

Report of the Meeting of the *Ad Hoc* Group on Emerging Diseases and Drivers of Disease Emergence in Animals

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Paris, France

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1. Summary

- The 'WOAH ad hoc Group on Emerging Diseases (including re-emerging diseases) and Drivers of Disease Emergence in Animals', known as WOAHA's "Emerging Diseases Group (EDG)", met from 5 – 7 December 2023 at the WOAHA Headquarters in Paris, France.
- The EDG focused on understanding its Terms of Reference and establishing a work plan.
- This was the first meeting of the ad hoc group, where emerging disease was considered as defined by WOAHA standards, as well as more broadly, i.e.: by including diseases which emerge and re-emerge over time and space.
- The EDG discussed their dual roles of supporting WOAHA in a response function and a business-as-usual operational function.
- Throughout the meeting, the EDG gained a working understanding of framing and reporting emerging diseases at WOAHA, and reviewed the ongoing emerging disease activities at the organisation.
- The experts deliberated and identified existing gaps in the current framework, providing several recommendations to address these gaps.
- The experts deliberated on improving WOAHA's emerging disease reporting systems, including the early-warning systems and the role of wildlife, as well as its response through the upcoming Incident Management System, including efficient risk communication.
- The group formulated a set of deliverables and a work plan for the first year of operation.
- The meeting concluded with a commitment to teamwork, stressing the importance of communication, engagement, and strategic planning to effectively tackle emerging diseases within WOAHA's framework.

2. Opening and Welcome

Dr Montserrat Arroyo, Deputy Directorate General for International Standards and Science, welcomed the participants. She emphasized the need for defining WOAHA's role more clearly in supporting its Members and partners towards addressing challenges associated with emerging diseases. She highlighted the significance of early detection of signals and swift response, while acknowledging the challenges that Members face in prioritising or allocating resources, managing risks around trade, ensuring synergy with partners and stakeholders, as well as ensuring seamless cross-border collaborations.

Dr Keith Hamilton, Head of the Preparedness and Resilience Department at WOAHA, provided a high-level overview of the group's formation, tracing its historical evolution from previous initiatives. He underscored WOAHA's historical experience in offering technical assistance to countries through guidance developed by expert groups, fostering confidence, and considering trade implications. He pointed out that WOAHA Members faced challenges in interpreting standards related to emerging diseases, mentioning the group's role in advising on the interpretation of these standards. He concluded by emphasizing the group's responsibilities in terms of both response mechanisms and strategic guidance.

Dr Dharmaveer Shetty, the Group Secretariat and Coordinator of Wildlife Networks within the Preparedness and Resilience Department at WOAHA, explained the Terms of Reference for the Emerging Diseases Group (EDG), while emphasizing that its two main functions include a response-oriented role and a routine business-as-usual operational function. The mode of operation of the group, mentioned in the 'Terms of Reference' for EDG, was discussed with the experts.

The group discussed their hopes and challenges in an ice-breaker exercise. The experts hoped that the recommendations from EDG drive impact through WOAHA, especially in managing the risk of emerging diseases. The group hoped that it could assist WOAHA in acting as an influencer towards finding solutions for emerging disease challenges by addressing the drivers of disease emergence, stimulating evidence-based discussions, and increasing reporting of wildlife diseases. The experts highlighted the importance of reaching a consensus, communicating recommendations effectively, and ensuring that there is minimal duplication of ongoing work in this field.

Experts highlighted the importance of framing the role of animals in emerging diseases accurately, integrating risk analysis into WOAHA's response mechanisms, ensuring the alignment of EDG with WOAHA's mandate, and clarifying the relationship with the Working Group on Wildlife. The experts also suggested evaluating the advantages and effectiveness of taking a

proactive versus reactive approach to emerging diseases, and disseminating and advocating these advantages to WOAAH's Members.

Dr Primal Silva was selected to Chair the meeting.

3. Framing and Reporting Emerging Diseases at WOAAH

The second session provided the experts with an overview of the framework for reporting Emerging Diseases to WOAAH.

Dr Lina Awada, senior epidemiologist at the Data Integration Department from WOAAH, presented a history of Emerging Diseases with respect to WOAAH since 2005, including reporting of previously unrecognised diseases, as well as WOAAH listed and non-listed diseases. She highlighted some challenges associated with mandatory and voluntary reporting channels, in terms of completeness, timeliness and engagement of Members.

Dr Gregorio Torres, Head of the Science Department at WOAAH, described the processes for identification and designation of Diseases as 'Emerging' in the context of the WOAAH Terrestrial Code. He highlighted the organization's standards and procedures relevant to Emerging Diseases, including the glossary definitions mentioned in the Code.

The group acknowledged the limited value of official information for early detection and warning of emerging diseases compared to unofficial information gathered through epidemic intelligence systems. The group also raised questions about the glossary definitions and terminology used by WOAAH and about whether the WOAAH reporting system was fit for purpose for early warning.

Dr Jenny Hutchison, Head of the World Animal Health Information and Analysis Department (WAHIAD) at WOAAH presented on the reporting of emerging diseases (compliant with the definition mentioned in WOAAH's standards), as well as emerging disease events (not restricted to the definition) to WOAAH by its Members. She described reporting mechanisms for both listed and non-listed diseases, as well as the requirements and channels for mandatory and voluntary reporting. She described the complexity of relevant articles in the Terrestrial Animal Health Code, including Article 1.1.3 (for mandatory reporting of listed diseases' exceptional events), 1.1.4 (for mandatory reporting of emerging diseases as defined by WOAAH standards), and 1.1.5 (for voluntary reporting by email of any other health event). Dr Hutchinson introduced the group to the World Animal Health Information System's (WAHIS) online data sharing platform. She highlighted that emerging diseases are solely captured in the early warning system (Immediate Notifications) to ensure timely information collection, but not in the regular six-monthly reports submitted to WOAAH by its Members.

The group recognized the importance of the WOAAH reporting systems with respect to the data validated by its Member governments and noted that the reporting mechanisms might not be fit for purpose towards the early detection of emerging diseases, which are integral to early warning systems and quick response actions.

Dr Claire Cayol, Project Manager from the Preparedness and Resilience Department at WOAAH presented an overview of the historical, current and future reporting of non-listed wildlife diseases to WOAAH. She explained that regular reporting of these diseases to WOAAH by Members is voluntary. It only becomes mandatory when events comply with the definition of emerging diseases provided in the WOAAH Terrestrial Animal Health Code. She spoke about the historical WAHIS-Wild system, current and updated WAHIS-Wild Beta system (an interim solution whilst options for a next generation wildlife disease reporting system are scoped out), as well as future systems and strategies for enhancing non-listed wildlife disease reporting.

The experts discussed WOAAH's current diagnostic standards and case definitions, suggesting the need to balance these with prevalent scientific definitions, to ensure early detection of signals based on global case definitions. The group discussed how advancements in the availability and capabilities of technology (including metagenomics) offered opportunities for early detection of emerging diseases, but also create challenges for WOAAH's existing model (the collection of validated information through Veterinary Services). The group discussed how the credibility and reliability of data should be put in context when using it for different purposes, including the need for investigation for signals based on non-validated data. The group discussed the strengths and weaknesses of high specificity versus high sensitivity, as well as the value of capturing weak signals versus validated signals, in reporting emerging diseases.

4. Understanding Emerging Disease at WOAAH

Dr Itlala Gizo, Project Officer from WAHIAD at WOAAH, presented on the intelligence gathering activities going on at WOAAH, including the EIOS (Epidemic Intelligence from Open Sources) initiative, a collaborative tool between WOAAH and WHO (World Health Organization), and the GLEWS+ (Global Early Warning System Plus) platform, which is a collaborative effort across the Quadripartite organisations (WOAH, WHO, Food and Agricultural Organisation (FAO), and the United Nations Environment Programme (UNEP)).

Dr Lina Awada presented a concept for a WOAAH epidemic intelligence framework, outlining WOAAH's vision for epidemic intelligence. This framework encompasses risk analysis, forecasting, early warning systems, handling disinformation and misinformation, and various other aspects. Additionally, it aims to clarify WOAAH objectives, map out the current stakeholders, processes, and available resources, assess efficiency of the current approach and explore areas for improvement, by means of developing specific activities.

Dr Mariana Marrana used WOAAH's response to COVID-19 as a case study to illustrate the response mechanisms employed during the pandemic and illustrate the mechanisms that were presented in the earlier talks.

Dr Keith Hamilton (on behalf of Chadia Wannous) presented WOAAH's engagement and contributions to the Quadripartite for Emerging Infectious Diseases, prompting discussion on WOAAH's role in advocating for a proportional response to emerging diseases involving animals.

During a roundtable discussion, the experts identified several gaps in the current emerging diseases ecosystem, including in early warning, preparedness, response, communication, diagnostics, data, drivers, equity, and infrastructure.

5. Case Studies: Lessons Learnt and the Way Forward: Emerging Diseases at WOAAH

A review of WOAAH's previous responses to emerging disease events aimed to reinforce the discussions on framing, reporting, and understanding emerging diseases at WOAAH.

Dr Keith Hamilton spoke about WOAAH's experience in early warning and response to past emerging diseases such as pandemic influenza A, H1N1, in humans and swine, as well as the Middle East Respiratory Syndrome (MERS). WOAAH had declared both diseases to be 'emerging diseases' according to the Terrestrial Animal Health Code glossary definition and thus, mandatory reporting to WOAAH was required. The data collected by WOAAH from the country reports of pH1N1 helped build evidence that it was a predominantly human disease where animals did not have a significant epidemiological role, and thus, there was no justification to ban trade in pigs or pork products. He highlighted the role of effective communication during the response, particularly with respect to naming of diseases to avoid stigmatising a sector or country (i.e., 'swine flu' vs. Pandemic H1N1), clarifying the source of infection, the potential role of animals in the virus's origin and spread to humans and establishing appropriate disease nomenclature. He emphasized the importance of building trust among stakeholders and the subsequent impact on domestic markets and trade. Additionally, Dr Hamilton touched upon variability in the interpretation of WOAAH's definition of emerging diseases over time. He stressed on the significance of receiving reports from Members for effective risk analysis, communication and trade facilitation for any emerging disease event.

Dr Dharmaveer Shetty described WOAAH's involvement in responding to the Mpox epidemic in humans. He highlighted the guidance developed by WOAAH's expert groups that were brought together during the emerging disease event. Mpox was not declared as an emerging disease by WOAAH according to the Terrestrial Animal Health Code.

Dr Gounalan Pavade discussed WOAAH's role in early warning and response to avian influenza. He spoke about the evolution of the response mechanisms, including the creation of guidelines and experts' groups around the topic.

Ms Sophie Muset presented the EboSursy project, which was developed as a response to Ebola virus disease. She spoke about the tools developed by the project, such as the engagement of radio stations for effective risk communication during outbreaks, as well as the lessons learned along the way.

Upon reviewing the historical WOAAH response to emerging disease events, the group highlighted that the effective handling of the Mpox situation could be viewed as a successful WOAAH response. However, the group discussed that this success might be attributed to the fact that Mpox doesn't impact animals commonly involved in extensive trading practices.

The group also discussed the existing gaps in the WOAAH reporting requirements for emerging diseases. The existing guidelines for reporting diseases were perceived to be mainly tailored for species traded on a large scale, leading to gaps in surveillance and reporting for emerging diseases.

Similarly, the existing WOAAH standards that might be relevant to formal wildlife trade was thought to primarily comprise of generic content from horizontal chapters, leaving out specific directives for the subject. The group highlighted the challenge of integrating informal wildlife trade into the reporting framework, or additionally, for conducting risk analysis despite its substantial relevance to emerging disease risk in certain regions worldwide.

6. Exploring Frontiers

The Working Group welcomed this initiative and requested access to the documents and presentations drafted and given during the initial meeting.

The Working Group also emphasized the importance of this network to the Wildlife Programme at WOAAH, and the importance of linkage between the Working Group and the Network. After listening to the case studies to illustrate WOAAH's past actions, this session dealt with exploring the frontiers of new technology and scientific advances through two studies. The session culminated with a discussion on the role of WOAAH in exploring these frontiers with respect to emerging diseases.

Dr Paolo Calistri from the WOAAH Collaborating Centre for epidemiology, modelling, and surveillance, based in IZS-Teramo, presented the PROVNA project (Defining Ecoregions and Prototyping an Earth Observation-based vector-borne disease surveillance system for North Africa), which aims to help countries in North Africa target their surveillance on Rift Valley Fever, by utilising remote sensing and earth observation data.

During the next presentation, Mr. Shaun Martin from the World Wildlife Fund, a WOAAH partner, introduced a machine learning-based approach aimed at exploring emerging disease hotspots. He highlighted plans for a preliminary trial in the Mekong Valley.

The experts discussed exploring opportunities for new technologies, including spread modelling, significance of developing pipelines for obtaining real-time information related to changes of drivers for disease emergence, utilizing metagenomics of wastewater for tracking multiple diseases like COVID-19, and advancements in sequencing tools. The importance of disseminating new technologies to WOAAH members, potentially available at WOAAH Reference Laboratories or Collaborating Centers, was underscored. Validating these innovative technologies or their outcomes was recognized as essential, albeit challenging due to their unconventional nature, without impeding their potential to generate crucial data and knowledge.

Moreover, discussions touched upon establishing connections between external networks and the WOAAH ecosystem, evaluating the adaptability of WOAAH Reference Centers to the swiftly evolving global landscape, and acknowledging the pandemic's role in fostering innovation

7. General Reflections

During the previous technical sessions, the group was introduced to the mechanisms associated with framing and reporting emerging diseases at WOAAH, understanding the current emerging disease activities in the organisation, illustrating the mechanisms using historical responses by WOAAH as case studies, and exploring frontier technologies in emerging diseases. Throughout these prior sessions, the experts were tasked with identifying gaps within the existing framework for emerging diseases and proposing recommendations to address these gaps. This process was emphasized during round-table discussions on identified gaps held at the conclusion of Session 3.

In this session, experts expanded on these gaps, while reflecting on the previous presentations in a collaborative manner. The group deliberated on the gaps noticed in defining WOAAH's role in global early warning, preparedness, and response efforts, while learning from lessons gleaned from past epidemics, evaluation of WOAAH's contributions via programs such as the wildlife health program, and an assessment of its impact towards emerging diseases.

Furthermore, the experts also underscored making a distinction between an infection and a disease, while advising on WOAAH's approach to emerging diseases. The group emphasised the relevance of making such a distinction to early warning systems, a point also suggested for inclusion in the deliverable that looks at the fit-for-purpose nature of Emerging Diseases in WOAAH.

The discussions also revolved around communication dynamics, stressing the necessity for timely, transparent, and targeted messaging to effectively disseminate crucial information to relevant stakeholders. This included a comprehensive focus on spillover events between animals and humans, or between different animal species, encompassing all animals from livestock to wildlife. The group also recommended developing templates for risk communication and guidance, where the key messages are developed and ready to go, while being transparent about the missing information during the emerging event.

Additionally, attention was directed towards information sources, incentives for sharing data and wildlife samples, identifying early indicators of new pathogens, understanding the drivers behind disease emergence, and addressing data gaps, particularly in regions like Africa. Barriers hindering information sharing, especially those impacting trade and politics, were highlighted.

The experts also noted the importance of considering the scope of including drivers for disease emergence, spectrum of host species' diversity, and the range of pathogens and threats, with respect to emerging diseases. The group acknowledged that, though WOAHA currently gathers data linked to livestock diseases and wildlife diseases, there are identified gaps in the reporting, as well as the risk analysis of emerging diseases, necessitating a more comprehensive approach.

The experts also deliberated on organising the group activities through the categories of preventing, detecting, responding, and recovering from emerging diseases. The group emphasized the development of adaptable processes, while developing short, medium, and long-term objectives.

8. Business as Usual Function

Dr Keith Hamilton provided an overview of the business-as-usual function for the EDG, based on the established Terms of Reference for this group of experts.

Dr Lina Awada provided an overview of the various resolutions adopted by the World Assembly of WOAHA Delegates since 2003, which are relevant to emerging diseases and the group.

Following the discussion on this function, the group had a preliminary conversation on the deliverables for the first year, which are described in Section 9.

9. Response Function

Dr Keith Hamilton provided an overview of the response function for the EDG, based on the established Terms of Reference for this group of experts.

The group discussed categorising the hazards considered in WOAHA's work for emerging diseases and developing a list of experts based on this categorisation, that is periodically updated for ready use in the event of an emerging disease.

Dr Daniel Donachie and Ms Madison Wimmers, both from the Preparedness and Resilience Department of WOAHA, introduced the upcoming WOAHA Incident Management System (IMS), including the background, need, role, and structure. They mentioned that the IMS will take an all-hazards approach.

The group was asked to suggest ways in which EDG could support the IMS during an emerging or re-emerging disease event. It was suggested to develop a mechanism to integrate the EDG to the IMS in terms of an emerging or re-emerging disease event. The group commented that it could support in providing rapid information for expertise network, to develop rapid and adequate communication from WOAHA, and support response. It was clarified that the communication regarding the source of the event being unintentional or deliberate was not in the scope of the organisation.

The group suggested that the planned simulation exercises for the IMS could include this group in some of the scenarios, especially those including emerging diseases. It was suggested that this would help improve internal coordination within WOAHA.

It was discussed that the IMS team can give regular updates to the group as a standing agenda.

10. Deliverables for the First Year

The group discussed working on four major deliverables during the first year:

10.1. Deliverable 1: Identification of Gaps in Emerging Diseases at WOAHA

The group will address two specific gaps during the first year, including (a) defining the role of WOAHA in the context of emerging diseases (considering mandate of the organisation, engagement with the Quadripartite, framework for risk analysis, review of the scope of events) and (b) evaluating the fitness for purpose of the definition of, designation of, and reporting requirements of emerging diseases in animals, including consideration to past experience.

The group requested the following supporting information: (a) documents describing the mandate of WOAHA that are relevant to emerging diseases, (b) a review of the relevant resolutions from the past 20 years to be conducted by WOAHA and submitted to the group, (c) documentation describing the engagement of WOAHA with the Quadripartite regarding topics relevant to emerging diseases, (d) summary of PVS results based on the scores for the selected critical competencies relevant to the management of emerging diseases (aggregated information, as well as

information by country, if possible), (e) WOAHA Risk Analysis Framework (Terrestrial Animal Health Code Chapter on Import Risk Analysis), (f) WOAHA Wildlife Health Framework, and (g) the One Health Joint Plan of Action.

The group will aim to finalise this deliverable in the first half of 2024.

10.2. Deliverable 2: Twice yearly review report on emerging and re-emerging diseases

This review report will be developed based on the review of emerging issues by experts. This would include emerging threats to animals, as well as threats that are zoonotic by nature. This review can be done in coordination with the Working Group on Wildlife. The group estimated that it would take about 1 month to come up with each report.

10.3. Deliverable 3: Discussion Paper on Emerging Diseases

The EDG would develop a high-level discussion paper on the importance and relevance of emerging diseases in animals, with respect to both animal and human health. This paper would be developed for internal use only, specifically to advise the WOAHA DG. This paper would identify the current status of emerging diseases, including the drivers of disease emergence, across the globe, including the existing gaps and opportunities to fill these gaps. A risk analysis framework, which would incorporate hazard identification, risk assessment, risk management, and risk communication, would be used to develop the publication. Subsequently, the article will also aim to highlight the relevance of WOAHA's short, medium, and long-term actions to support prevention, preparedness, detection, response, and recovery efforts. The publication will also look at the long-term impact on the drivers of disease emergence. During the meeting, the group participated in an exercise that involved team activity and brainstorming, to begin developing this deliverable.

The group will aim to finalise this deliverable by April 2024.

10.4. Deliverable 4: Investment and Technical Value Proposition of EDG for WOAHA

A short advocacy article targeted at the upper leadership of WOAHA would be developed by EDG. This article would document the need and value proposition of EDG for WOAHA, in terms of addressing emerging diseases for WOAHA's Members. The article could address the various facets of emerging diseases, including capacity development, laboratory development, expedited sample shipment, and supply chain accessibility. The group would also highlight its link to the WOAHA IMS.

The timeline for this deliverable will be defined after the Internal Discussion Paper on Emerging Diseases is finalised, but it would be valuable to have this deliverable before June 2024, if possible.

In addition to these four major deliverables, EDG will also (a) compile and periodically update a standing list of experts for emerging diseases, based on hazard categorisation (The WOAHA secretariat will circulate a first draft, to be completed by the group based on their own expert networks), (b) contribute to the upcoming ICM system, including a simulation exercise, and (c) collate information and response to the latest draft of the pandemic instrument.

It was collectively acknowledged that due care should be taken to ensure that EDG does not get overwhelmed with tasks between meetings. Striking a balance between the group's impact and efficiency is key and should be prioritised. The Secretariat is committed to providing comprehensive support to the group in the most effective manner possible, carefully scheduling tasks around practical deadlines.

11. Group Recommendations

11.1. Recommendation 1: Increasing Synergy and Value to WOAHA

- The group recommended, since it reports to the DG, that WOAHA ensures robust communication between EDG and other entities in WOAHA and other partner institutions. The WOAHA entities would include the WOAHA Specialist Commissions, Working Group on Wildlife, and other pertinent groups within WOAHA, whereas the external entities would include the One Health High-Level Expert Panel (OHHLEP), Quadripartite, CITES, amongst others. WOAHA should also consider engaging the Quadripartite in the EDG discussions.
- The experts recommended a synergistic collaborative strategy with existing entities to maximize impact, synergise efforts, improve knowledge sharing, and build engagement with other teams. By fostering collaboration, sharing resources, and regularly coordinating efforts, the group can streamline initiatives, prevent redundancies, and achieve more comprehensive outcomes in addressing the gaps associated with emerging diseases.

11.2. Recommendation 2: Enhancing Reporting and Surveillance Mechanisms at WOAAH

- The experts recommended exploring the potential of linking the proposed future next generation wildlife disease reporting system from WOAAH with systems present in other wildlife trade enforcement organizations, which already possess substantial data.
- The experts recommended that WOAAH explore the significance of reporting negative disease findings and percentage of positive results.
- The group recommended the need to address surveillance blind spots in the context of COVID-19, specifically regarding its hypothesised origin in animals, and the potential establishment of animal reservoirs. They highlighted the benefits of monitoring such surveillance blind spots in animals, citing examples such as fur farms and civets living in close proximity to humans. Furthermore, the group underscored the importance of a robust legal framework for countries to effectively implement surveillance and response measures, using fur animals and civets as an example.
- The group recommended that WOAAH analyse and address the existing gaps in the WOAAH reporting requirements for emerging diseases. The existing guidelines for reporting diseases were perceived to be mainly tailored for species traded on a large scale, leading to gaps in surveillance and reporting for emerging diseases.
- The group recommended that WOAAH explore the need for rapidly developing case definitions for specific emerging diseases within WOAAH. They suggested that EDG could provide its expertise for WOAAH, when necessary. This could also be included in the group deliverable that looks at the fit-for-purpose nature of Emerging Diseases in WOAAH.
- The group recommended that WOAAH considers linking with partner organisations such as WHO and the secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to address impediments for import/export of key reagents and transportation of samples during emerging disease events.
- The experts emphasised the importance of ensuring equitable access to high-quality and critical materials for laboratory testing, such as primers, to enable accurate disease identification and analysis. The group agreed that barriers to sample shipment, including CITES requirements (for wildlife specimens), could delay early detection and even undermine pandemic preparedness. The group recommended making a strong case, possibly using the quadripartite, to influencing CITES to remove barriers to sample shipment of wildlife specimens for diagnostic purposes. The group recommended that WOAAH continue and intensify its ongoing engagement with CITES regarding easing sample transfer across international borders.

11.3. Recommendation 3: Leveraging new technologies at WOAAH

- The group recommended that WOAAH capitalize on leveraging developing technologies and frontiers into the organisation's ecosystems, emphasizing their integration with WOAAH Reference Centres, including Reference Laboratories and Collaborating Centres.
- The group recommended that the ongoing advances in molecular epidemiology should be integrated into the upcoming epidemic intelligence framework.
- The group recommended that WOAAH consider the widening accessibility to metagenomics, the decentralisation of laboratory functions, and the rapidly expanding dissemination of non-validated disease data in its model (future proofing).
- The group recommended that there could be an exercise, such as a foresight exercise, on exploring cutting-edge technologies and leveraging next-generation genomics tools in expanding frontiers in emerging disease research.

11.4. Recommendation 4: Updating skillsets and competencies through WOAAH

- The group recommended that WOAAH considers expanding the critical competencies relevant to emerging diseases in the WOAAH PVS (Performance of Veterinary Services) evaluation tools. The group also recommended identifying competencies that are relevant to the identification and management of emerging disease, which could be done in collaboration with a consortium of veterinary schools. These identified competencies could be included in the Day 1 curriculum for Veterinary Students.

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- The group recommended that WOAHA develop information kits on emerging diseases by collaborating with veterinary schools.

11.5. Recommendation 5: Building Resilient Prevention and Preparedness Systems at WOAHA

- The group recommended that WOAHA consider a plan in the context of short-, medium- and long-term actions, with long term actions aimed at prevention (specifically influencing the drivers of disease emergence). The group recommended that they think about drivers and prevention measures that reduce overall risk.
- The group recommended that WOAHA work with its Members to develop national legislation that is fit-for-purpose in responding to emerging disease events.
- The group recommended that WOAHA highlight recent emerging events to leverage support amongst its Members.

11.6. Recommendation 6: Building Resilient Response Systems at WOAHA

- The group recommended that the IMS team give regular updates to the group as a standing agenda. The group recommended that EDG should participate, where relevant, in WOAHA simulation exercises with respect to the IMS.
- The group recommended that the hazards considered in WOAHA's work for emerging diseases be divided into high-level categories and that a list of experts be periodically developed and updated for whom to contact in the event of an emerging disease.
- For the twice-yearly review of threats, it was suggested that threats should be considered as categories rather than individual pathogens (for example mammalian adaptation of H5N1). For priority threats, subject matter experts (SME's) should be identified.
- The group recommended that they provide support to WOAHA, as and when required, during the ongoing Pandemic Accord negotiating text discussions, including components on surveillance and early warning.
- The group recommended developing templates for evidence-based risk communication and guidance, where the key messages to target audiences are developed and ready to go, in anticipation of future emerging events. The group highlighted the importance of ensuring transparent messaging, i.e.: complete transparency about the missing information, in these templates during the emerging event.
- The group recommended that WOAHA initiate work on developing a list of priority emerging diseases at the human-animal interface, across various geographic scales including the global scale.

11.7. Recommendation 7: Miscellaneous

- The experts also recommended that there exists more clarity in the name of the group with respect to (1) the impact of disease emergence in animals, on both animal and human health, and (2) the impact of disease emergence in humans on animal health. Thus, the group recommended the inclusion of the term 'humans', as an adjunct to 'animals' in the name of the group.

12. Conclusion

The meeting concluded with a comprehensive set of recommendations aimed at improving WOAHA's approach to addressing emerging diseases. The group also developed a work plan, including four major deliverables, for the first year. The group expressed its commitment to further collaborate, review, and develop strategies that could effectively prevent, detect, respond to, and recover from emerging disease events. Additionally, the establishment of clear communication channels and robust engagement with partner organizations were highlighted as crucial elements for successful outcomes in tackling emerging diseases.

.../Annexes

Annex 1. Agenda

Meeting of the Ad Hoc Group on Emerging Diseases and Drivers of Disease Emergence in Animals 5–7 December 2023, Paris

1. **Summary**
 2. **Opening and Welcome**
 3. **Framing and Reporting Emerging Diseases at WOAHA**
 4. **Understanding Emerging Disease at WOAHA**
 5. **Case Studies: Lessons Learnt and the Way Forward: Emerging Diseases at WOAHA**
 6. **Exploring Frontiers**
 7. **General Reflections**
 8. **Business as Usual Function**
 9. **Response Function**
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 - 10.1. Deliverable 1: Identification of Gap in Emerging Diseases at WOAHA
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 11. **Group Recommendations**
 12. **Conclusion**
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Annex 2. List of Participants

MEETING OF THE AD HOC GROUP ON EMERGING DISEASES AND DRIVERS OF DISEASE EMERGENCE IN ANIMALS

5–7 DECEMBER 2023, PARIS

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Annex 3. Terms of Reference

WOAH Ad Hoc Group on Emerging Diseases* and Drivers of Disease Emergence in Animals (‘WOAH’s Emerging Diseases Group’)

A) Response Function (Linked to the WOAHA Incident Management System)

Support response to major Emerging Disease event as part of WOAHA’s Incident Management System, including,

- a) collecting and sharing information (including unpublished findings)
- b) rapidly assessing relevant risks
- c) advise on WOAHA’s response, in line with its mandate, including:
 - i. policies and communications messages (including interviews with the media)
 - ii. recommendations for action, including identifying and interpreting existing standards and developing relevant guidance e.g., to support risk assessment, risk management and risk communication

B) Business as Usual Function

1. The group will identify existing gaps that it is best suited to address, and 1-2 specific relevant deliverables per year, starting with
 - a. Developing a discussion paper on the role of WOAHA in emerging disease events at the human animal interface
 - b. Evaluate the fitness for purpose of the definition of, designation of, and reporting requirements for emerging diseases in animals, including consideration to past experience
2. Support prevention of, and preparedness for Emerging Diseases with a twice yearly highlevel global review of emerging and re-emerging disease threats to animals (including wildlife) and humans.
3. Address specific issues referred to the Group by the WOAHA Director General, which may include matters raised by Specialist Commissions, Members, partners (such as the WHO and other quadripartite partners), OHHLEP, or by the WOAHA itself
4. Develop high-level future insight on emerging disease threats in animals which may have implications for animal health (including wildlife) and veterinary public health, in particular
 - a) Trends in the emergence of new pathogens of importance, new strains/variants of existing pathogens and the re-emergence of existing pathogens, including potential pandemic threats
 - b) Identification or change in major risk factors which may be associated with the emergence of diseases, in particular high risk animal populations;
 - c) The impact of new data or science on identified risk factors (environmental, climatic, human activity, land use change, agricultural production) on animal health, wildlife health and biodiversity.
5. Make policy and risk management recommendations, including the development of Guidelines.
6. Assist WOAHA to receive, record, and interpret information on emerging diseases.
7. Assist WOAHA to communicate and disseminate information about emerging infectious diseases, and represent WOAHA as requested.
8. Advise WOAHA on incorporating emerging infectious disease issues of importance in its work programs.
9. Collaborate with the WOAHA network of Reference Centers, WOAHA National Focal Points, and other relevant networks, for example OFFLU and OHHLEP.

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10. Support WOAAH in its interactions and collaborations with international organisations working on the animal, human and environmental health interface, and with the wider stakeholder community engaged on these issues.

Mode of Operation for the WOAAH's Emerging Diseases Group

- I. The Group is convened by and reports to the DG of WOAAH. The secretariat will be based within the Preparedness and Resilience Department.
- II. The Group should be light, fast, and flexible in support of WOAAH's Incident Management System.
- III. Normally one face-to-face meeting in Paris and two or more times remotely per year. The Group may meet more frequently in response to an Emerging Infectious Disease event.
- IV. It will have a core membership which may be expanded to engage additional subject matter experts when needed.
- V. The Chair will maintain additional regular communication with the WOAAH Preparedness and Resilience Department, and the WOAAH World Animal Health Information and Analysis Department as appropriate.
- VI. The Group will revise its work plan annually.
- VII. The operating language of the Group will be English.
- VIII. Reports will be shared with the DG who may share them with WOAAH Specialist Commissions, the Working Group on Wildlife, and OHHLEP, Members, and the Quadripartite as appropriate and published if appropriate

These terms of reference will be kept under review and modified in light of WOAAH's needs, experience with the group and development of the WOAAH Incident Management System