (Dr Ian Brown); “*EFSA opinion on avian influenza*” (Dr Frank Verdonck); and “*An analysis of the AI-related trade concerns raised by Member Countries*” (OIE Headquarters).

3. Introduction to Chapter 10.4. on infection with avian influenza viruses

Dr Bonbon, President of the Terrestrial Animal Health Standards Commission (Code Commission) noted the Terms of Reference were the result of discussions between the Specialist Commissions and the OIE Headquarters. The discussions had raised questions concerning the definition of the disease, the need for further distinction between the different pathogenicities of the disease and the application of measures applied in cases of LPAI and HPAI reported in poultry and wild birds. Dr Bonbon further noted that the Code Commission did not expect the *ad hoc* group to provide a revised chapter after its first meeting, but to give advice to the Code Commission so that the chapter can be revised in order for it to be better implemented by Member Countries.

OIE Headquarters advised that report of the Group would be validated by the DG/DDG before being reviewed by the Specialist Commissions at their February 2018 meetings. The report could be circulated to Member Countries for comments as an annex to the Code Commission’s February 2018 meeting report.

Dr Bonbon reiterated that the AI chapter had been reviewed some 10 years ago and that further review had been proposed in response to Member Country concerns, to address numerous trade issues arising from notifications of LPAI and HPAI. There is also a need to address the lack of notification by some countries and the application of inappropriate risk mitigation measures. Finally, Dr Bonbon noted that prior to the addition of H5 and H7 LPAI in 2005, the chapter’s scope covered only fowl plague (HPAI). Measures related to vaccination, status and surveillance were also added to the chapter. In this regard, the intent of the amendments was the need to know where H5 or H7 were occurring in order to manage the risk, not specifically for purposes of restricting trade or production.

Dr Swayne noted that the *ad hoc* group (2003) recognised that HPAI was the problem, but because H5 and H7 LPAI can mutate to HPAI they were added to the chapter to facilitate development of national control programs that managed this risk. Unfortunately, the result is they came to be seen as being of the same risk profile which has resulted in the negative impacts of the chapter through unfair trade barriers. Through the remainder of this document, the term “LPAI” will be used as defined in the current AI Code chapter as H5 and H7 LPAI virus strains unless clearly stated as pertaining to H1-16 LPAI virus strains.

4. Member Countries’ comments and concerns on the implementation of Chapter 10.4. infection with avian influenza viruses

The Group briefly reviewed the discussion paper on AI, which had been circulated to Member Countries. The discussion paper identified six key challenges for Member Countries when implementing the chapter, namely (1) inappropriate application or incorrect interpretation of the definition of AI in terms of making no distinction between HPAI and LPAI risk in trade; (2) the complexity of identifying LPAI viruses of zoonotic potential and its negative impact on trade when notifying LPAI outbreaks (including the lack of appropriate risk mitigation measures such as zoning around outbreaks); (3) difficulty of defining backyard poultry and its role in the epidemiology and transmission of the AI; (4) unclear requirements for demonstrating free status from LPAI and HPAI; (5) the need for guidelines on targeted surveillance for AI virus in wild birds; and (6) the unclear role of vaccination in the control and prevention of HPAI including its impact on maintaining or regaining disease-free status.

Annex 45 (contd)

The Group considered that the discussion paper provided a comprehensive review of the current situation related to usage and application of the OIE AI standards and decided to use it as an initial springboard for the Group to initiate discussions on the key challenges identified in the discussion paper.

5. Discussion on the issues included in the Terms of Reference for the Group

The Group proceeded with its discussion of the various issues using the Terms of Reference as the basis for its work.

Part A of the Terms of Reference**a) Review scientific evidence and provide an opinion on the different risks and impacts of AI in respect of the pathogenicity of AI viruses****Incubation period of the AI virus (AIV) and the duration of waiting period for recovery of status**

The Group reviewed and discussed the current science that supports the OIE requirements to recover disease free status of a country or zone and to verify whether or not the control measures taken and the length of the waiting period had a specific scientific basis.

Following discussions, the Group identified that a weak link and information gaps existed involving incubation periods and a three-month waiting period for the recovery of free-status.

The Group also discussed the current rationale to set the incubation period of AIV as 21 days for the purpose of the Code from the OIE Technical Disease Card on Highly Pathogenic Avian Influenza¹ as follows:

“The incubation period in poultry can be a few hours to a few days in individual birds, and up to 2 weeks in the flock. A 21-day incubation period was set taking into account the transmission dynamics of the virus in an avian population in the context of disease control measures”.

However, the Group considered that more recent epidemiological data on incubation periods of the AI virus from different regions needs to be collected and looked at more closely to determine if there is scientific evidence to support the three-month waiting period for recovery of status.

Recommendation for action

The Group recommended that experts from different regions conduct a review of the scientific literature and field data (Andrew Breed for Asia, Ian Brown for Europe and David Swayne for the Americas) to identify the rationale for having 21-day incubation period and re-evaluate the three-month waiting period for recovery status before the next meeting.

b) Review the current definitions of ‘AI’ and ‘poultry’ in order to ensure that the most appropriate and proportionate surveillance, notification and control measures and trade requirements are adopted in relation to the different risks posed by LPAI and HPAI chapter

The Group recognized that the OIE definitions of ‘AI’ and ‘poultry’ are fundamental concepts and terminologies that need to be more clearly defined to ensure a common understanding among Member Countries. It was acknowledged that often these definitions were not applied in an uniform way.

¹ OIE Technical disease card on [HPAI](#).

Annex 45 (contd)

The Group conducted an indepth assessment of the definitions including how they had evolved and how they are used and applied. The Group discussed the various interpretations by different stakeholders.

Definition of ‘AI’

The Group acknowledged that ‘AI’ as defined in the AI chapter has broad implications for the sanitary measures applied by Member Countries, including disease notification, prevention and control of AI and trade conditions.

It was therefore decided that the Group should address the following issues as particularly useful in its work to better define the definition of ‘AI, as shown below:

The Group agreed that LPAI should not be treated the same as HPAI in the Terrestrial Code, and there is a need to improve transparency of notifications of avian influenza while minimising unjustified trade restrictions arising from notification of strains of low pathogenicity.

The Group carefully considered three different options as follows:

- (1) two separate chapters for HPAI and LPAI viruses;
- (2) maintaining the status quo but implement other initiatives that may address this issue (e.g., improved information-sharing, training and cooperation with the World Health Organization (WHO) to make sanitary measures employed proportional to the level of zoonotic risk of AI, etc.);
- (3) making a clear distinction between HPAI and LPAI in the same chapter. Defining AI as HPAI for immediate notification and having a separate article or articles that highlight the need for LPAI surveillance, the possibility of mutation to HPAI, public health consequences, only six monthly reporting and the application of appropriate risk management measures in order to avoid unjustified barriers to trade.

After examining the three options, the Group noted that the first option was not practical and would not solve the challenge of striking a balance between the potential zoonotic risk of LPAI and the trade implications. With regard to the second option, there is an acceptance on the part of the majority of Member Countries that the status quo cannot be maintained.

The Group agreed to recommend the third option of separating LPAI and creating new articles in the same chapter dedicated to LPAI addressing the following key areas:

- the importance of surveillance;
- the need for proportional responses to the potential zoonotic risk of AI viruses;
- the possibility of including recommendation or requirements for Member Countries to only notify LPAI in six-monthly reports;
- and avoiding unjustified barriers to trade caused by notification of LPAI outbreaks.

The Group believed that this approach would provide Member Countries with a degree of certainty and flexibility as to how to apply sanitary measures against LPAI, while maintaining continuity and stability for the existing AI chapter.

Annex 45 (contd)**Definition of ‘poultry’**

The Group discussed the definition of ‘poultry’ and the reporting obligations of Member Countries, and revised the definition taking into account Member Countries’ requests to clarify the use of the term ‘backyard poultry’, specifically to exclude this sector of the population or redefine them in the AI chapter.

The Group noted that the categories of birds listed in the definition of ‘poultry’ should have an epidemiological role in the spread of the disease. Based on the epidemiology of the disease, the Group discussed the definition of ‘poultry’ and the likelihood of spread of viruses rather than the likelihood of exposure in assessing the risks associated with all categories of birds listed in the AI chapter.

With regard to the term ‘backyard poultry’, the Group noted that because backyard production systems vary between Member Countries, it was not possible to define a term that could be uniformly applied to all situations. The Group suggested that the words ‘including backyard poultry’ be removed from the definition as these were covered by ‘all domesticated birds’.

In addition, given the much lower risk of transmission of viruses in these types of birds compared to commercially traded poultry, and the absence of any data to the contrary, the Group proposed that the category of birds that are used exclusively for self consumption be removed from the definition of ‘poultry’ and proposed additional modifications to improve the clarity of the text.

The Group consequently proposed to revise point 3) of Article 10.4.1., deleting the words ‘including backyard poultry’ and inserting the words ‘except those birds used exclusively for self-consumption’ from the definition, to read:

- 3) *Poultry* is defined as ‘all domesticated birds, ~~including backyard poultry,~~ used for the production of *meat* or eggs for consumption except those birds used exclusively for self-consumption, for the production of other commercial products, ~~for restocking supplies of game,~~ or for breeding these categories of birds, as well as fighting cocks used for any purpose or all birds used for restocking supplies of game’.

Birds that are kept in captivity for any reason other than those reasons referred to in the preceding paragraph, including those that are kept for shows, races, exhibitions, competitions or for breeding or selling these categories of birds as well as pet birds, are not considered to be *poultry*’.

Recommendation for action

The Group recommended that the OIE Specialist Commissions work on revising text, taking into account its suggestion to redefine ‘AI’ and ‘poultry’. The Group also noted that it was essential to solicit Member Countries comments on its proposed approach on revising the definitions in order to advance these very critical concepts before proceeding on the revision of the chapter.

- c) **Propose specific measures for a disease-free zone or compartment with regard to the appropriate procedures and documented evidence applicable to such cases**

The Group drew attention to the fact that many of the AI-related trade disputes involved countries not having established zoning or compartments during “peacetime”.. Establishment and approval of compartments can and should be done in peace time. Zoning cannot be done before an outbreak occurs, but preparation by laying down the country specific principles and procedures for zoning can be done in peacetime. The Group noted that Member Countries concerns on the implementation issues associated with zoning and compartmentalisation are beyond its purview and instead recommended that the OIE encourage and promote the application by its Members of the general principles of regionalisation as required in the Terrestrial Code.

Annex 45 (contd)

- d) Propose the list of safe commodities in respect of the pathogenicity and transmission pathways of AI viruses, in particular reflecting that fresh meat and table eggs present a much lower likelihood of transmitting LPAI than HPAI viruses / g) revise the commodity articles, taking into account the biological differences between low and highly pathogenic AI regarding the likelihood of transmission of virus via various commodities and the likely consequences**

The Group examined the potential commodities that could be considered safe to trade because of their preparation or purpose, using criteria set out in Article 2.2.2. of the *Terrestrial Code*. The Group reviewed the scientific progress made in understanding the likelihood of LPAI virus transmission via commodities (such as fresh meat and table eggs, hatching eggs and live animals) since the previous *ad hoc* Group meeting.

From the preliminary search for literature, the Group found a study showing detection of low levels of RNA from some H5, H7 and H9 LPAI viruses in tissues and organs—e.g. heart, kidney, liver and brain—outside the respiratory tract (Systemic distribution of different low pathogenic avian influenza (LPAI) viruses in chicken, Post *et al.*, *Virology Journal*, 2013, 10:23) while other studies found no viable H7 live virus in meat and other internal tissues except those of the respiratory (including air sacs) and digestive tract. By contrast, HPAI viruses consistently produced very high quantities of viable virus in internal tissues, inside eggs and in meat. Since the degree of evidence and supporting data vary considerably, the Group concluded that there were insufficient data from the literature review to determine the commodities that could be considered safe for trade and be included in the AI chapter. As more information becomes available on LPAI viruses, it would be necessary to review this assessment.

Recommendation for action

The Group recommended that the OIE Headquarters conduct a literature review of the presence of AI viruses in poultry commodities including skeletal muscle, eggs, semen, visceral organs, brain, feather, skin, bone and blood. The information would be available prior to the next meeting to allow the Group to see if there are clear differences in infectivity, persistence and commodity-based risk between HPAI and LPAI viruses.

- e) Propose new articles for commodities imported from HPAI infected countries or zones**
- f) Review the procedures for virus inactivation to more accurately incorporate recent scientific data**
- g) Revise the commodity articles, taking into account the biological differences between low and highly pathogenic AI regarding the likelihood of transmission of virus via various commodities and the likely consequences**

The Group considered that in order to allow the safe trade of animals and commodities from HPAI infected countries or zones, commodity-specific risk mitigation measures should be applied such as procedures for virus inactivation. The Group noted that if commodities were considered not to require any disease-specific measures, they would be listed under the category of safe commodities by default.

The Group therefore suggested to first seek advice and information on the latest standardized industrial procedures for virus inactivation from the relevant international organisations or associations.

Recommendations for action

The Group requested the OIE Headquarters to consult with the relevant industry or associations to gather the latest scientific information on standard processing procedures that may impact virus inactivation including times and temperatures for the following commodities:

- feathers and down;
 - feather meal and poultry meal/blood meal;
 - pasteurisation of egg and egg products;
 - canned and sterilized meat/pasteurised meat;
 - fats (pet food)/extruded pet food;
 - skins and trophies.
- h) Propose risk management measures for trade in commodities from vaccinated poultry or a country, zone or compartment practicing vaccination**
- i) Review the procedures for virus inactivation to more accurately incorporate recent scientific data**
- j) Consider the possibility of including vaccination tool within the requirements of AI chapter (developing new requirements for HPAI free with vaccination status along with the corresponding surveillance requirements by taking into account of the relevant OFFLU recommendations on AI vaccine strategies)**

The group recognised vaccination in certain circumstances can contribute to preventing AI virus introduction or reducing its spread, decreasing potential economic losses and reducing zoonotic risk. The Group also reaffirmed that vaccination alone does not affect the status of an AI free country or zone as the AI chapter has specific provisions that would allow trade in vaccinated poultry and their products.

With regard to trade implications, although the Group recognised that the AI chapter recommends the continuation of trade in the presence of vaccination, it was of the opinion that an introductory text on the purposes of vaccination in the section on general provision could be useful to help Member Countries understand how vaccination could be applied in an AI free country or zone. The Group also emphasised that the implementation of an appropriate surveillance program in accordance with the Terrestrial Code is a pre-requisite for demonstrating freedom from infection with AI virus for trade in poultry commodities originating from the country, zone or compartment.

In response to the requests for updating surveillance articles concerning vaccination requirements and the need for a provision on the importation of vaccinated poultry, the Group proposed that the issues would be dealt with when the revision of the text of the AI chapter was undertaken.

Recommendations for action

The Group recommended that the OIE Specialist Commissions work on revising text, taking into account the Group's suggestion to modify the text in a way to make it more clear for the Member Countries to understand the purposes of systematic vaccination and their obligations to implement surveillance programmes.

Annex 45 (contd)

- k) Propose an approach to provide an incentive for Member Countries to carry out intense surveillance for AI viruses and that detection of low pathogenicity viruses and AI in wild birds would not lead to unjustified barriers to trade**

The Group noted that the above concerns were already addressed in the point 8) of the Article 10.4.1 of the Terrestrial Code. However, the Group considered that, by moving this point to the beginning of the same article and rewording the text to clearly articulate the differences in managing risks and making notification between poultry and birds other than poultry, the Member Countries would better understand the purposes of the chapter.

The Group emphasised the need to continue immediate notifications of HPAI in wild birds as part of an early warning system that helps to implement preventive biosecurity measures.

Recommendations for action

The Group recommended that the OIE Specialist Commissions work on revising text, taking into account its suggestions to modify and relocate the text.

Tables and figures at the end of surveillance chapter in the Code can be moved to the AI Manual Chapter and the relevant information can be incorporated into the surveillance articles.

Part B of the Terms of Reference

- a) Review relevant scientific literature on the epidemiology of current AI outbreaks and propose effective prevention and control measures during outbreaks (e.g. poultry confinement, movement control, preventive culling)**
- b) Review the virus dynamics of AI introduction via wild birds with respect to critical number of wild birds and presence of water bodies required for AI virus amplification and propose effective biosecurity measures to be implemented by the poultry farmers to prevent the introduction of AI virus from wild birds into poultry**
- c) Review the process for regaining country or zone freedom, including recommendations on the use of zoning and other risk mitigating measures taking into account the specificities of the respective viruses involved**
- d) Propose targeted surveillance focusing on areas of high poultry density, free-range poultry and establishments lying along wild bird migration pathways**

The Group considered that these issues were already covered in the AI chapter—though not in sufficient detail. In this respect, the Group proposed that the following activities could be envisaged in following years in order to provide more guidance to Member Countries:

- i) a publication in a plurithematic issue of the OIE Scientific and Technical Review of a paper providing a comprehensive review of the literature (by end of 2018), as either:
- a review that updates the paper² already published; or
 - a short paper addressing the four points mentioned above in collaboration between several members of the group.

² The scientific rationale for the World Organisation for Animal Health standards and recommendations on avian influenza. Review article. Pasick J. *et al.*, *Rev. Sci. Tech.*, 2014.

Annex 45 (contd)

- ii) a publication in the OIE Bulletin—shortened paper to fit the format of the Bulletin (by end of August 2018);
- iii) a dedicated themed issue on influenza A (swine, avian, equine) to present an update of our scientific understanding of this family of viruses, including covering the critical issues raised by Member Countries – (by 2019– 020).

The group also identified that some of the issues raised by the Member Countries were caused by difficulty in accessing relevant information on the OIE website and requested that the OIE Headquarters consider the following actions to address this:

- i) The ‘Checklist on the Practical Application of Compartmentalisation for Avian Influenza and Newcastle Disease’, published in 2007 should be updated; and
- ii) More effective communication to educate the Member Countries where to locate the information on AI.

6. Next steps

The Group recommended that the OIE Headquarters engage with the Member Countries to obtain their comments on how to move forward on the specific approach proposed in the report, especially on its proposal to revise the definitions of ‘AI’ and ‘poultry’ as the reaction of Member Countries to these proposals was an important step before commencing the comprehensive review of the chapter.

In the meantime, the Group agreed to continue to work on the scientific and literature reviews in order to ensure the latest scientific knowledge on epidemiology of AI viruses, surveillance and biosecurity was available for the next meeting.

The Chair closed the meeting and thanked the experts for their active participation and the useful discussions.

.../Appendices

Annex 45 (contd)

Appendix I

OIE AD HOC GROUP ON AVIAN INFLUENZA

Paris, 12–14 December 2017

Adopted agenda

1. Introductory session: Scene-setting—effective prevention of and response to current and future avian influenza outbreaks
 - Current global threats for transboundary spread of AI including virus properties with relevance to safe trade;
 - HPAI prevention and control strategies including the use of vaccination: add in “Risk of Spread through trade in poultry and poultry products and the mitigation steps to reduce such risk”;
 - EFSA opinion on avian influenza;
 - An analysis of the AI-related trade concerns raised by Member Countries.
 2. Introduction of Participants (*and housekeeping*)
 3. Adoption of the agenda
 4. President of Terrestrial Animal Health Code Commission - introduction to the *Terrestrial Animal Health Code* Chapter 10.4. Infection with avian influenza viruses
 5. Member Countries’ comments and concerns on the implementation of Chapter 10.4.
 6. Discussion (based on terms of reference)
 7. Conclusions
 8. Next steps
-

Annex 45 (contd)

Appendix II

REPORT OF THE OIE AD HOC GROUP ON AVIAN INFLUENZA VIRUSES

Paris, 12–14 December 2017

List of participants

MEMBERS

Dr David Swayne (Chair)

Laboratory Director
Southeast Poultry Research Laboratory
U.S. National Poultry Research Center
Agricultural Research Service
U.S. Department of Agriculture
934 College Station Road,
Athens, Georgia 30605
UNITED STATES
Tel.: +1 (706) 546-3433
E-mail: David.Swayne@ars.usda.gov

Dr Andrew Breed

Veterinary Epidemiologist,
Epidemiology and One Health Section,
Department of Agriculture and Water
Resources, Australia
31 Brigalow St O'Connor
ACT AUSTRALIA 2602
Tel.: +61 415234060
Email: andrew.breed@agriculture.gov.au
D

Prof. Ian Brown

Director of EU/FAO/OIE Reference
Laboratory for Avian & Swine
Influenza, Animal and Plant Health
Agency-Weybridge, UK
Visiting Professor in Avian Virology,
University of Nottingham
New Haw, Addlestone, Surrey KT15
3NB UNITED KINGDOM
Tel.: +44 1932.35.73.39
E-mail: ian.brown@apha.gsi.gov.uk

Mr Kevin Lovell

International Egg Commission
Avian Influenza Global Expert Group
1494 Cranberry Street
2194 Po Box 1202
Honeydew 2040
SOUTH AFRICA
Tel.: + 27 11 795 9928
E-mail: ariadne@iafrica.com

Dr Adriaan Olivier

Industry veterinarian, South Africa Ostrich
Business Chamber
Klein Karoo Group
PO Box 241 Oudtshoorn
SOUTH AFRICA 6620
Tel.: +27 (0)44 203 5295
E-mail: aolivier@kleinkaroo.com

Dr John Pasick

National Veterinary Science Authority
for Canadian Food Inspection Agency
(CFIA)-ACIA
106 Wigle Avenue 1, Kingsville N9Y
2J8 Ontario CANADA
Tel.: +1 519-733-5013(45418)
E-mail: john.pasick@inspection.gc.ca

Dr Maria Pittman

Legislative Veterinary Officer
European Commission
DG SANTE Unit G3 Official Controls and
Rue de la Loi 200, F101 03/054
1049 Brussels
BELGIUM
Email: Maria.PITTMAN@ec.europa.eu

Prof. Yoshihiro Sakoda

Faculty of Veterinary Medicine,
Disease Control Global Institute for
Collaborative Research and
Education, Hokkaido University
North 18, West 9, Kita-ku, Sapporo,
Hokkaido 060-0818, JAPAN
Tel.: +81-(0)11-706-5208
E-mail: sakoda@vetmed.hokudai.ac.jp

REPRESENTATIVES OF THE OIE SPECIALIST COMMISSIONS

Dr Etienne Bonbon

President
OIE Terrestrial Animal Health
Standards Commission
Room C-640, Viale delle Terme di
Caracalla – 00153 Rome, ITALY
Tel.: +39 06570 52447
Email: etienne.bonbon@fao.org

Dr Peter Daniels

Member of OIE Biological
Standards Commission
25 Hermitage Road,
Geelong, Victoria 3220
AUSTRALIA
Tel.: (61) 419.10.32.62
E-mail: danielspeter19@gmail.com

Dr Silvia Bellini

Istituto Zooprofilattico Sperimentale de
Lombardia e dell'Emilia Romagna
"Bruno Ubertini" Via Bianchi 9
25124 Brescia
ITALY
Tel.: +39 366 588 8774
Email: Silvia.bellini@izsler.it

[Annex 45](#) (contd)

[Appendix II](#) (contd)

GUEST SPEAKER

Dr Frank Verdonck

Team leader of Animal Health
and Welfare, EFSA
via Carlo Magno 1/a Parma
43126 ITALY
Tel.: +39 0521 036 111
E-mail:
Frank.VERDONCK@efsa.europa.eu
[Annex 44](#) (contd)
[Appendix II](#) (contd)

OIE HEADQUARTERS

Dr Monique Eloit

Director General
12, rue de Prony
75017 Paris
FRANCE
Tel: 33-(0)1 44 15 18 88
E-mail: oie@oie.int

Dr Matthew Stone

Deputy Director General
E-mail: m.stone@oie.int

Mrs Ann Backhouse

Head
Standards Department
Tel.: 33 (0)1 44.15.18.80
E-mail: a.backhouse@oie.int

Dr Jae Myong Lee

Chargé de mission
Tel: 33-(0)1 44 15 18 92
E-mail: j.lee@oie.int

Dr Gounalan Pavade

Chargé de mission
Tel: 33-(0)1 44 15 18 92
E-mail: g.pavade@oie.int



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Annex 46

Original: English
February 2018

**REPORT OF THE MEETING OF THE OIE AD HOC GROUP ON
VETERINARY PARAPROFESSIONALS
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.

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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.

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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

Annex 46 (contd)

- 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.

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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-Labayé, Senior Advisor, Public-Private Partnerships, joined the Group to provide information about the partnership currently explored between the OIE, the industry association Health For Animals (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

Annex 46 (contd)Annex I**OIE AD HOC GROUP ON VETERINARY PARAPROFESSIONALS****Paris, 12–14 February 2018****List of participants****MEMBERS OF THE OIE AD HOC GROUP****Dr Johan Oosthuizen (Chair)**

President
 South African Association of Veterinary
 Paraprofessionals
 Pretoria
 SOUTH AFRICA
 Tel.: 011 471 2984
 oostej@unisa.ac.za

Dr Samuel Niyi Adediran

Asst. Director Market Development &
 Access
 GALVmed, Africa Office
 4th Floor, Wing C – Suite B
 Galana Plaza
 Galana Road, off Arwings Kodhek Road
 P. O. Box 52773-00100
 Nairobi, Kenya
 Tel : +254 (0)772 157 782 ext 302.
 niyi.adediran@galvmed.org

Dr Benson Oduor Ameda

President
 Africa Veterinary Technicians Association
 Nairobi
 KENYA
 b.amedaba@gmail.com

Dr Markus Avong

Veterinary Council of Nigeria
 P. O. Box 2092, GPO Jos
 Plateau State
 NIGERIA
 Tel.: +234 803 429 7372
 avongam2000@yahoo.com

Dr Miftahul Islam Barbaruah

Director, Vet Helpline India
 House No.31/32 (Near Masjid No.1)
 Chandmari – Milanpur, Guwahati-781021,
 Assam
 INDIA
 Tel. : +91 361-2651593
 drbarbaruah@gmail.com

Dr Susan Catherine Cork

Head of Department & Professor of
 Ecosystem & Public Health
 Faculty of Veterinary Medicine University
 of Calgary
 3280 Hospital Drive, Calgary, Alberta,
 T2N 4Z6
 CANADA
 Tel: 403 210-6522 sccork@ucalgary.ca

Dr Gert-Jan Duives

Senior lecturer Animal Health &
 Production
 Department : International Food &
 Agribusiness
 HAS University of Applied Sciences
 P.O. Box 90108
 5200MA 's-Hertogenbosch
 THE NETHERLANDS
 Tel.: +31 8889 03600
 g.duives@has.nl

Ms Barbara M. Martin

BM Martin Laboratory Consultants
 2503 Eisenhower Avenue
 Ames, IA 50010
 UNITED STATES
 Tel.: +1 515 708 5622
 martin.barbara.m@gmail.com

Dr Vutha Pheng

Vice Dean of Graduate School
 Faculty of Veterinary Medicine
 Royal University of Agriculture
 #39, St 208, Sangkat Beongraing, Khan
 Donepenh, P.P.
 CAMBODIA
 Tel. : +855 012-697-487
 vutha1@yahoo.com

Dr Willy Schauwers

Veterinary laboratory technology
 consultant
 Haasdonksesteenweg 40
 9140 Temse
 BELGIUM
 willy.schauwers@skynet.be

Dr Heather Simmons

Program Manager and Education and Outreach Theme Leader
 Institute for Infectious Animal Diseases
 A Department of Homeland Security Science & Technology Center of Excellence
 Texas A&M University, 1500 Research Parkway
 Building B, Suite 270
 College Station, TX 77843-3202
 UNITED STATES
 Tel: 979-862-3202
 hlsimmons@ag.tamu.edu

Annex 46 (contd)

Annex I (contd)

OIE HEADQUARTERS

Dr Tomoko Ishibashi
Senior Manager, Standards
Development and Horizontal
Management Framework
t.ishibashi@oie.int

Dr David Sherman
Chargé de mission
Regional Activities Department
d.sherman@oie.int

Ms Jennifer Lasley
Project Coordinator
Programmes Department
j.lasley@oie.int

Annex 46 (contd)

Annex II

MEETING OF THE OIE AD HOC GROUP ON VETERINARY PARAPROFESSIONALS

Paris, 12–14 February 2018

Adopted 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
-

Annex 46 (contd)Annex III

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 health³, veterinary public health⁴ and laboratory diagnosis⁵. 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.

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

⁴ Training track to acquire the specific competencies recommended for VPPs working in veterinary public health.

⁵ Training track to acquire the specific competencies recommended for VPPs working in the diagnostic laboratory.

Annex 46 (contd)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.

Annex 46 (contd)

Annex III (contd)

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 46 (contd)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

Competencies⁶ 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 Activity⁷ means skill areas in which a VPP should demonstrate competency.

Veterinarian⁸ 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 Authority⁹ 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 domain¹⁰ 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.

⁶ From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality'.

⁷ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

⁸ From glossary of *Terrestrial Animal Health Code*.

⁹ From glossary of *Terrestrial Animal Health Code*.

¹⁰ From Article 3.4.2 of *Terrestrial Animal Health Code*.

Annex 46 (contd)

Annex III (contd)

Veterinary paraprofessional¹¹ 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 paraprofessional) in a territory, and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary paraprofessional should be defined by the veterinary statutory body depending on qualifications and training, and in accordance with need.

Veterinary Services¹² 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 body¹³ 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:

¹¹ From glossary of *Terrestrial Animal Health Code*.

¹² From glossary of *Terrestrial Animal Health Code*.

¹³ From glossary of *Terrestrial Animal Health Code*.

Annex 46 (contd)

Annex III (contd)

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.

Annex 46 (contd)

Annex III (contd)

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 control¹⁴. Veterinary science is the art and science concerned with the health of animals and the treatment of injuries and diseases that affect them¹⁵.

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

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

¹⁵ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

Annex 46 (contd)Annex III (contd)**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 health¹⁶.

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

¹⁶ Adapted from <https://www.med.unc.edu/ahs/clinical/about/glance> and <http://www.reference.md/files/D013/mD013677.html>

Annex 46 (contd)Annex III (contd)

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 release¹⁷.

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 population¹⁸.

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 release¹⁹.

Occupational health and safety means all aspects of health and safety in the workplace, with a strong focus on primary prevention of hazards²⁰.

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

¹⁷ *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* definition: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/0.04_GLOSSARY.pdf

¹⁸ *Terrestrial Animal Health Code* definition: <http://www.oie.int/index.php?id=169&L=0&htmfile=glossaire.htm>

¹⁹ *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* definition: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/0.04_GLOSSARY.pdf

²⁰ Adapted from the WHO definition: http://www.who.int/topics/occupational_health/en/

Annex 46 (contd)Annex III (contd)**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 matters²¹.

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

²¹ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

Annex 46 (contd)

Annex III (contd)

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 legislation²². 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 policies²³.

Professionalism means the desired qualities and competencies that characterise the expected performance of veterinary paraprofessionals²⁴.

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

²² From glossary of *Terrestrial Animal Health Code*.

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

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

Annex 46 (contd)

Annex III (contd)

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 activity²⁵.

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

²⁵ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

Annex 46 (contd)

Annex III (contd)

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 handler²⁶.

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 distress²⁷.

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

²⁶ Adapted from definitions of 'animal handler' and 'animal welfare' in the glossary of the *Terrestrial Animal Health Code*.

²⁷ From glossary of *Terrestrial Animal Health Code*.

Annex 46 (contd)

Annex III (contd)

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.²⁸ 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 products²⁹.

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

²⁸ Animal Production, *in* Saunders Comprehensive Veterinary Dictionary, 3 ed. © 2007 Elsevier, Inc.

²⁹ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

Annex 46 (contd)

Annex III (contd)

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 them³⁰.

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

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

Annex 46 (contd)Annex III (contd)**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 disease³¹. Field testing is the act of conducting an assay in the field and making a determination of the test result³².

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

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

³² Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

Annex 46 (contd)

Annex III (contd)

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 tasks³³.

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

³³ 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

Annex 46 (contd)

Annex III (contd)

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 performance³⁴.

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

³⁴ Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

Annex 46 (contd)

Annex III (contd)

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 analysis³⁵.

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

³⁵ Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals.

Annex 46 (contd)Annex III (contd)**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 appropriate³⁶.

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

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

Annex 46 (contd)

Annex III (contd)

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 animals³⁷.

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

³⁷ From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality'.

Annex 46 (contd)Annex III (contd)**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 consumption³⁸.

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

³⁸ WHO definition: http://www.who.int/foodsafety/areas_work/food-hygiene/en/

Annex 46 (contd)

Annex III (contd)

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.

Annex 46 (contd)

Annex III (contd)

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

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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

Annex 46 (contd)

Annex III (contd)

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

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	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

Annex 46 (contd)

Annex III (contd)

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

[Annex 46](#) (contd)[Annex III](#) (contd)**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.

Annex 46 (contd)

Annex III (contd)

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

Annex 46 (contd)

Annex III (contd)

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 46 (contd)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	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2			
<table border="1"> <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 6: Use and Management of Equipment and Facilities	6.1, 6.2
	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 9: Specimen Collection and Sampling	9.2			
	SOA 10: Laboratory and Field Testing	10.1a			
	SOA 12: Workflow Management	12.1			
SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2				
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			
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			

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