

# Report of the WOA Working Group on Wildlife

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13 to 16 December 2022  
Paris, France



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for Animal Health**  
Founded as OIE

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## 1. Summary

The Working Group highlighted that comprehensive needs for health of free-ranging wildlife populations were largely unaddressed by international organisations and agencies. Therefore, WOAAH had the opportunity to provide leadership in this area.

The Working Group discussed opportunities for WOAAH to play a leadership role in wildlife health in line with its existing mandate and mission.

WOAAH could **develop standards and/or guidelines** that promote wild animal health and conservation within a One Health framework. The **current WOAAH guidelines and standards could be reviewed** to identify opportunities for mutually beneficial outcomes for domestic and wild animal health and to consider wild animals from an environmental and ecological perspective.

Opportunities to play a leadership role in One Health frameworks included **better integrating wildlife health and ecosystem health into its operations**, in support of the objectives of the WOAAH Wildlife Health Framework. Specific activities under the Wildlife Health Framework, included:

- i. Enhanced wildlife disease surveillance and reporting
- ii. Capacity enhancement:
  - Strengthened Collaborating Centre Network to support delivery of the Wildlife Health Framework;
  - Inclusion of wild animal considerations and capacity assessment in PVS framework (assessment criteria, experts on missions etc.) to support countries in assessing wildlife health needs.
- iii. Education and training:
  - Strengthen the wildlife focal point network;
  - Extend the WOAAH network by including additional partnerships with wildlife health experts and international conservation organisations;
  - Consider including Wildlife Value Chain Risk Assessment into WOAAH training activities and tools.

## 2. Opening

The meeting of the WOAAH Working Group on Wildlife (the Working Group) was held from the 13<sup>th</sup> to the 16<sup>th</sup> of December 2022 at the WOAAH Headquarters in Paris, France; and was chaired by Dr William Karesh.

Dr Montserrat Arroyo, Deputy Director General of WOAAH, welcomed the members of the Working Group and thanked them for their inputs and support for the implementation of the WOAAH Wildlife Health Framework. She highlighted that WOAAH Members have been requesting increasing support to address wildlife health and the inputs from the Working Group as an advisory group were very important for this purpose. She mentioned that this role as an advisory group was well reflected in the agenda and she looked forward to reading the opinion, conclusions, and recommendations from the meeting, in particular regarding emerging diseases, which has been the subject of much discussion between the different Commissions. Dr Arroyo informed the group that the WOAAH Commissions had been asked to pay more attention to wildlife, and that the Working Group would be asked to contribute more to WOAAH discussion on terrestrial and aquatic animals in the future.

Ms Sophie Muset provided an overview of the implementation of the wildlife health framework. Dr Karesh congratulated Ms Muset and members of the WOAAH team working on wildlife on just how much has been achieved for Members in this area in such a relatively short period of time.

## 3. Adoption of agenda and designation of the rapporteur

Dr Jonathan Sleeman was appointed as the 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

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Dr Mulumba presented feedback from the Scientific Commission for Animal Diseases (SCAD – the Commission) on the paper developed by the Working Group on the vaccination of wild animals of high conservation value. The Working Group reviewed the feedback from the Commission and supported this feedback by adding a recommendation that: “when possible, a non-replicating vaccine or a vaccine for which it is possible to differentiate vaccinated from infected animals should be used.” The Working Group recommended the paper now be sent to the Terrestrial Animal Health Code Commission and Biological Standards Commission for consideration to be included in the relevant Code and Manual Chapters and that the recommendations be integrated into current disease control programmes.

## **5. Multisectoral coordination and collaboration**

### **5.1. Network of Collaborating Centres working on wildlife**

Dr Dharmaveer Shetty presented initial ideas for a project to set up a network of Collaborating Centres working on wildlife and invited discussion:

#### Comments:

- The Working Group suggested the development of a concept note describing the aim, purpose, objectives, structure, and operationalisation of the network, including details such as the centres to be involved, number of meetings per year and operating procedures.
- The Working Group also recommended commencing with Collaborating Centres within the ‘Wildlife Health and Biodiversity’ focus area and if interest existed, to incorporate other Collaborating Centres in a progressive fashion and as resources allowed.
- Finally, the Working Group congratulated WOAHA on this initiative and offered further input, if required, including review the concept note once finalised.

### **5.2. Network of the WOAHA National Focal Points for wildlife**

Dr Dharmaveer Shetty provided the Working Group with an update on the activities conducted to further develop and support the network of the WOAHA national focal points for wildlife.

#### Comment:

- The Working Group suggested consideration be given to a federated model focused on provision of support for capacity building efforts using a regional and sub-regional model. The Working Group noted that the Asia Pacific Region has developed successful networks and efforts should build on this success.

### **5.3. Develop or improve mechanisms or tools for wildlife health issues**

The Wildlife Conservation Society (WCS) has received support from the Science for Nature, Animal, and People Partnership (SNAPP) to convene a working group called the WildHealthNet Consortium. Its aim is to help implement and scale national wildlife health surveillance systems.

The first meeting of this Consortium, in September 2022, conducted an initial activity aimed at developing priority research questions deemed critical for implementation of surveillance at a global scale and progressing objectives of the WOAHA Wildlife Health Framework. A follow up survey solicited ranking feedback using criteria of importance and relevance to the Consortium including feasibility, and innovation.

The resulting document was presented to the Working Group.

#### Comments:

- The Working Group considered the findings and identified their priorities, which included work to better assist in measuring the cost-effectiveness of Wildlife Health Systems (actual cost, risk/costs avoided, revenue, other economic value, e.g. willingness to pay) and a “top three” data synthesis priorities which were: (1) the current status of wildlife disease surveillance systems worldwide, (2) what wildlife health means (beyond the wildlife health expert community), which could be linked to an identified priority of the Working Group for a Delphi exercise on the same subject with wildlife health experts (see agenda item 8.3), and (3) contextualizing wildlife health surveillance systems: what is actually being monitored and what opportunities are being missed?

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#### 5.4. Partnership with IUCN

A draft Memorandum of understanding, including identification of area of activity of mutual benefit between WOA and IUCN was presented to the Working Group.

##### Comments:

- The Working Group agreed that, rather than developing new standalone guidelines for wildlife health, it would be better to review and update existing WOA guidelines relating to wildlife health including those on wildlife health surveillance, IUCN-WOA Guidelines on Disease Risk Analysis, Guidelines for Reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain, and the 6 Training Manuals for the WOA National Focal Points for Wildlife.
- The Working Group suggested exploration of IUCN guidelines to see where WOA activities, input or expertise could be added to improve the work.
- Finally, the Working Group recommended inclusion of a contact point in each organisation to manage a workplan and interaction between the organisations.

#### 5.5. Partnership with CITES

A Memorandum of understanding and work plan were presented, for information, to the Working Group.

#### 5.6. Partnership with WDA

The Working Group was informed of a possible future collaboration with the Wildlife Disease Association (WDA) and made recommendations on the possible areas of collaboration, including:

- Involvement of wildlife experts from WDA in the potential collection and provision of wildlife disease data to WOA and its Focal Points, and
- Discussions on topics of interest for WOA (e.g. rapid international transport of diagnostic samples, Delphi exercise on the definition of Wildlife Health, etc.).
- Linkage of WDA wildlife experts to National Focal Points to help support them in their work
- Attendance of the WOA staff at WDA conferences
- Provision of access for WDA wildlife experts to tools developed during WOA Training Seminars for the National Focal Points for Wildlife (and their potential involvement in training)
- Involvement of PhD graduate students from WDA on topics of need for WOA.

Steps to help clarify any potential future relationship could include co-review of the Wildlife Health Framework with senior members of WDA, which would help better identify how WOA and WDA can work together to better identify and address areas of mutual interest.

##### Recommendations:

- The Working Group recommended WOA organise a meeting with senior members of WDA to brief them on the outcomes of this agenda item and discuss next steps. A member of the Working Group, who is also a senior WDA member will be invited to attend (*Marcela Uhart was proposed*).

### 6. Quality data collection, reporting, analysis and use improved

#### 6.1. Update on the Quickwin project

Dr Paolo Tizzani provided an update on the 'QuickWin' project. WAHIS-Wild had been inoperable since 2019 and the QuickWin project represented a temporary fix for wildlife data collection, until a more permanent solution can be found (this was being explored under the Wildlife Disease Reporting project (also known as next generation of a WOA disease reporting platform – see agenda item 6.2).

Dr Tizzani detailed that the QuickWin project would use SurveyMonkey and consist of a set of questions where data were entered disease by disease. Guidance material to support WOA Delegates and National Focal Points enter the data would be shared when the system went live. The guidance would include a Notification procedure outlining

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why, where, what and how to report, and a step-by-step guide for the online reporting module. He also highlighted that the supporting documentation/training materials would be linked to the wildlife disease technical cards.

Dr Tizzani informed the Working Group that internal testing of the SurveyMonkey tool had been completed and piloted with selected Focal Points for Wildlife from 9 countries. He also informed the Group that training for WAHIAD staff would take place in December 2022 and the module would be provided online in January 2023, after a webinar event to present the QuickWin to all the Members. Dr Tizzani concluded that WOAAH was still working on the data visualization platform.

The Working Group acknowledged the work done to develop this wildlife disease data collection module and made suggestions for future inclusion of the possibility to use an excel file to submit data, the need for functionality that allows filling of the database with multiple disease cases simultaneously, the ability to review the data provided before and after submission, and the possibility to include additional fields for diagnostic test methods used for the detection of a disease and level of confidence in the diagnosis.

## **6.2. Development of the next generation of a WOAAH disease reporting platform**

Dr Claire Cayol presented to the Working Group an overview of the current and possible future information system for reporting wildlife health to WOAAH by Member Countries.

Dr Cayol mentioned that the purpose, scope and use of the data collection must first be specified in a long-term strategy and highlighted that at all steps of the strategy the following will be considered: the needs of WOAAH Members, people (end users), goal-oriented processes to manage the data, and the optimal information technologies to assist and facilitate data input.

The Working Group was impressed by the work of Dr Cayol and the WOAAH Wildlife Team, recognising the significant amount of work and progress that has been made in a relatively short period of time. Feedback was provided on the objectives and actions proposed. It was agreed that the objectives for the system were comprehensive but that not all could be achieved with the resources available and that further clarification of the purpose of the system would assist in better refining scope, priorities and therefore design. Challenges were recognised, including lack of readily available denominator data, as well as clarification of language for several objectives including definitions and terminology relevant to endangered wildlife for which replacement with “Threatened Species of Wildlife” should be considered, so as to increase the scope of the system, and better reflect the need on the ground.

Suggestions and changes from the Working Group will be considered by Dr Cayol. A revised version of the presentation has been shared with the Working Group for consideration with feedback requested before the end of the first quarter of the 2023 calendar year.

### Recommendations:

- The Working group **endorsed** the proposed approach, subject to final consideration of the updated document and **agreed** that a summary and recommendation (support note) to move ahead be provided to the WOAAH Executive Committee.

## **7. Guidelines, standards, risk reduction strategies updated & developed**

### **7.1. Consultancy Report on “Perspectives on opportunities for WOAAH standards and guidelines to better address wildlife health”**

The report on “Perspectives on opportunities for WOAAH standards and guidelines to better address wildlife health” and its main conclusions were presented to the Working Group.

### Recommendations:

- The Working Group recommended that:
  - o To support a leadership role in wildlife health, WOAAH could consider developing standards and/or guidelines that promote wild animal health and conservation within a One Health framework. This could also include enhancing existing standards. The current standards could be reviewed to identify opportunities for mutually beneficial outcomes for domestic and wild animal health and to consider wild animals from an environmental and ecological perspective.

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- Specifically, a consultant or an *ad hoc* Group could review the Terrestrial and Aquatic Codes and Manuals and identify such opportunities.

## **7.2. Consultancy Report on “A study of veterinary services and wildlife disease legislation”**

The report on “A study of veterinary services and wildlife disease legislation” and its main conclusions were presented to the Working Group.

### Recommendations:

- The Working Group recommended that:
  - The 17 best practises proposed in the report, be considered for integration into the Terrestrial Code Chapter 3.4. on “Veterinary Legislation”.
  - In the next 24 months, WOAAH could disseminate the report to Member Countries to consider in the context of their legislative and regulatory frameworks.
  - A similar review of aquatic wild animal legislation could be conducted.
- The Working Group was informed that PVS legislation missions would be used to further inform and make recommendations as to future implementation strategies and potential broader utility of the findings. The Working Group also noted that this work would help to inform legislation development or revision by WOAAH’s partners, including other international organizations with an interest in wildlife health, for example IUCN.

## **7.3. Consultancy Report on “Wildlife health and related environmental factors in the PVS pathway”**

The report on “Wildlife health and related environmental factors in the PVS pathway” and its main conclusions were presented to the Working Group.

### Recommendations:

- The Working group recommended that future PVS missions better integrate wildlife expertise
- In parallel, the Working group recommended that WOAAH review the PVS pathway tools and evaluate opportunities to integrate wildlife health into the evaluation process for the purposes of protection of wildlife health. WOAAH should consider other available tools as a resource.

## **8. Scientific knowledge developed and disseminated**

### **8.1. *Ad hoc* Group on reducing risk of disease emergence and spillover through wildlife trade and along the supply chain**

Dr Tiggy Grillo presented to the Working Group the final version of the Guidelines for Reducing the risk of disease spillover events at markets selling wildlife and along the wildlife supply chain, for endorsement and recommendations to ensure timely and efficient dissemination.

### Recommendations:

- The Working Group:
  - Recognised the significant contribution by WOAAH in the development of these guidelines to aid in assessment and to assist with management of risk raised by the wildlife trade chain to all international trade, countries’ market access, human health and biodiversity and congratulated the authors and WOAAH on this significant achievement.
  - Endorsed the report of the virtual meeting of the Group, held in March 2022 and the final draft version of the Guidelines, and suggested dissemination via: (1) the WOAAH wildlife webpage, (2) direct distribution to international partners working on wildlife health (such as the Wildlife Diseases Association - WDA, CITES, IUCN and NGO’s), with a recommendation that they share the document with their members, and; (3) extension of an initiative of a workshop that will be organised in Thailand to present these guidelines to other countries in the Asia region and other regions worldwide.

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## 8.2. Research priorities in wildlife health

The Working Group identified the following priority research and questions aligned with the Wildlife Health Framework:

### Social relevance

- What are the costs and benefits of wildlife health for agriculture, economy, human health and ecosystems?
- What are the opportunities and impediments to a broader recognition of wildlife health?
- What are the opportunities and impediments of wildlife disease surveillance by local communities?

### Health Management

- Research on effectiveness of interventions which protect wildlife (of management of wildlife health): Evaluate and develop new strategies for wildlife health management
- Investigating wildlife/livestock disease risk mitigation approaches in the absence of diagnostic tests

### Diagnostic capabilities:

- Validation of diagnostic tests in wildlife
- Development of new and novel non-invasive sampling and diagnostic test methods in wildlife

### Disease emergence drivers:

- What are the drivers of diseases that threaten wildlife?
- What are the risks associated with wildlife international trade in pathogen emergence/transmission?
- Impact of climate change on wildlife health?

## 8.3. Definition of wildlife health

Dr Claire Cayol presented an article from Hanisch et al. (2012), that acknowledged the complexity of the concept of Health in general, the intricacy of its application to wildlife, and who conducted a Delphi exercise with a panel of American wildlife health professionals to conceptualise wildlife health. In a collaborative effort to be led by WOAAH, it was proposed to the Working Group that the exercise be repeated with a geographically wider, and more inclusive, panel of experts.

Dr Cayol also presented a project the aims of which were to draft an advocacy document based on existing knowledge of the relationship between biodiversity, biodiversity loss, and pathogen spread. This document would encapsulate biodiversity's ecological, aesthetic, symbolic, humanistic, and utilitarian significance. The objective would be to utilise the contents of this document as a central part of material for a campaign including social media, outreach, conferences and in a press release, to help reframe the narrative regarding the risk of infectious disease outbreaks and wildlife. Further distribution could occur via one or more peer-reviewed journal papers, targeting green and or gold open-access scientific journals.

### Recommendations:

- The Working Group:
  - o **Supported** a Delphi exercise designed to develop a definition of wildlife health. An objective to clearly define wildlife health should be included in the methodology, which should also include careful consideration of people and representative skill sets to be invited.
  - o **Supported** development of a paper by WOAAH on the relationship between biodiversity, biodiversity loss, and pathogen spread. The Working Group nominated two members (Dr Murata and Dr Woods) to support its development with Dr Cayol.
  - o **Noted** that there is no WOAAH definition for animal health and recommended that this also be developed by WOAAH.



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## 9. Any other business

### 9.1. Definition of an “emerging disease” and the process for the notification

The definitions of “emerging disease” found in the Terrestrial and Aquatic Code were presented to the Working Group, as well as article 1.1.5. from the Terrestrial Code. The Working Group was asked if the current definitions for “emerging disease” were adequate for WOAHP purposes.

#### Comment and Recommendation

The Working Group:

- Noted the challenges in capturing the range of risks for terrestrial and aquatic animals, other wildlife, and humans, in the current definition. It also discussed the need to gather information sufficient to inform predictive and forecasting efforts for animal diseases. The current definition could be reviewed to address these broader needs.
- Highlighted that the reporting of emerging diseases should consider the risk of the establishment and spread of an emerging disease, and thus the risk to trade as well as animal and human health.
- Noted that, within its mandate WOAHP has an opportunity to increase situational awareness on emerging diseases.

Two processes were suggested that could assist in informing the approach as to whether a change to the current definition is needed and to assist in clarification of any potential future role in the identification and management of emerging infectious diseases and issues globally:

- 1) rapid risk assessment – to compare maintenance of the current definition/status quo versus modification of the current definition to facilitate more rapid and timely capture and provision of information, and;
- 2) SWOT analysis - To help identify risks to WOAHP if definitional changes are not made.

It was noted that other organisations are also considering a role in this area.

### 9.2. Aquatic animals

The Working Group decided to identify an expert in aquatic animal health to participate to its next meeting in June.

## 10. Date of next meeting

The Working Group proposed the following dates for its next meeting from Tuesday 20 to Friday 23 June 2023.

## 11. Adoption of the report

The report was adopted by the Working Group.

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.../Annexes and appendices

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## Annex I.

### Adopted Agenda

#### MEETING OF THE WOAHP WORKING GROUP ON WILDLIFE

Paris (France), 13 to 16 December 2022

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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**
  5. **Multisectoral coordination and collaboration**
    - 5.1. Network of Collaborating Centres working on wildlife
    - 5.2. Network of the WOAHP National Focal Points for wildlife
    - 5.3. Develop or improve mechanisms or tools for wildlife health issues.
    - 5.4. Partnership with IUCN
    - 5.5. Partnership with CITES
    - 5.6. Partnership with WDA
  6. **Quality data collection, reporting, analysis and use improved**
    - 6.1. Update on the Quickwin project
    - 6.2. Development of the next generation of a WOAHP disease reporting platform
  7. **Guidelines, standards, risk reduction strategies updated & developed**
    - 7.1. Consultancy Report on “Perspectives on opportunities for WOAHP standards and guidelines to better address wildlife health”
    - 7.2. Consultancy Report on “A study of veterinary services and wildlife disease legislation”
    - 7.3. Consultancy Report on “Wildlife health and related environmental factors in the PVS pathway”
  8. **Scientific knowledge developed and disseminated**
    - 8.1. *Ad hoc* Group on reducing risk of disease emergence and spillover through wildlife trade and along the supply chain
    - 8.2. Research priorities in wildlife health
    - 8.3. Definition of wildlife health
  9. **Any other business**
    - 9.1. Definition of an “emerging disease” and the process for the notification
    - 9.2. Aquatic animals
  10. **Date of next meeting**
  11. **Adoption of the report**
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## Annex II.

### List of Participants

#### MEETING OF THE WOAHP WORKING GROUP ON WILDLIFE

Paris, 13 to 16 December 2022

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## Annex III.

### Reducing the Risk of Disease Spillover Events at Markets Selling Wildlife and along the Wildlife Supply Chain

#### REPORT OF THE MEETING OF THE WOA *AD HOC* GROUP

Virtual meeting, 9 March 2022

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#### 1. Opening of the meeting and purpose of the meeting

The WOA *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 sixth time on 9<sup>th</sup> March 2022, hosted by WOA headquarters based in Paris. The Group's first meeting was held in June, the second, third, fourth and fifth meetings held in September, November, December and January, respectively.

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

Dr Karesh highlighted that the purpose of this sixth meeting was to further progress the work of the Group, discuss groups for pre-release review of the guidelines, and the timelines for outputs.

#### 2. Designation of rapporteur

The meeting was chaired by Dr William Karesh and James Compton acted as rapporteur.

#### 3. Adoption of the agenda

The Group adopted the Agenda. The Agenda and List of Participants are presented in [Appendices I and II](#) of this report, respectively.

#### 4. Sub-working groups updates and discussion

An overview of the progress with the content for each section were discussed. Overarching themes of discussion are captured below with detailed additions and considerations for each section provided in the table of contents in [Appendix III](#).

The Group agreed that the Guidelines are being developed in recognition that approaches to risk reduction will depend on the particular circumstances to be addressed as well as cultural, economic, social and biodiversity contexts. Therefore, rather than being prescriptive, the Guidelines set out a framework, with examples, to support informed decision-making in the face of uncertainty and complexity. The Group discussed the next steps required to pull the sections together into a single guideline.

The introduction section would include background information setting the context, scope, goals and limitations. A "how to use the guidelines" section and "Checklist" would be included, along with an accompanying flow chart noting the multiple points at which users could start using the guidelines. The flowchart would start with the Step 1: describe the scale and scope wildlife trade system for which risks are to be addressed (e.g., scale: local, regional, national or international; scope: type of market, supply chain, wildlife taxa; in addition to control strategies already in place, taxa and disease knowledge base, applicable policies and standards, plus any identified gaps). This fundamental step can assist the user to identify a system at a scale and scope that implementation of the guidelines could be applied and ensure no specific considerations are missed. Step 2 onward would follow the sections within the guidelines (e.g., Step 2: Identify the stakeholders and knowledge brokers, Step 3: approach to decision making and risk assessment, etc)

The Group noted that the introduction should clearly state that these are interim guidelines (version 1) from which future additional tools and training (eLearning) should be developed. The guidelines could be revised in the future and provide a basis from which an OIE standard could be developed. A section outlining the methodology used to develop the guidelines was identified as a necessary addition and would be included either in the introductory section or as an appendix. There was a brief discussion about how to support pilot projects that evaluate risk reduction techniques and the need to capture information on risk reduction strategies already in place when undertaking surveillance. Monitoring and evaluation will provide the necessary evidence and feedback loops

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required to refine future risk reduction techniques as well as informing future versions of the guidelines.

When discussing which examples to include within the guidelines, it was noted that having examples from a cross section of regions and wildlife trade types would benefit the usability of the guidelines.

**Adopted Agenda**

**MEETING OF THE WOAHA AD HOC GROUP TO DEVELOP GUIDELINES**

**Virtual Meeting, 9 March 2022**

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- 1. Opening and purpose of the meeting**
  - 2. Designation of rapporteur**
  - 3. Adoption of the agenda**
  - 4. Adoption of the previous meeting report**
  - 5. Key reviewer groups**
  - 6. Programme for further work after this meeting**
  - 7. Finalisation of the report**
-

## List of Participants

## MEETING OF THE WOAAH AD HOC GROUP ON REDUCING THE RISK OF DISEASE SPILLOVER

Virtual Meeting, 9 March 2022

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Draft Table of Contents, as of 10 March 2022 revised following virtual meeting on 9 March 2022.

WOAH AD HOC GROUP ON

REDUCING THE RISK OF DISEASE SPILLOVER EVENTS IN WILDLIFE MARKET AND  
ALONG THE WILDLIFE SUPPLY CHAIN

Section of the Guidelines – Notes from September and November meetings	Next Steps
<p><b>1. Executive Summary</b> <b>Dec 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Summary Flow chart or infographic to show how the sections within the guidelines inter-link with and inform the other sections.</li> </ul> <p><b>Mar 2021 meeting updates:</b> Combine with scope, purpose, intended goals and limitations as well as background setting.</p>	<p>To be considered at later stage</p>
<p><b>2. Scope</b></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Wild animals and captive wild animals (zoos, pets, farms, etc) involved in wildlife trade.</li> <li>- Feral animals, however, were considered out of scope.</li> <li>- Terrestrial and aquatics</li> </ul> <p><i>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</i></p>	<p>Tweak to fit with final product</p>
<p><b>3. Purpose, intended goals and limitations</b> <b>Dec 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- highlight to users (of the guidelines) of the need to establish what the policy goals are from the start. This will inform each user's process of thinking in implementing the guidelines.</li> </ul> <p><b>Jan 2022 meeting update:</b></p> <ul style="list-style-type: none"> <li>- Highlight that the guidelines provide practical examples and provide a scaffold to the approach, rather than explicit recommendations.</li> <li>- Limitations to wildlife health and disease knowledge base, diagnostic tests validated for wildlife and uncertainty arising from information bias. For example, some species are well studied whereas others are not. These limitations highlight the need to engage key scientific and technical wildlife health subject matter experts as part of the process.</li> </ul>	<p>Tweak to fit with final product</p>
<p><b>4. Introduction / Background / Scene setting</b></p> <ul style="list-style-type: none"> <li>- Interconnectedness of the health of humans, domestic animals and wildlife</li> <li>- Animal welfare related to wildlife trade</li> <li>- 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...."</li> <li>- Conditions for effective spillover of a pathogen from a source wildlife host to a spillover host and vice versa?</li> <li>- "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] ... disease / 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)."</li> <li>- FAO. 2020. The COVID-19 challenge: Zoonotic diseases and wildlife. Collaborative Partnership on Sustainable Wildlife Management's four guiding principles to reduce.</li> </ul>	<p>1-2 pager</p>

<ul style="list-style-type: none"> <li>- risk from zoonotic diseases and build more collaborative approaches in human health and wildlife management.<sup>1</sup></li> </ul> <p><b>Nov 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Provide an overview on wildlife trade and then provide overview on elements relating to health.</li> </ul> <p><b>Dec 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- 1st paragraph in Section 6 to be moved into this section.</li> </ul> <p><b>Jan 2022 meeting update:</b></p> <ul style="list-style-type: none"> <li>- Determine interaction in relation to content in section 2 “Scope”</li> <li>- Theory of change diagram / diagram outlining how the guidelines are used to ensure the feedback loop.</li> <li>- Multi-agency approach required and should be recommended by guidelines. Barriers and challenges need to be flagged.</li> <li>- Risk assessment is an approach that can help to reduce risk – should be recommended in guidelines.</li> <li>- Emphasis and note the important of sustainable wildlife use; CITES provides the guidance here.</li> </ul>	
<p><b>5. Intended Audiences &amp; Stakeholders / Engagement and communication</b></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Outline other audiences and outline how each audience may use / interact with the guidelines.</li> </ul> <p><b>Dec 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Introductory paragraph placeholder completed.</li> <li>- A key audience = WOAH stakeholders inclusive of animal health and veterinary services</li> <li>- Raising awareness and use of the guidelines by additional stakeholder could be facilitated via WOAH stakeholders.</li> <li>- Inclusion of frontline workers was discussed.</li> </ul> <p><b>Jan 2022 meeting update:</b></p> <ul style="list-style-type: none"> <li>- Consider adding stakeholders to this section. E.g., outline key users’ groups and knowledge sources to communicate and engaged with as part of the process. This should include those who can provide technical disease or conservation input, others who provide knowledge relating to policy, cultural, social, regulatory, legal, and economic considerations, as well as those who provide perspectives of those impacted by any change to be implemented.</li> <li>- Propose how these stakeholder work together (e.g., set up a steering committee); referencing and referring to multi-sectoral collaboration as discussed in the Tripartite Zoonosis Guide and IUCN/WOAH DRA guidelines.</li> <li>- Recommendation: a minimum sectors/agency that should be involved: Wildlife authorities (Management and/or Trade), Animal Health Authorities (WOAH points of contact), epidemiologist/statisticians.</li> <li>- Reiterate the need for inclusion and equity in voices (including indigenous)</li> <li>- Example: Swiss law requires One Health collaboration. Mathias provided an example: Swiss legislation mandates the Government build a structure dealing with coordinated work on One health topics. <a href="#">Art. 54 Coordination body</a> in the Swiss Federal Act on Controlling communicable human diseases (Epidemic Act) and the corresponding articles 83 and 84 of the relevant ordinance provides an example of when, how and who to involve when dealing with specific topics such as detecting and monitoring, preventing, and combating zoonoses. This could be featured as a Text Box within the Guidelines to highlight good practice at the national level.</li> </ul>	<p><i>Short para to include Scope /- introduction</i></p>
<ul style="list-style-type: none"> <li>- Include an infographic (possibly hierarchical) detailing each type of target audiences from knowledge brokers to stakeholders with critical perspectives. To draw upon work of the group at the first meeting in June 2021.</li> </ul>	

<sup>1</sup> <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/WOAH DRA, Wikramanayake et al (2021), and others) to provide an overview.

- o Assessment of risk with limited information
  - o 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
- o Geographic differences
- o Species/Taxa differences
- o Wildlife trade / supply chain environment differences

### Sep 2021 meeting updates:

- Outline of approach and considerations for risk assessment; decision making and tools
- FAO Animal Health Colleagues could also assist with this section (via Kristina)

### Nov 2021 meeting updates:

- To include information on quantitative and qualitative risk assessment and considerations relating to each when applied to the pathogen risks and wildlife trade. Tripartite joint risk assessment was noted : <https://www.who.int/initiatives/tripartite-zoonosis-guide/joint-risk-assessment-operational-tool>
- Provide context to use of the precautionary approach, the [Hazard Analysis and Critical Control Points system](#) (HACCP) , [Hierarchy of Controls](#) (Ref: [CDC](#)) and primary, secondary and tertiary levels of prevention (ref: <https://www.statpearls.com/articlelibrary/viewarticle/27736/>).
- Many risks unknown, risk rating should be based on High / Medium / Low or Red / Orange / Yellow gradient.
- Importance of including a diversity of perspective through cross-sectoral consultation was critical part of the risk assessment process. Example: [Integrating gender into Illegal wildlife trade thinking and responses](#)
- Inclusion of examples to demonstrate application
- This section to focus on hazard identification and assessment, and link to section 7 which will cover risk management

### Dec 2021 meeting updates:

- Conference call held with the sub-group to inform the draft.
- A decision context framed to explore three main trade-offs and the need for inclusive decision-making framework.
- Diagram / examples to be included to demonstrate how to balance the trade-offs.
- Note: Precautionary principle may be a better fit for the next section.
- Intro to risk analysis and brief overview for each of the various papers.
- Would be great to include examples of the tangible factors that could be considered during risk assessments (Host taxa, locations, market type, etc)
- Useful to consider the perspective in this section and section #7 – considering “who” is managing risks “where”.
  - o “within a country” will refer to assessing and managing the risks along the broad “wildlife trade” chain and will probably be highly focused on coordination between agencies (gov and NGOs) and actors within a country.
  - o “between countries” will imply mainly government to government interactions or international organizations to define requirements for international trade or border/customs control.

<ul style="list-style-type: none"> <li>○ These would be complementary, meaning a stronger “in country” policy and approach to assess and manage the risks will provide greater safety to potential exports. The information gathered along the chain and a set of well-documented measures implemented by a strong national system will provide the best assurances to support safe exports and will be much more effective than standalone measures applied at export. Naturally, the national measures should also include assessing and managing risks presented by imports.</li> <li>- Code chapters on Import Risk Analysis would be worth noting in this chapter, but more so in Section 7.</li> </ul> <p><b>Jan 2022 meeting update:</b></p> <ul style="list-style-type: none"> <li>- Systems thinking paragraph to be reviewed by Simon</li> <li>- Uncertainty covered in section about the precautionary principle (possibly move to next section)</li> <li>- ) Case examples to be included: guinea pigs import into Hong Kong example, salamander trade, import risk assessment from countries (Australia import risk assessment available online), Amanda has some examples from SE Asia</li> <li>- Recommendation from this section: Risk analysis is key approach to reduce risk</li> <li>- Provision of risk factor table or checklist – to also include in an appendix</li> <li>- Need to note that decision making could impact both upstream or downstream (supply chain) and therefore there is a need to be mindful of what consequences may ensue based on at what point the intervention is made.</li> </ul> <p><b>Mar 2022 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Include step wise guide at start (possible similar to <a href="#">IUCN/OIE Wildlife DRA guidelines</a>)</li> <li>- Articulate WOAH RA focus is related to import risks whereas IUCN/WOAH Wildlife DRA guidelines provide a broader approach to RA.</li> <li>- Include examples of risk prioritisations processes (e.g. Korea, UK)</li> <li>- Provide links to section 7</li> </ul>	
<p><b>7 Overview of risk reduction techniques and interventions</b></p> <ul style="list-style-type: none"> <li>- General: Prevent, Minimize, Assess, Protect (or similar simple framework to structure options)</li> <li>- Options: e.g. closing or managing wildlife or wet markets, trade bans, sanitary regulations and biosecurity, improved animal health and welfare, reducing demand, culling, farming, and socioecological interventions.</li> <li>- IPBES, WHO-WOAH-UNEP interim guidance, and Stephen 2021 report, specifically Table 3.1 and 3.2.</li> <li>- Application of existing trade and sanitary standards</li> <li>- 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. <ul style="list-style-type: none"> <li>○ Who's at risk and associated levels of risk (query – would this be better in section 8)</li> <li>○ Types of risk including examples</li> <li>○ Disease risk interventions and reduction strategies, including benchmark / minimum standards</li> <li>○ Links to current guidance already available (could be combined / linked to section above item)</li> <li>○ Points of variation – e.g., how a specific supply chain point may vary based on associated risk factors and regional reality.</li> <li>○ Skill sets, training opportunities and capacity requirements</li> <li>○ Regulatory interventions / accountable and responsible authorities</li> </ul> </li> </ul> <p><b>Resources</b></p>	<p>Start with 1-2 dot points to explore approach / content</p>

- 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](#)

**Sep 2021 meeting updates:**

- Start with 1-2 dot points to explore approach/content

**Nov 2021 meeting updates:**

- Group agreed that the focus of this section was on preventing the transmission of potential pathogens from/among wildlife along wildlife supply chains.
- Consider use of the word “strategy” instead of “technique”
- Approaches to consider - Precautionary principle, the Hazard Analysis and Critical Control Points system (HACCP) , the Hierarchy of Controls (Ref: [CDC](#)) and primary, secondary and tertiary levels of prevention (ref: <https://www.statpearls.com/articlelibrary/viewarticle/27736/>). to be discussed in section [6 – risk assessment](#)).
- To potentially draw upon a resource developed by OHHLEP (One Health High Level Expert Panel) which explores HACCP for 11 interfaces, including wildlife trade and bushmeat.
- Reference to “Prevent, Minimize, Assess, Protect “ was from [IUCN/OIE 2021 guideline](#).
- To consider using the hierarchy of control instead, against which interventions could be listed: Elimination, substitution, engineering controls, administrative controls, PPE (as applied to [SARS-CoV-2 and Wildlife](#) by CDC). The theory that underpins the hierarchy of control is that the control methods at the top of graphic (e.g. prevention) are potentially more effective and protective than those at the bottom (e.g. PPE).
- To include information on:
  - o How to apply each risk reduction strategy and intervention, what the benefit / impacts of each could be (+/- the pros/cons), assessment of effectiveness via monitoring and evaluation (as outlined in section 8) noting the importance of feedback loops to modify, review or change strategies and interventions.
  - o Balance between controls, implications, benefits and possible harmful impacts.
- Generic wildlife trade infographic – need to add wildlife farms.
- Checklist approach would be beneficial. Various infographics considered.
- To note the importance of cross-sectoral communication and coordinated interventions.
- Inclusion of examples to demonstrate application
- Links to hazard identification and risk assessment in section 6; this section to include risk management
- Risk communication and training could be addressed and linked to section 10.

**Jan 2022 meeting update:**

- Hierarchy of control the scaffold
- Examples – specific known examples as well as generic examples; building on the diagram examples provided below.

**Mar 2022 meeting update:**

- Add in farms - noting RA section provides wider lens of factors to consider when assessing risks relating to farmed wildlife as opposed to domestic species; note the potential to apply some of the existing controls used for domestic species
- Use diagram from section on risk assessment as an additional scaffold for providing examples of interventions
- Expand on tourism substitution example and pop in an example box (move to Section 9&10 – Catherine); replace tourism example with another example in section on substitution controls
- Create new hierarchy of control graphic – use “disease risk elimination” instead of “Elimination controls”
- Provide links to section 6
- Noted the need for the approach selected to be based on the outcomes from a risk assessment and stakeholder consultation to ensure appropriateness to context

<ul style="list-style-type: none"> <li>- Tools and guidance on monitoring and evaluation across a range of potential benchmarks or indicators.</li> <li>- 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.</li> <li>- Upstream and downstream impacts</li> <li>- Surveillance – wildlife, domestic animals and humans [e.g. Wildlife surveillance, sampling, monitoring and testing: Ante-mortem and post-mortem inspections, Disease investigation, Identification, traceability, and record keeping]</li> </ul> <p><b>Sep 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- This was noted as a critical important section.</li> </ul> <p><b>Nov 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Useful to link monitoring and evaluation to guidance provided in sections 6 and 7</li> <li>- Noted that examples would be useful in this section.</li> <li>- Inclusion of viewpoint from multiple stakeholders when designing monitoring and evaluation tools.</li> <li>- Cross-sectoral communication and coordinated interventions critical to circumvent negative outcomes.</li> <li>- Group noted that behavioural shifts are likely to be more effective if they are grounded in the relevant socio-cultural structure, in addition to governance.</li> <li>- Benchmarks - The question is at what leverage point of the socio-ecological system you set the benchmark. Options include: numerical benchmarks, define process or principles of establishing processes. Description of leverage points is given by the <a href="#">Donella Meadows Project</a>.</li> </ul> <p><b>Dec 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- To build on the theory of change being recommended earlier in the document.</li> <li>- Highlight the importance and usefulness of monitoring and evaluation.</li> <li>- Note that the approach to monitoring and evaluation will change and be dependent on local setting or application.</li> <li>- Try to present a list of off-the-shelf indicators (that already exist) – trying to utilise these.</li> <li>- Guidance on how to choose indicators and when they might not work or what to use when an indicator is missing / not available.</li> <li>- Provision of a few examples, perhaps two in contrast to each other would be a useful demonstrate the need to consider local factors and stakeholders to implement an M&amp;E framework to ensure it is fit-for-purpose for the context. <ul style="list-style-type: none"> <li>o Reduce the demand for wildlife products – monitor number of species transiting in trade</li> <li>o Reduce the risk of pathogens in the wildlife market –monitor pathogen contamination</li> </ul> </li> <li>- By providing example, this would present a starting point that users can modified as they become familiar with the guidelines.</li> <li>- Disaster indexes may also be useful – DDR. e.g. <a href="https://www.unisdr.org/files/47063_indicatorsformeasuringtheintegratio.pdf">https://www.unisdr.org/files/47063_indicatorsformeasuringtheintegratio.pdf</a></li> </ul> <p><b>Jan 2022 meeting update:</b></p> <ul style="list-style-type: none"> <li>- Add evaluation of equity and Inter-agency collaboration</li> </ul>	<p>Draft by next meeting</p>
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<ul style="list-style-type: none"> <li>- Consider this section being moved (perhaps to the end) noting the need for evaluation and monitoring at each stage of the process</li> </ul>	
<p><b>Mar 2022 meeting update:</b></p> <ul style="list-style-type: none"> <li>- Provide list of example indicators used for M&amp;E in other related sectors +/- that could be applied to wildlife trade</li> <li>- Tracking exposure of people to wildlife / zoonotic diseases</li> <li>- Evaluation tools used to assess risk factors in people when diagnosed with zoonoses should include questions relating to possible wildlife sources</li> </ul>	
<p><b>8 Tools to identify critical capacity gaps and requirements</b></p> <p><b>Sep 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Outline the tools that are already available</li> </ul> <p><b>Nov 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Bridging workshops, OIE Performance of Veterinary Services [PVS] tool, WHO Joint External Evaluation [JEE] process, National Action plans, NWHC needs assessment, Surveillance evaluation tool (FAO).</li> <li>- Identify gaps, needs and capacity requirements (e.g. for requirements outlines in sections 6,7,8)</li> <li>- Governance structures and mandates.</li> <li>- Finance incentives and justification</li> </ul> <p><b>Dec 2021 meeting updates</b></p> <ul style="list-style-type: none"> <li>- Competencies and assessment tools will somewhat be dependant on context presented in earlier sections.</li> <li>- Present an overview of the tools that are already available (e.g. PVS, JEE, One Health Zoonotic Disease Prioritisation tool), noting which to use, when to use as well as limitations as applied to wildlife trade. Advice could be audience specific.</li> <li>- Potential to also include tools that are missing.</li> <li>- Need to allow for ongoing changing conditions, unexpected impacts, new behaviours, black market, etc</li> <li>- Some country examples may be beneficial</li> <li>- Cost/ benefit for different strategies and resourcing requirements (\$\$)</li> <li>- Also mentioned sustainability assessments available within CITES; the information in this document could be utilised by CITES and vice versa.</li> </ul>	
<p><b>9 Advice on implementation, risk communication and training</b></p> <p><b>Sep 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Outline the tools that are already available</li> <li>- General guidance for the need for behaviour change tools and the recognition this needs to be adapted to social context and links to public health advice; need to partner with other groups</li> </ul> <p><b>Nov 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Useful to link this section with the section on target audience, considering the different audiences when developing, and implementation communication and training.</li> <li>- Examples and incentives could be provided.</li> <li>- Draw on National Bridging workshops, PREDICT, lesson learnt from other initiatives</li> <li>- Noted development of the WOH eLearning Modules on wildlife trade. To be developed based on content of the guidelines. Two modules: Day 2 competency and expert.</li> <li>- Product development and implementation, enabling factors: political will, finance, resources, institutional capacity, technical knowledge, etc</li> <li>- Risk communication and training could be addressed in section 7</li> </ul> <p><b>Dec 2021 meeting updates</b></p> <ul style="list-style-type: none"> <li>- Stakeholders, trusted information sources, tailoring your outreach.</li> <li>- Knowledge practice and outreach surveys</li> <li>- Simulation exercises are outlined and how they could be applied to the wildlife trade. Testing capacity and gaps.</li> </ul>	<p>Continue to collate definitions available – finalise to align with guideline content.</p>

<ul style="list-style-type: none"> <li>- Lesson learnt and how to share at a local, regional and global practice.</li> <li>- Outline potential incentives.</li> <li>- Context in relation to resources (\$\$) – some examples</li> </ul> <p><b>Jan 2022 meeting update – Section 8 &amp; 9:</b></p> <ul style="list-style-type: none"> <li>- Transparency in decision making</li> <li>- Noting that value chain and uses may be different</li> <li>- Recommending specifics (based on the risk assessment outcomes): e.g. surveillance, etc</li> </ul> <p><b>Mar 2022 meeting update – Section 8 &amp; 9:</b></p> <ul style="list-style-type: none"> <li>- Highlight that many of the tools mentioned in this section were not developed with wildlife specifically in mind and therefore while using these tools, there may be a need to develop additional assessment considerations specific to wildlife and wildlife trade.</li> <li>- Evaluation tools used to assess risk factors in people when diagnosed with zoonoses should include questions relating to possible wildlife sources</li> <li>- Provide examples to demonstrate the following two tools not currently in public domain <ul style="list-style-type: none"> <li>o Needs Assessment for National Wildlife Health Programs (list of additional questions to be considered when evaluating a wildlife system)</li> <li>o Country Assessment for Environmental Health Services (e.g. Machalaba 2022)</li> </ul> </li> </ul>	
<p><b>10 Terminology and definitions</b></p> <p>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.</p> <p>Resources with glossaries which could be utilised</p> <ul style="list-style-type: none"> <li>- IPBES Workshop on Biodiversity and Pandemics Report<sup>2</sup></li> <li>- Statement of the WOAHP Wildlife Working Group, April 2020: Wildlife Trade and Emerging Zoonotic Diseases (April 2020)<sup>3</sup></li> <li>- Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets (Interim Guidance issued by WHO, WOAHP, UNEP on 12 April 2021)<sup>4</sup></li> <li>- WOAHP Terrestrial Animal Health Code<sup>5</sup> (<i>need to consider that ferals are out of scope, ensure aquatics considered</i>)</li> <li>- <i>Include wildlife welfare definitions (e.g. five domains / freedoms) [DJ Mellor as reference for 5 Domains: <a href="https://www.mdpi.com/2076-2615/10/10/1870/htm">https://www.mdpi.com/2076-2615/10/10/1870/htm</a>]</i></li> </ul> <p><b>Nov 2021 meeting updates:</b></p> <ul style="list-style-type: none"> <li>- Collating definitions used in key resources to provide a basis from which definitions to use in guidelines, aiming to have definitions which align and are not in conflict with other resources.</li> <li>- List of wildlife uses and link to target audiences to be developed.</li> </ul> <p><b>Dec 2021 / Jan 2022 meeting updates</b></p> <ul style="list-style-type: none"> <li>- Ongoing updates</li> </ul>	<p><i>Continue to collate definitions available – finalise to align with guideline content.</i></p>
<p><b>11 Outline of key documents and guidance already available – including standards, guidelines and training manuals of the OIE, FAO, WHO, UNEP, etc.</b></p> <ul style="list-style-type: none"> <li>- WHO-WOAH-UNEP 2021 <a href="#">Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets</a> (Interim Guidance issued on 12 April 2021)</li> <li>- WHO (2006) A Guide to Healthy Food Markets <a href="https://www.who.int/foodsafety/capacity/healthy_marketplaces/en/">https://www.who.int/foodsafety/capacity/healthy_marketplaces/en/</a></li> <li>- WHO (2018) Surveillance of foodborne diseases. <a href="https://www.who.int/foodsafety/areas_work/foodborne-diseases/fbd_surveillance/en/">https://www.who.int/foodsafety/areas_work/foodborne-diseases/fbd_surveillance/en/</a></li> <li>- WHO (2006). Public health interventions for prevention and control of avian influenza. <a href="https://apps.who.int/iris/bitstream/handle/10665/205700/B0237.pdf">https://apps.who.int/iris/bitstream/handle/10665/205700/B0237.pdf</a></li> </ul>	

<sup>2</sup><https://ipbes.net/pandemics>

<sup>3</sup>[https://www.oie.int/en/document/a\\_oiewildlifetradestatement\\_april2020-2/](https://www.oie.int/en/document/a_oiewildlifetradestatement_april2020-2/)

<sup>4</sup><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>



<p>WOAH (2021). Terrestrial Animal Health Code. <a href="https://www.oie.int/standard-setting/terrestrial-code/access-online/">https://www.oie.int/standard-setting/terrestrial-code/access-online/</a></p>	
<ul style="list-style-type: none"> <li>- WHO (2006). Public health interventions for prevention and control of avian influenza. <a href="https://apps.who.int/iris/bitstream/handle/10665/205700/B0237.pdf">https://apps.who.int/iris/bitstream/handle/10665/205700/B0237.pdf</a></li> <li>- FAO/WOAH/WHO. FSO/OIE/WHO Stop the spread: Measures to stop the spread of highly pathogenic bird flu at its source (2005) <a href="https://www.who.int/influenza/resources/documents/stop_spread_bird_flu/en/">https://www.who.int/influenza/resources/documents/stop_spread_bird_flu/en/</a></li> <li>- FAO (2019) TECHNICAL GUIDANCE PRINCIPLES OF RISK-BASED MEAT INSPECTION AND THEIR APPLICATION <a href="http://www.fao.org/3/ca5465en/CA5465EN.pdf">http://www.fao.org/3/ca5465en/CA5465EN.pdf</a></li> <li>- FAO/OIE/WHO (2021) SARS-CoV-2 in animals used for fur farming GLEWS+ Risk assessment <a href="http://www.fao.org/3/cb3368en/cb3368en.pdf">http://www.fao.org/3/cb3368en/cb3368en.pdf</a></li> <li>- UNODC 2020 The Potential of pathogen exposure from wildlife seizures: Guidance for evaluating and reducing the risks of transmission to frontline enforcement officers.</li> </ul> <p><b>Dec 2021 meeting update</b></p> <p>Drafted with key resources provided in section that align with the guideline's sections. As more resources are identified, these can be added to this section.</p>	

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