Breaking Barriers Event: Advancing the One Health Agenda with a Focus on the Environment

Breakout Sessions Outcomes Document

What this is: Brief overviews of key outcomes from 8 Breakout discussions that took place during the Breaking Barriers event (12-13 October, 2023), as follows:

Day 1 Breakouts – Highlighting important but less-commonly emphasized topics:

- Pollution & ecotoxicology
- Soil health
- Invertebrate biodiversity services and invasive species
- Pandemic prevention at source = protection of ecosystems & biodiversity
- One Health in the age of mass information

Day 2 Breakouts – Showcasing and discussing experiences with implementation:

- German 'Flagship' Projects on Biodiversity/Health
- One Health in Action: Experiences on the ground at the Environment-Health Nexus
- One Health Legal Frameworks: Connecting the new WHO CA+ process to existing

Federal Ministry for Economic Cooperation and Development | Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection | Food and Agriculture Organization of the United Nations | UN environment programme | World Health Organization | World Organisation for Animal Health Founded as OIE

Wildlife Conservation Society | giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH | International Alliance against Health Risks in Wildlife Trade | TIERPARK BERLIN | BERLIN WORLD WILD

To learn more about Breaking Barriers, please visit our event page:

"Unraveling the Impact: Pollution, Ecotoxicology and Their Roles in One Health"

Breakout lead/s: Chris Walzer – WCS, Wondwosen (Wondy) Asnake Kibret – UNEP
Moderator: Chris Walzer

Featured Speakers & Key Topics

Micah Miller – PhD Wildlife Research Scientist Biodiversity Research Institut	→	*"Ecotoxicology and One Health: What wildlife bioindicators say about environmental and human health"*
Silvia López Casas – PhD Freshwater Ecosystems Specialist, Andes, Amazon, Orinoco Region Wildlife Conservation Society [www.wcs.org]	→	*"Pollution and ecotoxicology in freshwater ecosystems, biodiversity and human health."*
Dr. Oliver Krone – Wildlife veterinarian, Leibniz Institut of Zoo and Wildlife Research	→	*"Lead toxicosis in large raptors and their role as indicator species for the environment, focus on Germany and Greenland."*
Sascha Gabizon – Exec. Executive Director Women Engage for a Common Future [www.wecf.org]		*Shared the latest thinking from ICCM and how to integrate One Health in the implementation of the new post 2020 framework.*

Key Points from the Discussions

1. *One Health emphasizes the **interconnectedness of human, animal, and ecosystem health**. It recognizes that the well-being of each component is closely intertwined and that addressing health challenges requires a collaborative and holistic approach. Ecotoxicology, is generally underrepresented in One Health approaches. However, it plays a significant role in understanding the impacts of pollution on wildlife, which can directly or indirectly affect human health through food chains and ecosystem services.*
2. ***Ecotoxicology and One Health are two interconnected fields** that shed light on the relationship between wildlife bioindicators, environmental health, and human well-being. By studying the impact of environmental pollutants on various wildlife species, we can gain valuable insights into the state of our ecosystems and potential risks to human health.*
3. *The **use of bioindicators** allows us to not only determine the extent of environmental contamination but also gauge the overall health and quality of ecosystems. Through careful monitoring and analysis of bioindicators, researchers can identify the presence and effects of pollutants, helping to inform management and conservation efforts.*
4. ***Ecotoxicology**, along with the use of environmental and wildlife bioindicators, provides critical information about environmental health and its impact on both wildlife, livestock, and humans. By integrating these findings into **policy frameworks and conservation strategies**, we can strive towards a healthier and more sustainable future.*

Open Points

- The significance and contribution of ecotoxicology to understanding the interconnectedness of human, animal, and environmental health are often overlooked. It is essential to recognize and address this under-recognition to ensure a comprehensive and holistic approach to health and well-being.
- Per- and polyfluoroalkyl substances (PFAS) are a group of synthetic chemicals that have gained attention due to their persistence, bioaccumulation, and adverse health effects. Understanding and addressing the intergenerational impacts of such pollutants is of utmost importance within the One Health context.

Next Steps & Offers from Audience Members

The participants have decided to draft and subsequently submit a **commentary piece** on the critical importance of integrating ecotoxicology in One Health approaches [Chris Walzer to lead on first draft].

"From Theory to Practice, How to Include Soil Health in One Health Implementation"

Breakout lead: Dr. Natalia Rodríguez Eugenio – FAO

Featured Speakers & Key Quotes

Dr. Bettina Hitzfeld – Head of Division of the Soil and Biotechnology Division at the Federal Office for the Environment, Switzerland	→ *"Healthy soils are central to One Health – but we still need to make this visible."*
Dr. Marco Martuzzi – Director, Environment and Health Department, Italian National Institute of Health, Italy	→ "*In environment and health, we have made great progress on air quality, water etc. High time we did the same for soil and health."*
Prof. Dr. Ravi Naidu – CEO and Managing Director of CRC CARE and Founding Director of the Global Centre for Environmental Remediation at the University of Newcastle, Australia	→ "*Although soil health is at the core of One Health, it lacks visibility, so we need to do more work to raise awareness among all stakeholders."*

Key Points from the Discussions

1. *Healthy soil is the **cornerstone of "One Health"**—an interconnected web linking the health of ecosystems, plants, animals, and humans.*
2. *Nutrient-rich soils produce nutrient-rich crops, which form the **basis of a balanced diet** essential for human well-being and for the healthy growth of animal feed.*
3. *Healthy soil acts as a natural **buffer against the spread of pollutants** and the spread of disease. Soils are home to 60% of terrestrial biodiversity. Biodiverse soils form a resilient barrier against pathogens, preventing their transmission to plants, animals and ultimately humans.*
4. *Healthy soils are also **more resilient** and able to retain and immobilise chemical pollutants entering the ecosystem. Soils also hold and filter water, protecting communities from waterborne diseases and pollution. Yet soil is a non-renewable resource, being depleted at high speed.*

Open Points

- Many humans are disconnected from land and soil. In many cultures, soils are seen as 'dirt' or an economic asset vs Indigenous Peoples and rural populations that see the land and soil as their "mother", is steeped in their culture, but also gives them the responsibility to care for it[1];
- Lack of awareness of the importance of healthy soils, and even of the basic facts making the soil an essential element of the biosphere.
- Local actions are mainly driven by accidents and impacts (e.g., pollution accidents, disease outbreaks) and not by a precautionary and prevention approach;
- Healthier, more nutritious and diverse diets are not well-established as a solution to achieve One Health;
- Lack of evidence on the impact of soil degradation on environmental and human health;
- Lack of information on the economic impact of soil degradation;
- Lack of attention to soils at all educational stages, particularly in health-related university degrees (veterinary, human health, plant physiology).

Next Steps & Offers from Audience Members

- **Make soil "sexy"** and promote activities that allow population to reconnect with the land.
  - World Soil Day[2] provides a great opportunity for this – dedicate next WSD campaign to One Health;
  - Messages must be targeted to the audience, including appealing to feelings and creating parallels between human and animal health and soil health;
  - Include health and environmental co-benefits (including climate change mitigation and adaptation and biodiversity conservation) in soil protection and sustainable soil management messages;
- **Make existing tools available** to different stakeholders and promote integration of different tools (e.g., crossing soil maps layers with certain diseases prevalence as in the case of anthrax outbreaks in alkaline soils in Kenya).
- **Focus on connecting the dots** of the One Health approach, using the wide range of information, surveillance and monitoring systems for human, animal, plant, and soil health.

References:

[1] http://www.creativespirits.info/aboriginalculture/land/meaning-of-land-to-aboriginal-people#ixzz3jXuKVGAG
[2] https://www.fao.org/world-soil-day/en/

"Arthropod Biodiversity Services and Invasive Species"

Breakout lead/s: Dr. Buyung Hadi – FAO, Dr. Ute Eilenberger – GIZ
Moderator: Dr. Ute Eilenberger

Featured Speakers & Key Quotes

Dr. Sunday Ekesi – ICIPE Kenya	→	*"Need to manage the harmful pests, especially invasive species sustainably to harness the ecosystem services of other beneficial insects such as pollinators, organic recyclers, insects for feed proteins, edible insects and others for a circular economy and One Health."*
Dr. Madelaine Healey – University of Sunshine Coast, Queensland Australia	→	"*Awareness on biological invasions; their economic, ecological, and social impacts; and the nature-based plant health solutions available to mitigate these impacts are often very low among common public, policy makers and researchers resulting in often underfunded and delayed investments in their management."*

Key Points from the Discussions

1. ***Balance of health****/optimize always a too much/too little*
2. *Evidence of impact/agroforestry –* ***business case***
3. ***Use native species*** *for agroforestry --> prevention!*
4. *There is a clear need to* ***bridge capacity gaps*** *and bring various National plant protection organisations in developing world to parity for effective invasive species management.*
5. ***Nature-based solutions*** *such as biological control as well as use of microbial biopesticides helps mitigate the risks of biological invasion and pesticide overuse.*
6. *Effectively linking enthusiastic* ***experts to curate Citizen-science databases*** *can enhance the quality of citizen science data.*

Open Points

- Systematic protocols that integrate risk assessments for biological control from selection of natural enemies to introduction and scaling is needed
- Education of the farmers, research communities, extension workers on the use and disadvantages of pesticides
- Need for strategy for emergency response in countries
- Socio-economic assessments of impacts of invasive species at the early stages of invasions needs to be refined, streamlined and advanced

"Pandemic Prevention at Source = Protection of Ecosystems & Biodiversity"

Breakout lead/s: Kim Grützmacher (International Alliance against Health Risks in Wildlife Trade), Pablo Sagredo Martin (UNEP), Wondwosen Asnake Kibret (UNEP), Cristina Romanelli (WHO), Molly Crystal (WCS), Chris Walzer (WCS), Chadia Wannous (WOAH)

Moderator: Cristina Romanelli; Pablo Sagredo Martin (co-moderator)

Abstract

Along the different stages of disease emergence leading to pandemics the proportion of pathogens making it to the next stage (from pre-emergence to pandemic) decreases as the costs for stopping them increases. Scientists have made a compelling economic case for pandemic primary prevention (prevention at source or upstream prevention) and claim that the cost of preventing further pandemics over the next decade by protecting wildlife and forests and regulating intensive livestock production in and around highly biodiverse ecosystems would equate to just 2% of the estimated financial damage caused by Covid-19.

Even though this approach would come with notable ancillary benefits for the climate and biodiversity, currently only a small percentage of efforts to reduce the risks of future pandemics goes to prevention at source (at the stages of pre-emergence and spillover) while the majority is invested in preparedness measures.

Approaches recognizing the incredible opportunity for investments contributing to solving the triple crisis (health, climate and biodiversity) are not only cost-effective but can reduce and prevent a lot of harm and suffering in the mid- and long-term.
In this session we looked at the current discourse around pandemic "prevention", and the practical implications.

Featured Speakers & Key Topics

Prof. Dr. Nitish Debnath – National Coordinator, One Health Bangladesh, OHHLEP member	→ *"Shifting the infectious disease control paradigm from reactive to proactive (Primary prevention)"*
Dr. Chadia Wannous – One Health Global Coordinator, World Organisation for Animal Health (WOAH):	→ *"WOAH's Wildlife Health Framework: The importance of protecting wildlife health to achieve One Health and its remaining challenges."*
Joan Carling – Executive Director, Indigenous Peoples Rights International-IPRI	→ *"Indigenous perspectives on ecosystems protection: Indigenous peoples are at the frontline when it comes to biodiversity protection, ecosystem changes, and its consequences."*

Key Points from the Discussions

1. *The **two main challenges** or barriers identified where the issues around not having a defined and common understanding of what pandemic prevention at source is and the lack of coordination between sectors when addressing pandemic prevention.*
2. ***Prevention must be proactive** vs. reactive and must lead us to address the drivers of spillovers – but the term "prevention" is understood very differently in different spheres - from conservation to policy to public health and social science – a common definition in the context of pandemic prevention is needed.*
3. *In the context of addressing the risks of future pandemics, **strategies to reduce the probability of zoonotic spillover events are still misunderstood** (including One Health), under-prioritized and under-utilized, despite their significant social, ecological, climate and economic co-benefits*
4. *The **strong economic case for primary prevention** (cost-effectiveness of measures) can help to overcome the prevention paradox (perceived invisibility of the value of prevention plus time lag of effects).*
5. *We need to **learn from Indigenous knowledges and practices** to observe and assess environmental changes, identify disease spillover risks, and shape prevention strategies.*

Next Steps

- Agree on the definition of "prevention" as *actions to identify threats and reduce risk of spillover* (as opposed to preparedness and response which refers to *actions which limit spread in human population*) and use term consistently.
- Shift the infectious disease control paradigm from reactive to proactive (primary / spillover prevention) and show the cost of "inaction" vs. "action" on prevention.
- Address drivers of pathogen spillover with a One Health approach at the human-animal-environment interface to minimise the risk of human infection by zoonotic pathogens.
- Translate abstract concepts and strategies (including One Health) by showcasing concrete actions taken on the ground to detect and prevent spillover risks.
- Action should range from sustainable use and management of ecosystems, identifying critical control points, risk communication, monitoring the occurrence and spread of diseases, access to vaccines while also fully utilizing existing tools and policies for pandemic prevention and response (co-design, co-create, co-construct, co-lead).

Open Questions

- What policies and political instruments are needed to enable prevention? How we can leverage existing tools or processes to lead us to enforceable legal frameworks that allow for action, starting at the local level?
- How do we address the lack of policy coherence, effort duplication (data duplication), and the need for whole of government approaches?
- How can we address vested interests amongst the stakeholders (particularly in preparedness and response), corruption as a symptom of this, short-termism in organizations and in the system, the lack of finance directed towards pandemic prevention and the existent erratic finance flows that exacerbate the drivers of pandemics?
- How can we ensure that Indigenous knowledges and practices related to wildlife and ecosystem management are integrated into pandemic prevention strategies?

"One Health in the Age of Mass Information"

Breakout lead/s: Craig Stephen – McEachran Institute, Canada
Moderator: Craig Stephen

Featured Speakers & Key Topics

Dr. John Berezowski – Professor & Chair in disease surveillance, Centre for Epidemiology and Planetary Health, Scotland's Rural College, Inverness, Scotland. → *Implications, sources and strategies for dealing with dis/misinformation*

Katharina Sperling – Head of Wildlife Conservation Program, Berlin World Wild, Zoo and Tierpark Berlin → *Information needs and challenges for One Health policy development*

Dr. Katie Woolaston – Interdisciplinary researcher in the School of Law at Queensland University of Technology → *Digital communications in conservation*

Key Points from the Discussions

1. *One Health depends on the ability to access, value and incorporate **multiple ways of knowing**, but it is at risk of becoming its own silo with its own information echo chamber.*
2. ***Strategic investments are needed** to help One Health practitioners and researchers understand the social and ecological context to help translate data into information.*
3. ***New partnerships** outside of the usual One Health community are needed to ensure information flow is not one way, that One Health is not speaking for others and that new strategies to connect and assess diverse ways of knowing are created, valued and applied.*

Open Questions

- Before looking to attack others for dis/misinformation, the One Health community needs to examine its own standard and cultures for how it creates, shares and applies information, and for whom.
- One Health issues are complex and often changing, making typical means of communication challenging. Engagement of marketing, communications and behaviour changes expertise is needed.
- Early and ongoing training of how to assess diverse forms of evidence and information is critical.

Next Steps & Offers from Audience Members

- Dedicated support to encourage mobility of One Health policy makers, researchers and practitioners is needed to build a broader understanding of how information is perceptive, values and use to help develop perspectives and skills to help shape a shared understanding of key issues

"German 'Flagship' Projects on biodiversity/health: International Alliance and N4H"

Breakout lead/s: Dr. Kim Grützmacher – International Alliance against Health Risks in Wildlife Trade, Nadja Münstermann – UNEP, Dr. Julian Blanc – UNEP, Dr. Chadia Wannous – WOAH, Catherine Machalaba & Hongying Li – EcoHealth Alliance

Moderator: Maike Voss – Center for Planetary Health Policy

Abstract

In response to the COVID-19 pandemic various initiatives were launched to prevent, prepare for, and respond to future pandemics. Within this triad, few address pandemics primary prevention or prevention at source – pre-spillover. Of those that do, few explicitly focus on the environment, ecosystems, and wildlife (fauna), even though this is arguably the most effective and cost-efficient approach to prevent the emergence of new and re-emergence of infectious diseases of zoonotic origin.

In 2021 and 2022, respectively, the German government (represented by the Federal Ministry for Economic Cooperation and Development – BMZ – and the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection – BMUV) launched two initiatives which promote the synergies of nature conservation and health protection: The International Alliance against Health Risks in Wildlife Trade and the Multi Partner Trust Fund - Nature for Health (N4H).

The breakout session highlighted the benefits of taking a participatory systems approach to One Health implementation. We explored not only *what* to do (i.e. prevention), but also *how* to do it (i.e. dive into systemic practices). We looked at synergies and how to maximise them, discussing what this work means in the larger context of pandemic prevention at source.

Featured Speakers & Key Topics

Dr. Raymond Hamoonga – One Health Specialist, Zambia National Public Health Institute	→ *"The establishment of a One Health strategy in Zambia as one of the N4H implementation countries."*
Johannes Keil – GIZ Global Program "International Alliance against Health Risk in Wildlife Trade"	→ *"An introduction of the International Alliance and its fields of action"*
Dr. Ulaankhuu Ankhanbaatar – Laboratory head of TADs diagnostic and surveillance, State Central Veterinary Laboratory, Mongolia	→ *"First experiences, challenges, and lessons learned from Mongolia as a N4H implementation country."*
Dr. Christina Pettan-Brewer – Associate Professor, Director and Senior Veterinarian, One Health Brazil/Latin America (OHLAIC/CYTED) and UW Center for One Health Research	→ *"One Health experiences and status quo from Latin America"*
Dr. Julian Blanc – Senior Program Officer, Ecosystems Division, UNEP	→ *"Set-up of N4H and its implementation scope"*
Joan Carling – Executive Director, Indigenous Peoples Rights International-IPRI	→ *"The collaboration between IPRI and the International Alliance"*

Key Points from the Discussions

1. ***Anthropogenic drivers of biodiversity degradation*** *and loss highlight emerging health threats which are deeply embedded in both local and global matrices, unleashing catastrophic consequences for life on earth.*
2. *The urgency of the hour demands* ***integrated and systemic approaches*** *that purposefully interlink the missions of halting biodiversity loss and protecting health simultaneously, to create sustainable solutions to our interconnected ecological and health crises.*
3. *It is possible to* ***simultaneously address the biodiversity and health crises*** *as a growing number of programs are highlighting.*
4. ***Local stakeholders*** *are absolutely critical for success and should define what success looks like, while governments and suitable governance structures are crucial to create enabling conditions.*

Next Steps & Key Actions

…for governments:

- **Donors** are encouraged to break down existing siloed funding structures and strategically interlink funding streams, thereby facilitating the critical funding of integrated health projects that have the dual capacity to help countries meet their health and biodiversity commitments (while co-benefiting climate change mitigation and adaptation). They are encouraged to invest in programs at the biodiversity-health nexus for improved health through cost-effective prevention, while simultaneously contributing to biodiversity targets.
- **PARITY (Participatory, Action-oriented, Responsive, Iterative, Transparent, Yielding) in action:** Advocating for approaches that are inherently participatory and demand-driven - promoting iterative, non-linear pathways informed by continuous feedback loops, thereby cultivating resilient and adaptive strategies in biodiversity and health interventions.
- **Global urgency governance**: There is a need for globally coordinated, accelerating, long-term governance that responds to the urgent need for effective action: interdepartmental, cross-scale and coherent policymaking based on systematic coordination processes between outward- and inward-facing policy fields and oriented towards the guiding principle of healthy living on a healthy planet.

…for stakeholders:

- Engage at different levels, i.e., at community level, influencers, and decision makers at local and district level, including engagement of sociologists, behavioural psychologists, marketing and communication experts, economists, political scientists, etc.

One Health in Action: Experiences on the Ground at the Environment-Health Nexus

Breakout lead/s: Chadia Wannous – WOAH, Chris Walzer – WCS
Moderator: Chris Walzer

Featured Speakers & Key Topics

Dr. Stacy Jupiter – PhD Melanesia Regional Director, Wildlife Conservation Society	→	*"Watershed Interventions for Systems Health (or WISH) approach to revitalize customs and traditions to inspire environmental stewardship for health and well-being outcomes."*
Dr. Livia Victoria Patrono – PhD Senior Scientist, Department of Ecology and Emergence of Zoonotic Diseases, Helmholtz Institute for One Health	→	*"One Health in action: Experiences from the EBO-SURSY project. One Health training to build capacity for hemorrhagic fever surveillance at the wildlife/domestic/human/environmental interfaces.*
Luis Guerra – MV, MSc Regional Health Coordinator, Mesoamerica & Western Caribbean, Wildlife Conservation Society	→	*"Formation of the One Health Technical Board of Guatemala. Implementation of the One Health approach to disease monitoring and prevention in the Mayan Forest.*
Dr. Raina Plowright – PhD Rudolf J. and Katharine L. Steffen Professor of Veterinary Medicine Cornell Atkinson Center for Sustainability, Cornell University	→	*"Pathogen spillover driven by rapid changes in bat ecology. Predicting Hendra virus spillover clusters across 25 years. Bats forgo nomadism and persist in novel habitats because of nearly complete loss of food that provides nectar in winter."*

Key Points from the Discussions

1. ***Long-term studies*** *[decades!] are required to fully understand the mechanisms and drivers of pathogen spillovers across various interfaces. Taking on such studies as an early career scientist is extremely risky.*
2. *Establishing the necessary* ***administrative structural reforms*** *to implement national and regional One Health approaches requires trust, tenacity, and long-term commitments.*
3. ***Broad multi-disciplinary generalists*** *are urgently required to guide and drive One Health implementation.*
4. *Pandemic prevention with* ***strategic protection and restoration of habitat*** *- Avoid: wildlife displaced to human habitats wildlife nutritional or physiological stress.*

Open Points

- To understand and address the drivers of pathogen spillovers at the wildlife-livestock-human interfaces we need donor agencies and others to provide funding opportunities across disciplines and sectors.
- Reviewers with the necessary breadth of knowledge to adequately understand complex multidisciplinary grant applications are generally lacking. It is critical to engage with granting entities to remediate this untenable situation.

Next Steps & Offers from Audience Members

There were suggestions to write a commentary piece highlighting the issues surrounding the lack of multidisciplinary understanding across funding agencies.

"One Health Legal Frameworks: Connecting the WHO CA+ to Existing Frameworks"

Breakout lead/s: Christine Franklin – Intergovernmental Policy Officer, WCS;
Dr. Chadia Wannous – One Health Global Coordinator, WOAH

Moderator: Dr. Susan Lieberman – Vice President, International Policy, WCS

Featured Speakers & Key Quotes

Dr. Rosalind Reeve – Senior Advisor, David Shepherd Wildlife Foundation and Fondation Franz Weber	→	*"Multilateral environment agreements such as the Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and United Nations Environment Assembly (UNEA) have adopted non-binding frameworks and resolutions related to biodiversity and health but must now focus on implementation."*
Prof. Dr. Elisa Morgera – Professor of Global Environmental Law, University of Strathclyde & Director, UKRI GCRF One Ocean Hub	→	*"Equity is often mentioned in international law, but it is a fuzzy concept and requires a frank conversation."*
Dr. Chadia Wannous – One Health Global Coordinator, World Organisation for Animal Health	→	*"Prevention of spillover events and drivers of risk, and the need for the One Health approach to achieve this, need to be adequately reflected in the pandemic accord. The Quadripartite collaboration on One Health (FAO, UNEP, WHO and WOAH) have been providing technical support and working with member countries including the OH Group of Friends to advocate for and promote the inclusion of relevant articles and provisions in the instrument."*
Danny Andrews – Head of Global Health team, UK Mission to the UN in Geneva	→	*"The informal meetings on Articles 4 and 5 of the Bureau's text of the WHO CA+ included discussions on concepts, structure, areas of convergence and divergence, and areas where further work is needed. They are currently paused, with no clarity on if they will continue."*
María Juliana Tenorio Quintero – Minister Counsellor, Permanent Mission of Colombia to the United Nations Office and other international organizations in Geneva	→	*"Developing countries views on the WHO CA+ are divergent with some supporting the inclusion of legal provisions on One Health. However, other countries are not necessarily opposed but question how to operationalize such provisions."*

Key Points from the Discussions

1. *Parties have begun to address the issues around the prevention of pathogen spillover through various **multilateral environment agreements**, but human and animal health are not the primary missions of those agreements and any resolutions and decisions that have been or may be adopted are not legally binding.*
2. *Participants agreed that the **inclusion of mandatory requirements** designed to prevent the spillover of pathogens from wildlife to other animals and people is one of the most important things that Member States can do when drafting and negotiating the **WHO accord**, but this must be done in accordance with other relevant international standards including those that govern animal health and welfare.*
3. *When negotiating the WHO pandemic accord, we should recall **human rights-related UN resolutions**, such as the right to science and the right to a clean, healthy and sustainable environment.*
4. *A draft negotiating text of the **WHO pandemic accord** was released a few days after this event, with the first round of negotiations set to take place in two parts (November 6-10 and December 4-6, 2023). The participants of this breakout session and overall event should reach out to their governments to advocate for the inclusion of legal provisions on One Health, particularly pandemic prevention at source. It is not enough to prepare for and respond to future pandemics, governments must do all they can to also prevent them.*

Open Points

- Making an economic case for One Health and pandemic prevention
- Ensuring that pandemic prevention at source is enshrined in the WHO pandemic accord- an open question is how far upstream the accord should go and how to collaborate with relevant international and regional intergovernmental organizations and other bodies.
- Development of One Health capacities, including for prevention, with particular regard to the development and strengthening of the capacities of low and lower middle-income countries.