

# ONE HEALTH HIGH- LEVEL EXPERT PANEL ANNUAL REPORT 2023



Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization



World Organisation  
for Animal Health  
Founded as OIE



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# FOREWORD FROM THE CO-CHAIRS

The One Health High-Level Expert Panel (OHHLEP) was inaugurated in May 2021 for a first two-year term. Although May 2023 was officially the end of the first term for OHHLEP, it was extended until December 2023 to complete several outputs and to provide continued support to the Quadripartite, in particular on the One Health Joint Plan of Action (OH JPA) and Implementation Guide.

To support the discussions on the Pandemic Instrument and the importance of the prevention of spillover also in strategic funding decisions, OHHLEP published an opinion on the definition of 'Prevention of Spillover' and what it should include. In addition, OHHLEP completed a guidance paper on developing One Health surveillance systems highlighting the trans-sectoral inclusion of actors and stakeholders. OHHLEP also developed an opinion on the current Avian Influenza panzootic with a concerning change in the ecology of the disease. It contains a critical appraisal of the current status and on One Health preparedness and response directed at the Quadripartite organizations.

As also documented in this annual report, OHHLEP members were involved in One Health activities at different levels, regionally to globally, including awareness raising and high-level political advocacy. In 2023, the panel met for a second time in person in Geneva to conclude and discuss the first term and to celebrate the successes.

An inventory and review of One Health tools that are linked to the implementation of the OH JPA has been released in the public domain for use by the One Health community and is currently in the process of scientific publication.

The co-chairs want to express their sincere gratitude to the members of OHHLEP who offered their time and expertise to fulfil the terms of reference and beyond for the first term of OHHLEP. The achievements have been remarkable for a panel of volunteers and have set the stage for One Health going forward. We also thank the Quadripartite partners for their support and, in particular, appreciate the assistance by the Secretariat, hosted by WHO. Although OHHLEP will now go into a second term with some members being re-selected and some new expertise being brought on board, we are certain that the Panel has established itself in a prominent place as a major player in One Health and that it will continue to strengthen the progress of One Health activities with evidence-based advice to the Quadripartite organizations.

**OHHLEP Co-Chairs:**

Thomas Mettenleiter

Wanda Markotter

# FOREWORD FROM THE QUADRIPARTITE PARTNERS

The One Health High-Level Expert Panel (OHHLEP) was established in May 2021 by the Quadripartite collaboration on One Health consisting of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the World Health Organization (WHO) and the World Organisation for Animal Health (WOAH), with the objective of providing evidence-based scientific advice to the four partner organizations, to advance the adoption and implementation of the One Health approach in global, regional, national, and local contexts.

The panel has met 12 times in plenary, many times in smaller working groups, dedicated substantial time, skill, and effort to accomplishing almost all of the deliverables set out in their workplan, and many additional deliverables that were not initially foreseen.

Following the start of the COVID-19 pandemic, the concept of One Health, though not new, gained further momentum. It was widely discussed as a useful approach to assess risks arising at the human-animal-ecosystem interface and to better plan and implement interventions in a more holistic way, using intersectoral and broad stakeholder collaboration. Through this, there was a shift to reorient actions around prevention, and to achieve more impactful and sustainable health outcomes for people, animals, and the planet.

OHHLEP has been instrumental in advancing this paradigm shift through its deliverables; laying down a common understanding of One Health through its definition of the concept; developing the Theory of Change as a powerful way to institute the required shift in thinking and actions; developing and analyzing an inventory of One Health tools to better assess, adapt and build One Health systems in countries; generating guidance on integrated One Health surveillance; and providing opinions on timely topics faced by the world, such as defining the prevention of zoonotic spillover and recommending a One Health approach to address High Pathogenic Avian Influenza H5N1.

OHHLEP has also contributed to the development of the One Health Joint Plan of Action and its Implementation Guide, and has supported efforts to disseminate, raise awareness, champion, and advocate for this plan – all with the aim of raising the profile of One Health and supporting countries to implement a One Health approach to address health threats.

The Quadripartite welcomes the third OHHLEP annual report, which documents the work of the current Panel over its final year of operation and is committed to using the knowledge generated by OHHLEP to advocate for and support countries in moving the One Health approach from concept to practice at all levels.

The Quadripartite organizations thank OHHLEP experts for their commitment, dedication, hard work, and collaboration to support the Quadripartite in elevating and advancing the One Health approach globally.

**QUADRIPARTITE PARTNERS LEAD FOCAL POINTS:**

**FAO:** Keith Sumption; Barbara Haesler; Fairouz Larfaoui

**UNEP:** Doreen Robinson; Julian Blanc

**WHO:** Francesco Branca; Amina Benyahia; Abigail Wright; Amira Preure

**WOAH:** Jean Philippe Dop; Chadia Wannous



# ACKNOWLEDGEMENTS

The Quadripartite would like to acknowledge the contributions of the technical colleagues from FAO, UNEP, WHO and WOAHA who contributed to the outputs developed by OHHLEP.

**FAO:**

Madhur Dhingra, Fernanda Dorea, Emma Gardner, Gunel Ismayilova, Fairouz Larfaoui, Ugo Pica Ciamarra, Ismaila Seck, Junxia Song, Baba Soumare, Zelalem Tadesse

**UNEP:**

Anjana Varma, Nadja Muenstermann

**WHO:**

Amira Preure, Cheng Liang, Shihan Liu

**WOAH:**

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**Graphic design:**

Claudia Ciarlantini (FAO), Enrico Masci (FAO)

# INTRO- DUCTION



# INTRODUCTION

The third One Health High-Level Expert Panel (OHHLEP) Annual Report outlines the accomplishments of the panel during its activity in 2023 according to its workplan and Terms of Reference. OHHLEP is an interdisciplinary expert advisory panel to the Quadripartite organizations, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the World Health Organization (WHO) and the World Organisation for Animal Health (WOAH), the panel is composed of 26 international experts from 21 countries (See Annex 1 for OHHLEP membership), that cover a broad range of disciplines and technical skills relevant to One Health aimed at providing the Quadripartite with scientific and expert policy advice on issues relevant to the interface between humans, wild and domestic animals, and the ecosystems, to support the Quadripartite's efforts to guide countries in their implementation of the One Health approach.

The panel carried out its work in 2023 under four initially composed Thematic Groups, and was chaired by Wanda Markotter and Thomas Mettenleiter, with Dominique Charron as Rapporteur of the panel. OHHLEP is supported by a Quadripartite joint secretariat hosted by WHO.

The first term of OHHLEP, initially set to expire in June 2023, was extended until December 2023 to allow for the completion of remaining deliverables and for the preparation for a second Term of OHHLEP by the Quadripartite. The Quadripartite updated the OHHLEP Terms of Reference for a second two-year term to focus on the implementation of the One Health approach and the One Health Joint Plan of Action (OH JPA) and launched a call for expressions of interest to renew the membership of the OHHLEP<sup>1</sup>.

The work of the panel since its inception has been reported in previous annual reports.

One Health High-Level Expert Panel, [Annual Report 2021](#)

One Health High-Level Expert Panel, [Annual Report 2022](#)

1. Call for OHHLEP Experts:

[https://www.who.int/news-room/articles-detail/call-for-experts---one-health-high-level-expert-panel-\(ohhlepe\)](https://www.who.int/news-room/articles-detail/call-for-experts---one-health-high-level-expert-panel-(ohhlepe)).



# TERMS OF REFERENCE (TOR) AND OHHLEP ROLE

The Terms of Reference for OHHLEP were jointly developed by the Quadripartite Partners for an initial two-year mandate to provide guidance on One Health to the Quadripartite and support their provision of evidence-based scientific and policy advice to address the challenges arising at the human-animal-ecosystem interface.

The focus of OHHLEP in this first term was on:

- providing policy relevant scientific assessment on the emergence of health crises arising from the human-animal-ecosystem interface, as well as research gaps; and
- guidance on the development of a long-term strategic approach to reducing the risk of zoonotic pandemics, with an associated monitoring and early warning framework, and the synergies needed to institutionalize and implement the One Health approach, including in areas that drive pandemic risk.

Specifically, the role of OHHLEP was to perform the following functions:

1. To provide advice on the analysis of scientific evidence on the links between human, animal and ecosystem health, and contribute to foresight on emerging threats to health;
2. To provide advice on better understanding of the impacts of food systems (including agriculture, livestock farming and trade, wildlife hunting and trade, aquaculture, animal products processing, handling, distribution and consumer practices) and ecological and environmental factors that may be contributing to zoonotic disease emergence/re-emergence and spillover events;
3. To contribute to the One Health research agenda setting and propose, advise on and review approaches and specific studies relevant to the development of a global approach to reduce risk of zoonotic pandemics;
4. To provide advice by invitation on a One Health policy response in relevant member countries; and
5. To provide recommendations on specific issues identified by the Partners in the areas of highest concern for attention and action, and future directions, in One Health.



# WORKPLAN

OHHLEP's workplan for 2023 brought to completion the work and deliverables laid out over the previous two years of OHHLEP's first term (extended to December 2023). The work was organized along four thematic working groups. While each group had two OHHLEP member co-leads, OHHLEP Co-chairs provided continuity across the workplan.

## GROUP 1. ONE HEALTH IMPLEMENTATION

- Advise the Quadripartite on the Implementation Guide of the One Health Joint Plan of Action (OH JPA)
- OHHLEP One Health Definition and Theory of Change dissemination, assist in compiling One Health Case Studies, examples of One Health implementation in regions/countries highlighting the lessons learnt and the challenges faced

## GROUP 2. ONE HEALTH TOOLS AND RESOURCES

- To support the Quadripartite's guidance for OH JPA implementation, complete inventory and analysis of One Health tools.

## GROUP 3. FRAMEWORK FOR ONE HEALTH SURVEILLANCE SYSTEM, PREVENTION (PREVENTIVE SURVEILLANCE), EARLY DETECTION AND RAPID DATA SHARING

- Develop a framework for a model One Health surveillance system

## GROUP 4. IDENTIFICATION AND REVIEW OF EVIDENCE ON THE UPSTREAM DRIVERS OF ZOOONOTIC SPILLOVER

- Systematic review of the drivers of zoonotic disease spillover

## OVERARCHING TOPICS

- Evidence based advice to support the Quadripartite in high level discourse, including the inclusion of One Health in the Pandemic Agreement negotiations,
- Advocacy and visibility for One Health and the work of the Quadripartite and OHHLEP at various high-level events

OHHLEP met as a panel twice in 2023 to discuss the work of the Quadripartite and progress on deliverables. The dates and links to the public meeting minutes are shown in Annex 3. In addition, informal working meetings under the four thematic groups were convened frequently throughout the reporting period. The following sections cover key progress and outputs achieved in 2023 toward the revised work plan presented above. OHHLEP and the Quadripartite partners met informally and virtually in October 2023 to discuss the extension of the panel, and in December 2023 to mark the end of the first term and to celebrate OHHLEP's accomplishments.



# **WORK PLAN PROGRESS REPORT**



## 1.

# Dissemination of One Health Definition and Theory of Change

Seizing an opportunity to strengthen visibility and application of the One Health definition<sup>2</sup>, and Theory of Change (ToC)<sup>3</sup>, in January 2023, OHHLEP published a commentary, One Health Action for Health Security and Equity<sup>4</sup>, as part of the peer-reviewed Lancet series, One Health and Global Health Security<sup>5</sup> advocating for a better global health security framework inclusive of One Health and its guiding principles according to the ToC.

The One Health definition and guiding principles developed by OHHLEP and endorsed by the Quadripartite were broadly welcomed and for the purpose of making them widely accessible, OHHLEP members translated the One Health definition and guiding principles from the English version into seven additional languages<sup>6</sup>. These translations were employed by the experts of OHHLEP, their networks and beyond for the purpose of developing a common understanding of the dimensions of One Health.

2. One Health High-Level Expert Panel (OHHLEP), Adisasmito WB, Almuhairei S, Behravesh CB, Bilivogui P, Bukachi SA, *et al.* (2022) One Health: A new definition for a sustainable and healthy future. *PLoS Pathog* 18(6): e1010537. <https://doi.org/10.1371/journal.ppat.1010537>
3. OHHLEP One Health Theory of Change: <https://www.who.int/publications/m/item/one-health-theory-of-change>
4. One Health High-Level Expert Panel (OHHLEP), Markotter W, Mettenleiter TC, Adisasmito WB, Almuhairei S, Barton Behravesh C, *et al.* (2023). One Health Action for health security and equity. *The Lancet* (401)10376. [https://doi.org/10.1016/S0140-6736\(23\)00086-7](https://doi.org/10.1016/S0140-6736(23)00086-7)
5. The Lance Series on One Health and Global Health Security: <https://www.thelancet.com/series/one-health-and-global-health-security>
6. Translation of the One Health definition and guiding principles: <https://www.who.int/publications/m/item/one-health-definitions-and-principles>

2.

## One Health Case Studies

To offer concrete examples of One Health implementation, OHHLEP members collected 17 One Health case studies, with multiple focus areas within One Health scope. A first group of 5 case studies were reviewed and edited against CABI's requirements/template for the CABI One Health Cases<sup>7</sup> intended to be published in 2024.

7. CABI One Health Cases: <https://www.cabidigitallibrary.org/journal/ohcs>

# 3. One Health Tools and Resources Inventory

Building on work initiated in 2022, OHHLEP undertook the development of an inventory of One Health tools available to support the implementation of the OH JPA<sup>8</sup> at global, regional and local levels. The objectives were to identify: (a) publicly available One Health tools to support capacity building and OH JPA implementation; (b) support for optimal outcomes for countries/regions using available One Health tools; (c) linkages to OH JPA Action Tracks and pathways in the One Health ToC; and (d) gaps and priorities for development of additional One Health tools.

OHHLEP members compiled information on One Health tools that were publicly available and released up to June 30, 2023, via online sources and partner networks including the Quadripartite. Inclusion criteria addressed One Health relevance, use at the national level in ≥5 locations, and whether tools were publicly available. Tools were assessed for applicability by OH JPA action track, ToC pathways of change, scope, and intended outcomes, as well as the extent to which tools addressed gender equality, social inclusion, and environmental dimensions of One Health.

Of over 100 candidate tools, 50 met the inclusion criteria. There was coverage of most Action Tracks and pathways of the OH JPA. Most available One Health tools addressed assessment and to a lesser extent implementation of One Health, with fewer tools available for action planning, prioritization, and monitoring. Gaps and opportunities for improving One Health tools were identified, including the integration of the environment dimension, gender equality, and social inclusion. The preliminary findings of the analysis were presented to the Quadripartite in October 2023 ahead of the publication of the OH JPA Implementation Guide.

The list of tools was published as an annex to the Implementation Guide<sup>9</sup> in December 2023 as a valuable resource for countries and entities implementing One Health. A list of resources to inform both tools and context was also included. The list of One Health tools is designed to be a living inventory to be reviewed periodically by the Quadripartite.

The final manuscript was submitted for publication in CABI One Health.

8. The Quadripartite's One Health Joint Plan of Action: <https://www.who.int/publications/i/item/9789240059139>

9. A Guide to implementing the One Health Joint Plan of Action at national level: <https://www.who.int/teams/one-health-initiative/quadripartite-secretariat-for-one-health/guide-to-implementing-the-OHJPA-at-national-level>

## 4.

# Developing One Health Surveillance Systems

In 2023, OHHLEP finalized its work on One Health surveillance systems. OHHLEP reviewed a range of definitions and approaches to surveillance among Quadripartite and other organizations. Although the systems reviewed included some successful, well integrated systems very few examples addressed global risk, particularly in biodiverse regions that are currently undergoing the most rapid environmental and socioeconomic change. The OHHLEP's One Health surveillance framework encompasses health and disease risks, their drivers and identification of opportunities for coordination and integration across sectors, moving the focus toward addressing and mitigating upstream drivers of health risks. The model

One Health surveillance system addresses early detection, and rapid data sharing, prevention and the surveillance of upstream drivers of spillover of pathogens, to better prevent, detect and respond to disease emergence.

Six steps were described for the development of the model One Health surveillance system, starting from defining the scope, the identification of data requirements, the development of the system design, its governance, integrated protocols, and the development of a joint implementation roadmap. The paper, 'Developing One Health Surveillance Systems'<sup>10</sup>, was published in August 2023 in the peer-reviewed Elsevier One Health Journal.

10. One Health High-Level Expert Panel (OHHLEP). (2023) Developing One Health Surveillance Systems. One Health (17) 100617. <https://doi.org/10.1016/j.onehlt.2023.100617>

**5.**

# Guidance on improved One Health Surveillance for Highly Pathogenic Avian Influenza H5N1 sublineage 2.3.4.4b

OHHLEP developed an opinion on using a One Health approach to address Highly Pathogenic Avian Influenza H5N1. The paper highlighted the need to integrate a One Health dimension to the HPAI surveillance mechanisms; strengthen data sharing and international accessibility to collected data and analysis; and to promote global preparedness through the evaluation of outbreak events.

The opinion calls for greater prioritization and investment in HPAI prevention and response, including prevention such as on-farm biosecurity and vaccination, as well

as compensation for affected poultry producers. The opinion highlights the need to reduce the risks linked to the interface between domestic and wild animals, which are increased by global drivers linked to human behavior and inequalities such as land use and climate change.

The appraisal and recommendations were published in December 2023 by the Quadripartite on the OHHLEP website<sup>11</sup>: The Panzootic Spread of Highly Pathogenic Avian Influenza H5N1 sublineage 2.3.4.4b: A Critical Appraisal of One Health Preparedness and Prevention.

11. The panzootic spread of HPAI H5N1 sublineage 2.3.4.4b: <https://www.who.int/publications/m/item/the-panzootic-spread-of-highly-pathogenic-avian-influenza-h5n1-sublineage-2.3.4.4b--a-critical-appraisal-of-one-health-preparedness-and-prevention>



6.

# Drivers of Zoonotic Spillover

In 2023, OHHLEP continued the systematic review of evidence on the anthropogenic drivers of zoonotic spillover events. The panel successfully screened the title and abstracts of a list of 55 846 references corresponding to the eleven drivers of spillover identified in 2022 and identified 6 310 relevant peer reviewed articles to assess further for evidence. Preliminary results from the screening showed that many papers addressed more than one driver. In addition, a review of reviews of drivers of zoonotic spillover was undertaken. The preliminary results indicated that most of the reviews corresponding to the criteria seem to lack or are based on only limited solid scientific evidence and are rather based on expert opinion.

A data mining approach was also designed and implemented to identify interlinkages between drivers, pathogens, host, reservoir, and additional elements in the chain of infection. Data mining appears to be most useful to describe and categorize the literature and the relationships between pathogens and drivers. Through this analysis it was possible to identify key papers that are repeatedly referenced.

The project on the review of drivers has been suspended for further decision in term 2, as it requires substantially increased resources for the work needed.

## 7.

# White Paper on Prevention of Zoonotic Spillover at Source

In response to a request from the Quadripartite and to inform discussions on One Health in the negotiations around the Pandemic Agreement, OHHLEP produced recommendations on the preventive approach to zoonotic spillover. A white paper, “Prevention of Zoonotic Spillover at Source”, defines the prevention of spillover and the scope and action required to address to the drivers of disease emergence to reduce their risk of emergence instead of relying solely on the current mechanisms of detection and response once health

threats have already emerged. In addition, the paper addresses the economic and social benefits of the One Health approach, its cost-effectiveness, and the strong political will and adequate financing required to achieve this. The paper was published on the Quadripartite OHHLEP site<sup>12</sup> and later published in the peer-review journal PLoS Pathogens<sup>13</sup>.

The prevention definition was later translated and published in French by Serge Morand and Patrick Giraudoux<sup>14</sup>.

12. Prevention of Zoonotic Spillover: From Relying on Response to Reducing the Risk at Source. <https://www.who.int/publications/m/item/prevention-of-zoonotic-spillover>

13. One Health High-Level Expert Panel (OHHLEP) (2023) Prevention of Zoonotic Spillover: From Relying on Response to Reducing the Risk at Source. PLoS Pathog 19(10): e1011504. <https://doi.org/10.1371/journal.ppat.1011504>

14. Prévention de la Propagation des Zoonoses : de « Compter sur la Réponse » à « Réduire le Risque à la Source ». <http://dx.doi.org/10.3406/bavf.2023.71059>

## 8.

## Other Activities of OHHLEP

In 2023, OHHLEP supported the Quadripartite via rapid research and guidance on specific emerging One Health global issues and provided valuable input on the Quadripartite efforts on the Implementation of the OH JPA and toward strengthening One Health in the Pandemic Agreement negotiations.

Panel members have also actively advocated for One Health as part of OHHLEP at a number of high-level events organized at national, regional, and international levels. Detailed OHHLEP representations are listed in Annex 4, some of these events were:

- G7 One Health High Level Event, organized by Japan, G7 Presidency
- Quadripartite Executive Annual Meeting
- Science Summit along the 78<sup>th</sup> United Nations General Assembly (UNGA78)
- One Health Group of Friends session on the Economics of One Health, organized by the Quadripartite

OHHLEP published an overview of its work in the peer reviewed journal<sup>15</sup> in December 2023, highlighting the Panel's achievements during the first term.

15. Mettenleiter, T.C., Markotter, W., Charron, D.F. et al. (2023) The One Health High-Level Expert Panel (OHHLEP). One Health Outlook 5, 18. <https://doi.org/10.1186/s42522-023-00085-2>



# Conclusion and Next Steps

## CONCLUSION

OHHLEP continued to provide strong support and guidance to the Quadripartite throughout 2023 with the many critical deliverables discussed in earlier sections of this report ranging from high level representation, to providing opinions on emerging issues, the development of resources, input into the implementation guide<sup>9</sup> and inputs to the pandemic agreement sections on One Health.

The future work for OHHLEP will build on this strong foundation and expand beyond zoonotic threats to address all dimensions of One Health and the Quadripartite efforts to advance the OH JPA.

## NEXT TERM

The Quadripartite has organized its priority actions around the roll out of the OH JPA and broad support to countries and regions to develop or strengthen National Action Plans aligned with the OH JPA. In preparation for OHHLEP Term II, the Quadripartite reviewed the OHHLEP Terms of Reference and membership to ensure alignment between OHHLEP mandate and the priorities of the Quadripartite in its One Health collaboration.

The Quadripartite revised the Terms of Reference to reflect this emphasis and to articulate a higher level and more balanced vision of One Health Secretariat towards an approach that could be applied more broadly across all action tracks of the OH JPA and through its three pathways of change. The revised Terms of Reference were designed so that specific annual workplans would be developed under these broad ToR, and aligned with the work of the Quadripartite. The new Terms of Reference were made available in October 2023 and can be found here.

The Quadripartite aimed to recompose OHHLEP for Term II in a way that retained the experience of Term I and augmented it with additional expertise such as social sciences, law, economics and stronger emphasis on environment, while maintaining the relative size of the panel and geographic and gender balance. An Open Call was issued from 6 October until the 20th of November and the selection of the panel took place in January 2024. The panel members proposed for Term II will be announced following approval by all four organizations.

# ANNEXES




# Annex 1

## LIST OF OHHLEP MEMBERS

Last Name	First Name	Affiliation
ADISASMITO	Wiku B.	Universitas Indonesia, Depok, West Java, Indonesia.
ALMUHAIRI	Salama	National Emergency Crisis and Disasters Management Authority, Abu Dhabi, United Arab Emirates.
BARTON BEHRAVESH	Casey	Centers for Disease Control and Prevention, Atlanta, Georgia, United States of America.
BILIVOGUI	Pépé	World Health Organization, Guinea Country Office, Conakry, Guinea.
BUKACHI	Salome A.	Institute of Anthropology, Gender and African Studies, University of Nairobi, Nairobi, Kenya.
CASAS	Natalia	National Ministry of Health, Autonomous City of Buenos Aires, Argentina.
CEDIEL BECERRA	Natalia	Faculty of Agricultural Sciences, Universidad de La Salle, Bogotá, Colombia.
CHARRON	Dominique	Visiting Professor, One Health Institute, University of Guelph, Guelph, Ontario, Canada.
CHAUDHARY	Abhishek	Indian Institute of Technology (IIT) Kanpur, India.
CIACCI ZANELLA	Janice R.	Brazilian Agricultural Research Corporation (Embrapa), Embrapa Swine and Poultry, Concórdia, Santa Catarina, Brazil. Visiting Scientist - USDA/ARS/NADC and Iowa State University, Ames, IA, USA
CUNNINGHAM	Andrew Alexander	Institute of Zoology, Zoological Society of London, London, United Kingdom.
DAR	Osman	Global Operations Division, United Kingdom Health Security Agency, London, United Kingdom, Global Health Programme, Chatham House, Royal Institute of International Affairs, London, United Kingdom.

Last Name	First Name	Affiliation
DEBNATH	Nitish	Fleming Fund Country Grant to Bangladesh, DAI Global, Dhaka, Bangladesh. One Health Bangladesh
DUNGU	Baptiste	Bonisa Solutions, Pretoria, South Africa, Faculty of Veterinary Science, University of Kinshasa, Kinshasa, Democratic Republic Congo.
FARAG	Elmoubasher	Ministry of Public Health, Health Protection & Communicable Diseases Division, Doha, Qatar.
GAO	George Fu	Institute of Microbiology, Chinese Academy of Sciences. (Current affiliation)
HAYMAN	David T. S.	Molecular Epidemiology and Public Health Laboratory, Hopkirk Research Institute, Massey University, Palmerston North, New Zealand.
KHAITSA	Margaret	Mississippi State University, Starkville, Mississippi, United States of America.
KOOPMANS	Marion P. G.	Erasmus MC, Department of Viroscience, Rotterdam, the Netherlands.
MACHALABA	Catherine	EcoHealth Alliance, New York, New York, United States of America.
MACKENZIE	John S.	Faculty of Health Sciences, Curtin University, Perth, Australia
MARKOTTER	Wanda	Centre for Viral Zoonoses, Department of Medical Virology, Faculty of Health Sciences, University of Pretoria, Pretoria, South Africa.
METTENLEITER	Thomas	Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Greifswald-Insel Riems, Germany.
MORAND	Serge	HealthDEEP, CNRS Institut Ecologie Environnement, Paris, France Faculty of Veterinary Technology, Kasetsart University, Bangkok, Thailand.
SMOLENSKIY	Vyacheslav	Federal Service for Surveillance on Consumer Rights Protection and Human Well-being (Rospotrebnadzor), Moscow, Russian Federation.
ZHOU	Lei	Chinese Center for Disease Control and Prevention, Beijing, People's Republic of China.



# Annex 2 LIST OF OHHLEP FULL PANEL MEETINGS

**Meeting 9, 2 & 3 March 2023.** [Minutes https://www.who.int/publications/m/item/9th-meeting-of-the-one-health-high-level-expert-panel-\(ohhlelep\)](https://www.who.int/publications/m/item/9th-meeting-of-the-one-health-high-level-expert-panel-(ohhlelep))

**Meeting 10, 8 & 9 June 2023.** [Minutes https://www.who.int/publications/m/item/10th-meeting-of-the-one-health-high-level-expert-panel-\(ohhlelep\)](https://www.who.int/publications/m/item/10th-meeting-of-the-one-health-high-level-expert-panel-(ohhlelep))



# Annex 3

## ORIGINAL WORKPLAN OF OHHLEP

### 1. One Health Implementation

- Defining One Health in the context of the panel
- Develop a Theory of Change to make One Health go from a theoretical concept to the daily practice of collaborative work between the different sectors (health, agriculture, environment) and at different levels
- Identify technical and institutional barriers for implementation of One Health on the ground
- Identifying case studies demonstrating good practice in One Health in detecting, controlling and preventing emerging zoonoses. Specifically, what worked, how were barriers overcome, governance arrangements, funding, incentives, etc.
- Suggest/develop improved flexible implementation strategies for One Health, focusing on preventing emerging zoonoses in different contexts

### 2. Inventory of current knowledge in preventing emerging zoonoses

- Systematic review and inventory of useful documents, knowledge-sharing platforms, capacity building tools, projects, networks, committees and good practices for the use of One Health approaches in the prevention of emerging zoonoses
- Identify successful transnational and national strategies and/or ministerial/administrative set-up that have shown practical and useful intersectoral collaboration (examples of good practice)
- Review requirements for a One Health workforce
- Develop and prioritize a portfolio of issues that would make a difference in the prevention of emerging zoonoses at the global, regional and national level
- Updated TG2 workplan for 2022

### 3. Develop a One Health Framework for Surveillance, early detection, and rapid data sharing in the prevention of emerging zoonoses

- Define the model One Health surveillance system (coordinated, integrated etc.)
- Assess what is known today about the presence of potential zoonotic pathogens, including current hotspot identification work
- Identify existing international guidance for integrated disease surveillance and the level of implementation
- Identify existing agreements and systems allowing/facilitating sharing of surveillance data.
- Provide guidance for interlaboratory systems for sharing of samples, data, results to provide early detection and diagnosis of disease pathogens
- Develop a practically implementable surveillance framework and good practice guidelines

### 4. Identify Factors contributing to spillover and subsequent spread of diseases and develop risk management framework

This includes all factors such as wildlife trade, food production and distribution, traditional markets, land-use changes, biodiversity, animal production and trade, human action, biosafety and biosecurity, any other relevant environmental issues, including climate change

- Identify key drivers of spillover
- Systematically analyze the evidence for risk of zoonotic spillover
- What are the gaps, what factors are neglected and what should be prioritized?
- Consider tools already available for multisectoral risk assessments; for example, investigate if HACCP principles could be adapted as risk assessment possibilities.

### 5. Overarching actions for the panel

- Bring all aspects of the different working groups together
- Develop a portfolio of key issues, knowledge and evidence gaps and prioritize these for their potential for making a difference in the prevention of emerging zoonoses, and as part of the development of a research agenda
- Give guidance and inputs to the work of generating knowledge and evidence on One Health of the partners, including the potential development and priorities for the Knowledge and Evidence Network and the Global Plan of Action on One Health
- Make evidence-based recommendations to the Partners for global, regional, national and local action
- Share the work of OHHLEP in key forums and media

# Annex 4

## CONTRIBUTIONS BY OHHLEP MEMBERS TO HIGH-LEVEL EVENTS ON BEHALF OF OHHLEP AND/OR CHAMPIONING ONE HEALTH

Date	OHHLEP member	Event	Event details/Title of contribution	Virtual link to contribution
17-21-Jan-23	Nitish Debnath	20 <sup>th</sup> Asian Regional Meeting of Commonwealth Veterinary Association & WOAHS Subregional Training Workshop on Animal Rabies – Bangalore, India	Keynote Speaker – Animal Welfare and One Health	
19-Jan-23	Marion Koopmans	European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Symposium-	Speaker – ESCMD Symposium – Virtual meeting	
24-Jan-23	Nitish Debnath and Catherine Machalaba	Prince Mahidol Conference 2023 – One Health Side event Organized Quadripartite – Bangkok, Thailand	Panellists – One Health Webinar Workshop	
26-Jan-23	Catherine Machalaba and Osman Dar	Launch event for the Lancet Series on One Health in Health Security – Webinar organized by Chatham House and The Lancet	Speakers – OHHLEP Theory of Change and OHHLEP's activities	
28-Jan-23	Catherine Machalaba	Prince Mahidol Award Conference 2023 on “Setting a New Health Agenda – at the Nexus of Climate Change, Environment and Biodiversity” – Bangkok, Thailand	Speaker – Overview of One Health and examples from practice – Inter-sectoral, Multi-sectoral Approaches: Opportunities (Part 2)	

Date	OHHLEP member	Event	Event details/Title of contribution	Virtual link to contribution
29-31-Jan-23	Casey Barton Behravesh	Consultative meeting on strategic guidance for prevention and control of emerging and re-emerging vector-borne and zoonotic infectious diseases in Eastern Mediterranean – organized by WHO EMRO – Amman, Jordan (Virtual)	Speaker – Information sharing between human and animal sectors	
30-Jan-23	Natalia Cediel Becerra	Neglected Tropical Diseases Celebration Day Conference – Organized by Asociación Colombiana de Infectología (ACIN) – Columbia	Keynote presentation – Neglected Tropical Diseases under the One Health Approach	
2-Feb-23	Serge Morand	Regional Artemisinin Resistance Initiative – RAI (Mekong Region) – Organized by the RAI Regional Steering Committee – Bangkok, Thailand	Speaker – Malaria Elimination and Sustainability in the context of “One Health	
2-Feb-23	Marion Koopmans	Symposium of the Cambridge University Veterinary Society – Cambridge, UK	Speaker	
8-Feb-23	Janice R. Ciacci Zanella	3 <sup>rd</sup> Meeting Workshop of the One Health Interinstitutional Group (GT-One Health) – Organized by GT-One Health, Brazilian Health Ministry – Brazil	Speaker – Brazilian Experience on the One Health High-Level Expert Panel	
8-Feb-23	Thomas Mettenleiter	One Health in the Pandemic Instrument Workshop – Organized by the German Foreign Office and Ministry of Health – Berlin, Germany	Panel member	
14-17-Feb-23	Serge Morand	6 <sup>th</sup> Cycle Training of WOAHP Focal Points for Wildlife in Asia and the Pacific with Regional Networking Workshop – Organized by WOAHP – Bangkok, Thailand	Participant at the Workshop/ Training – Capacity building for WOAHP Delegates and WOAHP National Focal Points	
15-Feb-23	Nitish Debnath	Action for Global Health – Foreign, Commonwealth and Development Office (FCDO) – One Health Roundtable Webinar	Panellists	
23-Feb-23	Serge Morand	Santé Mondiale Chine – Dialogue with French operators in China – organized by the French Embassy in China – Beijing, China	Speaker – “Biodiversity and One Health” – Virtual Intervention	

Date	OHHLEP member	Event	Event details/Title of contribution	Virtual link to contribution
24-Feb-23	Serge Morand	One Health Approach in Benin (Approche « une seule santé » au Bénin) Science/Policy Dialogue – Organized by the French Embassy in Benin – Cotonou, Benin	Speaker – One Health in Practice “One Health en pratique” – Virtual Intervention	
16-Feb-23	Marion Koopmans	Lorne I&I 2023 Conference Virtual Symposium	Speaker	
1-3-Mar-2023	Serge Morand	One Health Joint Plan of Action Implementation in the Asia-Pacific region: Asia-Pacific Partners and Quadripartite Meeting – Meeting Organized by the Quadripartite – Bangkok, Thailand	Speaker – “One Health definition by OHHLEP and contributions from each sector”	
7-8-Mar-23	Nitish Debnath	Workshop Towards Operationalisation of the One Health Approach in the Eastern Mediterranean Region” – Organized by Eastern Mediterranean Public Health Network (EMPHNET) / Center for Global Health and Development (GHD) - Amman, Jordan	Keynote Speaker	
8-Mar-23	Casey Barton Behravesh	US Agency for International Development One Health Working Group – Organized by US Agency for International Development (USAID) – Washington DC, USA (Virtual)	Speaker – Overview of the OHHLEP	
10-Mar-23	Catherine Machalaba	National Workshop on One Health and Protected Areas – organized by Conservation Works Activity and the National One Health Coordination Platform of Liberia – Monrovia, Liberia	Conference Speaker – One Health in Protected Area Management – One Health definition and operational approaches	
18-Mar-23	Marion Koopmans	Leiden International Bio Medical Student Conference (LIMSC) 2023 – Leiden, Netherlands	Speaker	

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20-22-Mar-23	Nitish Debnath	Pandemic Fund Board Retreat – Organized by the World Bank – Washington DC, USA	Board Alternate Member of the Pandemic Fund Board – “Strengthen the working relationship among Board representatives and between the Board and the Secretariat and Build a shared understanding of the constituency system; Hold an initial discussion on how the Board will allocate the Pandemic Fund’s resources to proposals submitted in response to the first Call for Proposals;”	
20-25-Mar-23	David Hayman	Intergovernmental Platform on Biodiversity and Ecosystem Services second author meeting	Coordinating Lead Author	<a href="https://www.ipbes.net/nexus/events">https://www.ipbes.net/nexus/events</a>
23-Mar-23	Marion Koopmans	Symposium on Sustainable Food Systems in the face of Global Human-Made Catastrophes - Organized by the Bristol Collegiate Research Society - Virtual Event	Speaker	
28-Mar-23	Wanda Markotter and Thomas Mettenleiter	First Quadripartite Annual Executive Meeting - Organized by the Quadripartite - Geneva, Switzerland (virtual)	Presentation	
28-Mar-23	Thomas Mettenleiter	32 <sup>nd</sup> Annual Meeting of the German Society for Virology - Ulm, Germany	Keynote Speaker	
28-Mar-23	Marion Koopmans	32 <sup>nd</sup> Annual Meeting of the German Society for Virology - Ulm, Germany	Keynote Speaker	
28-Mar-23	Janice R. Ciacci Zanella	Joint Policy Workshop Exploring One Health in Brazil - Organized by the UK Academy of Medical Sciences, the Brazilian National Academy of Medicine, and the Brazilian Academy of Sciences - Rio de Janeiro, Brazil	Keynote Presentation	<a href="https://www.youtube.com/watch?v=tdB5nAeW1Ic">https://www.youtube.com/watch?v=tdB5nAeW1Ic</a>
30-Mar-23	Marion Koopmans	UPenn Zoonotic Diseases Symposium - Virtual event	Speaker	
12-Apr-23	Natalia Cediel Becerra	IV International Seminar on Animal and Plant Health 2023 - Organized by the Cuba Government - Virtual Event	Keynote Speaker - Conference about Projections of the One Health 2026 Quadripartite Joint Plan: The Theory of Change	
13-Apr-23	Catherine Machalaba	Consortium of Universities for Global Health - Organized by Four Paws - Washington, D.C.	Speaker - From Science to Policy: How the Pandemic Instrument can prevent pandemics and enable equity - Overview of One Health, spillover prevention, and equity considerations	

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13-Apr-23	Thomas Mettenleiter	One Health Seminar - Organized by Det Norkse Videnskaps-Akademi - Oslo, Norway	Speaker	
15-Apr-23	Catherine Machalaba	Consortium of Universities for Global Health (CUGH) 14th Annual Conference - Global Health at a Crossroads: Equity, Climate Change, and Microbial Threats - Organized by CUGH - Washington. D.C.	Speaker - Addressing the Triple Crisis: Climate Change, Biodiversity Loss, and Pollution - Concept of One Health and examples from practice	
21-Apr-23	Natalia Cediel Becerra	Meeting on the Pandemic Treaty and its Importance for Colombia	Expert advisor - OHHLEP's position on spillover prevention	
26-27-Apr-23	Nitish Debnath	Bangladesh One Health Pandemic Fund Project Proposal Development Workplan and budget preparation Workshop - BRAC CDM, Savar, Dhaka	Workshop Participant - Project proposal Preparation for Pandemic Fund	
27-28-Apr-23	Dave Hayman	9 <sup>th</sup> World Veterinary Association (WVA) Global One Health Summit	Invited speaker	<a href="https://worldvet.org/news/9th-wva-global-one-health-summit/">https://worldvet.org/news/9th-wva-global-one-health-summit/</a>
29-Apr-23	Natalia Cediel Becerra	38 <sup>th</sup> World Veterinary Congress - Organized by the World Veterinary Association - Taiwan	Speaker - The Environment, an Essential Element of One Health: a Gender Perspective View	
1-May-23	Natalia Casas	One Health Approach Athenaeum - Organized by Epidemiology Residency, National Ministry of Health of Argentina - Buenos Aires, Argentina	Speaker - Training to Epidemiology Residents and Health Workers	
5-19-May-23	David Hayman	NAS Symposia: Prioritizing Actions for Epidemic and Pandemic Preparedness - Organized by the National Academies of Science, Engineering, and Medicine - Virtual Event	Invited Participating Expert	<a href="https://www.nationalacademies.org/event/05-04-2023/prioritizing-actions-for-epidemic-and-pandemic-preparedness">https://www.nationalacademies.org/event/05-04-2023/prioritizing-actions-for-epidemic-and-pandemic-preparedness</a>
15-May-23	Catherine Machalaba and Osman Dar	One Health Situation Analysis Workshop - Organized by the World Bank and the Quadripartite - Virtual Workshop	Participants/Expert Advisors - One Health Assessment Methods - Examples of One Health Assessment	
26-May-23	Serge Morand	Workshop: Cross Sectoral Evidence Based Governance for One Health - Implementation of One Health at the EU level in a scientific opinion with policy recommendations - Organized by the European Commission - Brussels, Belgium	Participant - Science Advice for Policy by European Academies - "The environmental dimension of One Health"	

Date	OHHLEP member	Event	Event details/Title of contribution	Virtual link to contribution
26-May-23	Thomas Mettenleiter	Operationalizing One Health Workshop - Organized by the European Commission - Brussels (Virtual Event)	Speaker	
1-Jun-23	Casey Barton Behravesch	Quadripartite Implementation of One Health - organized by the US Department of Health and Human Services, US Government - Virtual Event	Presentation - Overview of Quadripartite One Health Activities and One Health Joint Plan of Action Implementation Plan provided to Multisectoral Partners from the US Government	
5-7-Jun-23	Serge Morand	One Sustainable Health for all 2023 Global Forum - Organized by One Sustainable Health - Lyon, France (Hybrid Event)	Participant - "Stepping Up Operationalisation One Sustainable Health for All"	
12-14-Jun-23	Nitish Debnath	11 <sup>th</sup> One Health Bangladesh Conference - Dhaka, Bangladesh	Inaugural speaker of the Conference and Chair of the Conference Organizing Committee	<a href="https://www.youtube.com/watch?v=rXH5pr8Z9zw">https://www.youtube.com/watch?v=rXH5pr8Z9zw</a>
28-29-Jun-23	Salome A. Bukachi	Workshop "Epistemic standards of due care" - Organized by the Centre for Interdisciplinary Research (ZIF) - Bielefeld University, Germany	Speaker - The Epistemology of Evidence based Policy in One Health: The Case of the One Health High-Level Expert Panel.	
3-Jul-23	Marion Koopmans	The 11 <sup>th</sup> Loeffler Lecture Conference - Organized by the Fredrich Loeffler (FLI) Institute - Greifswald, Germany	Speaker	
6-Jul-23	Natalia Cediell Becerra	Zoonoses Celebration Day Seminar - organized by Colombian Ministry of Health - Virtual Event	Speaker - "Building Together the One Health Strategic Action Plan for Colombia for Colombia"	
10-Jul-23	Janice R. Ciacci Zanella	Meeting/Recorded Video - Head of Pandemics & Campaign Strategies FOUR PAWS International (VIER PFOTEN) -	Participant - Discussion about One Health with governments in LAC - PAHO Member States Discussion on the Pandemic Instrument	
4-7-Jul-23	Dave Hayman	Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) Meeting - Co-chairs and coordinating lead author meeting - Garmisch, Germany	Coordinating Lead Author	<a href="https://www.ipbes.net/nexus/events">https://www.ipbes.net/nexus/events</a>
11-Aug-23	Janice R. Ciacci Zanella	Meeting/Recorded Video - Importance of Formalizing GT-One Health for Brazil - Organized by GT-One Health, Brazilian Health Ministry -	Participant - Technical Meeting on One Health	



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17-18-Aug-23	David Hayman	Te Pūnaha Matatini meeting - Te Pūnaha Matatini, Aotearoa New Zealand Centre of Research Excellence for Complex Systems - Christchurch, New Zealand	Principal Investigator & Strategic Leadership Group member	<a href="https://www.tepunahamatatini.ac.nz/publications/annual-reports/">https://www.tepunahamatatini.ac.nz/publications/annual-reports/</a>
30-Aug-23	Marion Koopmans	European Society for Clinical Virology (ESCV) Symposium - Milan Italy	Speaker	
5-8-Sep-23	Nitish Debnath	Asia-Pacific Quadripartite One Health Workshop - Bangkok, Thailand	Speaker - One Health theory of Change and three pathways of change	
11-13-Sep-23	Wanda Markotter	FAO Agrifood SPI workshop - Rome, Italy	Participant - Science Policy Interphases Around Agrifoods	
12-Sep-23	Natalia Cediel Becerra	One Health in the Americas Workshop: The Importance of Interagency Collaboration in the Hemisphere and its rural communities - Organized by Interamerican Institute for Cooperation of Agriculture (IICA) - San José, Costa Rica	Keynote Speaker - Challenges for One health Operationalization	
14-Sep-23	Catherine Machalaba	One Health in Impact Assessment Training - Organized by Conservation Works Activity, The Union of Environmental Professionals of Liberia, and the National One Health Coordination Platform of Liberia - Monrovia, Liberia	Speaker - Overview of One Health and operational approaches	
15-Sep-23	Natalia Casas	National Congress of Infectious Diseases - Organized by Argentine Society of Infectious Diseases - Buenos Aires, Argentina	Speaker - One Health Roundtable: Surveillance and control of zoonoses	
18-Sep-23	Janice R. Ciacci Zanella	Science Summit at the 78 United Nations General Assembly	Presentation - Session (3) Health and Biodiversity, Lecture 3. One Health: How Brazil is Inserting Itself and Acting	<a href="https://sciencesummitunga78.sched.com/event/1PcrX">https://sciencesummitunga78.sched.com/event/1PcrX</a>
19-Sep-23	Catherine Machalaba	One Health Group of Friends session on the Economics of One Health - Organized by the Quadripartite and the One Health Group of Friends - Online Webinar	Presentation - The Cost of Action: Global Financing and the One Health Agenda - One Health Economic Analysis	
20-Sep-23	Nitish Debnath	2023 One Health Symposium at the University of Guelph, Hybrid New Global Directions in One Health	Presentation - Implementation of One Health in Bangladesh	

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24-Sep-23	Wanda Markotter	Science Summit along the 78th United Nations General Assembly (UNGA78) - Virtual Event	Panellist - Global One Health actions -	
25-27-Sep-23	Salama Suhail Almuhairi	FAO Global Conference on Sustainable Livestock Transformation - Organized by FAO - Rome, Italy	Presentation - Animal health for improved production and public health. The presentation covered one health, biosecurity, AMR, vaccination and animal health impact on human health and livestock production	<a href="https://www.fao.org/events/detail/fao-global-conference-on-sustainable-livestock-transformation/en">https://www.fao.org/events/detail/fao-global-conference-on-sustainable-livestock-transformation/en</a>
26-Sep-23	Marion Koopmans	Annual Meeting of the German Center for Infectious Research (DZIF)	Speaker	
1-3-Oct-23	Wanda Markotter	Pooling Collective Intelligence Conference - Organized by Université de Montpellier, CGIAR - Montpellier, France	Participant	
1-3-Oct-23	Thomas Mettenleiter	Pooling Collective Intelligence Conference - Organized by Université de Montpellier, CGIAR - Montpellier, France	Participant	
1-5-Oct-23	Salama Suhail Almuhairi and Elmoubasher Farag	17 <sup>th</sup> Conference of WOAHO Regional Commission for the Middle East	Participant - Developing a regional assessment survey on One Health coordination, communication and cooperation between Veterinary, Public Health and Environmental Protection Services and along with Dr. Elmoubasher and giving a presentation in the conference	<a href="https://rr-middleeast.woah.org/en/events/17%e1%b5%97%ca%b0-conference-of-the-regional-commission/">https://rr-middleeast.woah.org/en/events/17%e1%b5%97%ca%b0-conference-of-the-regional-commission/</a>
5-Oct-23	Natalia Casas	XXXIX National Hydatid Disease Conference -XLIV International Conference of Hydatidology - Organized by Argentine Association of Hydatidosis - La Pampa, Argentina	Presentation - One Health approach to Echinococcosis control and surveillance: One Health approach to Echinococcosis	
5-6-Oct-23	Serge Morand	Science / Policy Dialogue - Regional Consultation on Multi-Stakeholder Collaboration to Strengthen Sustainability and Resilience of Livestock Systems in South and Southeast Asia - Organized by FAO and the International Centre for Integrated Mountain Development (ICIMOD) - Kathmandu, Nepal	Participant - Biodiversity, Livestock and One Health	

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9-11-Oct-23	David Hayman	WOAH EBO-SURSY: International symposium on emerging and re-emerging zoonotic diseases; focus on viral haemorrhagic fevers in Africa - Organized by WOAHA - Senegal	Keynote speaker - WOAHA: focus on viral haemorrhagic fevers in Africa	<a href="https://rr-africa.woah.org/en/projects/ebo-sursy-en/">https://rr-africa.woah.org/en/projects/ebo-sursy-en/</a>
10-Oct-23	Natalia Casas	Live Streaming - One Health: an approach that builds resilience against emergencies and disasters - Organized by Internews Health Journalism Network (HJN)	Presentation	
11-Oct-23	Marion Koopmans	International Symposium on Zoonoses Research - Organized by Universität Münster - Berlin, Germany	Speaker	
12-Oct-23	David Hayman	WOAH EBO-SURSY project advisory committee meeting - Organized by WOAHA - Senegal	Advisory Committee Member	<a href="https://rr-africa.woah.org/en/projects/ebo-sursy-en/">https://rr-africa.woah.org/en/projects/ebo-sursy-en/</a>
12-13-Oct-23	David Hayman	WOAH EBO-SURSY Technical workshop for WOAHA focal points – Improving monitoring protocols; integrating scientific recommendations - Organized by WOAHA - Senegal	Contributing Expert - WOAHA: Technical workshop for improving viral haemorrhagic fever monitoring in Africa	<a href="https://rr-africa.woah.org/en/projects/ebo-sursy-en/">https://rr-africa.woah.org/en/projects/ebo-sursy-en/</a>
12-13-Oct-23	Thomas Mettenleiter	Breaking barriers: advancing the one health agenda with a focus on the environment - Organized BMZ, WCS - Berlin, Germany	Moderation, Presentation	
17-18-Oct-23	Nitish Debnath	National Conclave for Augmented Zoonotic Diseases Surveillance at Human Wildlife Interface - Centre for One Health, National Centre for Disease Control Directorate General of Health Services Ministry of Health & Family Welfare Government of India - New Delhi, India	Virtual Speaker - Preventing Zoonotic Disease Emergence	
18-Oct-23	Janice R. Ciacci Zanella	Roundtable on One Health, role of forest restoration in ensuring human, animal, and environmental health in Amazonia - Organized by Alliance for the Restoration of Amazonia, Brazilian Agricultural Research Corporation - Belem do Para, Brazil	Presentation	

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19-Oct-23	Janice R. Ciacci Zanella	XX National Congress of Brazilian Swine Veterinary Society - Organized by Brazilian Association of Veterinarian Specialists in Swine (ABRAVES) - Porto Alegre, Brazil	Presentation - How is Brazil positioned in regulations or standards related to One Health?	
19-Oct-2023	Marion Koopmans	Global Virus Network (GVN) Annual Meeting - Organized by GVN - Monte Carlo, Monaco	Speaker	
24-Oct-23	Serge Morand and Catherine Machalaba	Meeting - Global Research & Innovation Forum Resilience Against Outbreaks and Pandemics: Research to Identify Sustainable Solutions - Organized by WHO - Geneva, Switzerland (Hybrid Meeting)	Participants - Threats in a Changing World Research to Develop New Opportunities for Innovative Mitigation Interventions	
24-Oct-23	David Hayman	Inaugural meeting - WOAHA Ad Hoc Group for Next Generation Wildlife Health Information Systems Meeting - Organized by WOAHA - Virtual Event	Chair of the Ad Hoc Next Generation Information Systems Group	<a href="https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/">https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/</a>
31-Oct-23	Casey Barton Behravesh	G7 One Health High Level Event - Organized by Japan, G7 Presidency - Virtual Event	Presentation	
1-Nov-23	Catherine Machalaba	EPI-WIN webinar: Preventing epidemics and pandemics through One Health in practice - Voices from One Health professionals - Organized by WHO - Virtual Event	Presentation - One Health in Action - One Health overview and examples of One Health from practice	
3-Nov-23	Janice R. Ciacci Zanella	Pre-recorded Video statement - One Health Day - Video to South American Countries to Implement the One Health Approach	Communication	
3-Nov-23	Nitish Debnath	One Health Dialogue Series - One Health Implementation: How could we translate the One Health approach into actions at all levels? - organized by the Quadripartite - Online Program	Panellist - One Health Implementation: How could we translate the One Health approach into actions at all levels? - Shared One Health implementation in Bangladesh	
6-11-Nov-23	Wiku Adisasmito	Negotiations for the Pandemic Treaty (Country Delegation) - International Negotiating Body (INB), WHO - Geneva, Switzerland	Member of Country Delegation	

Date	OHHLEP member	Event	Event details/Title of contribution	Virtual link to contribution
6-8-Nov-23	Wanda Markotter	Global Technical Consultation, Strategic framework for early warning of animal health threats - Organized by FAO - Rome, Italy	Participant	
9-10-Nov-23	Nitish Debnath	STDF PPG 858 - Managing aflatoxin contamination in Asia using One Health Stakeholders' Consultation Meeting - Stakeholder consultation on One Health approach for Food Safety and International Collaboration - Bangkok, Thailand	Three On-line Presentation: Pathways of Change of One Health Implementation in Bangladesh	
13-Nov-23	Wanda Markotter	SAGO Meeting	Update SAGO on OHHLEP activities	
13-16-Nov-23	Serge Morand and Nitish Debnath	33 <sup>rd</sup> Conference of the Regional Commission for Asia and the Pacific - WOAHA - New Delhi, India	"Preventing Zoonoses at Source – towards enhancing capacity for prevention, rapid detection, awareness, control, and research on zoonoses	
13-16-Nov-23	Nitish Debnath	33 <sup>rd</sup> Conference of the Regional Commission for Asia and the Pacific - WOAHA - New Delhi, India	Speaker of Technical Item 1: Preventing Zoonosis at Source - Enhance capacity for prevention, control, and rapid diagnostic testing of zoonoses, boost research on rapid and accurate diagnostic techniques, refine awareness campaigns, and promote research on vector-borne zoonoses.	
15-Nov-23	Catherine Machalaba and Wanda Markotter	One Health Economics Mini-Congress - Organized by the Agricultural Research Council of South Africa and EcoHealth Alliance - Pretoria, South Africa and Online	Presentation - One Health Economics Overview and Perspectives	
16-Nov-23	Catherine Machalaba and Osman Dar	UKHSA Conference 2023 plenary session - One planet, one health: Our future - Organized by the UK Health Security Agency - Leeds, UK and Online	Panel Discussion - One Health Definition and Principles	
20-21-Nov-23	David Hayman	Inaugural meeting of core leadership - WOAHA Collaborating Centre Network for Wildlife Health Meeting - Organized by WOAHA - Paris, France	Co-chair of the WOAHA collaborating centre network	<a href="https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/">https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/</a>
20-24-Nov-23	Wanda Markotter	Capacitation One Health in Eastern and Southern Africa (COHESA) Project Biennial Conference - Organized by COHESA - Pretoria, South Africa	Invited presentation - One Health from Global to local	

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22-Nov-23	Natalia Cediel Becerra	XVIII Scientific Meeting of the National Health Institute - Organized by National Health Institute - Bogotá, Colombia	Keynote Speaker - The implementation of the One Health approach in the countries of the Americas: a top-down and bottom-up perspective	
22-Nov-23	Natalia Cediel Becerra	International Congress of Wildlife Management in Amazon and Latin-American Region - Organized by the Wildlife Conservation Society - Santa Marta, Colombia	Panellist - Quadripartite One Health Joint Action Plan and OHHLEP's role in OH implementation in Latin American Region	
22-24-Nov-23	David Hayman	WOAH Ad Hoc Group for Next Generation Wildlife Health Information Systems - Organized by WOAH - Paris, France	Chair of the Ad Hoc Next Generation Information Systems Group	<a href="https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/">https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/</a>
22-24-Nov-23	Serge Morand	Regional Meeting on Dengue Surveillance Systems and the Use of Early Outbreak Prediction Tools such as EWARS-csd in Countries of the Southeast Asia and West Pacific Regions - Organized by TDR Research on Diseases of Poverty (UNICEF, UNDP, World Bank, WHO) - Bangkok, Thailand	Presentation - OH approach for improving the arbovirus diseases surveillance and early response	
22-24-Nov-23	Wanda Markotter	ELEPHANT conference - Virtual event	Invited presentation - Global Initiatives in One Health: One Health High-Level Expert Panel	
24-Nov-23	Natalia Cediel Becerra	1 <sup>st</sup> Latin-American Congress of One Health and One Welfare - Organized by the Universidad de Cordoba, Colombia - Monteria, Colombia		
1-Dec-23	Casey Barton Behravesh	WOAH ad Hoc Group Meeting on Emerging Disease in Animals - Organized by WOAH - Paris, France	Participating Expert - Discussion on Emerging diseases and drivers of disease emergence in animals	
4-6-Dec-23	Wiku Adisasmito	Negotiations for the Pandemic Treaty (Country Delegation) - International Negotiating Body (INB), WHO - Geneva, Switzerland	Member of Country Delegation	
5-6-Dec-23	David Hayman	National One Health Aotearoa Symposium - Organized by Alliance between: University of Otago, Massey University, Institute of Environmental Science and Research (ESR) - Wellington, New Zealand	Virtual Keynote speaker	<a href="https://onehealth.org.nz/symposium2023/">https://onehealth.org.nz/symposium2023/</a>

Date	OHHLEP member	Event	Event details/Title of contribution	Virtual link to contribution
5-7-Dec-23	David Hayman	WOAH Ad Hoc Group on Emerging Disease in Animals Meeting - Organized by WOAH - Paris, France	Participating expert	<a href="https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/">https://www.woah.org/en/what-we-do/animal-health-and-welfare/wildlife-health/</a>
12-13-Oct-23	Nitish Debnath and Thomas Mettenleiter	Symposium - Breaking Barriers: advancing the One Health agenda with a focus on the environment - Organized by BMZ and WCS - Berlin, Germany	Presentation	
Jan-Dec-23	Casey Barton Behravesh	US Government Wildlife Dimensions of Zoonotic Disease and One Health interagency working group - U.S. Department of State - Virtual Meetings	Presentations - Overview of OHHLEP and Updates on New OHHLEP Materials When Published	

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