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REPORT OF THE MEETING OF THE OIE WORKING GROUP ON WILDLIFE

Virtual meeting, 7 – 10 December 2021

1. Summary

The Working Group on Wildlife (the 'Working Group') met virtually, owing to the exceptional circumstances brought about by the pandemic, from 7 to 10 December 2021.

To support the OIE's core mission of transparency, the Working Group will be involved in the revision of the current wildlife health information system. The initiative "Quick Win Project" was presented to the Working Group.

The Working Group was informed and made recommendations for the OIE workshop that would be organised during the Wildlife Disease Association Conference, which would be held in August 2022 in USA. It commented and supported an official letter sent to CITES to further explore the challenges and opportunities relating to CITES requirements for the transport of diagnostic wildlife specimens (including the most recent simplified procedures) with the aim of facilitating the ability to truly undertake rapid wildlife health diagnostics in support of conservation and zoonotic disease prevention.

The Working Group agreed to be part of the governance structure of the Wildlife Health framework as the "advisory committee". The Working Group also made recommendations to establish a formal collaboration with the Aquatic Animal Health Standards Commission and made additional comments on the updated version of the Terms of Reference for the OIE National Focal Points for Wildlife.

Finally, the Working Group finalized the paper "Vaccination of animals of high conservation value" taking into account last comments from the Scientific Commission.

2. Opening

The Working Group meeting was held by videoconference from 7 to 10 December 2021 and was chaired by Dr William Karesh.

Dr Keith Hamilton, Head of the OIE Preparedness and Resilience Department, welcomed the members, highlighting that the passing year had been productive for OIE's wildlife programme. The most significant achievement was the Wildlife Health Framework which was adopted by Member Countries at the OIE General Session in 2020. Since then, he mentioned that there had been a most positive reaction to OIE's work on wildlife health from OIE staff at the Headquarters and in the regions, and from international partners. The OIE Director General had pointed out the importance of wildlife health in several high level international events, such as the Paris Peace Forum, the regional training seminars for the OIE National Focal Points for Wildlife, and in the International Atomic Energy Agency Scientific Forum. The OIE communications team had also been proactive in promoting OIE as a leader in wildlife health. The commitment of the OIE and its donors to wildlife health has also been demonstrated with the mobilisation of resources to recruit two new staff to support a renewed

strategy for wildlife disease reporting, and to coordinate the network of the OIE National Focal Points for Wildlife, reinforcing the OIE wildlife team already in place. Dr Hamilton thanked the OIE Collaborating Centre for Research, Diagnosis, and Surveillance of Wildlife Pathogens (USA/Canada) which was involved in providing significant support to OIE projects on wildlife such as the technical disease cards for wildlife and the scientific content of the training seminars for the OIE National Focal Points for Wildlife. He also thanked the members of the Working Group on Wildlife for their outstanding contribution to the OIE activities on wildlife over the past year.

Recognising the expanding work of the wildlife programme and the need to make best use of the Working Group on Wildlife's valuable time it was reiterated that the Working Group on Wildlife is a strategic advisory body. Whilst the OIE Secretariat (OIE Headquarters), the network of OIE Reference Centres, and the National Focal Point network would be responsible for operationalising the Wildlife Health Framework.

Dr Hamilton acknowledged the generous support of donors, the Australian Government, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the US Centers for Disease Control (CDC) in contributing to operationalisation of the Wildlife Health Framework.

3. Adoption of agenda and designation of the rapporteur

Dr Marcela Uhart was appointed as rapporteur for the meeting. The agenda and the list of participants are provided in Annexes I and II, respectively.

4. Feedback from the meetings of the Scientific Commission for Animal Diseases, Terrestrial Animal Health Standard Commission and relevant *ad hoc* Groups

4.1. Scientific Commission

Dr Misheck Mulumba, member of the Scientific Commission, updated the Working Group on the relevant outcomes from the latest Scientific Commission for Animal Diseases (SCAD) meetings.

4.2. Terrestrial Animal Health Code Commission (Code Commission)

The Working Group was briefed on the conclusion of the Code Commission's discussions on the Working Group on Wildlife's proposal to develop a new chapter in the *Terrestrial Code* on surveillance of disease of wildlife. The Working Group was informed that a call for a consultant would be set up to review existing OIE Standards and practical Guidelines to identify gaps and needs with regards to wildlife disease surveillance and health management and propose interventions for improvement. This work would provide inputs whether new chapters in the *Terrestrial Code* on wildlife health are needed.

4.3. OIE *ad hoc* Group on reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain

Dr Tiggy Grillo updated the Working Group on the work of the *ad hoc* Group on reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain. She summarized the last three meetings of the Group (June, September and November 2021) and mentioned that the Guidelines and best practices to mitigate the risks of disease spillover events at markets selling wildlife and along the wildlife supply chain would be developed by June 2022, through additional meetings of the Group.

The reports of the two virtual meetings of the Group, held in June and September 2021, were endorsed and are attached as Annexes III and IV.

5. Disease intelligence

Dr Paolo Tizzani represented the OIE World Animal Health Information and Analysis Department (WAHIAD) during the meeting. Dr Tiggy Grillo represented the OIE Preparedness and Resilience Department.

5.1. Presenting the results of the survey for the OIE National Focal Points for Wildlife

The OIE Collaborating Centre for Research, Diagnosis and Surveillance of Wildlife Pathogens, in collaboration with the OIE, designed a questionnaire to collect the perspective of the OIE Members on their surveillance systems for wildlife health events. The main objective of the survey was to better understand the OIE Members' wildlife disease surveillance systems, including reporting of diseases of wildlife through OIE-WAHIS and WAHIS-Wild, cross-sectoral connectivity, and the veterinary authority role related to legal and illegal wildlife trade.

The questionnaire, available in the three official languages of the OIE, was sent at the end of September 2021 to the 182 OIE Focal Points for Wildlife, 102 of which submitted the completed questionnaire.

The parts of the survey related to the disease surveillance system, OIE-WAHIS and WAHIS-Wild were presented to the Working Group. The results of the survey will be presented in a report which will be finalised in the first semester of 2022.

5.2. Presenting the interim reporting solution

The Quick Win Project, which is an initiative with the aim to develop simplified reporting to capture data from 2019-2021, was presented to the Working Group as an interim reporting solution.

The Quick Win Project is being implemented to ensure that the OIE continues to collect and report wildlife disease information whilst a longer term comprehensive strategy for wildlife disease reporting is developed.

Proposed actions:

- The Working Group will be informed when the online reporting form will be available.

5.3. Presenting the long-term perspective for disease reporting

Based on the survey results, internal discussion, and the presentation of WHISPERS and other recently developed regional reporting systems, it was proposed that the current wildlife health information system be reviewed, as a special project towards Output 3 of the Wildlife Health Framework. This review would include an assessment of wildlife health information needs and would require the convening of a Key Users Committee which would include OIE NFPs for wildlife, disease notifications and laboratories across 5 different regions, end users/contributors from multilateral organisations (e.g. UNEP, CITES, FAO, IUCN, etc), conservation bodies, universities covering a range of expertise (conservation, ecology, epidemiology, diagnostics, etc), representatives from one or more OIE Collaborating Centres that work on wildlife diseases, and a representative from the Working Group.

The Working Group highlighted the importance of the interoperability between the different international systems for animal disease data management and conservation datasets and the need for partnerships with other international organisations that have already developed such systems.

Proposed actions:

- The Working Group designated two members (*Jonathan Sleeman and Marcela Uhart*) to be the contact points for this proposed project.

6. OIE workshop at the Wildlife Disease Association Conference (August 2022)

The Wildlife Disease Association (WDA) Conference, to be held in July 2022 in Madison, Wisconsin in the United States of America, was presented to the Working Group. The mission of the WDA is to promote healthy wildlife and ecosystems, biodiversity conservation, and sustainable solutions to One Health challenges. The Working Group was informed that the OIE will sponsor a half day workshop during the conference and was seeking input from the Working Group on the purpose, format, topics and target audience for this event. The Working Group highlighted that the purpose of this event could be to tap into the wildlife health expertise and connections of the participants to discuss and receive feedback on the implementation of the OIE Wildlife Health Framework and related activities. The Working Group also mentioned that this event could facilitate networking

between the WDA experts and the OIE. Potential format options were discussed and the Working Group proposed either a panel which allows one to three lead speakers, followed by an open discussion with panelists and participants, or a classic session more focused on providing information on the OIE activities on wildlife to participants.

Proposed actions:

- By mid-February, a draft proposal (purpose, format, topics and target audience) would be developed with input from the Working Group and then sent to the organisers of the WDA conference.

7. OIE Wildlife Health Framework

Ms. Sophie Muset presented to the Working Group the governance structure of the Wildlife Health Framework and the progress in the implementation of this programme. The Working Group welcomed and acknowledged the progress made in implementing this programme.

Proposed actions:

- The Working Group agreed to be part of the governance structure of this programme as the "advisory committee".

8. Mechanisms to support Members to manage events affecting wildlife

Dr Mariana Delgado, Preparedness and Resilience Department, presented to the Working Group some of the existing procedures at the international level, regarding the management of wildlife mortality events in a territory and the guidelines currently available to manage these kinds of events.

The Working Group discussed two situations among the countries requesting support to manage a wildlife mortality event: lack of resources (human, expertise or materials) or lack of coordination between the different national authorities in charge of wildlife and animal health. The support should be adapted to the type of need of the country requesting support.

The Working Group stated that it would be useful to know what OIE wishes to achieve through this support as it would guide the procedure or tools that need to be developed (e.g., improving the notification of wildlife diseases to the OIE, conservation purpose, or capacity enhancement of the wildlife disease surveillance system).

The Working Group also highlighted that it was important to explain and communicate on the importance of investigating and managing wildlife mortality events, per se, not only as relevant for domestic animals, trade or public health. Additionally, it was noted that legal authority at national levels for responding to wildlife morbidity or mortality events is not always clearly defined or aligned with available resources and capabilities.

Finally, the Working Group encouraged the OIE to liaise for this kind of initiatives with international organisations such as IUCN and WDA that have technical expertise and work more closely with the wildlife authorities to develop the coordination at the national level between veterinary services and wildlife authorities.

Recommendations:

- The Working Group suggested to the OIE to develop a white paper on this issue taking into account the comments shared during the meeting for its revision at the next meeting in June.

9. Facilitate the transport of wildlife diagnostic specimens

The Working Group was updated on the recent activities of the OIE regarding the transport of wildlife diagnostic specimens. It was informed that a letter was sent, in October 2021, by the OIE Director General to CITES to engage in discussions with CITES to further explore the challenges and opportunities relating to CITES requirements for the transport of diagnostic wildlife specimens (including the most recent simplified procedures) with the aim of facilitating the ability to truly undertake rapid wildlife health diagnostics in support of conservation and zoonotic disease prevention. It was also informed that following this letter, the previous Chair of the CITES working group on Simplified Procedures for Permits and Certificates was approached by the CITES Secretariat and accepted to discuss presenting this issue to the Standing Committee for consideration at its next meeting in March 2022. A draft document has been developed and sent to the OIE for comments.

Proposed actions:

- The Working Group will provide comments by the deadline.

10. OIE National Focal Points for Wildlife Network

The updated version of the Terms of Reference for the OIE National Focal Points for Wildlife based on comments from the Working Group, analysis of questionnaires sent to the OIE National Focal Points on this issue, and the consultation of the relevant departments at the OIE Headquarters, was presented to the Working Group. The Working Group made additional comments on this updated version.

The Working Group considered a proposal to link Wildlife Focal Point training to a needs assessment process, whereby training for the country or region would be based on an assessment of gaps in capabilities to conduct wildlife disease surveillance and management. The assessment would review all aspects of a national wildlife health program (diagnostics, epidemiology, data management, disease response, etc.), and training would be co-created with in-country partners to focus on the identified needs. The Working Group deferred on moving forward with this idea to the next meetings in June or December 2022, as OIE initiatives are going to be conducted next year with a review of the assessment tools for OIE Members and the development of e-modules for the veterinary services on wildlife health and wildlife disease surveillance.

Proposed actions:

- A new version of the Terms of reference will be developed and sent for final review to the Working Group (*February 2022*).

11. Wildlife health and aquatic animal health

Dr Stian Johnsen presented the work of the Aquatic Animal Health Standards Commission (Aquatic Animals Commission) and activities under the OIE Aquatic Animal Health Strategy of relevance to the Wildlife Working Group. The main objective of the presentation was for the Working Group to have a better understanding of the work of the Aquatic Animals Commission and to establish a formalized procedure for the exchange of information. The Working Group was very interested in how emerging diseases in aquatic animals are managed by the Commission and the OIE Member Countries, and the development of two new chapters for the Aquatic Animal Health Code on Emergency disease preparedness and Disease outbreak management. This could be very helpful for the work of the Working Group as similar efforts for wildlife are developed.

Recommendations:

- A procedure for the exchange of information between the Aquatic Animals Commission and the Working Group will be established by the Secretariats;
- The draft agendas of the Commission and the Working Group will be shared before meetings to establish if there are topics of interest for the other parties;
- Members of the Commission and the Working Group can be invited to each other's meetings on specific items, but not on regular basis;
- The Secretariats will make sure to share the links to the final reports of the Commission and the Working Group.

12. Vaccination of animals of high conservation value

The Working Group updated the paper "Vaccination of animals of high conservation value" taking into account the comments from the Scientific Commission provided in 2020 which included using the AUSVET guidance document "Risk-based assessment of disease control options for rare and valuable animals" as a model.

The Working Group recognized the challenges of producing guidelines for each of the transboundary diseases and therefore proposed more general principles that could be used to assist the Competent Authority in their decision making. If needed by the Scientific Commission, the paper could be extended to provide more information using the AUSVETPLAN guidance document as a model. The Working Group would be happy to progress this if required.

Proposed action:

- The paper is going to be presented to the Scientific Commission at its next meeting in February 2022.

13. Any other business

Collaborating Centres on Wildlife Health

The Working Group was informed that a network of Collaborating Centres working on wildlife would be developed in 2022. Collaborating Centres have been approached and most of them accepted to be part of this network. A first meeting is going to be organised in the first trimester of 2022. The Working Group will be updated at its meeting in June.

The Working Group was also informed of the intention of Australia to assist by developing a dedicated Collaborating Centre on Wildlife Health.

14. Date of next meeting

The Working Group proposed the following dates for its next meeting: from Tuesday 14 to Friday 17 June 2022.

15. Adoption of the report

The report was adopted by the Working Group.

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…/Annexes

Annex I

MEETING OF THE OIE WORKING GROUP ON WILDLIFE

Virtual meeting, 7 – 10 December 2021

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1. **Summary**
2. **Opening**
3. **Adoption of agenda and designation of the rapporteur**
4. **Feedback from the meetings of the Scientific Commission for Animal Diseases, Terrestrial Animal Health Standard Commission and relevant *ad hoc* Groups**
   - 4.1. Scientific Commission
   - 4.2. Terrestrial Animal Health Standard Commission
   - 4.3. *Ad hoc* Group on reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain
5. **Disease intelligence**
   - 5.1. Presenting the results of the survey for the OIE National Focal Points for Wildlife
   - 5.2. Presenting the interim reporting solution
   - 5.3. Presenting the long-term perspective for disease reporting
6. **OIE workshop at the Wildlife Disease Association Conference (August 2022)**
7. **OIE Wildlife Health Framework**
8. **Mechanisms to support Members to manage events affecting wildlife**
   - 8.1. Situation regarding existing guidance or guidelines on the management of mortality events in wildlife
   - 8.2. Conclusion on promoting one of them or developing new ones
9. **Facilitate the transport of wildlife diagnostic specimens**
10. **OIE National Focal Points for Wildlife Network**
    - 10.1. Virtual Intermediate Training workshops in the five OIE regions worldwide held in September 2021 – Outcomes
    - 10.2. Presentation of the updated Terms of reference for the OIE National Focal Points for Wildlife
11. **Wildlife health and aquatic animal health**
12. **Vaccination of animals of high conservation value**
13. **Any other business**
14. **Date of next meeting**
15. **Adoption of the report**

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MEETING OF THE OIE WORKING GROUP ON WILDLIFE

Virtual meeting, 7 – 10 December 2021

List of participants

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REPORT OF THE MEETING OF THE OIE *AD HOC* GROUP ON REDUCING THE RISK OF DISEASE SPILLOVER EVENTS AT MARKETS SELLING WILDLIFE AND ALONG THE WILDLIFE SUPPLY CHAIN

Virtual meeting, 8–10 June 2021

1. Opening of the meeting

The OIE *ad hoc* Group on reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain, met virtually from 8 to 10 June 2021, hosted by OIE headquarters based in Paris.

Dr Keith Hamilton, Head of the Preparedness and Resilience Department, welcomed the participants on behalf of the Director General of the OIE, Dr Monique Eloit. He provided background on the catalyst for bringing together the Group for the task ahead. Prior to COVID-19, internal discussions within the OIE had identified a necessity to better integrate consideration of wildlife health across OIE's standards and guidelines. The emergence of COVID-19 further shed light on the need to address risks from emerging diseases at the human−animal−environment interface through better integration of wildlife health management into OIE's core activities. In recognition of the need for further consultation, the OIE designed a questionnaire to collect the views and perspectives of the Veterinary Authorities of OIE Members on the role of Veterinary Services in wildlife health management. Provision of standards, practical guidelines, and training were identified as key activities where the OIE could support its members. OIE also consulted with a number of multilateral organisations and partners, with the resulting development of the OIE Wildlife Health Framework.

In April 2020, the OIE Wildlife Working Group released a statement on wildlife trade which highlighted the complexities, benefits, and challenges of this sector. The statement acknowledged that over (or non-sustainable) exploitation of wildlife contributes to the impoverishment of biodiversity and species conservation, has depleted natural resources worldwide, may pose threats to animal health and welfare, and can result in serious public health problems. Nevertheless, it also notes that wildlife is an important source of protein and income and supports livelihoods in many vulnerable local and rural communities.

With an identified need to 1) strengthen legal, responsible trade, and sustainable use of wildlife; 2) provide additional support for competent authorities to improve biosecurity and sanitary measures; 3) reduce risks of disease transmission; and 4) improve animal health and welfare, and biodiversity conservation, an approach based on regulatory principles is required. With financial support from the Australian government, the OIE drew together this *ad hoc* Group (AHG) to develop science-based guidance on reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain, and to support and promote its implementation.

Prior to commencing the work of the AHG, Dr Craig Stephen was engaged by the OIE to undertake A Rapid Review of Evidence on Managing the Risk of Disease Emergence in the Wildlife Trade. The review emphasised that there are significant gaps and biases in the current evidence base around wildlife trade and disease emergence. In addition, the review noted a lack of systematic evaluations or impact assessments of risk management options necessary to pinpoint most effective, efficient, acceptable, or sustainable policies or practices for reducing emerging disease risks. It was acknowledged that risk management solutions will need to be attentive and adaptable to different settings and socio-ecological determinants and cannot solely rely on taking a 'domestic animal approach'. The Group was asked to consider the review

conducted by Dr Craig Stephen as well as additional documentation (e.g., guidance documents, statements, reports[1]) developed in relation to the risk of disease spillover and wildlife trade. An example is the WHO/OIE/UNEP interim guidance document on *Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets*, the focus of which is limited to live wild animals used for food in traditional food markets.

Dr Francisco D'Alessio, Deputy Head of the Standards Department, provided the Group with an overview of the OIE standard setting process versus development of OIE guidance. Current OIE standards include the *Terrestrial Animal Health Code* and *Aquatic Animal Health Code*, the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* and the *Manual of Diagnostic Tests for Aquatic Animals.* Each code addresses safe trade, disease control, animal health and zoonoses, and animal welfare. The manuals provide a harmonised approach to disease diagnosis by describing internationally agreed laboratory diagnostic techniques. The standard setting process is inclusive, science-based and consensus-based and undertaken through numerous cycles of consultation, concluding with adoption by the OIE Members during the annual General Assembly, who then implement the standards, which can take several years to complete. In contrast, whilst OIE guidance still needs to align with the OIE mandate and meet the needs of OIE Members, there is greater flexibility, and they can be produced in more rapid timeframes. It was noted that risks associated with animal pathogens, including zoonotic agents, were within the OIE's mandate. With regards to food safety, while the OIE's standard-setting activities in this field focus on identifying and controlling potential hazards prior to the slaughter of animals or the primary processing of their products (meat, milk, eggs, etc.) that could be a source of risk for consumers, the setting of food standards to protect human health and to ensure fair practices in the food trade was the mandate of Codex Alimentarius.

In summary, the OIE is looking to develop interim guidelines to mitigate the risks of disease spillover events based on best practice and currently available evidence. Preferably this will incorporate tools and guidance on implementation, be outcome-focussed, and reflect system-based thinking. In addition, development of options for monitoring and evaluating the effectiveness of implementation will be necessary to provide an evidence base of future refined risk mitigation measures and avoid unintended consequences. In the long-term, the goal is to explore if and how to integrate guidance relating to wildlife health (including pathogen transmission risk) and wildlife trade into current OIE standards.

It is intended that the guidelines will be developed through a series of virtual meetings over the next 6-9 months. The main aim of this meeting was to discuss and agree on the target audience, the scope, structure and content of the guidelines. The group was encouraged to be innovative in its approaches yet be realistic in what could be developed given the timeframe and data currently available.

2. Appointment of chairperson and rapporteur and adoption of the terms of reference and of the agenda

The meeting was chaired by Dr William Karesh and Dr Marcela Uhart acted as rapporteur. The adopted Agenda and the List of Participants are presented at Appendices I and II of this report, respectively.

3. Scope of the Guidelines

3.1. Target Audience

The Group discussed a range of target groups and noted that given their range, a tiered or layered approach will likely be necessary. An outline of each intended target audience and how each can use the guidelines will be useful to include. For example, guidance on practical risk reduction techniques and interventions could aim for individual behavior change by frontline personnel, private sector, and end-users. Whereas guidance on assessing risk, implementation, monitoring and evaluation, capacity gap analysis, and

[1] Including, for example: Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets (Interim Guidance issued by WHO, OIE, UNEP on 12 April 2021); UNEP ILRI Series Preventing the next pandemic - Preventing pandemic zoonotic diseases and how to break the chain of transmission; IPBES Workshop on Biodiversity and Pandemics Report.

communication would be critical for authorities with a mandate inclusive of animal health, wildlife management, and public health (including veterinary services). It was noted that once the guidelines were established, training and communication strategies for specific target groups could be further considered. Further discussion on deployment of the guidelines set out the need to identify key stakeholders with varying perspectives, motivated champions, as well as those responsible for implementation and associated budgets. Promotion across multiple sectors will be critical given responsibilities fall under different authorities and legal instruments.

National government authorities with mandates for animal health, public health, wildlife management, wildlife trade and enforcement, and frontline personnel along the wildlife trade value chain were identified as the key target audiences for the guidelines. ***Engagement with National government authorities with mandates for animal health, wildlife management, wildlife trade and enforcement are critical to raise awareness, ensure uptake of existing regulations, enable frontline worker implementation, and promote legal reform that may be required.*** These are outlined below:

National government authorities with mandates for animal health, public health, wildlife management, wildlife trade and enforcement: Veterinary and animal health authorities (including OIE Delegates and OIE National Focal Points for Wildlife), food safety and public health authorities, biodiversity / environment / natural resource authorities and sectors (e.g. wildlife, conservation, forestry, fisheries, as appropriate), CITES Management & Scientific Authorities, customs and port authorities (manager level), market and in-country trade authorities (decision making / manager level), law enforcement (decision making level) as well as wildlife/forestry management.

Frontline personnel/practitioners: Customs, law enforcement and port authority officers; market and trade authority officers and inspectors; police officers; wildlife/forestry management officers; conservation/environment law enforcement officers; veterinary services; food safety inspectors; animal health and welfare auditors & inspectors; wildlife traders & users (domestic and international markets, farms, harvesters/hunters, wildlife processing, suppliers and other actors along the supply chain); agricultural and livestock sectors, wildlife sectors (wildlife farms, captive breeding, ranching facilities, zoos and rescue centres); field researchers and practitioners; doctors and medical personnel; and freight, cargo and transport personnel.

Indigenous people and local communities (IPLCs) (subsistence), and urban consumers/end-users in provincial towns and metropolitan cities were also considered a key target audience for the guidelines.

Private sector, donors, development banks and aid agencies, ministries of finance, chambers of commerce and civil society were also deemed important target audiences. These audiences were identified as a target for high level guidance to promote uptake, implement change as well as provide financial and capacity support to sectors and jurisdictions identified through gap analysis.

Private sector & civil society including individuals, groups and organisations (end-users): wildlife traders (corporate i.e., exotic pet shops, manufacturers), transport/cargo sector (e.g. the International Air Transport Association [IATA] and the International Federation of Freight Forwarders Associations [FIATA]), zoos, hobbyists / exotic pet owners (legal exotic pet trade), general public & communities (e.g. of live animals, traditional medicine or wildlife products/derivatives such as meat, skins, fur).

Multi-lateral organizations, trade agreements and conventions: the United Nations Food and Agriculture Organization (FAO) / the World Organisation for Animal Health (OIE) / the World Health Organization (WHO) / the United Nations Environment Programme (UNEP) collaboration, biodiversity related conventions (e.g. the Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES], the Convention on Migratory Species [CMS], the Convention on Biological Diversity [CBD], The Nagoya Protocol on Access and Benefit-sharing and other as appropriate), relevant inter-governmental agencies (e.g. the United Nations Office on Drugs and Crime [UNODC]), the International Criminal Police Organization (INTERPOL), United Nations convention against Transnational Organized Crime [UNTOC], World Customs Organisation (WCO), and signatories under relevant regional trade agreements.

3.2. Risks to be addressed

The risks to be addressed in the interim guidelines (e.g., risk pathways; type of wild animals – free-living or farmed; type of wildlife products; legal or illegal wildlife trade; commercial or non-commercial use) were discussed.

It was acknowledged that there are numerous external factors as well as points of transmission that could be the target for intervention / mitigation strategies, and the extent to which each is addressed in the guidelines will be guided by the scope (as outlined below). The discussion on risks explored if the guidelines would consider disease prevention, wildlife health resilience, drivers for social change or more specifically frontline disease transmission risks. For example, the opportunity exists to develop guidelines to implement health intelligence systems that could drive surveillance activities, identify disease risks early and address drivers of disease spillover at its root cause (e.g., limiting system disruptions due to land-use or animal production change). The Group felt that these would be both beneficial and complement the guidelines and should be promoted. The Group will consider the extent to which these aspects are addressed by the work being undertaken.

The Group agreed that a risk-based approach considering source population, location, host taxa, activities, key interfaces, and environment along the generic wildlife supply chain (see Figure 1), and product-type (e.g., meat, skin, fur, medicinal, live animal) should be the focus. The gradient of risk (e.g., decreasing from high-risk live animals to lower risk processed product) would be useful to capture, in addition to the need to incorporate risk probabilities, where they exist. It was recognised that both illegal / legal, commercial / non-commercial as well as regulated / unregulated wildlife trade all carried inherent disease spillover risks. The guidelines should not focus on one or the other but be developed for application across the spectrum of wildlife trade situations along the supply chain. In addition, risk varies dependant on the pathogen (e.g., some more resistant to degradation, different routes of transmission).

The scope was considered to include infectious pathogens at all interfaces where direct, indirect or vector-borne transmission leads to a risk of disease spillover to humans, domestic animals, or wildlife. The Group agreed that a multi-hazard risk reduction (i.e. One Health) approach was required, focused on wild animals and captive wild animals (zoos, pets, etc)[2] involved in wildlife trade. Feral animals, however, were considered out of scope.

The Hazard Analysis and Critical Control Points (HACCP) approach was noted as a useful starting point for the guidance. The Group also acknowledged the need to apply precautionary approaches, especially given the level of scientific uncertainty regarding effective, efficient, acceptable, or sustainable policies and practices for reducing emerging disease risks (as noted in the review by Dr Craig Stephen). Ideally this should be complemented by guidance on a systematic approach to monitor system wide (national and international) patterns of (animal protein) production and consumption, in addition to strategies to identify critical changes leading to raised spillover probabilities.

3.3. Types of environments or setting where the guidelines would be applied

The types of environment or settings where the guidelines would apply (e.g., trade, transportation, capture, farming, marketing, harvest, consumption, supply chain, etc.) were also discussed.

The Group noted that the infographic (Figure 1) developed by Dr Craig Stephen in the rapid risk review provided an excellent example of a generic wildlife supply chain and included most of the critical environments and settings that would need to be addressed within the guidelines. Whilst wildlife supply chains can be far more complex than the diagram illustrates, having multiple loops repeating at some stages, the infographic provided a tangible diagram of the key control points.

[2] Note: Clear definitions for “wildlife”, “wild animals” and “captive wild animals”, in light of OIE definitions, will be required within the guidelines.

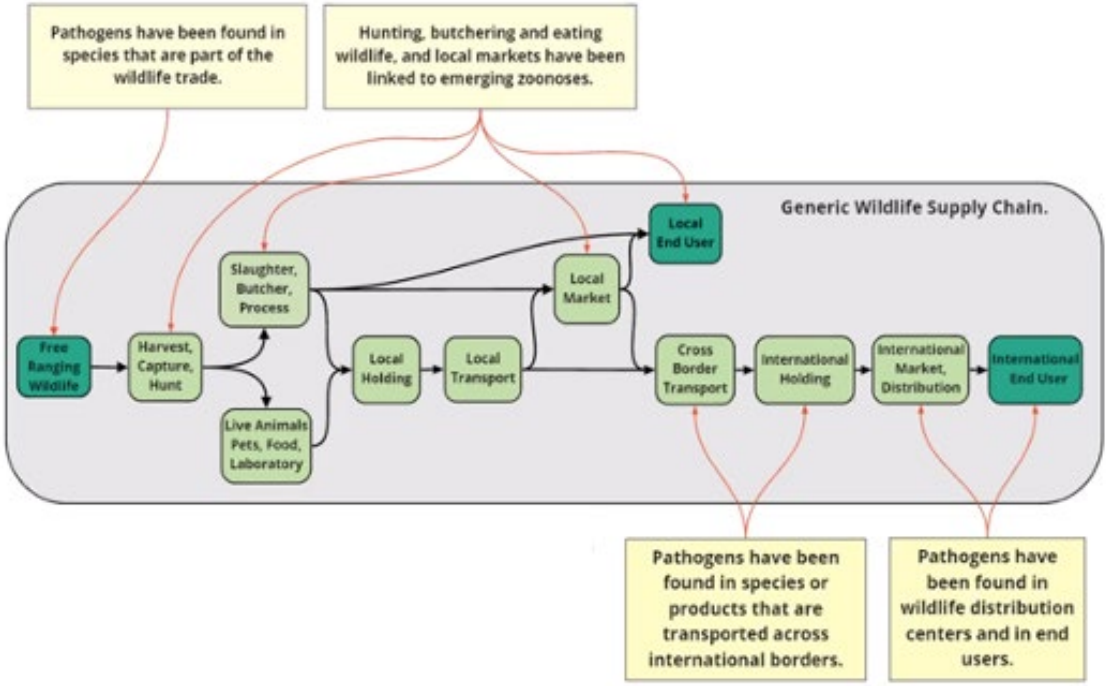

Figure 1: Generic Wildlife Supply Chain [Credit Dr. John Berezowki in Stephen C, Berezowski J et al. 2021 Rapid Review of Evidence on Managing the Risk of Emerging Diseases in the Wildlife Trade. Prepared for the Preparedness and Resilience Department of the OIE.]

4. Structure and content of the Guidelines

The background and scene setting sections should highlight the complexities of wildlife trade and supply chain, outline the similarities, differences, and interdependences with domestic animal trade, provide examples of how interventions may have upstream and downstream impacts when implemented, and also provide common language to enable promotion and engagement.

Guidelines should provide tangible, pragmatic, flexible and practical guidance for countries to be able to implement effectively on the ground. Decision flowcharts, infographics and meta-guidance models were discussed. Human health models for other complex issues (e.g., smoking) were raised, including the WHO model of health promotion and risk reduction.

A meta-guidance approach (see appendix III) would assist jurisdictions to perform their own assessment of risk, identify critical control points, plan and implement interventions, as well as monitor, evaluate and test interventions. A toolbox with a "decision tree" would facilitate identification of the tools and options that are available and guide countries to select those most suited to particular socio-ecological, socio-political and/or cultural settings. Risk assessment tools would allow the guidelines to be adapted to specific risk and capacity contexts, providing adaptable, flexible and sustainable approaches that can be successfully implemented. Hence a meta-guidance framework would allow users to select the relevant tools according to their preferences, capacity, identified needs, and specific risks. Inclusion of tools already in place for domestic animal trade may facilitate engagement with veterinary authorities. For example, drawing on information that is already available such as chapters within the OIE *Terrestrial Animal Health Code*. The guidelines should provide both technical guidance, drawing on current best practice risk reduction techniques and interventions at different points along the supply chain as well as provide tools on how to implement the technical guidance. Guidance and tools to facilitate evaluation and monitoring and identify critical capacity gaps would also be useful. Thorough evaluation and monitoring with subsequent sharing of lessons learned in specific settings would potentially facilitate feedback loops that identify effective interventions and bring the theory of change full cycle. Challenges identified included the need to complement uptake of and associated change relating to guidelines with capacity building.

The guidelines should set transparent benchmarks and minimum standards to encourage in-country, cross-border and regional uptake, whilst noting the need to find a balance between prescriptive interventions focused on regulation and accountability versus adaptability, flexibility, and sustainability. As many of the intervention and mitigation strategies are yet to be proven effective in reducing spillover from wildlife trade and supply chain, prescriptive advice may initially be limited and utilize some proven strategies from trade in domestic animals and their products, and application of established precautionary approaches.

It was noted that the interim guidelines would provide a starting point from which a wider body of work could be established and progressed.

Draft Table of Contents:

- Executive summary / High level summary
- Introduction / Background / Scene setting
- Terminology and definitions – e.g., define wild animals, captive wild animals (farm, zoo, pets, etc), wildlife health, etc. The group noted the importance of clearly defining terms used in the guidance, and aligning these with definitions in the OIE Codes and Manuals.
- Scope
- Purpose, intended goals and limitations
- Outline of key documents and guidance already available – including standards, guidelines and training manuals of the OIE, FAO, WHO, UNEP, etc.
- Intended audience and potential reach – outlining how each audience may use / interact with the guidelines
- Approach to risk assessment / analysis – drawing on guidelines already developed in addition to specific risk frameworks developed for the wildlife trade sector (e.g.Sleeman et al (in prep), and others)
- Overview of tools, risk reduction techniques and interventions - biosecurity and sanitary measures, improve animal health and welfare, etc
- Specific guidance provided using the wildlife value chain infographic utilising a precautionary approach[3] in addition to HACCP.

  Using the generic supply chain infographic as the basis (see Figure 1), set out a series of sections which address the following elements against the infographic. Key settings, supply chain points and / or environments could be zoomed in on to focus on specific tools, techniques, examples or gaps.

  Given a number of risk reduction techniques and intervention strategies would be similar across different settings, the Group noted that an interactive tool or matrix of risks and risk mitigation techniques / interventions could be developed.

  - Who's at risk and associated levels of risk
  - Types of risk including examples
  - Disease risk interventions and reduction strategies, including benchmark / minimum standards
  - Links to current guidance already available (could be combined / linked to preceding item)
  - Points of variation – e.g., how a specific supply chain point may vary based on associated risk factors and regional reality.
  - Skill sets, training opportunities and capacity requirements
  - Opportunities for surveillance and monitoring
  - Regulatory interventions / accountable and responsible authorities
  - Non-regulatory interventions, in particular awareness and education amongst stakeholders

[3] Note: a working definition of "precautionary approach" as it applies to these guidelines and the wildlife trade and supply chain will be developed."

- Tools and guidance on monitoring and evaluation across a range of potential benchmarks or indicators. For example, monitoring and evaluating uptake and compliance, changes in wildlife trade indicators (e.g., volume), unintended consequences and / or phasing out of specific practices. Many approaches were discussed, including use of data that are already being captured (TRAFFIC, CITES, INTERPOL, etc) and / or wildlife disease surveillance to identify successful mitigation techniques. Key indicators and metrics need to be tied to testable outcomes. It was noted that this section may provide general advice in the guidelines, however developing effective monitoring and evaluation tools was a body of work in itself and out of scope.
- Tools to identify critical capacity gaps and requirements (e.g., the OIE Performance of Veterinary Services [PVS] tools / the WHO Joint External Evaluation [JEE] process)
- Advice on implementation, risk communication and training
- Additional considerations, as required.

5. Programme for further work after this meeting

The Group agreed to progress through a series of virtual meetings and correspondence through a dedicated folder on internet. The second meeting will be organised in September 2021.

6. Finalisation of the report

The report was finalised and adopted by the Group a couple of weeks after the meeting by electronic communication.

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…/Appendices

Annex IV

REPORT OF THE MEETING OF THE OIE *AD HOC* GROUP ON REDUCING THE RISK OF DISEASE SPILLOVER EVENTS AT MARKETS SELLING WILDLIFE AND ALONG THE WILDLIFE SUPPLY CHAIN

Virtual meeting, 30 September 2021

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1. Opening of the meeting and purpose of the meeting

The OIE *ad hoc* Group on reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain, met virtually for the second time, on the 30 September 2021, hosted by OIE headquarters based in Paris. The Group's first meeting was held in June 2021.

Dr William Karesh, Chair of the Group, welcomed the participants.

At the previous meeting, the group was provided background on the catalyst for bringing the group together with the aim of developing guidelines and best practices to mitigate the risks of disease spillover events based on currently available evidence.

Dr Karesh highlighted that the purpose of this meeting was to make further progress and organise the work of the group, assign responsibility for writing the sections of the final product, and confirmed the timelines for outputs.

2. Designation of rapporteur

The meeting was chaired by Dr William Karesh and Dr Jonathan Sleeman acted as rapporteur.

3. Adoption of the agenda

The Group adopted the Agenda, with the addition of a presentation, and List of Participants which are presented at Appendices I and II of this report, respectively

4. Presentation on the outcomes from the meeting in June 2021

Dr Tiggy Grillo presented on the outcomes from the previous meeting. The presentation re-emphasised the background catalyst for the work of the Group and summarised the key elements discussed during the first meeting, including the target audience for the guidelines, the scope of risk to be addressed, use of the generic supply chain infographic (figure 1) as the basis to set out a series of key sections of the guidelines as well as the structure and content of the guidelines.

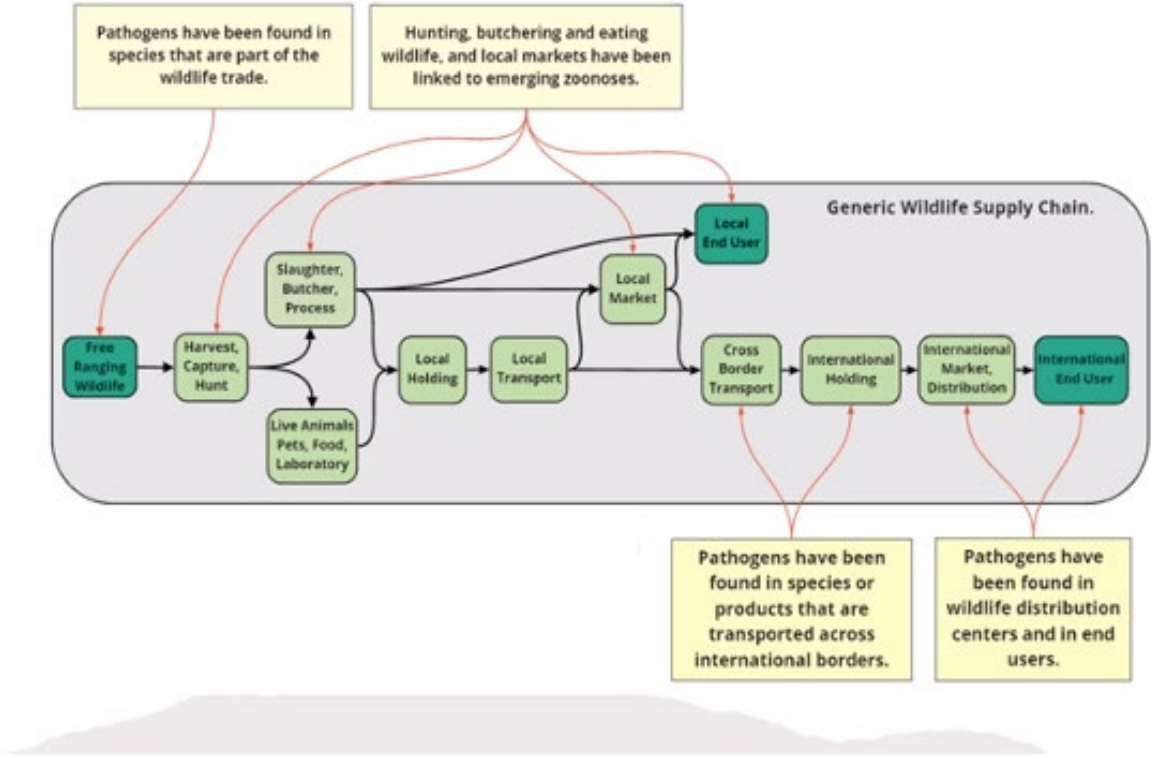

Figure 2: Generic Wildlife Supply Chain [Credit Dr. John Berezowki in Stephen C, Berezowski J et al. 2021 Rapid Review of Evidence on Managing the Risk of Emerging Diseases in the Wildlife Trade. Prepared for the Preparedness and Resilience Department of the OIE.]

The Group discussed and reconsidered several elements of the guidelines outlined in the presentation / first meeting report.

It was noted that it would be important to reference and outline the relationship to the interim guidance issued by WHO, OIE, UNEP on 12 April 2021: Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets.

The Group recognised that the initial key target audiences identified (national government authorities and frontline personnel) were quite different, and it could be challenging to develop a single guideline document that would be equally useful for both groups. OIE Members and veterinary services provide a critical user group that could underpin the focus of the guidelines, with key sections of the guidelines targeted to broader or specific audiences. For example, the executive summary or a short appendix could be written to also target policy and decision makers, whereas other sections would benefit other audiences. An option could be to include a user guide (perhaps in the form of a decision tree) at the start of the guidelines to direct different user groups (e.g., target audiences) to the specific sections of the guidelines.

The Group also discussed primary, secondary and tertiary levels of prevention as they map to addressing drivers of spillover, to early detection surveillance, to biosecurity and sanitary measures at key interfaces along the supply chain.

The Group revisited the notion that significant gaps and biases in the current evidence base around wildlife trade and disease emergence exist as well as the lack of systematic evaluations that pinpoint the most effective, efficient, acceptable, or sustainable policies or practices for reducing emerging disease risks. The guidelines will need to convey this uncertainty. Recognising that without an evidence base, policy makers would / could be resistant to implementing policy change. However, the guidelines would provide the interim practical and pragmatic tools from which users could start with. The guidelines could draw on universal precautions and the hierarchy of controls as a basis. Complemented by monitoring and evaluation systems also provided in the guidelines, these in combination will enable an evidence base from which feedback loops will hopefully inform the direction and priorities for critical policy change and implementation. In recognition that there are also many new research initiatives aiming to further understand and identify risk reduction strategies for zoonotic

infectious diseases and that the guidelines could acknowledge the need for users to be adaptive to new knowledge and to changing local conditions when applying the guidelines. The section on monitoring and evaluation was identified as a critical component of the guidelines.

The need for a focus Group made up of key users was identified as potentially beneficial approach to guide the content of the guidelines. An OIE survey in 2020 to collect the views and perspectives of the Veterinary Authorities of OIE Members in relation to wildlife health management identified that this audience was looking for practical guidelines and training. It was reiterated that the more practical and pragmatic the guidelines were, the more useful they would be.

5. Sub-working groups and future meetings

Prior to the meeting, the Group had been provided with the draft table of contents, developed during the first meeting, as basis from which sub-working groups could be organised. During the meeting, the Group agreed to the composition and lead for each sub-working group. Some members would also act as a knowledge bridge between sub-working groups.

The Group agreed to progress through a series of unofficial meetings of sub-working groups and email correspondence through a dedicated folder on the internet. The Group agreed to develop a detailed outline of the content (see Appendix III) for each sub-section of the guidelines in advance of the next meeting in November 2021, with the aim of producing some completed sub-sections by the end of 2021. The aim is to complete the guidelines within the first half of 2022.

6. Definitions and terminology

A sub-working group will develop a list of definitions. The Group agreed that this section would need to continuously be revisited and revised as the content of the guidelines is developed, in recognition of its importance and the potential to identify new terms requiring definition.

7. Programme for further work after this meeting

The Group will meet again in for its third meeting in November 2021. It was re-iterated that the initial guidelines would provide a starting point from which a wider body of work could be established and progressed.

8. Finalisation of the report

The report was finalised and adopted by the Group a couple of weeks after the meeting by electronic communication.

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…/Appendices

Appendix I

THE MEETING OF THE OIE *AD HOC* GROUP ON REDUCING THE RISK OF DISEASE SPILLOVER EVENTS AT MARKETS SELLING WILDLIFE AND ALONG THE WILDLIFE SUPPLY CHAIN

Virtual, 30 September 2021

Agenda

1. Opening and purpose of the meeting
2. Designation of rapporteur
3. Adoption of the agenda
4. Presentation on the outcomes from the meeting in June 2021
5. Sub-working groups and future meetings
6. Definitions and terminology
7. Programme for further work after this meeting

Appendix II

MEETING OF THE OIE *AD* HOC GROUP ON REDUCING THE RISK OF DISEASE SPILLOVER EVENTS IN WILDLIFE MARKET AND ALONG THE WILDLIFE SUPPLY CHAIN

30 September 2021

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Appendix III

Draft Table of Contents, as of the 1 October 2021
revised following virtual meeting on the 30 September 2021

Section of the Guidelines	Next Steps
1. Executive Summary	***To be considered at later stage***
2. Scope - Infectious pathogens at all interfaces where direct, indirect or vector-borne transmission leads to a risk of disease spillover to humans, domestic animals, or wildlife. - Wild animals and captive wild animals (zoos, pets, etc.) involved in wildlife trade. - Feral animals, however, were considered out of scope. - Terrestrial and aquatics - *Include a general statement noting the principles and techniques / tools within these guidelines could be applied / useful for settings that may not necessarily be covered in detail in this document*	**Final version to be revised to align with final product**
3. Purpose, intended goals and limitations	**Final version to be revised to align with final product**
4. Introduction / Background / Scene setting - Interconnectedness of the health of humans, domestic animals and wildlife - Animal welfare - Wildlife trade overview "… highlight the complexities of wildlife trade and supply chain, outline the similarities, differences, and interdependences with domestic animal trade, provide examples of how interventions may have upstream and downstream impacts when implemented, and also provide common language to enable promotion and engagement…." - Conditions to form an effective spillover of an pathogen - "external factors as targets for intervention / mitigation strategies…. disease prevention, wildlife health resilience, drivers for social change or more specifically frontline disease transmission risks. For example [discussion or recommendations relating to the benefits of]… ….health intelligence systems that could drive surveillance activities, identify disease risks early and address drivers of disease spillover at its root cause (e.g., limiting system disruptions due to land-use, climate change or animal production change). …" - FAO. 2020. The COVID-19 challenge: Zoonotic diseases and wildlife. Collaborative Partnership on Sustainable Wildlife Management's four guiding principles to reduce risk from zoonotic diseases and build more collaborative approaches in human health and wildlife management.[4]	**Brief - 1 pager**
5. Intended Audiences - Key Audience: National government authorities with mandates for animal health, public health, wildlife management, wildlife trade and enforcement, and frontline personnel along the wildlife trade value chain were identified as the key target audiences for the guidelines. - Outline other audiences and outline how each audience may use / interact with the guidelines	**Short para to include Scope /- introduction**

[4] http://www.fao.org/3/cb1163en/CB1163EN.pdf

6. Approach to risk assessment / decision framework Drawing on guidelines already developed in addition to specific risk frameworks developed for the wildlife trade sector (e.g. Sleeman et al (in prep), IUCN/OIE DRA, Wikramanayake et al (2021), and others) to provide an overview. - Assessment of risk with limited information - Context of assessing risk: Risk to who: human health, domestic animal health, wildlife health; Assessing risk through multiple lens e.g. biodiversity, conservation, economic, local culture and livelihoods, agriculture, etc - Geographic differences - Species/Taxa differences - Wildlife trade / supply chain environment differences	**Outline of approach an considerations risk assessment; decision making**
7. Overview of tools, risk reduction techniques and interventions - biosecurity and sanitary measures, improve animal health and welfare, etc - General: Prevent, Minimize, Assess, Protect - Options: e.g. closing or managing wildlife or wet markets, trade bans, sanitary regulations and biosecurity, reducing demand, culling, farming, and socioecological interventions. (See meeting minutes from June 2021 for further detail) - IPBES, WHO-OIE-UNEP interim guidance, and Stephen 2021 report, specifically Table 3.1 and 3.2. - Application of existing trade and sanitary standards - Use the generic supply chain infographic as the basis, set out a series of sections which address the following elements against the infographic. Generic Wildlife Trade Supply Chain: free-ranging wildlife, harvest/capture/hunt, local (incl. farms, etc) and international holding, slaughter/butcher/process, cross border transport (transportation, relocation, translocation), international distribution and market, local market, local and international end user. o *Who's at risk and associated levels of risk (query – would this be better in section 8)* o Types of risk including examples o Disease risk interventions and reduction strategies, including benchmark / minimum standards o Links to current guidance already available (could be combined / linked to section above item) o Points of variation – e.g., how a specific supply chain point may vary based on associated risk factors and regional reality. o Skill sets, training opportunities and capacity requirements o Opportunities for surveillance o Regulatory interventions / accountable and responsible authorities Resources - Table 1 in Hilderink MH & de Winter II (2021). No need to beat around the bushmeat–The role of wildlife trade and conservation initiatives in the emergence of zoonotic diseases. Heliyon, e07692. - AUSTRALIAN STANDARD FOR THE HYGIENIC PRODUCTION OF WILD GAME MEAT FOR HUMAN CONSUMPTION - Australia - Export Control (Wild Game Meat and Wild Game Meat Products) Rules 2021	**To further explore approach/content**

8. Tools and guidance on monitoring and evaluation across a range of potential benchmarks or indicators. - For example, monitoring and evaluating uptake and compliance, changes in wildlife trade indicators (e.g., volume), unintended consequences and / or phasing out of specific practices. Many approaches were discussed, including use of data that are already being captured (TRAFFIC, CITES, INTERPOL, etc) and / or wildlife disease surveillance to identify successful mitigation techniques. Key indicators and metrics need to be tied to testable outcomes. It was noted that this section may provide general advice in the guidelines, however developing effective monitoring and evaluation tools was a body of work in itself and out of scope. - Upstream and downstream impacts - Surveillance – wildlife, domestic animals and humans o Wildlife surveillance, sampling, monitoring and testing ▪ Ante-mortem and post-mortem inspections ▪ Disease investigation ▪ Identification, traceability, and record keeping	**Overview of why this is important, concepts of application, what could be monitored/evaluated and why, what data is available to use – wildlife trade as well as disease; This was noted a critical important section**
9. Tools to identify critical capacity gaps and requirements (e.g., the OIE Performance of Veterinary Services [PVS] tools / the WHO Joint External Evaluation [JEE] process	**Outline the tools that are already available**
10. Advice on implementation, risk communication and training	**Outline the tools that are already available; general guidance for the need for behaviour change tools and the recognition this need to be adapted to social context and links to public health advice; need to partner with other groups**
11. Terminology and definitions Clear definitions for "wildlife", "wild animals" and "captive wild animals" (farm, zoo pets, etc), in light of OIE definitions, will be required within the guidelines. Resources with glossaries which could be utilised - IPBES Workshop on Biodiversity and Pandemics Report[5] - Statement of the OIE Wildlife Working Group, April 2020: Wildlife Trade and Emerging Zoonotic Diseases (April 2020)[6] - Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets (Interim Guidance issued by WHO, OIE, UNEP on 12 April 2021)[7] - OIE Terrestrial Animal Health Code[8] *(need to consider that ferals are out of scope, ensure aquatics considered)* - *Include wildlife welfare definitions (e.g. five domains / freedoms) [DJ Mellor as reference for 5 Domains: https://www.mdpi.com/2076-2615/10/10/1870/htm]*	**Collate definitions available**

[5] https://ipbes.net/pandemics
[6] https://www.oie.int/en/document/a_oiewildlifetradestatement_april2020-2/
[7] https://cdn.who.int/media/docs/default-source/food-safety/ig--121-1-food-safety-and-covid-19-guidance-for-traditional-food-markets-2021-04-12-en.pdf
[8] https://www.oie.int/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/

12. Outline of key documents and guidance already available – including standards, guidelines and training manuals of the OIE, FAO, WHO, UNEP, etc. - WHO (2006) A Guide to Healthy Food Markets https://www.who.int/foodsafety/capacity/healthy_marketplaces/en/ - WHO (2018) Surveillance of foodborne diseases. https://www.who.int/foodsafety/areas_work/foodborne-diseases/fbd_surveillance/en/ - WHO (2006). Public health interventions for prevention and control of avian influenza. **https://apps.who.int/iris/bitstream/handle/10665/205700/B0237.pdf** - OIE (2021). Terrestrial Animal Health Code. https://www.oie.int/standard-setting/terrestrial-code/access-online/ - WHO (2006). Public health interventions for prevention and control of avian influenza. https://apps.who.int/iris/bitstream/handle/10665/205700/B0237.pdf - FAO/OIE/WHO. FSO/OIE/WHO Stop the spread: Measures to stop the spread of highly pathogenic bird flu at its source (2005) https://www.who.int/influenza/resources/documents/stop_spread_bird_flu/en/ - FAO (2019) TECHNICAL GUIDANCE PRINCIPLES OF RISK-BASED MEAT INSPECTION AND THEIR APPLICATION http://www.fao.org/3/ca5465en/CA5465EN.pdf - FAO/OIE/WHO (2021) SARS-CoV-2 in animals used for fur farming GLEWS+ Risk assessment http://www.fao.org/3/cb3368en/cb3368en.pdf TO ADD: ❖ WHO/UNEP/OIE interim guidance ❖ UNODC guidelines for frontline workers ❖ Li et 2021 China's changes to wildlife trade ❖ FAO additions ❖ Any specific country guidance also can be included	**ALL TO CONTRIBUTE**