One Health Outlook

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Scientific highlights of the 8th world one health Congress, Cape Town, South Africa 2024

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Abstract
The 8th World One Health Congress took place in Cape Town, South Africa on 20–23 September 2024 to address all cross-sectoral and transdisciplinary aspects of the One Health paradigm, integrating human, animal, and environmental health. It brought together more than 1400 participants from 87 countries, and 400 speakers across 70 sessions. We summarize here the fourteen keynote lectures, which emphasized the need for a One Health approach to better integrate plant and agricultural health against food insecurity; the continuing challenges posed by antimicrobial resistance and emerging infectious threats; a paradigm shift towards health risk prevention; and approaches to further strengthen and expand the impact of the One Health movement.

Keywords One health, Conference report, Science

Introduction

Since 2011, when the first One Health Congress of this series took place, the One Health approach has become accepted and implemented by an ever growing number of universities, research institutions, national and international health and environmental organizations, policy makers and industry. The One Health approach deals with the impact of complex and dynamic interphases between human, animal, plant and environmental health.

The 8th World One Health Congress in Cape Town, South Africa on 20–23 September 2024, was jointly organized by the global One Health Community, the University of Witwatersrand, South Africa and the Africa One Health Network, Zambia. The organization was supported by the Quadripartite Collaboration on One Health of the Food and Agriculture Organization (FAO) of the United Nations (UN), the UN environment programme (UNEP), the World Health Organization (WHO), and the World Organization for Animal Health (WOAH; formerly OIE), and with additional support from the International Livestock Research Insitute (ILRI). It brought together more than 1.400 participants from 87 countries, and 400 speakers across 70 sessions, giving the floor to leading experts addressing global One Health science and policy.

With the aim of addressing all cross-sectoral and transdisciplinary aspects of the One Health paradigm, integrating human, animal, and environmental health, the congress ran parallel tracks on One Health science, antimicrobial resistance (AMR), and the science policy interface (SPI), among others. It enabled discussing major One Health challenges, as well as sharing research data and policy developments, and provided a unique

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opportunity to look at global One Health science and policy through an African lens. Through an open call for abstracts, notable work from distinguished scientists and opinion leaders was disseminated at the world's largest forum dedicated to advancing the One Health agenda and community.

Here we provide a summary of the fourteen keynote lectures presented during the Congress, all addressing major One Health topics. A summary of the SPI track is available as a separate article [1].

One health against food insecurity

As a much welcome effort to comprehensively advance the One Health movement, dedicated sessions of the Congress addressed the often-underrepresented aspect of One Health associated with plant health, agricultural development, and food security.

Gregory Wolff, chairperson of the Commission on Phytosanitary Measures for the International Plant Protection Convention (IPPC), presented the opening keynote lecture for the Congress. He emphasized the critical role of plant health in the One Health framework. Plants are the foundation of the food chain, providing over 80% of the food we eat, and are essential for oxygen production and environmental balance. However, plant pests and diseases cause significant crop losses, with the most vulnerable populations—already facing food insecurity—being the hardest hit. Climate change exacerbates the spread of these pests, making it urgent to protect plant health to ensure global food security.

Wolff called for more integration of plant health into global health discussions, particularly within the One Health context. Wolff highlighted the IPPC's efforts to set international standards to prevent the spread of plant pests and diseases, and addressing the evident concern over antimicrobial resistance, including in a plant health context. The IPPC also continues to analyze the impacts of climate change on plant health and to collect scientific evidence and generate the tools necessary to safeguard against pests and disease outbreaks. In that regard, Wolff suggested that the Quadripartite Collaboration on One Health could more prominently identify the IPPC, an international treaty ratified by 185 countries and recognized by the World Trade Organization as one of the three world's standard setting organizations, together with the Codex Alimentarius Commission and the WOAH.

Wolff urged for stronger collaboration and innovation in plant protection, citing the need for advanced biosurveillance systems, better pest management, and the use of integrated approaches to reduce pesticide overuse. In order to establish fully effective One Health systems, he argued that integrating and harmonizing training, detection, diagnostics, response and control mechanisms is essential. He invited delegates to engage in discussions on plant health and called on all stakeholders to prioritize plant health as a vital part of the One Health framework. He concluded by emphasizing that "good planet health needs good plant health," and encouraged continued efforts to safeguard plant health for a healthier future.

Appolinaire Djikeng, Director General of the International Livestock Research Institute (ILRI), and Managing Director of the CGIAR Resilient AgriFood Systems science area echoed and expanded the message of the opening lecture with his keynote on "Leveraging One Health Approaches and Innovations for Resilient Food, Land, and Water Systems." He emphasized the critical role of agriculture, particularly in the context of the climate crisis, in achieving global development goals, including poverty reduction. Djikeng discussed the challenges in agricultural systems, such as greenhouse gas emissions, biodiversity loss, water usage, productivity and food waste. He highlighted the importance of addressing these challenges through innovation and sustainability to ensure food security and mitigate climate change impacts.

Djikeng outlined the work of the Consultative Group on International Agricultural Research (CGIAR), the world's largest publicy funded agricultural research network committed to innovation for farmers and food systems in the developing world, in transforming food, water, and land systems under the One Health framework while contributing to global sustainable development efforts. CGIAR actions include strenghtening country capacities to control neglected and emerging zoonotic diseases, from Rift Valley fever to COVID-19, holistic One Health diagnosis and intervention in traditional markets and meat and fish processing sectors, mitigating agricultural AMR risks, and One Health management of wild meat value chains. He emphasized the need for capacity building, policy support, and scaling successful solutions to reach millions of people. He further addressed the importance of partnerships across sectors, the use of digital tools and data to enhance agricultural practices, and emphasized the role of AMR in jeopardizing food safety. To conclude, Djikeng called for continued collaboration, evidence-based decision-making, and the integration of local partners to ensure sustainable agricultural development.

One health against antimicrobial resistance

Three keynote lectures were devoted to the global issue of antimicrobial resistance (AMR).

Jomana Musmar, representing the U.S. Department of Health and Human Services (HHS), discussed the global collaboration and policy efforts aimed at combating AMR through a One Health approach. She outlined the work of the Presidential Advisory Council on Combating

Antibiotic-Resistant Bacteria (PACCARB). The council advises the U.S. Secretary of Health and Human Services on AMR through expert recommendations on a range of topics including infection prevention, data privacy and sharing, workforce expansion, product innovation, among others. She shared information on implementation of the U.S. government's national action plan to combat AMR, which was first established in 2015; it focuses on five goals: preventing infections, strengthening surveillance, advancing diagnostics and new antibiotics, and improving international collaboration.

Musmar highlighted the severe economic and health threats posed by AMR, including an estimated $1–3.4 trillion annual loss to the global economy by 2030 and up to 10 million deaths annually by 2050. The rising resistance of bacteria and the exacerbating factors like climate change, health inequities, and environmental racism make AMR a complex, systemic issue that requires global attention.

Musmar stressed that AMR must be included in all emergency and pandemic preparedness discussions, as it directly impacts global health with all One Health domains intricately interconnected [2]. She addressed how AMR is worsened in conflict zones, citing how war leading to significant environmental destruction, soil and water contamination, human displacement, and limited access to healthcare facilitate the exponential increase and rapid spread of resistant pathogens. Global cooperation and localized, community-driven solutions are key to combating AMR effectively.

In conclusion, Musmar called for continued dialogue, data sharing, and collective action to combat AMR and stressed the need for accountability in implementing solutions. She invited further engagement and input from, often, global stakeholders, emphasizing that AMR is a global issue that transcends borders.

David W Graham, from Durham University in the UK, discussed the need for greater cross-sectoral integration in research, surveillance and action in the fight against AMR. He framed AMR as a complex issue impacted by antimicrobial use and other human activity, especially environmental pollution, arguing that resistance arises when microorganisms are exposed to antimicrobials and other stressors, leading to stronger, more resistant strains [3]. He explained that AMR presents two major risks: the direct risk of infection by resistant pathogens and the longer-term risk of developing new untreatable pathogens that can spread between regions and One Health sectors, often through the environment.

Graham emphasized that to address AMR effectively, surveillance systems must go beyond tracking infections and also monitor environmental factors such as the presence of chemicals, metals, and antimicrobials [4]. This integrated approach is necessary for understanding the transmission pathways of resistance. However, he noted that current research is fragmented and often lacks the cross-sectoral data required to make informed decisions. For example, while there is substantial research on AMR genes, studies often overlook the genetic context of those genes or fail to connect environmental observations to human or animal health outcomes. Similarly, plant health research, which could provide important insights into AMR transmission, remains underrepresented.

Using AI and machine learning, Graham's team analyzed over 250,000 research papers on AMR and found that although research on AMR is increasing, it remains heavily concentrated in high-and middle-income countries, such as China, the US, and India, with lower income countries—which face the greatest AMR burden—being underrepresented [5]. They also identified significant redundancies in research, particularly in wealthier countries, where similar studies are repeated without adding new insights.

Graham's study revealed that while research integration is improving over time, there are still critical gaps. For instance, environmental studies often fail to isolate and sequence resistant organisms, limiting our collective ability to calibrate data from metagenomics– an approach that has great potential for integrated AMR surveillance.

He called for a more coordinated approach to research that bridges the gaps between human, animal, plant, and environmental health. He also recommended reducing redundant research efforts and encouraging more innovation, especially work of greater value to regions most affected by AMR.

In conclusion, Graham argued that tackling AMR requires integrated surveillance systems that can track data across sectors and regions. This approach will help fill knowledge gaps, guide decision-making, and better address the global AMR crisis, particularly in low-income countries where the need for effective solutions is most urgent.

Yewande Alimi, representing both the Africa CDC and the African Union Inter-African Bureau for Animal Resources, shared key insights regarding AMR in Africa. The African continent bears the highest burden of AMR globally, which results in not only numerous deaths but also significant economic losses. Approximately 20% of Africans lack access to affordable antimicrobials, and without action, 4.1 million people could die annually from AMR. A multi-year study across 14 African countries [6] revealed alarming levels of AMR, with many countries showing resistance rates far higher than the global benchmark.

Alimi discussed the importance of amplifying Africa's voice in global AMR discussions, particularly during the UN General Assembly [7]. The African Union has worked to elevate the continent's AMR priorities, advocating

for stronger governance, One Health approaches, better surveillance, and increased financing. Despite the challenges, Alimi stressed that cost-effective interventions, such as infection prevention, better sanitation, and improved animal husbandry, could significantly reduce AMR drivers in Africa. Specific recommendations include the need for enhanced laboratory capacity across sectors, integrated surveillance, and domestic financing for national action plans. Alimi also highlighted the importance of political commitment and local manufacturing of medical commodities, including vaccines, to support AMR prevention. The One Health approach is crucial for sustainable solutions. Finally, Alimi called on international partners to increase investment in Africa's AMR efforts, citing the need for both greater funding and support for homegrown solutions to combat the rising threat of AMR.

One health against emerging infectious threats

Three keynote lectures brought enlightened perspectives on current and future emerging infectious threats and innovative ways to tackle them.

Linfa Wang, a leading expert in zoonotic diseases, bat immunology, and pathogen discovery at Duke-NUS Medical School in Singapore, shared his research lessons on emerging viral threats over the past 30 years. Wang emphasized the necessity of the One Health approach while highlighting that zoonotic viruses often originate from bats and require an intermediate host. Addressing both animal-to-human spillover and human-to-animal transmission (spillback) is critical for preventing outbreaks and pandemic, like that of COVID-19.

Wang introduced the concept of "unnatural natural reservoirs," where humans pass a virus to animals, which can then serve as reservoirs, even without showing symptoms. He pointed to cases like SARS-CoV-2, where minks and white-tailed deer were infected with the virus and could potentially spread it back to wildlife, domesctic animals or humans, raising concerns about future zoonotic outbreaks.

He discussed the success of the One Health vaccine approach, developed in Australia, which involved vaccinating horses against the Hendra virus to prevent transmission to humans. This approach has been successful in preventing human infections. Wang suggested a similar strategy could be applied to prevent MERS outbreaks by vaccinating camels, the virus's intermediate host.

In his recent research, Wang has shifted focus to understanding how bats' immune systems could inspire new human treatments. Bats, which coexist with many viruses without developing disease, have evolved mechanisms to balance immune responses and prevent over-inflammation. Wang's team has identified a protein, X2, that dampens inflammation and protects against viral infections. This discovery has led to the development of potential bat-inspired anti-inflammatory drugs, with plans for clinical trials by 2026.

Wang concluded by highlighting the growing interest in bat immunology, with significant funding and research efforts now focused on translating these findings into human health applications. He believes that learning from bats' immune systems could offer novel strategies for preventing diseases and extending human health span.

Marietje Venter, an expert in zoonotic and vector-borne diseases at the University of Witwatersrand and University of Pretoria, South Africa, delivered a keynote on how climate change is driving the emergence of novel pathogens, with a focus on arboviruses. She discussed how factors like global warming, deforestation, air and water pollution and industrialization are creating favorable conditions for the spread of vector-borne diseases, particularly those transmitted by mosquitoes, such as Zika, West Nile, Chikungunya, and Rift Valley Fever. These viruses are spreading beyond their traditional regions due to changes in mosquito distribution, especially *Aedes* and *Culex* species. While some diseases, like Rift Valley Fever, can be controlled through livestock vaccination, others, like West Nile, are more difficult to manage because they are spread by wildlife, in the case of West Nile, wild birds.

She highlighted her team's surveillance work in South Africa, where they monitored animals, such as horses and wildlife, to detect emerging diseases. This approach revealed that several viruses, including West Nile and Shuny viruses, were circulating in animals but not detected in humans due to limited testing. Venter emphasized that these diseases are underreported in Africa, stressing the need for improved surveillance.

Venter also pointed out that mosquito populations vary by region, with some areas in South Africa facing a higher risk of outbreaks. Her work further showed that different mosquito species can transmit various viruses, complicating control efforts.

In conclusion, Venter called for expanded surveillance and a coordinated approach to address the growing threat of vector-borne diseases, urging better data collection, monitoring, and the use of the One Health framework to protect public health in both humans and animals.

Eddie Holmes, from the University of Sydney, Australia, focused on the potential of metagenomics, especially when combined with Artificial Intelligence (AI), to empower the One Health approach and improve our understanding of how viruses cross species barriers to cause disease. Metagenomics involves sequencing the RNA from diverse samples (e.g., animal tissue, feces, food), which helps identify viral diversity and discover

new viruses. This method has proven useful in tracking how viruses jump between species, an important factor in preventing pandemics.

Holmes shared an example from a study of small mammals in Yunnan Province, China, where metagenomic sequencing identified 162 viruses, 24 of which were deemed "risky" due to their ability to infect multiple species. These included coronaviruses found in gut tissues of animals, highlighting the potential of non-invasive fecal sampling. He also discussed the risks associated with the wildlife trade, particularly the fur farming industry in China, where viruses like H9N2 avian influenza virus and HKU8-alpha coronaviruses were found in animals like raccoon dogs and civets. These animals, often sold as game food, are significant sources of zoonotic viruses.

Holmes further described ongoing work investigating the viral risks in non-traditional farmed animals such as raccoons, capybaras, and camels. He stressed that metagenomics and AI could help identify new viruses and antimicrobial resistance genes in wildlife and farmed animals. Holmes concluded by discussing the critical role of metagenomics and AI in studying COVID-19 and the virus's potential origin in wildlife markets, emphasizing the importance of preventing such outbreaks by better understanding the viral diversity in animals and their movement across species.

In sum, metagenomics, when coupled with AI, can play a transformative role in identifying emerging infectious diseases, improving prevention strategies, and supporting the One Health approach by monitoring viral diversity and potential spillover events.

One health prioritizing health risk prevention

While reactive responses remain the often-chosen path to controlling emerging infectious threats, the One Health framework urges a paradigm shift towards prevention for more effective control.

Chadia Wannous, One Health Global Coordinator and Senior Specialist at the WOAH, addressed the urgent need to prioritize health risk prevention by adopting the One Health approach. The world is facing multiple interconnected challenges, including pandemics, neglected zoonotic diseases, antimicrobial resistance (AMR), food safety issues, and environmental degradation. These challenges call for a shift away from siloed approaches to health—where animal, human, and environmental health are treated separately—to a more integrated, proactive strategy.

Wannous highlighted that the recent COVID-19 pandemic underscored the risks of neglecting the connections between human, animal, and environmental health, with 75% of emerging infectious diseases and nearly all pandemics originating from this intersection. She noted that the current trajectory of human expansion into natural habitats exacerbates these risks by disrupting ecological balance, thus increasing the potential for zoonotic disease spillovers.

She convincingly argued that prevention is cost-effective, noting that while preventing health risks through the One Health approach would cost approximately $10–11 billion annually, the cost of responding to a pandemic like that of COVID-19 is around $30 trillion. Therefore, she urged investment in prevention over reactive containment strategies.

Wannous shared the WOAH's work in prioritizing prevention, including advocating for One Health policies, building capacity in countries to implement these strategies, and developing integrated surveillance and early warning systems. She highlighted specific projects like the IBOSURCE initiative in Africa, which strengthens surveillance for viral hemorrhagic fevers. Additionally, the WOAH focuses on science, research, and data sharing, as well as public awareness campaigns to increase understanding of One Health principles. The WOAH collaborates with the WHO, FAO, and UNEP through the Quadripartite Collaboration to create a unified approach to global health challenges. In conclusion, Wannous stressed that the time to act is now, and by working together across sectors and borders, a healthier and more sustainable future is within reach.

Maria Van Kerkhove, infectious disease epidemiologist, technical lead for the COVID-19 response and Director of the Department of Epidemic and Pandemic Preparedness and Prevention at the WHO, likewise emphasized the importance of not just preparing for future pandemics but preventing them. She stressed that while COVID is likely not be the last pandemic of our lifetimes, there have been significant advances in the past two decades in health emergency preparedness that need to be sustained and built upon. The WHO is working on the Health Emergencies Prevention, Preparedness, and Response (HEPR) framework, which incorporates recommendations from member states and organizations to improve preparedness from both technical and governance perspectives.

She highlighted the need for a global approach to health emergencies, involving collaboration across sectors, including the environment, and the importance of a One Health approach to prevent the emergence and mitigation of zoonotic diseases. WHO has also been focusing on addressing threats like climate change, conflict, and disasters, which exacerbate health risks and complicate emergency responses. Dr. Van Kerkhove underscored the growing risk of zoonotic diseases, which account for a significant percentage of emerging infectious diseases, and the necessity of strengthening surveillance, laboratory capacities, community engagement, clinical care and healthcare systems globally.

She discussed the integration of various health initiatives to avoid siloed responses to diseases and the need for sustained investments in these capacities. Van Kerkhove also touched on the challenge of maintaining preparedness beyond election cycles and political changes, urging governments to maintain readiness and avoid fear-driven responses. She expressed gratitude for the support of WHO Member States and from organizations like USAID on spillover prevention and highlighted the importance of using data and evidence to guide preparedness efforts.

Additionally, van Kerkhove addressed the WHO's work on managing bio-risks, including the prevention of laboratory breaches and ensuring the equitable distribution of medical countermeasures. She concluded by calling for a state of global alertness, with governments prepared to prevent, mitigate, and manage health emergencies, based on science, trust, transparency, and collaboration.

Trevor Smith from Global Affairs Canada gave a keynote address on biosecurity, expressing deep concern about the threat of biological weapons and the need for enhanced cooperation between public health and security sectors. He summarized the historical development and continued threat of biological weapons. Smith explained how, despite efforts to curb their use through international agreements like the Geneva Protocol and the Biological and Toxin Weapons Convention, countries, including the Soviet Union and Japan, developed and deployed biological weapons. He also pointed out the ongoing threat posed by terrorist groups, such as al-Qaeda and ISIL, who seek to acquire biological weapons.

Smith underscored the importance of biosecurity and the need for a global, collaborative response to prevent the use of biological agents as weapons. He discussed the work done by the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, a G7-led initiative, and how it has made significant strides in preventing bioterrorism. However, he stressed that more efforts are needed, particularly in bridging the gap between the health and security sectors. Despite advancements, Smith argued that the lack of coordination between these sectors remains a major challenge.

He concluded by calling for more recognition of the biosecurity threat and urged public health professionals to engage with security organizations in their own countries. He highlighted initiatives like BioTracker, a bioterrorism surveillance system, and the upcoming Women's Network for Biosafety and Biosecurity meeting in Tanzania as examples of ongoing efforts. Smith's appeal was clear: while the public health community has made strides in disease prevention, it must also address the threat of deliberate biological threats with the same urgency.

Streghtening the One Health movement

Overall, great progress has been achieved on the One Health front, however, continued efforts are needed to ensure the effective implementation of One Health solutions, as discussed in three keynote lectures.

Rumbidzai Gondo, a research analyst from Nature for Health and the Zimbabwe Youth Biodiversity Network, delivered a passionate talk on the interconnectedness of health, nature, and biodiversity, with a prescription for progress emphasizing the importance of youth involvement in addressing these issues.

Gondo highlighted the ongoing challenges Zimbabwe faces, including severe droughts—six South African countries having declared a state of emergency due to the 2024–2025 El Nino land drought—food insecurity and water scarcity exacerbated by climate change. She also pointed to the rise of zoonotic diseases, such as cholera and anthrax, and the risks associated with poor sanitation and malnutrition. The impacts on both human and environmental health are profound, with millions of people at risk of hunger and malnutrition, particularly children. In fact, Zimbabwe fails nine out of the 17 Sustainable Development Goals (SDGs); overall, most SGDs will not be met by 2030.

Gondo argued that the concept of One Health is still unfamiliar to many—especially the grassroots at the forefront of the One Health challenges—yet it is vital for addressing the root causes of health crises, from food insecurity to infectious diseases. She noted that political, social, and economic barriers prevent many young people, indigenous people and grassroots from fully participating in decision-making processes. Gondo introduced a Congolese proverb that says: "a single bracelet does not jingle", emphasizing the importance of collaboration and community. The youth have the potential to be key players in solving these global challenges, but their contributions are often overlooked due to age-based stereotypes and lack of access to resources and platforms for visibility.

She called for more inclusive policies that prioritize youth engagement in health and environmental solutions, particularly in developing countries. Gondo stressed that effective solutions will only come when we bridge gaps between sectors, foster collaboration, and empower youth to take leadership roles. She concluded by urging everyone to take collective action, emphasizing that youth, as the largest demographic group globally, must be included in shaping policies and creating sustainable solutions for a livable future.

Dominique Charron, a visiting scholar in One Health at the University of Guelph, highlighted five essential challenges to advancing One Health implementation. She noted that while One Health is gaining international attention, especially after the publication of the One Health Joint Plan of Action, there remain significant gaps

in implementation. Charron emphasized the urgent need to address these gaps, particularly in gender equality and inclusion of marginalized groups. Despite the importance of these issues in theory, they are insufficiently reflected in One Health programs and tools, with only five out of fifty tools addressing gender equity adequately. She called for better engagement with all sectors of society, especially underrepresented groups, and for integrating gender and social justice principles into One Health governance.

Charron stressed the need for stronger leadership and intersectoral governance. Effective One Health implementation requires collaboration across sectors, including health, environment, and agriculture, with leaders skilled in both governance and One Health. Additionally, she advocated for training leaders at all levels, particularly younger professionals, to ensure they have the competencies to lead integrated, cross-sectoral initiatives.

Another critical gap identified was the need for robust evidence of One Health's impact. Charron called for a culture of evaluation and measurement, encouraging the One Health community to embrace the collection of data on outcomes and impacts to improve effectiveness and demonstrate the value of One Health to funders. She also discussed the necessity of sustainable funding mechanisms for One Health, beyond pandemic preparedness, to support broader goals like food security and climate action.

Finally, Charron highlighted a communication challenge. The One Health message, while integrated into high-level international discussions, does not resonate enough with the general public. She called for improved public outreach, particularly through social media and digital channels, to raise awareness and build long-term support for One Health. By capitalizing on the momentum from international agreements and focusing on these key areas, Charron believes One Health can be implemented more effectively and inclusively.

Martyn Jeggo, from Deakin University, Australia, and International Livestock Research Institute (ILRI), Kenya reflected on the lessons learnt from the World One Health Congresses, held from 2011 to 2024. He began by revisiting the initial challenges discussed at the first international conference in 2011, highlighting the cultural shift required for One Health, where organizations would need to relinquish some control and work together. Despite early resistance, One Health has succeeded in fostering interdisciplinary collaboration across sectors, and Jeggo emphasized the importance of systems thinking to address complex global challenges. He also noted significant progress in areas like pandemic preparedness, food security, AMR, and environmental issues, with more focus on the social sciences and gender equity.

However, Jeggo shifted to a more critical tone, questioning the global response to crises like COVID-19 and ongoing geopolitical conflicts. He criticized the lack of a cohesive One Health approach during the pandemic, which led to disorganized responses and global inequities. He also raised concerns about the state of the world, pointing to issues such as war, starvation, climate change, and failed democratic systems. Jeggo called for a shift from a "One Health" approach to a "One World" approach, advocating for a more unified global governance model to tackle these pressing issues. He argued that the United Nations, founded in 1945, needs to be restructured to address the current global challenges more effectively, citing examples of reforms in organizations like CGIAR that have worked to improve collaboration on food security and land use.

Jeggo concluded by acknowledging the successes of the One Health movement and the importance of continuing to leverage these lessons to tackle global problems. He emphasized the need for the international community to rethink governance structures, especially within the UN, to address the existential threats facing the planet. He ended with a call for continued collaboration and congratulated the organizers, speakers, and participants for their contributions to the conference and the One Health vision.

Abbreviations

AMR	Antimicrobial Resistance
AI	Artificial Intelligence
FAO	Food and Agriculture Organization
HEPR	Health Emergencies Prevention, Preparedness, and Response
ILRI	International Livestock Research Institute
ISIL	Islamic State of Iraq and the Levant
PACCARB	Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria
WHO, FAO, WOAH, UNEP	Quadripartite Collaboration
SDGs	Sustainable Development Goals
UNEP	United Nations Environment Programme
WHO	World Health Organization
WOAH	World Organization for Animal Health

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